



# OMNI-Test Laboratories, Inc.

EPA Standard of Performance for New Residential Wood Heaters

## Certification Test Report

### Non-Confidential Business Information (Non-CBI)

**Manufacturer:** Hearth & Home Technologies, LLC  
**Heater Type:** Pellet-Fired, Freestanding  
**Model:** Santa Fe-C, Santa Fe I-C, Castile-C, Castile I-C

**Prepared for:** Hearth & Home Technologies, LLC  
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**Test Period:** December 17, 2018

**Report Date:** February 13, 2019  
**Report Revision Date:** September 20, 2023

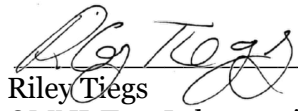
**Report Number:** 0061PM077E

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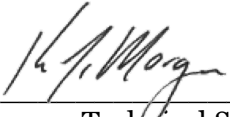
## AUTHORIZED SIGNATORIES

This report has been reviewed and approved by the following authorized signatories:

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# **Section 1**

## **Appliance, Testing, & Results**

- 1.1 - Summary Tables
- 1.2 - Procedures and Results Summary
- 1.3 - Appliance Description

## 1.1 - Summary Tables

**Table 1 – Particulate Emissions**

	One-Hour Filter	Integrated Total
<b>Emission Rate</b> (g/hr)	2.393	1.098
<b>Emission Factor</b> (g/dry kg)	1.563	1.597
<b>Emission Rate Uncorrected<sup>2</sup></b> (g/hr)	2.393	1.098

<sup>1</sup>Corrected refers to gravimetric analysis that takes negative filter weights as a negative value in cases where filter residue was transferred to (stuck to) O-ring gaskets to account for the mass transfer.

<sup>2</sup>Uncorrected refers to gravimetric analysis where negative filter weights are taken as zero, thus reporting a higher value by over-reporting of transferred filter material. The uncorrected values were added to this report in response to a request by the US EPA.

**Table 2 – Efficiency and CO**

	Burn Rate Segment			Integrated Total
	Maximum	Medium	Minimum	
<b>Time</b> (minutes)	60	120	180	360
<b>Burn Rate</b> (dry kg/hr)	1.531	0.595	0.468	0.688
<b>Heat Input Rate</b> (BTU/hr, HHV)	30,632	11,912	9,360	13,756
<b>Heat Output Rate</b> (BTU/hr, HHV)	22,440	7,299	5,831	9,097
<b>Efficiency</b> (%, HHV)	73.3%	61.3%	62.3%	66.1%
<b>Efficiency</b> (%, LHV)	78.0%	65.2%	66.3%	70.4%
<b>CO Emission Rate</b> (g/min)	0.03	0.17	0.21	0.17

## 1.1 - Summary Tables

**Table 3 – Test Facility Conditions**

	Initial	Middle	Final
Room Temperature (°F)	74	78	76
Barometric Pressure (in Hg)	30.08	30.04	30.01
Air Velocity (ft/min)	<50	<50	<50
Induced Draft (in H2O)	ϕ	ϕ	ϕ

**Table 4 – Heater Configuration**

	Pretest	Burn Rate Segment		
		Maximum	Medium	Minimum
Heat Output Setting	Heat setting on High, FRAP set to fully open, control board set to 7. (max), Fan is automatic	Heat setting on High, FRAP set to fully open, control board set to 7. (max). Fan is Automatic	Heat setting on low, FRAP set to fully open, control board set to 7. (max) Fan is Automatic	Heat setting on low, FRAP set to fully closed, control board set to 6. (min) Fan is Automatic

## **1.2 - Procedures and Results Summary**

### **TESTING PROCEDURE**

The Santa Fe-C was tested in accordance with the U.S. EPA 40 CFR Part 60, Subpart AAA – Standards of Performance for New Residential Wood Heaters using ASTM E2515 and ASTM E2779. The model was tested for thermal efficiency and carbon monoxide (CO) emissions in accordance with CSA B415.1-10. The fuel used for certification testing was Pres-to-Log brand soft wood pellet fuel; this fuel was graded as Premium by the Pellet Fuels Institute and was produced at registered mill # 03208. Particulate emissions were measured using dual sampling trains consisting of two sets of filters (front and back).

A single test run was performed. The unit was installed and adjusted in accordance with the manufacturer's instructions

The manufacturer's instructions specified operating the preburn and high burn segments at maximum heat setting, the "FRAP" (feed rate adjustment plate) fully open, and the control board trim switch set to 7. The medium burn segment was operated at heat setting low, FRAP set to fully open, and the control board switch set to 7. The low burn segment at minimum heat setting, FRAP set to full closed, and the control board switch set to 6.

### **RESULTS SUMMARY**

Proportionality results of the integrated test run, in addition to all other validity criteria, were within specified limits, and no sampling anomalies occurred. All burn rate categories were achieved. Therefore, this test run is considered valid and appropriate.

The Santa Fe-C results indicate an average particulate emission rate of 1.098 g/hr. The results are within the emission limit of 2.0 g/h for affected appliances manufactured on or after May 15, 2020.

The heater demonstrated an average thermal efficiency of 66.1%. The calculated CO emission rate was 0.17 g/min.

Upon completion of emissions certification testing, the sample unit was sealed and will be stored by the manufacturer in accordance with the requirements of the CFR.

## 1.3 - Appliance Description

**Appliance Manufacturer:** Hearth & Home Technologies

**Pellet Stove Model:** Santa Fe-C

**Type:** Freestanding, air-circulating type, pellet-fired room heater.

The Santa Fe-C's principle elements include a fuel hopper, ductile Iron burn pot, and electrical fuel feed, combustion air, and convection air supply systems. The frame of the unit is constructed of mild steel, as is the outer fascia.

Combustion products are routed out of the firebox chamber via a baffle-type heat exchanger through a 3-inch diameter flue outlet located on the rear of the unit. A factory built 3" to 6" vent pipe adaptor was used for testing; this adaptor is shown in the manual as an approved installation.

Fuel is supplied from the hopper to the burn pot via a screw-type auger, mounted diagonally. Fuel supply rate is varied by cycling the auger motor as needed.

Ashes fall through the burn pot into a removable ash drawer located at the bottom of the unit. The drawer is accessed through a mild steel door, distinct from the cast aluminum front firebox door, which also features a 16.5 x 11.13" glass panel.

The electrical systems are regulated by a single user-operated toggle switch that operates the three heat settings. An adjustable slide plate (FRAP) is in the hopper, this plate is used to restrict the number of pellets that can enter the auger from the hopper. An additional trim setting is located on the control board, this control is only intended to be manipulated by a dealer representative at the time of initial installation. It was used during testing to obtain data at maximum and minimum settings.

More detailed information is shown in the manufacturer's design drawings, Appendix C of this report. This information is considered confidential business information (CBI) by the manufacturer and is not included in the non-CBI version of this report.



Hearth & Home Technologies, Inc.  
Model: Santa Fe-C  
Project: 0061PM077E



**Santa Fe-C – Sealed Test Unit**

**Appliance Photographs**  
Santa Fe-C  
**Test Date: 12/18/2018**



**Santa Fe-C Front**



**Santa Fe-C Back**



**Santa Fe-C Left**



**Santa Fe-C Control**

## **Section 2**

### **Test Data**

2.1 Test Data by Run


2.2 Sample Analysis & Tares

## **2.1 - Test Data by Run**

### Run 1 Notes & Results

## ASTM E2779 / ASTM E2515 Emissions Results

Manufacturer: Hearth & Home  
 Model: Santa Fe  
 Project No.: 0061PM077E  
 Tracking No.: 2288  
 Run: 1  
 Test Date: 12/17/18

Technician Signature: 

Integrated Test Run	
Particulate Emission Rate	<b>1.10 g/hr</b>
Total Particulate Emissions - $E_T$	6.59 g
Emissions Factor	1.60 g/kg
CSA B415 Efficiency	<b>66.1% HHV</b>

First Hour Emissions	
Particulate Emission Rate	2.39 g/hr
Total Particulate Emissions - $E_T$	2.39 g
Emissions Factor	1.56 g/kg

Burn Rate (Composite)	<b>0.69 kg/hr dry</b>	
Burn Rate (High)	1.53 kg/hr dry	
Burn Rate (Medium)	0.60 kg/hr dry	38.9% Of High
Burn Rate (Low)	0.47 kg/hr dry	30.6% Of High
Average Tunnel Temperature	87 degrees F	
Avg.Velocity in Dilution Tunnel - $v_s$	13.99 ft/second	
Avg.Flow Rate in Dilution Tunnel - $Q_{sd}$	9384.0 dscf/hour	
Average $\Delta p$	0.055 inches H2O	
Average $\Delta H$	1.34 inches H2O	
Total Time of Test	360 minutes	

## ASTM E2779 / ASTM E2515 Emissions Results

Manufacturer: Hearth & Home  
 Model: Santa Fe  
 Project No.: 0061PM077E  
 Tracking No.: 2288  
 Run: 1  
 Test Date: 12/17/18

Technician Signature: \_\_\_\_\_

	1 <sup>st</sup> Hour	Sample Train 1	Sample Train 2	Sample	Unit
Total Sample Volume - $V_m$	9.563	57.930	58.913	N/A	ft <sup>3</sup>
Average Gas Meter Temperature	72.67	77.85	78.53		°F
Sample Volume (Std. Conditions) - $V_{mstd}$	9.412	56.465	57.259		dsf <sup>3</sup>
Total Particulates - $m_n$	2.4	6.7	6.6		mg
Particulate Concentration - $C_r/C_s$	2.550E-04	1.19E-04	1.15E-04		g/dsf <sup>3</sup>
Total Particulate Emissions - $E_T$	2.39	6.68	6.49		g
Particulate Emission Rate	2.39	1.11	1.08		g/hr
Emissions Factor	1.56	1.62	1.57		g/kg
Delta from Avg. Particulate Emissions		0.10	0.10		g

### Quality Checks

Filter Temps < 90 °F	OK	Ambient Temp (55-90°F)	OK
Filter Face Velocity	OK	Negative Probe Weight	OK
Leakage Rate	OK	Pro-Rate Variation	OK
Medium Burn Rate < 50%	OK	Dual Train Comparison	OK
Train Precision 0.5g/kg	0.05	Train Precision 7.5%:	1.45

### CSA B415.1 Results - Overall & By Category

Manufacturer: Hearth & Home  
 Model: Santa Fe  
 Date: 12/17/18

Run: 1  
 Control #: 0061PM077E  
 Test Duration: 360

Test Results in Accordance with CSA B415.1-09 - Overall			
	HHV Basis	LHV Basis	
Overall Efficiency	66.1%	70.4%	
Combustion Efficiency	99.5%	99.5%	
Heat Transfer Efficiency	66%	70.7%	
Output Rate (kJ/h)	9,590	9,097	(Btu/h)
Burn Rate (kg/h)	0.69	1.52	(lb/h)
Input (kJ/h)	14,501	13,756	(Btu/h)
Test Load Weight (dry kg)	4.13	9.09	dry lb
MC wet (%)	6.27		
MC dry (%)	6.69		
Particulate (g )	6.59		
CO (g)	63		
Test Duration (h)	6.00		
Emissions	Particulate	CO	
g/MJ Output	0.11	1.09	
g/kg Dry Fuel	1.60	15.25	
g/h	1.10	10.49	
lb/MM Btu Output	0.27	2.54	
Air/Fuel Ratio (A/F)	68.84		

Test Results in Accordance with CSA B415.1-09 - Maximum			
	HHV Basis	LHV Basis	
Overall Efficiency	73.3%	78.0%	
Combustion Efficiency	99.5%	99.5%	
Heat Transfer Efficiency	74%	78.4%	
Output Rate (kJ/h)	23,656	22,440	(Btu/h)
Burn Rate (kg/h)	1.53	3.37	(lb/h)
Input (kJ/h)	32,291	30,632	(Btu/h)
Test Load Weight (dry kg)	1.53	3.37	dry lb
MC wet (%)	6.27		
MC dry (%)	6.69		
Particulate (g )	2.40		
CO (g)	2		
Test Duration (h)	1.00		
Emissions	Particulate	CO	
g/MJ Output	0.10	0.09	
g/kg Dry Fuel	1.57	1.35	
g/h	2.40	2.06	
lb/MM Btu Output	0.24	0.20	
Air/Fuel Ratio (A/F)	30.07		

Test Results in Accordance with CSA B415.1-09 - Medium			
	HHV Basis	LHV Basis	
Overall Efficiency	61.3%	99.5%	
Combustion Efficiency	99.5%	65.5%	
Heat Transfer Efficiency	62%	65.5%	
Output Rate (kJ/h)	7,694	7,299	(Btu/h)
Burn Rate (kg/h)	0.60	1.31	(lb/h)
Input (kJ/h)	12,558	11,912	(Btu/h)
Test Load Weight (dry kg)	1.19	2.62	dry lb
MC wet (%)	6.27		
MC dry (%)	6.69		
Particulate (g )	-		
CO (g)	20		
Test Duration (h)	2.00		
Emissions	Particulate	CO	
g/MJ Output	-	1.29	
g/kg Dry Fuel	-	16.70	
g/h	-	9.94	
lb/MM Btu Output	-	3.00	
Air/Fuel Ratio (A/F)	78.22		

Test Results in Accordance with CSA B415.1-09 - Minimum			
	HHV Basis	LHV Basis	
Overall Efficiency	62.3%	99.5%	
Combustion Efficiency	99.5%	66.7%	
Heat Transfer Efficiency	63%	66.7%	
Output Rate (kJ/h)	6,147	5,831	(Btu/h)
Burn Rate (kg/h)	0.47	1.03	(lb/h)
Input (kJ/h)	9,867	9,360	(Btu/h)
Test Load Weight (dry kg)	1.40	3.09	dry lb
MC wet (%)	6.27		
MC dry (%)	6.69		
Particulate (g )	-		
CO (g)	39		
Test Duration (h)	3.00		
Emissions	Particulate	CO	
g/MJ Output	-	2.09	
g/kg Dry Fuel	-	27.51	
g/h	-	12.87	
lb/MM Btu Output	-	4.86	
Air/Fuel Ratio (A/F)	105.86		

VERSION: 2-2 12/14/2009

Modified to fit this Format

**Pellet Heater Conditioning Data - ASTM E2779**

Manufacturer: Hearth & Home  
 Model: Santa Fe  
 Tracking No.: 2288  
 Project No.: 0061PM077E  
 Test Date: Nov - Dec 2018  
 Operation Category: Medium

Elapsed Time (hours)	Fuel Added (lbs)	Stack (°F)
0	317.8	334
1	314.3	338
2	312.6	223
3	311.1	221
4	309.7	181
5	308.6	184
6	307.5	182
7	319.4	320
8	316.5	328
9	314.8	221
10	313.4	213
11	312.2	190
12	311.1	179
13	310.1	174
14	307.9	285
15	305.0	283
16	302.4	285
17	299.7	283
18	297.1	292
19	294.4	285
20	317.9	343
21	314.6	345
22	312.7	227
23	311.0	227
24	309.8	188
25	308.7	187
26	307.5	183
27	318.6	321
28	315.0	325
29	313.5	212
30	311.9	207



## Pellet Heater Conditioning Data - ASTM E2779

Manufacturer: Hearth & Home  
 Model: Santa Fe  
 Tracking No.: 2288  
 Project No.: 0061PM077E  
 Test Date: Nov - Dec 2018  
 Operation Category: Medium

Elapsed Time (hours)	Fuel Added (lbs)	Stack (°F)
31	310.6	182
32	309.4	190
33	308.1	201
34	318.6	321
35	315.0	325
36	313.5	212
37	311.9	207
38	310.6	182
39	309.4	190
40	308.1	201
41	315.2	227
42	311.8	232
43	310.1	159
44	308.6	163
45	307.4	146
46	306.2	146
47	305.1	146
48	311.8	279
49	308.8	302
50	305.5	313

## Pellet Heater Preburn Data - ASTM E2779

Manufacturer: Hearth & Home  
 Model: Santa Fe  
 Tracking No.: 2288  
 Project No.: 0061PM077E  
 Test Date: 12/17/18

PB Length: 60 min  
 Recording Interval: 1 min

Averages:	272	66	-0.05		
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Elapsed Time (min)	Scale Reading	Weight Change	Stack (F)	Ambient (F)	Draft ("H2O)	CO2 (%)	CO (%)
0	39.4	-	252	67	-0.05		
1	39.3	-0.1	253	67	-0.05		
2	39.2	-0.1	255	67	-0.05		
3	39.2	0	256	67	-0.05		
4	39.1	-0.1	256	67	-0.05		
5	39.1	0	255	67	-0.05		
6	39.0	-0.1	256	66	-0.05		
7	39.0	0	258	67	-0.05		
8	38.9	-0.1	261	66	-0.05		
9	38.9	0	260	66	-0.05		
10	38.8	-0.1	257	66	-0.05		
11	38.7	-0.1	262	67	-0.05		
12	38.7	0	266	67	-0.05		
13	38.6	-0.1	269	66	-0.05		
14	38.5	-0.1	272	66	-0.05		
15	38.5	0	275	66	-0.05		
16	38.4	-0.1	272	66	-0.05		
17	38.4	0	272	67	-0.05		
18	38.3	-0.1	271	67	-0.05		
19	38.3	0	267	66	-0.05		
20	38.2	-0.1	266	66	-0.05		
21	38.2	0	268	66	-0.05		
22	38.1	-0.1	269	66	-0.05		
23	38.0	-0.1	268	66	-0.05		
24	38.0	0	267	66	-0.05		
25	37.9	-0.1	269	67	-0.05		
26	37.9	0	270	66	-0.05		
27	37.8	-0.1	272	66	-0.05		
28	37.7	-0.1	270	66	-0.05		
29	37.7	0	274	67	-0.05		

## Pellet Heater Preburn Data - ASTM E2779

Manufacturer: Hearth & Home  
 Model: Santa Fe  
 Tracking No.: 2288  
 Project No.: 0061PM077E  
 Test Date: 12/17/18

PB Length: 60 min  
 Recording Interval: 1 min

Averages:	272	66	-0.05		
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30	37.6	-0.1	275	66	-0.05		
31	37.6	0	275	66	-0.05		
32	37.5	-0.1	274	66	-0.05		
33	37.4	-0.1	277	66	-0.05		
34	37.4	0	277	66	-0.06		
35	37.3	-0.1	277	66	-0.05		
36	37.3	0	278	66	-0.05		
37	37.2	-0.1	277	66	-0.05		
38	37.2	0	277	66	-0.05		
39	37.1	-0.1	276	67	-0.05		
40	37.0	-0.1	277	66	-0.05		
41	37.0	0	280	66	-0.05		
42	36.9	-0.1	279	66	-0.06		
43	36.9	0	278	66	-0.05		
44	36.8	-0.1	276	66	-0.05		
45	36.7	-0.1	278	66	-0.05		
46	36.7	0	278	66	-0.05		
47	36.6	-0.1	277	66	-0.05		
48	36.6	0	276	66	-0.05		
49	36.5	-0.1	279	66	-0.05		
50	36.4	-0.1	282	66	-0.06		
51	36.4	0	281	66	-0.05		
52	36.3	-0.1	283	66	-0.06		
53	36.2	-0.1	285	66	-0.05		
54	36.2	0	285	66	-0.05		
55	36.1	-0.1	286	66	-0.05		
56	36.1	0	283	66	-0.05		
57	36.0	-0.1	282	66	-0.06		
58	35.9	-0.1	281	66	-0.06		
59	35.9	0	283	66	-0.06		
60	35.8	-0.1	284	66	-0.06		

Pellet Heater Test Data - ASTM E2779 / ASTM E2515

Run: 1

Manufacturer: Hearth & Home High Burn End Time: 60
Model: Santa Fe Medium Burn End Time: 180
Tracking No.: 2288 Total Sampling Time: 360 min
Project No.: 0061PM077E Recording Interval: 1 min
Test Date: 17-Dec-18
Beginning Clock Time: 09:51 Background Sample Volume: 0 cubic feet
Meter Box Y Factor: 0.986 (1) 0.985 (2) 0 (Amb)

Barometric Pressure: Begin Middle End Average
30.08 30.04 30.01 30.04 Hg

PM Control Modules: 335, 336
Dilution Tunnel MW(dry): 29.00 lb/lb-mole
Dilution Tunnel MW(wet): 28.78 lb/lb-mole
Dilution Tunnel H2O: 2.00 percent
Dilution Tunnel Static: -0.240 H2O
Tunnel Area: 0.1963 ft^2
Pitot Tube Cp: 0.99

Avg. Tunnel Velocity: 13.99 ft/sec.
Initial Tunnel Flow: 160.0 scfm
Average Tunnel Flow: 156.4 scfm
Post-Test Leak Check (1): 0.000 cfm @ 8 in. Hg
Post-Test Leak Check (2): 0.000 cfm @ 6 in. Hg
Fuel Moisture (%): 6.689 Dry Basis 6.270 Wet Basis

Velocity Traverse Data table with columns Pt.1 to Pt.8 and Center, rows Initial dP and Temp.

Main data table with columns: Elapsed Time (min), Gas Meter 1 (ft^2), Gas Meter 2 (ft^2), Sample Rate 1 (cfm), Sample Rate 2 (cfm), Orifice dH 1 (H2O), Meter Temp 1 (F), Meter Vacuum 1 (Hg), Orifice dH 2 (H2O), Meter Temp 2 (F), Meter Vacuum 2 (Hg), Dilution Tunnel (F), Tunnel Center dP, Pro. Rate 1, Pro. Rate 2, Scale Reading, Weight Change, Stack, Filter 1, Dryer 1, Filter 2, Dryer 2, Ambient, Draft (H2O), CO2 (%), CO (%)















### Pellet Heater Test Data - ASTM E2779 / ASTM E2515

Run: 1

Manufacturer: Hearth & Home High Burn End Time: 60  
 Model: Santa Fe Medium Burn End Time: 180  
 Tracking No.: 2288 Total Sampling Time: 360 min  
 Project No.: 0061PM077E Recording Interval: 1 min  
 Test Date: 17-Dec-18  
 Beginning Clock Time: 09:51 Background Sample Volume: 0 cubic feet

Meter Box Y Factor: 0.986 (1) 0.985 (2) 0 (Amb)

Barometric Pressure: Begin Middle End Average  
30.08 30.04 30.01 30.04 "Hg


PM Control Modules: 335, 336  
 Dilution Tunnel MW(dry): 29.00 lb/lb-mole  
 Dilution Tunnel MW(wet): 28.78 lb/lb-mole  
 Dilution Tunnel H2O: 2.00 percent  
 Dilution Tunnel Static: -0.240 "H<sub>2</sub>O  
 Tunnel Area: 0.1963 ft<sup>2</sup>  
 Pitot Tube Cp: 0.99

Avg. Tunnel Velocity: 13.99 ft/sec.  
 Initial Tunnel Flow: 160.0 scfm  
 Average Tunnel Flow: 156.4 scfm  
 Post-Test Leak Check (1): 0.000 cfm @ 8 in. Hg  
 Post-Test Leak Check (2): 0.000 cfm @ 6 in. Hg  
 Fuel Moisture (%): 6.689 Dry Basis 6.270 Wet Basis

Velocity Traverse Data									
	Pt.1	Pt.2	Pt.3	Pt.4	Pt.5	Pt.6	Pt.7	Pt.8	Center
Initial dP	0.040	0.056	0.052	0.036	0.038	0.054	0.056	0.038	0.058
Temp:	95	95	95	95	95	95	95	95	95
	V <sub>strav</sub> 14.52 ft/sec			V <sub>scent</sub> 16.33 ft/sec			F <sub>p</sub> 0.889		

Elapsed Time (min)	Particulate Sampling Data												Fuel Weight (lb)		Temperature Data (°F)						Stack Gas Data				
	Gas Meter 1 (ft <sup>3</sup> )	Gas Meter 2 (ft <sup>3</sup> )	Sample Rate 1 (cfm)	Sample Rate 2 (cfm)	Orifice dH 1 ("H <sub>2</sub> O)	Meter Temp 1 (°F)	Meter Vacuum 1 ("Hg)	Orifice dH 2 ("H <sub>2</sub> O)	Meter Temp 2 (°F)	Meter Vacuum 2 ("Hg)	Dilution Tunnel (°F)	Tunnel Center dP	Pro. Rate 1	Pro. Rate 2	Scale Reading	Weight Change	Stack	Filter 1	Dryer 1	Filter 2	Dryer 2	Ambient	Draft ("H <sub>2</sub> O)	CO <sub>2</sub> (%)	CO (%)
343	55.187	56.126	0.16	0.16	1.33	79	2.01	1.09	80	1.10	82	0.055	99	99	26.3	0.0	165	71	74	71	72	67	-0.031	1.23	0.013
344	55.349	56.290	0.16	0.16	1.33	79	2.00	1.09	80	1.10	82	0.054	101	100	26.2	-0.1	166	71	74	71	72	67	-0.032	1.29	0.020
345	55.510	56.454	0.16	0.16	1.33	79	2.01	1.09	80	1.10	82	0.055	99	99	26.2	0.0	167	71	74	71	72	67	-0.031	1.41	0.011
346	55.671	56.619	0.16	0.16	1.33	79	2.01	1.08	80	1.10	82	0.056	98	99	26.2	0.0	166	71	74	71	72	67	-0.032	1.13	0.021
347	55.833	56.782	0.16	0.16	1.33	79	2.01	1.08	80	1.10	81	0.056	99	97	26.2	0.0	163	71	74	71	72	67	-0.031	0.71	0.058
348	55.994	56.945	0.16	0.16	1.33	79	2.01	1.08	80	1.10	81	0.055	99	98	26.2	0.0	164	71	74	71	72	67	-0.032	1.33	0.014
349	56.155	57.109	0.16	0.16	1.33	79	2.02	1.08	80	1.10	81	0.055	99	99	26.1	-0.1	166	71	74	71	72	67	-0.032	1.42	0.009
350	56.317	57.274	0.16	0.16	1.33	79	2.02	1.09	80	1.10	81	0.056	99	99	26.1	0.0	164	70	74	70	72	67	-0.031	0.98	0.017
351	56.478	57.437	0.16	0.16	1.33	79	2.01	1.09	80	1.10	81	0.055	99	98	26.1	0.0	164	70	74	70	72	67	-0.032	1.05	0.025
352	56.639	57.602	0.16	0.16	1.33	79	2.01	1.09	80	1.10	81	0.056	98	99	26.1	0.0	163	70	74	70	72	67	-0.031	0.96	0.013
353	56.800	57.766	0.16	0.16	1.33	79	2.01	1.08	80	1.10	81	0.056	98	98	26.1	0.0	162	70	74	70	72	67	-0.030	0.93	0.017
354	56.962	57.929	0.16	0.16	1.34	79	2.01	1.09	80	1.10	81	0.056	99	97	26.1	0.0	160	70	74	70	72	67	-0.030	0.96	0.052
355	57.123	58.093	0.16	0.16	1.33	79	2.01	1.09	80	1.10	80	0.055	99	99	26.0	-0.1	161	70	74	70	72	67	-0.030	1.02	0.015
356	57.284	58.257	0.16	0.16	1.34	79	2.00	1.09	80	1.10	80	0.056	98	98	26.0	0.0	158	70	74	70	72	67	-0.030	0.69	0.041
357	57.446	58.421	0.16	0.16	1.33	79	2.01	1.09	80	1.10	80	0.055	99	99	26.0	0.0	155	70	74	70	71	67	-0.028	0.63	0.065
358	57.607	58.586	0.16	0.16	1.33	79	2.02	1.09	80	1.10	80	0.054	100	100	26.0	0.0	158	70	74	70	71	66	-0.030	1.41	0.012
359	57.768	58.749	0.16	0.16	1.34	79	2.02	1.08	80	1.10	80	0.056	98	97	26.0	0.0	159	70	74	70	71	67	-0.030	1.20	0.005
360	57.930	58.913	0.16	0.16	1.34	79	2.01	1.09	79	1.10	80	0.055	99	99	26.0	0.0	156	70	74	70	71	66	-0.028	0.65	0.052
Avg/Tot	57.930	58.913	0.16	0.16	1.34	78	2.00	1.09	79	1.10	87	0.05	100	100			197	71	74	72	72	68	-0.036	1.76	0.018

## Pellet Heater Lab Data - ASTM E2779 / ASTM E2515

Manufacturer: Hearth & Home      Equipment Numbers: \_\_\_\_\_  
 Model: Santa Fe  
 Tracking No.: 2288  
 Project No.: 0061PM077E  
 Run #: 1      Technician Signature:   
 Date: 12/17/18

### TRAIN 1 (First Hour emissions)

Sample Component	Reagent	Filter, Probe or Seal #	Mass Readings		
			Tare, mg	Final, mg	Particulate, mg
A. Front filter catch	Filter	D623	121.4	123.8	2.4
B. Rear filter catch	Filter				0.0
C. Probe catch*	Probe				0.0
D. Filter seals catch*	Seals				0.0
1 <sup>st</sup> hour Sub-Total, mg:					2.4

### TRAIN 1 (Remainder of Test)

Sample Component	Reagent	Filter, Probe or Seal #	Mass Readings		
			Tare, mg	Final, mg	Particulate, mg
A. Front filter catch	Filter	D624	121.3	125.0	3.7
B. Rear filter catch	Filter	D625	121.5	121.5	0.0
C. Probe catch*	Probe	32	114741.2	114741.3	0.1
D. Filter seals catch*	Seals	R695	3413.4	3413.9	0.5
Remainder Sub-Total, mg:					4.3
Train 1 Aggregate, mg:					6.7

### TRAIN 2

Sample Component	Reagent	Filter, Probe or Seal #	Mass Readings		
			Tare, mg	Final, mg	Particulate, mg
A. Front filter catch	Filter	D626	121.3	127.2	5.9
B. Rear filter catch	Filter	D627	122.2	122.4	0.2
C. Probe catch*	Probe	33	113943.4	113943.5	0.1
D. Filter seals catch*	Seals	R696	3266.0	3266.4	0.4
Train 2 Aggregate, mg:					6.6

### AMBIENT

Sample Component	Reagent	Filter, Probe or Seal #	Mass Readings		
			Tare, mg	Final, mg	Particulate, mg
A. Front filter catch*	Filter				0.0
Ambient Aggregate, mg:					0.0

\*Particulate catch that results in a negative number, is assumed to be zero for probes and seals, negative numbers for filters are assumed to be included in O-ring seal weights.

**Pellet Heater Certification Run Sheets**

Client: Hearth & Home Project Number: 0061PM077E Run Number: 1  
 Model: Santa Fe Tracking Number: 2288 Date: 12/17/18  
 Test Crew: B. Davis  
 OMNI Equipment ID numbers: 335, 336, 410, 592, 637, 132, 283A, 594, 559,

**ASTM E2779 Run Notes**

**Air Control Settings**

High Burn Rate Target: 100% on High  
 Settings: Heat switch, Frap rod fully open, Board control on position 7

Medium Burn Rate Target: <50%  
 Settings: Heat setting on low, Frap Rod fully open, Board control on 7

Low Burn Rate Target: Minimum  
 Settings: Heat setting on low, Frap Rod fully closed, Board control on #6

Additional Settings Notes:

Pellet Moisture Content: 6.27  
 Pellet Specifications: Softwood Pellets  
 Pellet Analysis Notes: Report No. USR:W218-1227-01

**Preburn Notes**

Time	Notes
∅	Heat switch on high, Frap rod fully open, control board switch on position 7.

**Test Notes**

Time	Notes
60	Changed front filter in train A, adjusted controls for medium
120	Adjusted controls for low burn.

Technician Signature: B. Davis Date: 1/24/19

**Pellet Heater Certification Run Sheets**

Client: Hearth & Home Project Number: 0061PM077E Run Number: 1  
 Model: Santa Fe Tracking Number: 2288 Date: 12/17/18  
 Test Crew: B. Davis  
 OMNI Equipment ID numbers: 132, 2+3A, 335, 336, 410, 594, 559, 592, 637, 650

**ASTM E2515 Sampling Information**

Test Location: OMNI Portland Clock Time @ ET=0: 09:51  
 Span Gas Concentrations: CO<sub>2</sub>(%): 10.08 CO(%): 2.53 CO(ppm): 901

Test Run Validation Checks	Pre Test	Post Test
Zero Stack Gas Leakage	<u>good</u>	<u>good</u>
Zero Pitot Line Leakage	<u>good</u>	<u>good</u>
Zero Induced Draft	<u>0.0</u>	
100% Smoke Capture	<u>100%</u>	

Test Run Validation Measurements	Pre Test		Post Test	
Scale Audit (lbs)				
CO <sub>2</sub> % (Zero/Span)	<u>0.00</u>	<u>9.96</u>	<u>0.00</u>	<u>9.92</u>
CO % (Zero/Span)	<u>0.000</u>	<u>2.528</u>	<u>0.000</u>	<u>2.522</u>
CO ppm (Zero/Span)	<u>0</u>	<u>906</u>	<u>0</u>	<u>901</u>
Sample A Leakage (cfm @ "Hg)			<u>0.0 @ 8</u>	
Sample B Leakage (cfm @ "Hg)			<u>0.0 @ 6</u>	
Room Air Velocity (ft/min)	<u>250</u>			
Barometric Pressure ("Hg)	<u>30.08</u>		<u>30.01</u>	
Relative Humidity (%)	<u>35.2</u>		<u>36.4</u>	
Tunnel Static ("H <sub>2</sub> O)	<u>-.24</u>		<u>-.24</u>	

**Last Cleaning Dates**

Flue Pipe	<u>12/14/18</u>
Dilution Tunnel	<u>12/14/18</u>
Sample Dryers	<u>12/14/18</u>

**Dilution Tunnel Traverse**

Traverse Point	1	2	Center	3	4	5	6	7	8
Δp ("H <sub>2</sub> O)	<u>.040</u>	<u>.056</u>	<u>.058</u>	<u>.052</u>	<u>.036</u>	<u>.038</u> <u>.054</u>	<u>.054</u>	<u>.056</u>	<u>.038</u>
T (°F)	<u>95</u>	<u>95</u>	<u>95</u>	<u>95</u>	<u>95</u>	<u>95</u>	<u>95</u>	<u>95</u>	<u>95</u>

Technician Signature: B. Davis

Date: 1/24/19

## **2.2 - Sample Analysis & Tares**

Analysis Worksheets  
Tared Filter, Probe, and O-Ring Data  
Pellet Fuel Label  
Pellet Fuel Analysis Report

**Pellet Heater Certification Run Sheets**

Client: Hearth & Home Project Number: 0061PM077E Run Number: 1  
 Model: Santa Fe Tracking Number: 2288 Date: 12/17/18  
 Test Crew: B Davis  
 OMNI Equipment ID numbers: 335, 336, 410, 592, 637, 132, 283A, 594, 559

**ASTM E2515 Lab Sheet**

Assembled By:

B Davis

Date/Time in Desiccator:

Weighing #1	Weighing #2	Weighing #3	Weighing #4
Date: <u>12/20/18</u>	Date: <u>12/21/18</u>	Date:	Date:
Time: <u>0804</u>	Time: <u>0940</u>	Time:	Time:
R/H %: <u>14.3</u>	R/H %: <u>13.5</u>	R/H %:	R/H %:
Temp (F): <u>67.4</u>	Temp (F): <u>67.1</u>	Temp (F):	Temp (F):
Audit 1: <u>200.1</u>	Audit 1: <u>200.0</u>	Audit 1:	Audit 1:
Audit 2: <u>5000.0</u>	Audit 2: <u>5000.0</u>	Audit 2:	Audit 2:
Audit 3: <u>99998.1</u>	Audit 3: <u>99998.0</u>	Audit 3:	Audit 3:
Initials: <u>BC</u>	Initials: <u>BC</u>	Initials:	Initials:

Train	Item	ID #	Tare (mg)	Weight (mg)	Weight (mg)	Weight (mg)	Weight (mg)
A	Front Filter (60 min)	<u>D623</u>	<u>121.4</u>	<u>123.8</u>	<u>123.8</u>	-	
A	Front Filter (Remainder)	<u>D624</u>	<u>121.3</u>	<u>125.1</u>	<u>125.0</u>	-	
A	Rear Filter	<u>D625</u>	<u>121.5</u>	<u>121.6</u>	<u>121.5</u>	-	
A	Probe	<u>32</u>	<u>114741.2</u>	<u>114741.3</u>	<u>114741.3</u>	-	
A	O-Ring Set	<u>R695</u>	<u>3413.4</u>	<u>3414.0</u>	<u>3413.9</u>	-	
B	Front Filter	<u>D626</u>	<u>121.3</u>	<u>127.3</u>	<u>127.2</u>	-	
B	Rear Filter	<u>D627</u>	<u>122.2</u>	<u>122.5</u>	<u>122.4</u>	-	
B	Probe	<u>33</u>	<u>113943.4</u>	<u>113943.4</u>	<u>113943.5</u>	-	
B	O-Ring Set	<u>R696</u>	<u>3266.0</u>	<u>3266.4</u>	<u>3266.4</u>	-	
BG	Filter						

Technician Signature: [Signature]

Date: 1/24/19



Tare Sheet: (check one)

Probes \_\_\_\_\_

47mm Filters \_\_\_\_\_

100mm Filters \_\_\_\_\_

O-Ring Pair

Prepared By: B. Davis

Balance ID #: Omni-00637

Thermohygrometer ID #: Omni-00592

Audit Weight ID #/Mass: Omni-00283A

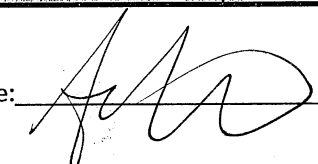
1 5g

Placed in Dessicator: Date: <u>12/10/18</u> Time: <u>0910</u>	Date: <u>12/13/18</u> Time: <u>10:13</u> RH %: <u>11.1</u> T (°F): <u>67.4</u> Audit: <u>4999.9</u>	Date: <u>12/14/18</u> Time: <u>0920</u> RH %: <u>11.2</u> T (°F): <u>66.4</u> Audit: <u>5000.0</u>	Date: <u>12/17/18</u> Time: <u>0850</u> RH %: <u>10.8</u> T (°F): <u>65.2</u> Audit: <u>5000.0</u>	Date: _____ Time: _____ RH %: _____ T (°F): _____ Audit: _____	Date Used	Project Number	Run No.
R695	3413.2	3413.4	-		12/17/18	0061PM077 E	1
R696	3265.9	3266.0	-		↓	↓	↓
R697	3303.5	3303.7	-		12/18/18	0061PN013 E	1
R698	3402.6	3403.0	3402.9		↓	↓	↓
R699	3319.7	3319.7	-		1/8/19	0028WS062 E	1
R700	4137.9	4138.1	✓		↓		1
R701	4074.9	4075.0	-		↓		2
R702	4075.9	4075.9	-		↓		2
R703	3307.2	3307.6	3307.4	-	1/9/19		3
R704	3304.5	3304.6	-		↓		↓
R705	4095.1	4095.0	-		↓		4
R706	3343.8	3344.1	3343.9	-	↓		↓
R707	4112.8	4112.8	-		1/10/19		6
R708	4112.7	4112.7	-		↓		↓
R709	3413.6	3413.9	3413.9	-	1/14/19	0125PS013E .R2	1
R710	3547.3	3547.6	3547.4	-	↓	↓	↓

Initials: BD     Initials: BD     Initials: BD     Initials: \_\_\_\_\_  
 Initials: \_\_\_\_\_     Initials: \_\_\_\_\_     Initials: \_\_\_\_\_     Initials: \_\_\_\_\_

Final Technician Signature: BD

Date: 12/13/18

Evaluator signature: 

Tare Sheet: (check one)

Probes

47mm Filters \_\_\_\_\_

100mm Filters \_\_\_\_\_

O-Ring Pair \_\_\_\_\_

Prepared By: B Davis

Balance ID #: Omni-00637

Thermohygrometer ID #: Omni-00592

Audit Weight ID #/Mass: Omni-0287A

100g

Placed in Dessicator: Date: <u>11/20/18</u> Time: <u>0950</u>	Date: <u>12/13/18</u>		Date: <u>12/14/18</u>		Date:	Date:	Date Used	Project Number	Run No.
	Time: <u>10:05</u>	Time: <u>0913</u>	Time:	Time:	RH %:	RH %:			
	RH %: <u>13.2</u>	RH %: <u>11.2</u>	RH %:	RH %:	T (°F): <u>67.2</u>	T (°F): <u>66.3</u>	T (°F):	T (°F):	
	Audit: <u>99998.2</u>	Audit: <u>99998.1</u>	Audit:	Audit:					
32	<u>114741.1</u>	<u>114741.2</u>	-				<u>12/13/18</u>	<u>0061PM077E</u>	<u>1</u>
33	<u>113943.3</u>	<u>113943.4</u>	-				↓	↓	↓
35	<u>114326.2</u>	<u>114326.4</u>	-				<u>12/18/18</u>	<u>0061PN013E</u>	<u>1</u>
36	<u>114883.3</u>	<u>114883.4</u>	-				↓	↓	↓
37	<u>114464.9</u>	<u>114465.1</u>	-				<u>1/8/19</u>	<u>0028WS062E</u>	<u>1</u>
38	<u>114150.9</u>	<u>114150.7</u>	-						↓
58	<u>117066.6</u>	<u>117066.5</u>	-				<u>1/8/19</u>		<u>2</u>
59	<u>117784.6</u>	<u>117784.7</u>	-				<u>1/9/19</u>		<u>3</u>
62	<u>117661.0</u>	<u>117661.0</u>	-				<u>1/9/19</u>		<u>4</u>
64	<u>118206.4</u>	<u>118206.2</u>	-						
65	<u>117084.0</u>	<u>117084.1</u>	-				<u>1/8/19</u>	<u>0028WS062E</u>	<u>2</u>
66	<u>118454.9</u>	<u>118455.1</u>	-				<u>1/9/19</u>		<u>3</u>
67	<u>117759.8</u>	<u>117760.0</u>	-				<u>1/10/19</u>		<u>6</u>
68	<u>116804.2</u>	<u>116804.1</u>	-						
Initials: <u>BD</u>	Initials:	Initials:	Initials:						

Final Technician Signature: [Signature]  
Control No. P-SFDP-0002.xls, Effective date: 2/1/2017

Date: 12/14/18

Evaluator signature: [Signature]

Tare Sheet: (check one)

Probes \_\_\_\_\_

47mm Filters

100mm Filters \_\_\_\_\_

O-Ring Pair \_\_\_\_\_

Prepared By: B Davis

Balance ID #: Omni-00637

Thermohyrometer ID #: Omni-00592 Audit Weight ID #/Mass: Omni-00283A / 200 mg

ID #	Date: <u>11/15/18</u>		Date: <u>11/16/18</u>		Date: _____		Date: _____		Date Used	Project Number	Run No.
	Time: <u>1410</u>	Time: <u>0923</u>	Time: _____	Time: _____	RH %: <u>20.6</u>	RH %: <u>19.4</u>	RH %: _____	RH %: _____			
	T (°F): <u>68.4</u>	T (°F): <u>65.3</u>	T (°F): _____	T (°F): _____	Audit: <u>200.1</u>	Audit: <u>200.0</u>	Audit: _____	Audit: _____			
D613	121.1	121.2							11/19/18	0061PS085E	1
D614	121.1	121.3									
D615	120.8	120.8									
D616	120.9	121.0									
D617	120.9	120.9									
D618	120.5	120.5							12/10/18	0135PS022E	1
D619	121.4	121.6									
D620	121.3	121.5									
D621	122.2	122.4									
D622	121.5	121.6									
D623	121.4	121.4							12/17/18	0061PM077E	1
D624	121.2	121.3									
D625	121.3	121.5									
D626	121.4	121.3									
D627	122.2	122.2									
D628	121.5	121.5							1/2/19	0028WS062E	1
D629	120.4	120.4									2
D630	121.1	121.1							1/9/19		3
D631	121.4	121.3									4
D632	120.7	120.5									4
Initials: <u>Ba</u>		Initials: <u>Ba</u>		Initials: _____		Initials: _____					

Final Technician Signature: B Davis  
 Control No. P-SFDP-0002.xls, Effective date: 2/1/2017

Date: 11/16/18

Evaluator signature: L. J. Mory



# THE ORIGINAL Pres-to-Logs®

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### Premium Quality Primera Calidad

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- Economical/Económico

California Proposition 65 WARNING

This product contains wood dust, a substance known to the State of California to cause cancer. Avoid breathing dusts and avoid contact with eyes. Wash thoroughly after use. For more information on Proposition 65, please visit the following website: www.P65Warnings.ca.gov. For more information on this product, please visit our website: www.pres-to-logs.com.

**Manufacturer's Contact Information**

401 Separation A 2028  
 401 Separation A 2028  
 401 Separation A 2028

Address: 401-475-7077  
 Phone: 206-262-6734 / 206-262-6735  
 Fax: 206-262-6736  
 All Orders in US: 1-800-233-3336  
 Email: info@pres-to-logs.com  
 Website: www.pres-to-logs.com  
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**Manufacturer's Contact Analysis**

Net Weight: 40 lbs. (18.18 kg)  
 Moisture: 10%  
 Heating Value: 8,000 BTU/lb.  
 Ash Content: 0.5%  
 Sulfur: 0.01%  
 Chlorine: 0.01%

Pres-to-Logs® Pellet Fuel must be burned in a stove or furnace designed to burn wood pellets. Pres-to-Logs® is not responsible for damages from improper burning of this fuel.

El Combustible en Gránulo Pres-to-Logs® debe utilizarse en una estufa u horno diseñado para gránulos de madera. Pres-to-Logs® no se hace responsable por daños ocasionados por el uso incorrecto de este combustible.



NET WT. 40<sup>36</sup> lbs. (18kg)  
PESO NETO 40<sup>36</sup> lbs. (18kg)





**PFI Densified Fuel Grade: Premium**  
**Mill Registration # 03208**  
**Grade Requirements:**

Bulk Density:	48 lbs/ft <sup>3</sup>
Diameter:	.230-.285 in/5.84-7.25 mm
Durability:	≥96.5
Fines:	≤0.50%
Ash Content (as received):	≤1%
Length:	≤1% >1.5 in.
Moisture:	≤8.0%
Chlorides:	100 ppm

**Manufacturers Guaranteed Analysis:**

Type of Material:	Softwood
Additives:	None
Minimum Higher Heating Value (as received):	8200 BTU/lb.
Other Manufacturers Guarantees:	



**Pres-to-Log**  
**furnace de**  
**is not resp**  
**burning of**

**El Combust**  
**en una est**  
**Pres-to-Log**  
**por el uso**

**NE**  
**PESO**



Twin Ports Testing, Inc.  
 1301 North 3rd Street  
 Superior, WI 54880  
 p: 715-392-7114  
 p: 800-373-2562  
 f: 715-392-7163  
 www.twinportstesting.com

**Report No:** USR:W218-1227-01  
**Issue No:** 1

# Analytical Test Report

**Client:** OMNI-TEST LABORATORIES INC.  
 13327 NE Airport Way  
 Portland, OR 97230  
**Attention:** Finance Department  
**PO No:** 180206

Signed: *Katy Jahr*  
 Katy Jahr  
 Chemistry Lab Supervisor  
 Date of Issue: 1/8/2019  
THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

## Sample Details

**Sample Log No:** W218-1227-01      **Sample Date:**  
**Sample Designation:** 013E-077E      **Sample Time:**  
**Sample Recognized As:** Wood Pellets      **Arrival Date:** 12/27/2018

## Test Results

	METHOD	UNITS	MOISTURE FREE	AS RECEIVED
Moisture Total	ASTM E871	wt. %		6.27
Ash	ASTM D1102	wt. %	0.26	0.25
Volatile Matter	ASTM D3175	wt. %		
Fixed Carbon by Difference	ASTM D3172	wt. %		
Sulfur	ASTM D4239	wt. %	0.006	0.006
SO <sub>2</sub>	Calculated	lb/mmbtu		0.014
Net Cal. Value at Const. Pressure	ISO 1928	GJ/tonne	19.80	18.41
Net Cal. Value at Const. Pressure	ISO 1928	J/g	19803	18408
Gross Cal. Value at Const. Vol.	ASTM E711	J/g	21092	19770
Gross Cal. Value at Const. Vol.	ASTM E711	Btu/lb	9069	8500

Carbon	ASTM D5373	wt. %	51.57	48.33
Hydrogen*	ASTM D5373	wt. %	5.92	5.55
Nitrogen	ASTM D5373	wt. %	< 0.21	< 0.19
Oxygen*	ASTM D3176	wt. %	> 42.04	> 39.40

\*Note: As received values do not include hydrogen and oxygen in the total moisture.

Chlorine	ASTM D6721	mg/kg		
Fluorine	ASTM D3761	mg/kg		
Mercury	ASTM D6722	mg/kg		

Bulk Density	ASTM E873	lbs/ft <sup>3</sup>		
Fines (Less than 1/8")	TPT CH-P-06	wt. %		
Durability Index	Kansas State	PDI		
Sample Above 1.50"	TPT CH-P-06	wt. %		
Maximum Length (Single Pellet)	TPT CH-P-06	inch		
Diameter, Range	TPT CH-P-05	inch		to
Diameter, Average	TPT CH-P-05	inch		
Stated Bag Weight	TPT CH-P-01	lbs		
Actual Bag Weight	TPT CH-P-01	lbs		

**Comments**

## **Section 3**

### **Laboratory Quality Assurance**

- 3.1 - Quality Assurance/Quality Control
- 3.2 - Calibration Data
- 3.3 - Example Calculations

### **3.1 - Quality Assurance/Quality Control**

*OMNI* follows the guidelines of ISO/IEC 17025, “General Requirements for the Competence of Testing and Calibration Laboratories,” and the quality assurance/quality control (QA/QC) procedures found in *OMNI*'s Quality Assurance Manual.

*OMNI*'s scope of accreditation includes, but is not limited to, the following:

- ANSI (American National Standards Institute) for certification of product to safety standards.
- To perform product safety testing by the International Accreditation Service, Inc. (formerly ICBO ES) under accreditation as a testing laboratory designated TL-130.
- To perform product safety testing as a “Certification Organization” by the Standards Council of Canada (SCC).
- Serving as a testing laboratory for the certification of wood heaters by the U.S. Environmental Protection Agency.

This report is issued within the scope of *OMNI*'s accreditation. Accreditation certificates are available upon request.

The manufacturing facilities and quality control system for the production of the Santa Fe-C at Hearth & Home Technologies were evaluated to determine if sufficient to maintain conformance with *OMNI*'s requirements for product certification. *OMNI* has concluded that the manufacturing facilities, processes, and quality control system are adequate to produce the appliance congruous with the standards and model codes to which it was evaluated.

This report shall not be reproduced, except in full, without the written approval of *OMNI-Test Laboratories, Inc.*



### 3.2 - Calibration Data

Equipment for ASTM E2515, ASTM E2779, & EPA Method 28R

ID #	Lab Name/Purpose	Log Name	Attachment Type
132	10 lb Weight	Weight Standard, 10 lb.	Calibration Certificate
283A	Audit Weights	Troemner 21pc Msas Set	Calibration Certificate
335	Sample Box / Dry Gas Meter	Apex Automated Emissions Sampling Box	Calibration Log
336	Sample Box / Dry Gas Meter	Apex Automated Emissions Sampling Box	Calibration Log
410	Microtector	Dwyer Microtector	Calibration Certificate
594	Combustion Gas Analyzer	CAI Gas Analyzer	See Run Sheet
559	Vaneometer	Dwyer Vaneometer	Equipment Record
592	Thermohygrometer	Omega Digital Thermohygrometer	Calibration Log
637	Milligram Balance	Analytical Balance - Mettler - Toledo	Calibration Certificate
650	Barometer/Hygrometer	Digital Barometer	Calibration Certificate

## SCALE WEIGHT CALIBRATION DATA SHEET

Weight to be calibrated: 10 pounds

ID Number: OMNI-00132

Standard Calibration Weight: 10 pounds

ID Number: OMNI-00255

Scale Used: MTW-150K

ID Number: OMNI-00353

Date: 2/23/2018

By: B. Davis

Standard Weight (A) (Lb.)	Weight Verified (B) (Lb.)	Difference (A - B)	% Error
10.0	10.0	0.0	0

\*Acceptable tolerance is 1%.

*This calibration is traceable to NIST using calibrated standard weights.*

Technician signature:  Date: 2/23/18

# Certificate of Calibration



**JJ Calibrations, Inc.**

7007 SE Lake Rd  
Portland, OR 97267-2105  
Phone 503.786.3005  
FAX 503.786.2994

Certificate Number: **685888**

**Omni-Test Laboratories**  
13327 NE Airport Way  
Portland, OR 97230

PO: **180188**  
Order Date: **10/09/2018**  
Authorized By: **N/A**



Calibrated on: **10/26/2018**  
\*Recommended Due: **10/26/2023**  
Environment: **20 °C 57 % RH**  
\* As Received: **Within Tolerance**  
\* As Returned: **Within Tolerance**  
Action Taken: **Calibrated**  
Technician: **139**

Property #: **OMNI-00283A**  
User: **N/A**  
Department: **N/A**  
Make: **Troemner Inc**  
Model: **1mg-100g (Class F)**  
Serial #: **47883**  
Description: **Mass Set, 21pc**  
Procedure: **DCN 500901**  
Accuracy: **Class F**

Remarks: \* Many factors may cause the unit to drift out of calibration before the recommended due date. Any reported error is the absolute value between the reference and the unit. Uncertainties include the effects of the unit.

**This set meets Class F specifications.**  
**Received and returned eight (8) masses in a black case secured by a rubber band.**

### Standards Used

Std ID	Manufacturer	Model	Nomenclature	Due Date	Trace ID
723A	Rice Lake	1mg-200g (Class 0)	Mass Set,	03/23/2019	668240
800A	Sartorius	MSA225W100DI	Analytical Balance	12/11/2018	663857

### Measurement Data

Parameter	Measurement Description	Range Unit	Reference	Min	Max	*Error	UUT	Uncertainty
<b>Before/After</b>								Accredited = ✓
<b>Mass</b>								
Dot	200 mg	200.00030	199.4603	200.5403	0.0500	200.0503 mg	6.2E-01	✓
	1 g	1.0000880	0.9991088	1.0009088	0.0000000	1.000088 g	1E-03	✓
	2 g	2.00001470	1.9989147	2.0011147	0.0003250	2.0003397 g	1.3E-03	✓
	5 g	5.00000840	4.9985084	5.0015084	0.0000400	4.9999684 g	1.7E-03	✓
	10 g	10.0000100	9.998010	10.002010	0.000245	9.999765 g	2.3E-03	✓
Dot	20 g	20.0000140	19.996014	20.004014	0.000990	20.001004 g	4.6E-03	✓
	50 g	49.9999660	49.989966	50.009966	0.000595	49.999371 g	1.1E-02	✓
	100 g	100.000000	99.98000	100.02000	0.00194	99.99806 g	2.3E-02	✓

JJ Calibrations, Inc. certifies that this instrument has been calibrated in accordance with the JJ Calibrations Quality Assurance Manual with the stated procedure using standards that are traceable to the National Institute of Standards and Technology (NIST), or other National Measurement Institutes (NMI's), or by using natural physical constants, intrinsic standards or ratio calibration techniques. The quality system and this certificate are in compliance with ANSI/NCSL Z540-1-1994, ISO/IEC 17025-2005, ISO 10012-1, the ISO 9000 family and QS 9000. The expanded uncertainties of measurements for this calibration are based upon 95% (2 sigma) confidence limits. Unless otherwise stated, a test accuracy ratio (TAR) of 4:1, if achievable, is maintained. The results reported herein apply only to the calibration of the item described above. This report may not be reproduced, except in full, without prior written consent of JJ Calibrations, Inc.  
JJ Calibrations, Inc. quality system has been assessed and accredited to ISO/IEC 17025:2005.

  
Reviewer

3 Issued 10/29/2018 Rev # 15

  
Inspector

# Thermal Metering System Calibration Y Factor

Manufacturer: APEX  
 Model: XC-60-EP  
 Serial Number: 606001  
 OMNI Tracking No.: OMNI-00335  
 Calibrated Orifice:           

<b>Average Gas Meter y Factor</b>
<b>0.986</b>

<b>Orifice Meter dH@</b>
<b>N/A</b>

Calibration Date: 07/17/18  
 Calibrated by: B. Davis  
 Calibration Frequency: Six months  
 Next Calibration Due: 1/17/2019  
 Instrument Range: 1.000 cfm  
 Standard Temp.: 68 oF  
 Standard Press.: 29.92 "Hg  
 Barometric Press., Pb: 30.12 "Hg  
 Signature/Date: *B. Davis* 7/18/2018

### Previous Calibration Comparison

Date	<u>1/17/2018</u>	Acceptable Deviation (5%)	Deviation
y Factor	<u>0.977</u>	0.04885	0.009
Acceptance	<b>Acceptable</b>		

### Current Calibration

Acceptable y Deviation	0.020
Maximum y Deviation	0.008
Acceptable dH@ Deviation	N/A
Maximum dH@ Deviation	N/A
Acceptance	<b>Acceptable</b>

### Reference Standard \*

Standard	Model	Standard Test Meter
Calibrator	S/N	<u>OMNI-00001</u>
	Calib. Date	<u>30-Oct-17</u>
	Calib. Value	<u>0.9977</u> y factor (ref)

Calibration Parameters	Run 1	Run 2	Run 3
Reference Meter Pressure ("H2O), Pr	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>
DGM Pressure ("H2O), Pd	<u>2.00</u>	<u>1.38</u>	<u>1.00</u>
Initial Reference Meter	<u>609.1</u>	<u>615.5</u>	<u>620.8</u>
Final Reference Meter	<u>615.4</u>	<u>620.7</u>	<u>626.7</u>
Initial DGM	<u>0</u>	<u>0</u>	<u>0</u>
Final DGM	<u>6.292</u>	<u>5.245</u>	<u>5.995</u>
Temp. Ref. Meter (°F), Tr	<u>92.0</u>	<u>93.0</u>	<u>91.0</u>
Temperature DGM (°F), Td	<u>92.0</u>	<u>93.0</u>	<u>91.0</u>
Time (min)			
Net Volume Ref. Meter, Vr	6.300	5.200	5.900
Net Volume DGM, Vd	6.292	5.245	5.995
<b>Gas Meter y Factor =</b>	<b>0.994</b>	<b>0.986</b>	<b>0.979</b>
<b>Gas Meter y Factor Deviation (from avg.)</b>	0.008	0.001	0.007
<b>Orifice dH@</b>	N/A	N/A	N/A
<b>Orifice dH@ Deviation (from avg.)</b>	N/A	N/A	N/A

where:

1. Deviation = |Average value for all runs - current run value|
- \*\* 2.  $y = [Vr \times (y \text{ factor (ref)}) \times (Pb + (Pr / 13.6)) \times (Td + 460)] / [Vd \times (Pb + (Pd / 13.6)) \times (Tr + 460)]$
- \*\* 3.  $dH@ = 0.0317 \times Pd / (Pb (Td + 460)) \times [(Tr + 460) \times \text{time}] / Vr]^2$

\* Reference calibration is traceable to NIST through NIST Test # 40674, Kimble ASTM E1272, or NIST traceable laboratory

\*\* Equations come from EPA Method 5

The uncertainty of measurement is  $\pm 0.14 \text{ ft}^3/\text{min}$ . This is based on the reference standard having a TAR (Test Accuracy Ratio) of at least 4:1.

## DIFFERENTIAL PRESSURE GAUGE CALIBRATION DATA SHEET

Instrument to be calibrated: Pressure Transducer

Maximum Range: 0-2" WC ID Number: OMNI-00335

Calibration Instrument: Digital Manometer ID Number: OMNI-00395

Date: 7/18/2018 By: B. Davis

**This form is to be used only in conjunction with Standard Procedure C-SPC.**

Range of Calibration Point ("WC)	Digital Manometer Input ("WC)	Pressure Gauge Response ("WC)	Difference (Input - Response)	% Error of Full Span*
0-20% Max. Range 0 - 0.4	0.183	0.183	0.0	0.0
20-40% Max. Range 0.4 - 0.8	0.705	0.704	0.001	0.05
40-60% Max. Range 0.8 - 1.2	1.019	1.016	0.003	0.15
60-80% Max. Range 1.2 - 1.6	1.394	1.391	0.003	0.15
80-100% Max. Range 1.6 - 2.0	1.980	1.978	0.002	0.10

\*Acceptable tolerance is 4%.

The uncertainty of measurement is  $\pm 0.4$ " WC. This is based on the reference standard having a TAR (Test Accuracy Ratio) of at least 4:1.

Technician signature:  Date: 7/18/18

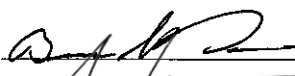

Reviewed by:  Date: 7/20/18

Temperature Calibration EPA Method 28R, ASTM 2515							
BOOTH:		TEMPERATURE MONITOR TYPE:				EQUIPMENT NUMBER:	
Mobile		National Instruments Logger				00335, 00336	
REFERENCE METER EQUIPMENT NUMBER: 00373				Calibration Due Date: 8/02/17			
CALIBRATION PERFORMED BY:			DATE:		AMBIENT TEMPERATURE:		BAROMETRIC PRESSURE:
B. Davis			7/17/18		76		30.12
Input Temperature (F)	Ambient	Meter A	Meter B	Filter A	Filter B	Tunnel	FB Interior
0	0	1	1	1	1	0	0
100	100	101	101	100	100	100	100
300	300	300	300	300	300	300	300
500	500	501	500	500	500	500	500
700	700	700	700	700	700	700	700
1000	1000	1001	1000	1000	1000	1000	1000

Input (F)	FB Top	FB Bottom	FB Back	FB Left	FB Right	Imp A	Imp B	Cat	Stack
0	0	0	0	0	0	1	1	1	0
100	100	100	100	100	100	101	101	101	100
300	300	300	300	300	300	300	300	300	300
500	500	500	500	500	500	500	500	500	500
700	700	700	700	700	700	700	700	700	700
1000	1000	1000	1000	1000	1000	1000	1000	1000	1000

1500  
2000

1500  
2000

Technician signature:  Date: 7/17/18  
 Reviewed By:  Date: 7/20/18

# Thermal Metering System Calibration Y Factor

Manufacturer: APEX  
 Model: XC-60-EP  
 Serial Number: 606002  
 OMNI Tracking No.: OMNI-00336  
 Calibrated Orifice:           

<b>Average Gas Meter y Factor</b>
<b>0.985</b>

<b>Orifice Meter dH@</b>
<b>N/A</b>

Calibration Date: 07/17/18  
 Calibrated by: B. Davis  
 Calibration Frequency: Six months  
 Next Calibration Due: 1/17/2019  
 Instrument Range: 1.000 cfm  
 Standard Temp.: 68 oF  
 Standard Press.: 29.92 "Hg  
 Barometric Press., Pb: 30.12 "Hg  
 Signature/Date: *B. Davis* 1/17/2018

### Previous Calibration Comparison

Date	<u>1/17/2018</u>	Acceptable Deviation (5%)	Deviation
y Factor	<u>0.979</u>	0.04895	0.006
Acceptance	<b>Acceptable</b>		

### Current Calibration

Acceptable y Deviation	0.020
Maximum y Deviation	0.003
Acceptable dH@ Deviation	N/A
Maximum dH@ Deviation	N/A
Acceptance	<b>Acceptable</b>

### Reference Standard \*

Standard	Model	Standard Test Meter
Calibrator	S/N	<u>OMNI-00001</u>
	Calib. Date	<u>30-Oct-17</u>
	Calib. Value	<u>0.9977</u> y factor (ref)

Calibration Parameters	Run 1	Run 2	Run 3
Reference Meter Pressure ("H2O), Pr	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>
DGM Pressure ("H2O), Pd	<u>1.91</u>	<u>1.20</u>	<u>0.80</u>
Initial Reference Meter	<u>572.4</u>	<u>577.5</u>	<u>582.9</u>
Final Reference Meter	<u>577.4</u>	<u>582.604</u>	<u>588.1</u>
Initial DGM	<u>0</u>	<u>0</u>	<u>0</u>
Final DGM	<u>5.061</u>	<u>5.245</u>	<u>5.34</u>
Temp. Ref. Meter (°F), Tr	<u>86.0</u>	<u>86.0</u>	<u>78.0</u>
Temperature DGM (°F), Td	<u>90.0</u>	<u>95.0</u>	<u>86.0</u>
Time (min)	<u>23.5</u>	<u>30.0</u>	<u>37.8</u>
Net Volume Ref. Meter, Vr	5.000	5.104	5.200
Net Volume DGM, Vd	5.061	5.245	5.34
<b>Gas Meter y Factor =</b>	<b>0.988</b>	<b>0.984</b>	<b>0.984</b>
<b>Gas Meter y Factor Deviation (from avg.)</b>	0.003	0.001	0.001
<b>Orifice dH@</b>	N/A	N/A	N/A
<b>Orifice dH@ Deviation (from avg.)</b>	N/A	N/A	N/A

where:

1. Deviation = |Average value for all runs - current run value|
- \*\* 2.  $y = [V_r \times (y \text{ factor (ref)}) \times (P_b + (P_r / 13.6)) \times (T_d + 460)] / [V_d \times (P_b + (P_d / 13.6)) \times (T_r + 460)]$
- \*\* 3.  $dH@ = 0.0317 \times P_d / (P_b (T_d + 460)) \times [(T_r + 460) \times \text{time}] / V_r]^2$

\* Reference calibration is traceable to NIST through NIST Test # 40674, Kimble ASTM E1272, or NIST traceable laboratory

\*\* Equations come from EPA Method 5

The uncertainty of measurement is  $\pm 0.14 \text{ ft}^3/\text{min}$ . This is based on the reference standard having a TAR (Test Accuracy Ratio) of at least 4:1.

## DIFFERENTIAL PRESSURE GAUGE CALIBRATION DATA SHEET

Instrument to be calibrated: Pressure Transducer

Maximum Range: 0-2" WC ID Number: OMNI-00336

Calibration Instrument: Digital Manometer ID Number: OMNI-00395

Date: 7/18/18 By: B. Davis

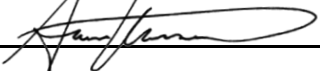
**This form is to be used only in conjunction with Standard Procedure C-SPC.**

Range of Calibration Point ("WC)	Digital Manometer Input ("WC)	Pressure Gauge Response ("WC)	Difference (Input - Response)	% Error of Full Span*
0-20% Max. Range 0 - 0.4	0.045	0.041	0.003	0.20
20-40% Max. Range 0.4 - 0.8	0.446	0.447	0.001	0.05
40-60% Max. Range 0.8 - 1.2	0.900	0.901	0.001	0.05
60-80% Max. Range 1.2 - 1.6	1.589	1.592	0.003	0.20
80-100% Max. Range 1.6 - 2.0	1.902	1.908	0.006	0.30

\*Acceptable tolerance is 4%.

The uncertainty of measurement is  $\pm 0.4$ " WC. This is based on the reference standard having a TAR (Test Accuracy Ratio) of at least 4:1.

Technician signature:  Date: 7/18/18

Reviewed by:  Date: 7/20/18




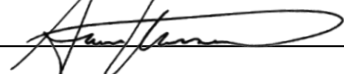
Temperature Calibration EPA Method 28R, ASTM 2515								
BOOTH:		TEMPERATURE MONITOR TYPE:				EQUIPMENT NUMBER:		
Mobile		National Instruments Logger				00335, 00336		
REFERENCE METER EQUIPMENT NUMBER: 00373				Calibration Due Date: 8/02/17				
CALIBRATION PERFORMED BY:			DATE:		AMBIENT TEMPERATURE:		BAROMETRIC PRESSURE:	
B. Davis			7/17/18		76		30.12	
Input Temperature (F)	Ambient	Meter A					Tunnel	FB Interior
			Meter B	Filter A	Filter B			
0	0	1	1	1	1	0	0	
100	100	101	101	100	100	100	100	
300	300	300	300	300	300	300	300	
500	500	501	500	500	500	500	500	
700	700	700	700	700	700	700	700	
1000	1000	1001	1000	1000	1000	1000	1000	

Input (F)	FB Top	FB Bottom	FB Back	FB Left	FB Right	Imp A	Imp B	Cat	Stack
0	0	0	0	0	0	1	1	1	0
100	100	100	100	100	100	101	101	101	100
300	300	300	300	300	300	300	300	300	300
500	500	500	500	500	500	500	500	500	500
700	700	700	700	700	700	700	700	700	700
1000	1000	1000	1000	1000	1000	1000	1000	1000	1000

1500  
2000

1500  
2000

Technician signature:  Date: 7/17/18

Reviewed By:  Date: 7/20/18

# Certificate of Calibration

Certificate Number: **686722**



**JJ Calibrations, Inc.**  
 7007 SE Lake Rd  
 Portland, OR 97267-2105  
 Phone 503.786.3005  
 FAX 503.786.2994

**Omni-Test Laboratories**  
 13327 NE Airport Way  
 Portland, OR 97230



PO: **180192**  
 Order Date: **10/22/2018**  
 Authorized By: **N/A**  
 Calibrated on: **10/30/2018**  
 \*Recommended Due: **10/30/2019**  
 Environment: **22 °C 44 % RH**  
 \* As Received: **Limited**  
 \* As Returned: **Limited**  
 Action Taken: **Calibrated**  
 Technician: **111**

Property #: **OMNI-00410**  
 User: **N/A**  
 Department: **N/A**  
 Make: **Dwyer**  
 Model: **1430**  
 Serial #: **OMNI-00410**  
 Description: **Microtector**  
 Procedure: **DCN 500908**  
 Accuracy: **±0.00025" WC**

Remarks: \* Many factors may cause the unit to drift out of calibration before the recommended due date. Any reported error is the absolute value between the reference and the unit. Uncertainties include the effects of the unit.

Previous limitation of micrometer head calibrated only continued. .001" reading micrometer head ±.001" (LSD) tolerance applied.

### Standards Used

Std ID	Manufacturer	Model	Nomenclature	Due Date	Trace ID
541A	Select	E8FED2	Gage Block Set, 8pc	12/18/2018	663864

### Measurement Data

Parameter	Measurement Description	Range	Unit	Reference	Min	Max	*Error	UUT	Uncertainty
<b>Before/After Length</b>			Inch	0.1300	0.129	0.131	0.001	0.129 Inch	1.1E-03 ✓
			Inch	0.3850	0.384	0.386	0.001	0.384 Inch	1.1E-03 ✓
			Inch	0.6150	0.614	0.616	0.001	0.614 Inch	1.1E-03 ✓
			Inch	0.8700	0.869	0.871	0.001	0.869 Inch	1.1E-03 ✓
			Inch	1.0000	0.999	1.001	0.001	0.999 Inch	1.1E-03 ✓

JJ Calibrations, Inc. certifies that this instrument has been calibrated in accordance with the JJ Calibrations Quality Assurance Manual with the stated procedure using standards that are traceable to the National Institute of Standards and Technology (NIST), or other National Measurement Institutes (NMI's), or by using natural physical constants, intrinsic standards or ratio calibration techniques. The quality system and this certificate are in compliance with ANSI/NCCL Z540-1-1994, ISO/IEC 17025-2005, ISO 10012-1, the ISO 9000 family and QS 9000. The expanded uncertainties of measurements for this calibration are based upon 95% (2 sigma) confidence limits. Unless otherwise stated, a test accuracy ratio (TAR) of 4:1, if achievable, is maintained. The results reported herein apply only to the calibration of the item described above. This report may not be reproduced, except in full, without prior written consent of JJ Calibrations, Inc.  
 JJ Calibrations, Inc. quality system has been assessed and accredited to ISO/IEC 17025:2005.

  
 Reviewer

3 Issued 10/31/2018 Rev # 15

  
 Inspector

# ZRE

# NDIR/O<sub>2</sub>



# USER'S

# MANUAL



1312 West Grove Avenue  
Orange, CA 92865-4134  
Phone: 714-974-5560 Fax: 714-921-2531  
[www.gasanalyzers.com](http://www.gasanalyzers.com)



## VWR Temperature Hygrometer Calibration Procedure and Data Sheet

Frequency: Every Two Years

Step 1: Locate NIST traceable standard.

Step 2: Place unit to be calibrated, tracking No. OMNI-00592, inside OMNI desiccate box on the same shelf with the NIST traceable standard.

Step 3: After a period of not less than four hours record the temperature and humidity of both units in the spaces provide below.

Step 4: If the unit to be calibrated matches the NIST standard within  $\pm 4\%$ , it is acceptable. If not, the unit needs to be sent to a repair company or replaced.

### Verification Data:

Date: 1/8/2018 Technician: B Davis

Time in desiccate: 0910 Recording time: 1335

NIST Standard Temperature: 28.3 °F NIST Standard Humidity: 74.5

Test Unit Temperature Reading: 25.4 °F Test Unit Humidity Reading: 74.3

Test unit OMNI- 00592 is X or was not      within acceptable limits.

Technician Signature: B Davis

Comments: Full scale of OMNI-00592 is 90% RH, with a difference of 2.9 this gives a error percentage of 3.22%. This value is within the allowable 4%.

---

---

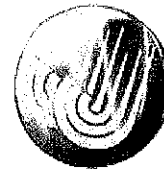
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# Certificate of Calibration

Certificate Number: **681844**



**JJ Calibrations, Inc.**  
 7007 SE Lake Rd  
 Portland, OR 97267-2105  
 Phone 503.786.3005  
 FAX 503.786.2994

**Omni-Test Laboratories**  
 13327 NE Airport Way  
 Portland, OR 97230

OnSite

PO: **180176**  
 Order Date: **08/07/2018**  
 Authorized By: **N/A**



Calibrated on: **08/07/2018**  
 \*Recommended Due: **02/07/2019**  
 Environment: **22 °C 38 % RH**  
 \* As Received: **Out of Tolerance**  
 \* As Returned: **Within Tolerance**  
 Action Taken: **Adjusted**  
 Technician: **III**

Property #: **OMNI-00637**  
 User: **N/A**  
 Department: **N/A**  
 Make: **Mettler Toledo**  
 Model: **MS104TS/00**  
 Serial #: **B729400181**  
 Description: **Analytical Scale, 120g**  
 Procedure: **DCN 500887**  
 Accuracy: **±0.0005g**

Remarks: \* Many factors may cause the unit to drift out of calibration before the recommended due date. Any reported error is the absolute value between the reference and the unit. Uncertainties include the effects of the unit.

Balance went into over range at max capacity. Adjusted balance to bring all points back into tolerance.

### Standards Used

Std ID	Manufacturer	Model	Nomenclature	Due Date	Trace ID
256A	Rice Lake	W0133K	Mass Set,	05/30/2019	660578

### Parameter

### Measurement Data

Measurement Description	Range Unit	Reference	Min	Max	*Error	UUT	Uncertainty
<b>Before</b>							Accredited = ✓
<b>Force</b>							
	g	10.00000	9.9995	10.0005	0.0004	10.0004 g	5.7E-04 ✓
	g	30.00000	29.9995	30.0005	0.0004	30.0004 g	5.7E-04 ✓
	g	60.00000	59.9995	60.0005	0.0004	60.0004 g	5.7E-04 ✓
	g	90.00000	89.9995	90.0005	0.0005	90.0005 g	5.7E-04 ✓
	g	120.00000	119.9995	120.0005	120.0000	0.0000 g	5.7E-04 ✓
<b>After</b>							Accredited = ✓
	g	10.00000	9.9995	10.0005	0.0000	10.0000 g	5.7E-04 ✓
	g	30.00000	29.9995	30.0005	0.0001	29.9999 g	5.7E-04 ✓
	g	60.00000	59.9995	60.0005	0.0001	60.0001 g	5.7E-04 ✓
	g	90.00000	89.9995	90.0005	0.0002	89.9998 g	5.7E-04 ✓
	g	120.00000	119.9995	120.0005	0.0002	119.9998 g	5.7E-04 ✓

JJ Calibrations, Inc. certifies that this instrument has been calibrated in accordance with the JJ Calibrations Quality Assurance Manual with the stated procedure using standards that are traceable to the National Institute of Standards and Technology (NIST), or other National Measurement Institutes (NMI's), or by using natural physical constants, intrinsic standards or ratio calibration techniques. The quality system and this certificate are in compliance with ANSI/NCCL Z540-1-1994, ISO/IEC 17025-2005, ISO 10012-1, the ISO 9000 family and QS 9000. The expanded uncertainties of measurements for this calibration are based upon 95% (2 sigma) confidence limits. Unless otherwise stated, a test accuracy ratio (TAR) of 4:1, if achievable, is maintained. The results reported herein apply only to the calibration of the item described above. This report may not be reproduced, except in full, without prior written consent of JJ Calibrations, Inc.  
 JJ Calibrations, Inc. quality system has been assessed and accredited to ISO/IEC 17025:2005.

Reviewer:

3 Issued 08/09/2018 Rev # 15

Inspector:



Calibration complies with ISO/IEC 17025, ANSI/NCSL Z540-1, and 9001



Cert. No.: 6530-9263396

Traceable® Certificate of Calibration for Digital Barometer

Manufactured for and distributed by : Control Company "Drawer 58307,Houston,TX,77258,USA"

Instrument Identification:

Model: 6530,

S/N: 181062211

Manufacturer: Control Company

Standards/Equipment:

Table with 4 columns: Description, Serial Number, Due Date, NIST Traceable Reference. Rows include Digital Barometer, Digital Thermometer, Chilled Mirror Hygrometer, and Climate Chamber.

Certificate Information:

Technician: 57

Procedure: CAL-31

Cal Date: 26 Feb 2018

Cal Due Date: 26 Feb 2020

Test Conditions: 54.9%RH 22.83°C 1023mBar

Calibration Data: (New Instrument)

Table with 11 columns: Unit(s), Nominal, As Found, In Tol, Nominal, As Left, In Tol, Min, Max, ±U, TUR. Rows show calibration data for %RH, °C, and mb/hPa.

This certificate indicates Traceability to standards provided by (NIST) National Institute of Standards and Technology and/or a National Standards Laboratory.

A Test Uncertainty Ratio of at least 4:1 is maintained unless otherwise stated and is calculated using the expanded measurement uncertainty. Uncertainty evaluation includes the instrument under test and is calculated in accordance with the ISO "Guide to the Expression of Uncertainty in Measurement : (GUM). The uncertainty represents an expanded uncertainty using a coverage factor k=2 to approximate a 95% confidence level.

Nominal=Standard's Reading; As Left=Instrument's Reading; In Tol=In Tolerance; Min/Max=Acceptance Range; ± U=Expanded Measurement Uncertainty; TUR=Test Uncertainty Ratio; Accuracy=±(Max-Min)/2; Min=As Left Nominal(Rounded) - Tolerance; Max= As Left Nominal(Rounded) + Tolerance;

Nicol Rodriguez

Nicol Rodriguez, Quality Manager

Aaron Justice

Aaron Justice, Technical Manager

Maintaining Accuracy:

In our opinion once calibrated your Digital Barometer should maintain its accuracy. There is no exact way to determine how long calibration will be maintained. Digital Barometer change little, if any at all, but can be affected by aging, temperature, shock, and contamination.

Recalibration:

For factory calibration and re-certification traceable to National Institute of Standards and Technology contact Control Company.

CONTROL COMPANY 12554 Galveston RD Suite B230 Webster TX USA 77598 Phone 281 482-1714 Fax 281 482-9448 sales@control3.com www.control3.com

Control Company is an ISO/IEC 17025:2005 Calibration Laboratory Accredited by (A2LA) American Association for Laboratory Accreditation, Certificate No. 1750.01. Control Company is ISO 9001:2008 Quality Certified by DNV GL, Certificate No. CERT-01805-2006-AQ-HOU-RvA. International Laboratory Accreditation Cooperation (ILAC) - Multilateral Recognition Arrangement (MRA).

### **3.3 - Example Calculations**



## Equations and Sample Calculations - ASTM E2779 & E2515

Manufacturer:	Hearth & Home
Model:	Santa Fe
Run:	1
Category:	Integrated

Equations used to calculate the parameters listed below are described in this appendix. Sample calculations are provided for each equation. The raw data and printout results from a sample run are also provided for comparison to the sample calculations.

$M_{Bdb}$  - Weight of test fuel burned during test run, dry basis, kg

$M_{BSidb}$  - Weight of test fuel burned during test run segment  $i$ , dry basis, kg

BR - Average dry burn rate over full integrated test run, kg/hr

$BR_{Si}$  - Average dry burn rate over test run segment  $i$ , kg/hr

$V_s$  - Average gas velocity in the dilution tunnel, ft/sec

$Q_{sd}$  - Average gas flow rate in dilution tunnel, dscf/hr

$V_{m(std)}$  - Volume of Gas Sampled Corrected to Dry Standard Conditions, dscf

$m_n$  - Total Particulate Matter Collected, mg

$C_s$  - Concentration of particulate matter in tunnel gas, dry basis, corrected to standard conditions, g/dscf

$E_T$  - Total Particulate Emissions, g

PR - Proportional Rate Variation

$PM_R$  - Average particulate emissions for full integrated test run, g/hr

$PM_F$  - Average particulate emission factor for full integrated test run, g/dry kg of fuel burned

## Equations and Sample Calculations - ASTM E2779 & E2515

$M_{Bdb}$  - Weight of test fuel burned during test run, dry basis, kg

ASTM E2779 equation (1)

$$M_{Bdb} = (M_{Swb} - M_{Ewb})(100/(100 + FM))$$

Where,

- FM = average fuel moisture of test fuel, % dry basis
- $M_{Swb}$  = weight of test fuel in hopper at start of test run, wet basis, kg
- $M_{Ewb}$  = weight of test fuel in hopper at end of test run, wet basis, kg

Sample Calculation:

6.27 %

$$M_{Swb} = 35.7 \text{ lbs}$$

$$M_{Ewb} = 26.0 \text{ lbs}$$

0.4536 = Conversion factor from lbs to kg

$$M_{Bdb} = [(35.7 \times 0.4536) - (26.0 \times 0.4536)] (100/(100 + 6.27))$$

$$M_{Bdb} = 4.14 \text{ kg}$$

## Equations and Sample Calculations - ASTM E2779 & E2515

$M_{BSidb}$  - Weight of test fuel burned during test run segment  $i$ , dry basis, kg

ASTM E2779 equation (2)

$$M_{BSidb} = (M_{SSiwb} - M_{ESiwb})(100/(100 + FM))$$

Where,

$M_{SSiwb}$  = weight of test fuel in hopper at start of test run segment  $i$ , wet basis, kg

$M_{ESiwb}$  = weight of test fuel in hopper at end of test run segment  $i$ , wet basis, kg

Sample Calculation (from medium burn rate segment):

$$FM = 6.27 \%$$

$$M_{SSiwb} = 32.1 \text{ lbs}$$

$$M_{ESiwb} = 29.3 \text{ lbs}$$

0.4536 = Conversion factor from lbs to kg

$$M_{BSidb} = [(32.1 \times 0.4536) - (29.3 \times 0.4536)] (100/(100 + 6.27))$$

$$M_{BSidb} = 1.2 \text{ kg}$$

## Equations and Sample Calculations - ASTM E2779 & E2515

BR - Average dry burn rate over full integrated test run, kg/hr

ASTM E2779 equation (3)

$$BR = \frac{60 M_{Bdb}}{\theta}$$

Where,

$\theta$  = Total length of full intergrated test run, min

Sample Calculation:

$$M_{Bdb} = 4.14 \quad \text{kg}$$

$$\theta = 360 \quad \text{min}$$

$$BR = \frac{60 \times 4.14}{360}$$

$$BR = \mathbf{0.69} \quad \text{kg/hr}$$

## Equations and Sample Calculations - ASTM E2779 & E2515

$BR_{Si}$  - Average dry burn rate over test run segment  $i$ , kg/hr

ASTM E2779 equation (4)

$$BR_{Si} = \frac{60 M_{BSidb}}{\theta_{Si}}$$

Where,

$$\theta_{Si} = \text{Total length of test run segment } i, \text{ min}$$

Sample Calculation (from medium burn rate segment):

$$M_{BSidb} = 1.20 \text{ kg}$$

$$\theta = 120 \text{ min}$$

$$BR = \frac{60 \times 1.2}{120}$$

$$BR = 0.60 \text{ kg/hr}$$

## Equations and Sample Calculations - ASTM E2779 & E2515

$V_s$  - Average gas velocity in the dilution tunnel, ft/sec

ASTM E2515 equations (9)

$$V_s = F_p \times K_p \times C_p \times (\sqrt{\Delta P})_{avg} \times \sqrt{\frac{T_s}{P_s \times M_s}}$$

Where:

- $F_p$  = djustment factor for center of tunnel pitot tube placement,  $F_p = \frac{V_{strav}}{V_{scent}}$ , ASTM E2515 Equation (1)
- $V_{scent}$  = Dilution tunnel velocity calculated after the multi-point pitot traverse at the center, ft/sec
- $V_{strav}$  = Dilution tunnel velocity calculated after the multi-point pitot traverse, ft/sec
- $k_p$  = Pitot tube constant, 85.49
- $C_p$  = Pitot tube coefficient: 0.99, unitless
- $\Delta P^*$  = Velocity pressure in the dilution tunnel, in H<sub>2</sub>O
- $T_s$  = Absolute average gas temperature in the dilution tunnel, °R; (°R = °F + 460)
- $P_s$  = Absolute average gas static pressure in diluion tunnel, =  $P_{bar} + P_g$ , in Hg
- $P_{bar}$  = Barometric pressure at test site, in. Hg
- $P_g$  = Static pressure of tunnel, in. H<sub>2</sub>O; (in Hg = in H<sub>2</sub>O/13.6)
- $M_s$  = \*\*The dilution tunnel wet molecular weight;  $M_s = 28.78$  assuming a dry weight of 29 lb/lb-mole

Sample calculation:

$$F_p = \frac{14.52}{16.33} = 0.889$$

$$V_s = 0.889 \times 85.49 \times 0.99 \times 0.234 \times \left( \frac{87.4 + 460}{30.04 + \frac{-0.24}{13.6}} \times 28.78 \right)^{1/2}$$

$$V_s = 13.99 \text{ ft/s}$$

\*The ASTM test standard mistakenly has the square root of the average delta p instead of the average of the square root of delta p. The current EPA Method 2 is also incorrect. This was verified by Mike Toney at EPA.

\*\*The ASTM test standard mistakenly identifies  $M_s$  as the dry molecular weight. It should be the wet molecular weight as indicated in EPA Method 2.

## Equations and Sample Calculations - ASTM E2779 & E2515

$Q_{sd}$  - Average gas flow rate in dilution tunnel, dscf/hr

ASTM E2515 equation (3)

$$Q_{sd} = 3600 \times (1 - B_{ws}) \times v_s \times A \times \frac{T_{std}}{T_s} \times \frac{P_s}{P_{std}}$$

Where:

3600	=	Conversion from seconds to hours (ASTM method uses 60 to convert in minutes)
$B_{ws}$	=	Water vapor in gas stream, proportion by volume; assume 2%
A	=	Cross sectional area of dilution tunnel, ft <sup>2</sup>
$T_{std}$	=	Standard absolute temperature, 528 °R
$P_s$	=	Absolute average gas static pressure in dilution tunnel, = $P_{bar} + P_g$ , in Hg
$T_s$	=	Absolute average gas temperature in the dilution tunnel, °R; (°R = °F + 460)
$P_{std}$	=	Standard absolute pressure, 29.92 in Hg

Sample calculation:

$$Q_{sd} = 3600 \times (1 - 0.02) \times 13.99 \times 0.1963 \times \frac{528}{87.4 + 460} \times \frac{30.04 + \frac{-0.24}{13.6}}{29.92}$$

$$Q_{sd} = 9384.0 \text{ dscf/hr}$$

## Equations and Sample Calculations - ASTM E2779 & E2515

$V_{m(std)}$  - Volume of Gas Sampled Corrected to Dry Standard Conditions, dscf

ASTM E2515 equation (6)

$$V_{m(std)} = K_1 \times V_m \times Y \times \frac{P_{bar} + \left( \frac{\Delta H}{13.6} \right)}{T_m}$$

Where:

- $K_1$  = 17.64 °R/in. Hg
- $V_m$  = Volume of gas sample measured at the dry gas meter, dcf
- $Y$  = Dry gas meter calibration factor, dimensionless
- $P_{bar}$  = Barometric pressure at the testing site, in. Hg
- $\Delta H$  = Average pressure differential across the orifice meter, in. H<sub>2</sub>O
- $T_m$  = Absolute average dry gas meter temperature, °R

Sample Calculation:

Using equation for Train 1:

$$V_{m(std)} = 17.64 \times 57.930 \times 0.986 \times \frac{\left( 30.04 + \frac{1.34}{13.6} \right)}{\left( 77.9 + 460 \right)}$$

$$V_{m(std)} = \mathbf{56.465} \text{ dscf}$$

Using equation for Train 2:

$$V_{m(std)} = 17.64 \times 58.913 \times 0.985 \times \frac{\left( 30.04 + \frac{1.09}{13.6} \right)}{\left( 78.5 + 460 \right)}$$

$$V_{m(std)} = \mathbf{57.259} \text{ dscf}$$

Using equation for ambient train:

$$V_{m(std)} = 17.64 \times 0.00 \times 0 \times \frac{\left( 30.04 + \frac{0.00}{13.6} \right)}{\left( 67.6 + 460 \right)}$$

$$V_{m(std)} = \mathbf{0.000} \text{ dscf}$$



## Equations and Sample Calculations - ASTM E2779 & E2515

$m_n$  - Total Particulate Matter Collected, mg

ASTM E2515 Equation (12)

$$m_n = m_p + m_f + m_g$$

Where:

$m_p$  = mass of particulate matter from probe, mg

$m_f$  = mass of particulate matter from filters, mg

$m_g$  = mass of particulate matter from filter seals, mg

Sample Calculation:

Using equation for Train 1 (first hour):

$$m_n = 0.0 + 2.4 + 0.0$$

$$m_n = 2.4 \text{ mg}$$

Using equation for Train 1 (remainder):

$$m_n = 0.1 + 3.7 + 0.5$$

$$m_n = 4.3 \text{ mg}$$

Train 1 Aggregate = **6.7 mg**

Using equation for Train 2:

$$m_n = 0.1 + 6.1 + 0.4$$

$$m_n = \mathbf{6.6 \text{ mg}}$$

## Equations and Sample Calculations - ASTM E2779 & E2515

$C_s$  - Concentration of particulate matter in tunnel gas, dry basis, corrected to standard conditions, g/dscf

ASTM E2515 equation (13)

$$C_s = K_2 \times \frac{m_n}{V_{m(\text{std})}}$$

Where:

$K_2$  = Constant, 0.001 g/mg

$m_n$  = Total mass of particulate matter collected in the sampling train, mg

$V_{m(\text{std})}$  = Volume of gas sampled corrected to dry standard conditions, dscf

Sample calculation:

For Train 1:

$$C_s = 0.001 \times \frac{6.7}{56.47}$$

$$C_s = 1.19\text{E-}04 \text{ g/dscf}$$

For Train 2

$$C_s = 0.001 \times \frac{6.6}{57.26}$$

$$C_s = 1.15\text{E-}04 \text{ g/dscf}$$

For Ambient Train

$$C_r = 0.001 \times \frac{0.0}{0.00}$$

$$C_r = 0.000000 \text{ g/dscf}$$

## Equations and Sample Calculations - ASTM E2779 & E2515

$E_T$  - Total Particulate Emissions, g

ASTM E2515 equation (15)

$$E_T = (c_s - c_r) \times Q_{std} \times \theta$$

Where:

- $C_s$  = Concentration of particulate matter in tunnel gas, g/dscf
- $C_r$  = Concentration particulate matter room air, g/dscf
- $Q_{std}$  = Average dilution tunnel gas flow rate, dscf/hr
- $\theta$  = Total time of test run, minutes

Sample calculation:

For Train 1

$$E_T = ( \underline{0.000119} - 0.000000 ) \times \underline{9384.0} \times \underline{360} / 60$$
$$E_T = \underline{6.68} \text{ g}$$

For Train 2

$$E_T = ( \underline{0.000115} - 0.000000 ) \times \underline{9384.0} \times \underline{360} / 60$$
$$E_T = \underline{6.49} \text{ g}$$

Average

$$E = \underline{6.59} \text{ g}$$

Total emission values shall not differ by more than 7.5% from the total average emissions

$$7.5\% \text{ of the average} = \underline{0.49}$$

$$\text{Train 1 difference} = \underline{0.10}$$

$$\text{Train 2 difference} = \underline{0.10}$$

## Equations and Sample Calculations - ASTM E2779 & E2515

### PR - Proportional Rate Variation

ASTM E2515 equation (16)

$$PR = \left[ \frac{\theta \times V_{mi} \times V_s \times T_m \times T_{si}}{\theta_i \times V_m \times V_{si} \times T_{mi} \times T_s} \right] \times 100$$

Where:

- $\theta$  = Total sampling time, min
- $\theta_i$  = Length of recording interval, min
- $V_{mi}$  = Volume of gas sample measured by the dry gas meter during the "ith" time interval, dcf
- $V_m$  = Volume of gas sample as measured by dry gas meter, dcf
- $V_{si}$  = Average gas velocity in the dilution tunnel during the "ith" time interval, ft/sec
- $V_s$  = Average gas velocity in the dilution tunnel, ft/sec
- $T_{mi}$  = Absolute average dry gas meter temperature during the "ith" time interval, °R
- $T_m$  = Absolute average dry gas meter temperature, °R
- $T_{si}$  = Absolute average gas temperature in the dilution tunnel during the "ith" time interval, °R
- $T_s$  = Absolute average gas temperature in the dilution tunnel, °R

Sample calculation (for the first 1 minute interval of Train 1):

$$PR = \left( \frac{360 \times 0.145 \times 13.99 \times (95.0 + 460) \times (77.9 + 460)}{1 \times 57.93 \times 14.02 \times (87.4 + 460) \times (70.0 + 460)} \right) \times 100$$

$$PR = \underline{93} \%$$

## Equations and Sample Calculations - ASTM E2779 & E2515

$PM_R$  - Average particulate emissions for full integrated test run, g/hr

ASTM E2779 equation (5)

$$PM_R = 60 (E_T / \theta)$$

Where,

$E_T$  = Total particulate emissions, grams

$\theta$  = Total length of full integrated test run, min

Sample Calculation:

$$E_T \text{ (Dual train average)} = 6.59 \text{ g}$$

$$\theta = 360 \text{ min}$$

$$PM_R = 60 \times ( 6.59 / 360 )$$

$$PM_R = 1.10 \text{ g/hr}$$

## Equations and Sample Calculations - ASTM E2779 & E2515

$PM_F$  - Average particulate emission factor for full integrated test run, g/dry kg of fuel burned

ASTM E2779 equation (6)

$$PM_F = E_T / M_{Bdb}$$

Where,

$E_T$  = Total particulate emissions, grams

$M_{Bdb}$  = Weight of test fuel burned during test run, dry basis, kg

Sample Calculation:

$$E_T \text{ (Dual train average)} = 6.59 \text{ g}$$

$$M_{Bdb} = 4.14 \text{ kg}$$

$$PM_F = (6.59 / 4.14)$$

$$PM_F = 1.59 \text{ g/kg}$$

*Hearth & Home Technologies, Inc.  
Model: Santa Fe-C  
Project: 0061PM077E*

# **Appendix A – Labeling & Owner’s Manual**

## **Santa Fe-C, Santa Fe I-C**

## **Castile-C, Castile I-C**

**ATTENTION: CHAUD LORS DE L'OPERATION. NE PAS TOUCHER. GARDEZ LES ENFANTS ET LES VETEMENTS LOIN DE L'ESPACE DESIGNÉ DE L'INSTALLATION. LE CONTACT PEUT CAUSER DES BRÛLURES À LA PEAU. VOIR L'ÉTIQUETTE ET LES INSTRUCTIONS. Opérez cet appareil avec le couvercle de la trémie fermé. Le défaut de ne pas suivre les instructions peut résulter, sous certaines conditions, en une combustion des émissions des produits venant de la trémie. Ne pas remplir la trémie trop pleine.**

Serial No. / N° de série  
**US**

Report / Rapport  
061-S-776-6-2  
0061PM077E

Report / Rapport  
061-S-776-6-2  
0061PM077E

Barcode Label

Listed Solid Fuel Room Heater/Pellet Type. Also suitable for Mobile Home Installation. This appliance has been tested and listed for use in Manufactured Homes in accordance with OAR 814-23-9000 through 814-23-9091 / Appareil de chauffage de combustible solide type de boulettes. Accepté dans l'installation dans les maisons mobiles. Cet appareil a été testé et enregistré pour l'usage dans les Maisons Mobiles en accord avec OAR 814-23-9000 jusqu'à 814-23-9091.

**PREVENT HOUSE FIRES / PRÉVENTION DES FEUX DE MAISON**  
Install and use only in accordance with manufacturer's installation and operating instructions. CONTACT LOCAL BUILDING OR FIRE OFFICIALS ABOUT RESTRICTIONS AND INSPECTION IN YOUR AREA. **WARNING - FOR MOBILE HOMES:** Do not install appliance in a sleeping room. An outside combustion air inlet must be provided. The structural integrity of the mobile home floor, ceiling and walls must be maintained. Refer to manufacturer's instructions and local codes for precautions required for passing chimney through a combustible wall or ceiling. **INSPECT AND CLEAN VENT SYSTEM FREQUENTLY IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. DO NOT CONNECT THIS UNIT TO A CHIMNEY SERVING ANOTHER APPLIANCE.** Use a 3" or 4" diameter type "L" or "PL" venting system. Installez et utilisez en accord avec les instructions d'installation et d'opération du fabricant. **CONTACTEZ LE BUREAU DE LA CONSTRUCTION OU LE BUREAU DES INCENDIES AU SUJET DES RESTRICTIONS ET DES INSPECTIONS D'INSTALLATION DANS VOTRE VOISINAGE.** Ne pas connecter l'espace en dessous de l'appareil. **AVIS - Pour Les Maisons Mobiles:** Ne pas installer dans une chambre à coucher. Un tuyau extérieur de combustion d'air doit être installé et ne doit pas être obstrué lorsque l'appareil est en usage. La structure intégrale du plancher, du plafond et des murs de la maison mobile doit être maintenue intacte. Référez vous aux instructions du fabricant et des codes locaux pour les précautions requises pour passer une cheminée à travers un mur ou un plafond combustibles, et les compensations maximums. **INSPECTEZ ET NETTOYEZ LA CHEMINÉE FRÉQUEMMENT.** Ne pas connecter cet appareil à une cheminée servant un autre appareil. Utilisez système de ventilation "L" ou "PL" diamètre 76mm ou 102mm.

Tested to: ASTM E1509-04, ULC-S627-00, ORD-C1482-M1990 Room Heating Pellet Burning Type, (UM) 84-HUD FOR USE ONLY WITH PELLETIZED WOOD OR SHELLED FIELD CORN FUEL. DO NOT USE ANY OTHER TYPE OF FUEL. OMNI-Test Laboratories, Inc. has determined that this appliance complies with Canadian Standards Association (CSA) B415.1 and Title 40 of the U.S. Code of Federal Regulations, Part 60, SubPart AAA OMNI-Test Laboratories Accreditation: The Standards Council of Canada, the American National Standards Institute, and the U.S. Environmental Protection Agency. Input Rating: 30,600 Btu/s/hr. Electrical Rating: 115 VAC, 60 Hz, Start 4.1 Amps, Run 1.1 AMPS. Route power cord away from unit. Do not route cord under or in front of appliance. Do not obstruct the space beneath the heater. **DANGER:** Risk of electrical shock. Disconnect power supply before servicing. Replace glass only with 5mm ceramic available from your dealer. To start, set thermostat above room temperature, the stove will light automatically. To shutdown, set thermostat to below room temperature. For further instruction refer to owner's manual. **KEEP VIEWING AND ASH REMOVAL DOORS TIGHTLY CLOSED DURING OPERATION. CAUTION: COMBUSTION AIR OPENINGS ARE NOT TO BE OBSTRUCTED.**

Testé à: ASTM E1509-04, ULC-S627-00, ORD-C1482-M1990 Room Heating Pellet Burning Type, (UM) 84-HUD POUR USAGE AVEC LES BOULETTES DE BOIS OU DE COMBUSTIBLE DE MAIS ÉCOSSÉ DES CHAMPS. N'utiliser aucun autre genre de combustible. OMNI-Test Laboratories, Inc. a déterminé que cet appareil se conforme avec la norme de l'Association Canadienne de normalisation (CSA) B415.1 ainsi que le Titre 40 du Code Fédéral de Régulations des États-Unis, partie 60, sous-partie AAA. Accréditations OMNI-Test Laboratories - Le Conseil Canadien des Normes (CCNSCC), l'Institut des Standards Nationaux Américain (ANSI) et l'Agence de Protection Environnementale (EPA). Puissance de Rendement: 30 600 Btu/s/hr. Puissance Électrique: 115 VAC, 60 Hz, Début 4.1 Amps, Courant 1.1 Amps. Éteignez le fil électrique de l'appareil. Ne pas faire passer le fil électrique au dessus ou en dessous de l'appareil. Ne pas bloquer l'espace au dessous de l'appareil. **DANGER:** Il y a risque de décharge électrique. Déconnectez le fil électrique de la prise de contact avant le service. Remplacez la vitre seulement avec une vitre céramique de 5 mm disponible chez votre fournisseur. Pour allumer, monter la température du thermostat au dessus de la température de la pièce, le poêle s'allumera automatiquement. Pour éteindre, descendre la température du thermostat en dessous de la température de la pièce. Pour des instructions supplémentaires, référez vous au manuel du propriétaire. **GARDEZ LA PORTE D'OUVRETURE ET LA PORTE DES CENDRES FERMÉES HERMÉTIQUEMENT DURANT L'OPÉRATION. ATTENTION: OUVRETTURES DE COMBUSTION AIR NE SONT PAS À ÊTRE OBSTRUÉES.**

<b>MINIMUM CLEARANCES TO COMBUSTIBLE MATERIALS / ESPACES LIBRES MINIMUM DES MATERIAUX COMBUSTIBLES:</b>	<b>A</b> Back Wall / Mur Arrière	2"151mm
	<b>B</b> Side Wall / Mur De Côté	6"1152mm
	<b>C</b> Side Wall / Mur De Côté	2"151mm
	<b>D</b> Pipe to Back Wall / Un Tuyau Mur Arrière	3"717mm
	<b>E</b> Side Wall / Mur De Côté	6"1152mm
	<b>F</b> Back Wall / Mur Arrière	7"1178mm
	<b>G</b> Side Wall / Mur De Côté	2"151mm
	<b>H</b> Pipe to Side Wall / Un Tuyau Mur De Côté	3"717mm
	<b>I</b> Alcove Installation / Installation de l'alcôve:	
	Min. Alcove Height / Une hauteur minimum de l'alcôve	43"1092mm
	Min. Alcove Side Wall / Une hauteur minimum mur de côté de l'alcôve	6"1152mm
	Min. Alcove Width / Une épaisseur minimum mur de côté de l'alcôve	38"965mm
	Max. Alcove Depth / La profondeur maximum de l'alcôve	36"914mm

**NOTE 1:** In residential installations, when using Parts 811-0860, (3" - 3" Top Vent Adapter) and 812-3570 (3" - 6" Offset Adapter), 24 gauge 6" single wall flue connector may be used. **NOTE 1 :** Dans les installations résidentielles, lorsque les pièces 811-0860, (dessus de l'adaptateur de ventilation 3" - 3") et 812-3570 (le ressaut de l'adaptateur 3" - 6"), un tuyau connecteur de 6" pour mur simple de calibre 24 peut être utilisé.

**NOTE 2:** In manufactured home installation, when using Part 811-0860, (3" - 3" Top Vent Adapter) and 812-3570 (3" - 6" Offset Adapter), use listed double wall flue connector. An Outside Air Kit (Part 811-0872), must be used with manufactured home installation. **NOTE 2 :** Pour l'installation dans les maisons préfabriquées, lorsque les pièces 811-0860, (dessus de l'adaptateur de ventilation 3" - 3") et 812-3570 (le ressaut de l'adaptateur 3" - 6"), utilisez un tuyau connecteur enregistré pour mur double. Un assemblage d'air extérieur (pièce 811-0872), doit être utilisé pour l'installation dans les maisons préfabriquées.

**FLOOR PROTECTION / PROTECTION DU SOL**

The non-combustible floor protector must be 1/2" (13mm) minimum thickness, "k" value = 0.49, Type II thermal protection R = 1.0 or greater. **\*Non-combustible floor protection must extend 2 inches (51mm) beneath the flue pipe when installed with horizontal venting or under the Top Vent Adapter with vertical installation. RECOMMENDED IN USA; REQUIRED IN CANADA.**

<b>G</b> 2 in. (203MM)	Le protecteur de plancher doit être d'un minimum de 1/2" (13mm) d'épaisseur, "k" value = 0.49, Type II thermique R = 1.0 ou une plus grande ou équivalent.
<b>H</b> 2 in. (51MM)	*Un protecteur incombustible de plancher doit s'étendre 2 inches (51mm) sous le conduit de cheminée pour une installation de ventilation horizontale ou sous un adaptateur de ventilation de dessus pour une installation verticale.
<b>I</b> 6 in. (457mm)	ÉTATS-UNIS-RECOMMANDE; CANADA - REQUIRENT.

Manufactured by/Fabrique par: **HEARTH & HOME technologies**  
352 Mountain House Road  
Halifax, PA 17032  
www.quadrafire.com

U.S. ENVIRONMENTAL PROTECTION AGENCY  
Certified to comply with 2020 particulate emission standards at 1.10 g/hr EPA method 289 and ASTM 2779 using premium wood pellets.  
This wood heater needs periodic inspection and repair for proper operation. Consult the owner's manual for further information. It is against federal regulations to operate this wood heater in a manner inconsistent with the operating instructions in the owner's manual.

2019	2020	2021	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Made in China / Fait Aux Chine

**DO NOT REMOVE THIS LABEL / NE PAS ENLEVER L'ÉTIQUETTE**

- NOTE:**
1. MATERIAL: TEKRA FOIL WITH SLIT BACK
  2. BACKGROUND: SILVER
  3. COPY: BLACK / RED
  4. ADHESIVE: PERMANENT ACRYLIC
  5. TEMPERATURE RATING: 14°F [-10°C] TO 248°F [120°C]

					UNLESS OTHERWISE SPECIFIED DIMS ARE INCHES[MM] & : TOLERANCES ARE: (2) PLACE DEC : ± 0.03 (3) PLACE DEC: ± 0.005 ANGLE: ± 2° FRACTION: ± 1/16 ← OUTSIDE MATERIAL. ← NORMAL DIM & INSIDE MATERIAL. ← OUTSIDE APEX ← INSIDE APEX - DIMS ENCLOSED BY AN OVAL ARE CRITICAL DIMENSIONS										
					<b>HEARTH &amp; HOME technologies</b>					PART NAME: <b>SERIAL LABEL, SANTA FE, (11" X 5.75")</b>					
A CREATION		89553		01/25/19		IJW		DRAWN BY: IJW		SCALE: NTS		MATERIAL: SEE NOTE			
REV		REVISIONS		ECO #		DATE		BY		THIS PRINT IS CHECKED AND CONTROLLED BY THE ENGINEERING DEPARTMENTS OF HEARTH & HOME TECHNOLOGIES INC.		SHEET: 1 OF 1		PART NUMBER: <b>7050-800</b> REV: <b>A</b>	





**CAUTION: HOT WHILE IN OPERATION DO NOT TOUCH. KEEP CHILDREN, CLOTHING AND FURNITURE AWAY. CONTACT MAY CAUSE SKIN BURNS. SEE NAMEPLATE AND INSTRUCTIONS. Operate this unit with fuel hopper lid closed. Failure to do so may result in emissions products' combustion from the hopper under certain conditions. Maintain hopper seal in good condition. Do not over fill the hopper.**

**ATTENTION: CHAUD LORS DE L'OPÉRATION. NE PAS TOUCHER. GARDEZ LES ENFANTS ET LES VÊTEMENTS LOIN DE L'ESPACE DÉSIGNÉ DE L'INSTALLATION. LE CONTACT PEUT CAUSER DES BRÛLURES À LA PEAU. VOIR L'ÉTIQUETTE ET LES INSTRUCTIONS. Opérez cet appareil avec le couvercle de la trémie fermé. Le défaut de ne pas suivre les instructions peut résulter, sous certaines conditions, en une combustion des émissions des produits venant de la trémie. Ne pas remplir la trémie trop pleine.**

Serial No. / N° de série



Report / Rapport  
061-S-77d-6.2  
0061PM077E

**QUADRA-FIRE**

**SANTA FE  
PELLET STOVE**



Listed Solid Fuel Room Heater/Pellet Type. Also suitable for Mobile Home Installation. This appliance has been tested and listed for use in Manufactured Homes in accordance with OAR 814-23-9000 through 814-23-9009. / Appareil de chauffage de combustible solide/de type de boulettes. Accepté dans l'installation dans les maisons mobiles. Cet appareil a été testé et enregistré pour l'usage dans les Maisons Mobiles en accord avec OAR 814-23-9000 jusqu'à 814-23-9009.

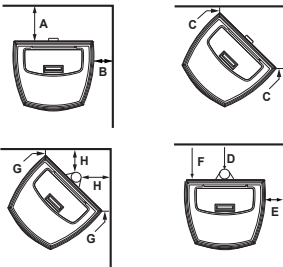
**PREVENT HOUSE FIRES / PRÉVENTION DES FEUX DE MAISON**

Install and use only in accordance with manufacturer's installation and operating instructions. CONTACT LOCAL BUILDING OR FIRE OFFICIALS ABOUT RESTRICTIONS AND INSPECTION IN YOUR AREA. **WARNING - FOR MOBILE HOMES:** Do not install appliance in a sleeping room. An outside combustion air inlet must be provided. The structural integrity of the mobile home floor, ceiling and walls must be maintained. Refer to manufacturer's instructions and local codes for precautions required for passing chimney through a combustible wall or ceiling. **INSPECT AND CLEAN VENT SYSTEM FREQUENTLY IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. DO NOT CONNECT THIS UNIT TO A CHIMNEY SERVING ANOTHER APPLIANCE.** Use a 3" or 4" diameter type "L" or "PL" venting system. Installez et utilisez en accord avec les instructions d'installation et d'opération du fabricant. **CONTACTEZ LE BUREAU DE LA CONSTRUCTION OU LE BUREAU DES INCENDIES AU SUJET DES RESTRICTIONS ET DES INSPECTIONS D'INSTALLATION DANS VOTRE VOISINAGE.** Ne pas obstruer l'espace en dessous de l'appareil. **AVIS - Pour Les Maisons Mobiles:** Ne pas installer dans une chambre à coucher. Un tuyau extérieur de combustion d'air doit être installé et ne doit pas être obstrué lorsque l'appareil est en usage. La structure intégrale du plancher, du plafond et des murs de la maison mobile doit être maintenue intacte. Référez vous aux instructions du fabricant et des codes locaux pour les précautions requises pour passer une cheminée à travers un mur ou un plafond combustibles, et les compensations maximums. **INSPECTEZ ET NETTOYEZ LA CHEMINÉE FRÉQUEMMENT.** Ne pas connecter cet appareil à une cheminée servant un autre appareil. Utilisez système de ventilation "L" ou "P" diamètre 76mm ou 102mm

Tested to: ASTM E1509-04, ULC-S627-00, ORD-C1482-M1990 Room Heating Pellet Burning Type, (UM) 84-HUD FOR USE ONLY WITH PELLETED WOOD OR SHELLED FIELD CORN FUEL. DO NOT USE ANY OTHER TYPE OF FUEL. OMNI-Test Laboratories, Inc. has determined that this appliance complies with Canadian Standards Association (CSA) B415.1 and Title 40 of the U.S. Code of Federal Regulations, Part 60, SubPart AAA.OMNI-Test Laboratories Accreditions: The Standards Council of Canada, the American National Standards Institute, and the U.S. Environmental Protection Agency. Input Rating: 30,600 Btu/hr. Electrical Rating: 115 VAC, 60 Hz, Start 4.1 Amps, Run 1.1 AMPS. Route power cord away from unit. Do not route cord under or in front of appliance. Do not obstruct the space beneath the heater. **DANGER:** Risk of electrical shock. Disconnect power supply before servicing. Replace glass only with 5mm ceramic available from your dealer. To start, set thermostat above room temperature, the stove will light automatically. To shutdown, set thermostat to below room temperature. For further instruction refer to owner's manual. **KEEP VIEWING AND ASH REMOVAL DOORS TIGHTLY CLOSED DURING OPERATION. CAUTION: COMBUSTION AIR OPENINGS ARE NOT TO BE OBSTRUCTED.**

Testé à: ASTM E1509-04, ULC-S627-00, ORD-C1482-M1990 Room Heating, Pellet Burning Type, (UM) 84-HUD POUR USAGE AVEC LES BOULETTES DE BOIS OU DE COMBUSTIBLE DE MAÏS ÉCOSSÉ DES CHAMPS. N'utiliser aucun autre genre de combustible. OMNI-Test Laboratories, Inc. a déterminé que cet appareil se conforme avec la norme de l'Association Canadienne de normalisation (CSA) B415.1 ainsi que le Titre 40 du Code Fédéral de Régulations des États-Unis, partie 60, sous-partie AAA. **Accréditations OMNI-Test Laboratories :** Le Conseil Canadien des Normes (CCNSCC), l'Institut des Standards Nationaux Américain (ANSI) et l'Agence de Protection Environnemental (EPA). Puissance de Rendement : 30 600 Btu/shr. Puissance Electrique: 115 VAC, 60 Hz, Début 4.1 Amps, Courir 1.1 Amps. Éloignez le fil électrique de l'appareil. Ne pas faire passer le fil électrique au dessus ou en dessous de l'appareil. Ne pas bloquer l'espace au dessous de l'appareil. **DANGER!** Il y a risque de décharge électrique. Déconnectez le fil électrique de la prise de contact avant le service. Remplacez la vitre seulement avec une vitre céramique de 5 mm disponible chez votre fournisseur. Pour allumer, monter la température du thermostat au dessus de la température de la pièce, le poêle s'allumera automatiquement. Pour éteindre, descendre la température du thermostat en dessous de la température de la pièce. Pour des instructions supplémentaires, référez vous au manuel du propriétaire. **GARDEZ LA PORTE D'OUVREURE ET LA PORTE DES CENDRES FERMÉES HERMÉTIQUEMENT DURANT L'OPÉRATION. ATTENTION: OUVERTURES DE COMBUSTION AIR NE SONT PAS À ÊTRE OBSTRUÉE.**

**MINIMUM CLEARANCES TO COMBUSTIBLE MATERIALS / ESPACES LIBRES MINIMUM DES MATÉRIAUX COMBUSTIBLES:**



- A Back Wall / Mur Arrière 2"/51mm
- B Side Wall / Mur De Côté 6"/152mm
- CORNER INSTALLATION / INSTALLATION DU COIN :**
- C Side Wall / Mur De Côté 2"/51mm
- VERTICAL 3" - 3" ADAPTER KIT (PART 811-0860) INSTALLATION: UN ASSEMBLAGE POUR ADAPTEUR 3" - 3" (PIÈCE 811-0860) POUR INSTALLATION VERTICALE :**
- D Pipe to Back Wall / Un Tuyau Mur Arrière 3"/76mm
- E Side Wall / Mur De Côté 6"/152mm
- F Back Wall / Mur Arrière 7"/178mm
- CORNER INSTALLATION WITH VERTICAL ADAPTER KIT: INSTALLATION DU COIN AVEC UN ASSEMBLAGE D'ADAPTEUR VERTICAL :**
- G Side Wall / Mur De Côté 2"/51mm
- H Pipe to Side Wall / Un Tuyau Mur De Côté 3"/76mm
- ALCOVE INSTALLATION / INSTALLATION DE L'ALCÔVE:**
- Min. Alcove Height / Une hauteur minimum de l'alcôve 43"/1092mm
- Min. Alcove Side Wall: / Une hauteur minimum mur de côté de l'alcôve 6"/152mm
- Min. Alcove Width / Une épaisseur minimum mur de côté de l'alcôve 38"/965mm
- Max. Alcove Depth: / La profondeur maximum de l'alcôve 36"/914mm

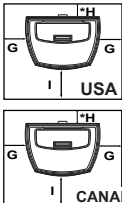
**NOTE 1:** In residential installations, when using Parts 811-0860, (3" - 3" Top Vent Adapter) and 812-3570 (3" - 6" Offset Adapter), 24 gauge 6" single wall flue connector may be used.

**NOTE 1 :** Dans les installations résidentielles, lorsque les pièces 811-0860, (dessus de l'adaptateur de ventilation 3" - 3") et 812-3570 (le ressaut de l'adaptateur 3" - 6"), un tuyau connecteur de 6" pour mur simple de calibre 24 peut être utilisé.

**NOTE 2:** In manufactured home installation, when using Part 811-0860, (3" - 3" Top Vent Adapter) and 812-3570 (3" - 6" Offset Adapter), use listed double wall flue connector. An Outside Air Kit (Part 811-0872), must be used with manufactured home installation.

**NOTE 2 :** Pour l'installation dans les maisons préfabriquées, lorsque les pièces 811-0860, (dessus de l'adaptateur de ventilation 3" - 3") et 812-3570 (le ressaut de l'adaptateur 3" - 6"), utilisez un tuyau connecteur enregistré pour mur double. Un assemblage d'air extérieur (pièce 811-0872), doit être utilisé pour l'installation dans les maisons préfabriquées.

**FLOOR PROTECTION / PROTECTION DU SOL**



The non-combustible floor protector must be 1/2" (13mm) minimum thickness, "k" value = 0.49, Type II thermal protection R = 1.0 or greater.

\*Non-combustible floor protection must extend 2 inches (51mm) beneath the flue pipe when installed with horizontal venting or under the Top Vent Adapter with vertical installation. **RECOMMENDED IN USA; REQUIRED IN CANADA.**

- G 2 in. (203MM)
- H\* 2 in. (51MM)
- I 6 in. (457mm)

Le protecteur de plancher doit être d'un minimum de 1/2" (13mm) d'épaisseur, "k" value = 0.49, Type II thermique R = 1.0 au plus grande de matériel incombustible ou équivalent.

\*Un protecteur incombustible de plancher doit s'étendre 2 inches (51mm) sous le conduit de cheminée pour une installation de ventilation horizontale ou sous un adaptateur de ventilation de dessus pour une installation verticale. **ÉTATS-UNIS-RECOMMANDÉ; CANADA - REQUIRENT.**

Manufactured by: Fabriqué par:

**U.S. ENVIRONMENTAL PROTECTION AGENCY**

Certified to comply with 2020 particulate emission standards at 1.10 g/hr EPA method 28R and ASTM 2779 using premium wood pellets.

**HEARTH & HOME**  
technologies  
352 Mountain House Road  
Halifax, PA 17032  
www.quadrafire.com

This wood heater needs periodic inspection and repair for proper operation. Consult the owner's manual for further information. It is against federal regulations to operate this wood heater in a manner inconsistent with the operating instructions in the owner's manual.


2019 2020 2021 JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

Made in China /  
Fait Aux Chine

**DO NOT REMOVE THIS LABEL / NE PAS ENLEVER L'ÉTIQUETTE**

7050-800A

5.5  
[139.7mm]



Report / Rapport  
061-S77d-6.2  
0061PM077E

## QUADRA-FIRE® CASTILE PELLETT STOVE

Serial No. / N° de série: **HF**

**BARCODE LABEL**

Listed solid fuel Room Heater/Pellet Type. Also suitable for Mobile Home Installation. This appliance has been tested and listed for use in Manufactured Homes in accordance with OAR 814-23-9000 through 841-23-909. OMNI-Test Laboratories, Inc. has determined that this appliance complies with Canadian Standards Association (CSA) B415.1 and Title 40 of the U.S. Code of Federal Regulations, Part 60, SubPart AAA. OMNI-Test Laboratories Accreditations: The Standards Council of Canada, the American National Standards Institute, and the U.S. Environmental Protection Agency. Tested to: ASTM E1509-04, ULC S627-00, ULC/ORD-C1482-M1990 Room Heating Pellet Burning Type, (UM) 84-HUD FOR USE ONLY WITH PELLETIZED WOOD OR SHELLD FIELD CORN FUEL. Do not use any other type of fuel. Input Rating: 30,600 Btu's/hr Electrical Rating: 115 VAC, 60 Hz, Start 4.1 Amps, Run 1.1 Amps. Route power cord away from unit. Do not route cord under or in front of appliance. Do not obstruct the space beneath the heater.

**DANGER:** Risk of electrical shock. Disconnect power supply before servicing. Replace glass only with 5mm ceramic available from your dealer. To start, set thermostat above room temperature, the stove will light automatically. To shutdown, set thermostat to below room temperature. For further instruction refer to owner's manual. Keep viewing and ash removal doors tightly closed during operation.

**PREVENT HOUSE FIRES** - Install and use only in accordance with manufacturer's installation and operating instructions. Contact local building or fire officials about restrictions and inspections in your area.

**WARNING - FOR MOBILE HOMES:** Do not install appliance in a sleeping room. An outside combustion air inlet must be provided. The structural integrity of the mobile home floor, ceiling and walls must be maintained.

**DO NOT CONNECT THIS UNIT TO A CHIMNEY SERVING ANOTHER APPLIANCE.** Use a 3 in or 4 in diameter type "L" or "PL" venting system.

Appareil de chauffage solide/de type de boulettes. Accepté dans l'installation dans les maisons mobiles. Cet appareil a été testé et enregistré pour l'usage dans les Maisons Mobiles en accord avec OAR 814-23-9000 jusqu'à 814-23-909. OMNI-Test laboratories, Inc. a déterminé que cet appareil se conforme avec la norme de l'Association Canadienne de normalisation (CSA) B415.1 ainsi que le Titre 40 du Code Fédéral de Régulations des États-Unis, partie 60, sous-partie AAA. Accréditations OMNI-Test Laboratories : Le conseil Canadien des Normes (CCNSCC), l'Institut des Standards Nationaux Américain (ANSI) et l'Agence de Protection Environnemental (EPA). Testé à: ASTM E1509-04, ULC S627-00, ULC/ORD-C1482-M1990 Room Heating Pellet Burning Type, (UM) 84-HUD POUR USAGE AVEC LES BOULETTES DE BOIS OU DE COMBUSTIBLE DE MAIS ÉCOSSÉ DES CHAMPS. N'utiliser aucun autre genre de combustible puissance de Rendement: 30 600 Btu's/hr. Puissance Électrique: 115 VAC, 60 Hz, Début 4.1 Amps, Courir 1.1 Amps. Éloignez le fil électrique del'appareil. Ne pas faire passer fil électrique au dessus ou en dessous de l'appareil. Ne pas bloquer l'espace au dessous de l'appareil.

**DANGER:** Risque de décharge électrique. Déconnectez le dil électrique de la prise de contact avant le service. Remplacez la vitre seulement avec une vitre céramique de 5 mm disponible chez votre fournisseur.

Pour allumer, monter la température du thermostat en dessous de la température de oa pièce. Pour des instructions supplémentaires, référez vous au manel du propriétaire. Gardez la porte d'ouverture et la porte des cendres fermées hermétiquement durant l'opération.

**PRÉVENTION DES FEUZ DE MASON** - Installez et utilisez en accord avec les instructions d'installation et d'opération du fabricant. Contactez le bureau de la constuction ou le bureau des incendies au sujet des restrictions et des inspections d'installation dans votre voisinage. Ne pas obstruex l'espace en dessous de l'appareil.

**AVIS - Pour les Maisons Mobiles :** Ne pas installer dans une chambre à coucher. Un tuyau extérieu de combustion d'air doit être maintenue intacte. Référez vous aux instructions de fabricant et des codes locaux pour les précautions requises pour passer une cheminée à travers un mur ou un plafond combustibles, et es compensations maximums. Inspectez et nettoyez la cheminée fréquemment. Ne pas connecter cet appareil à une cheminée servant un autre appareil. Utilisez systèm de ventilation "L" ou "PL" diamètre 76mm ou 102mm.

**U.S. ENVIRONMENTAL PROTECTION AGENCY**  
Certified to comply with 2020 particulate standards at 1.10 G/HR  
EPA Method 28R and ASTM 2779 using premium wood pellets.

This wood heater needs periodic inspection and repair for proper operation. Consult the owner's Manual for further information. It is against federal regulations to operate this wood heater in a manner inconsistent with operating instructions in owner's manual.

**USA**  
G = 6" / 152mm  
H\* = 2" / 51mm  
I = 6" / 152mm

**CANADA**  
G = 203mm  
H\* = 51mm  
I = 457mm

**FLOOR PROTECTION / PROTECTION DU SOL**

\*Non-combustible floor protection must extend beneath the flue pipe when installed with horizontal venting or under the Top Vent Adapter with vertical installation. Recommended in USA; Required in Canada. Floor protection must be non-combustible material, extending beneath heater and to the front/sides/rear as indicated. Measure ront distance (I) from the surface of the glass door.

\*La protection du sol non combustible doit se prolonger sous la conduite de fumée lorsqu'elle est installée avec une ventilation horizontale ou sous l'adaptateur de ventilation supérieure avec une installation verticale. Reconnmandé aux USA; Obligatoire au Canada.

La protection du sol doit être incombustible, s'étendant sous le radiateur et à l'avant / aux côtés / à l'arrière comme indiqué. Mesurer la distance avant (I) à partir de la surface de la porte vitrée.

Manufactured by: Fabriqué par

**HEARTH & HOME technologies**

352 Mountain House Road,  
Halifax, PA 17032  
www.quadrafire.com

Date of Manufacture / Date de fabrication:

2019	2020	2021	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**DO NOT REMOVE THIS LABEL / NE PAS ENLEVER L'ETIQUETTE**

**NOTE:**

- MATERIAL: NON-ANODIZED ALUMINUM 0.020 THICK
- BACKGROUND: BLACK
- COPY: WHITE
- ADHESIVE: N/A
- TEMPERATURE RATING: -50°F TO 350°F

					UNLESS OTHERWISE SPECIFIED DIMS ARE INCHES[MM] & : TOLERANCES ARE: (2) PLACE DEC : ± 0.03 (3) PLACE DEC: ± 0.005 ANGLE: ± 2° FRACTION: ± 1/16 ←←← OUTSIDE MATERIAL. ←← NORMAL DIM & INSIDE MATERIAL. ← OUTSIDE APEX ←← INSIDE APEX - DIMS ENCLOSED BY AN OVAL ARE CRITICAL DIMENSIONS									
														
					PART NAME: <b>CASTILE INSERT CLEARANCE LABEL (5.5"X10.5")</b>									
					DRAWN BY: <b>IJW</b>			SCALE: <b>NTS</b>			MATERIAL: <b>SEE NOTE</b>			
THIS PRINT IS CHECKED AND CONTROLLED BY THE ENGINEERING DEPARTMENTS OF HEARTH & HOME TECHNOLOGIES INC.					SHEET: <b>1 OF 1</b>			PART NUMBER: <b>7021-800</b>			REV: <b>A</b>			

REV	DESCRIPTION	ECO #	DATE	BY
A	CREATION	89555	01/25/19	IJW

10.5 [266.7mm]



Report / Rapport  
061-S77d-6.2  
0061PM077E

# QUADRA-FIRE® CASTILE PELLET STOVE

Serial No. /  
N° de série: **HF**

BARCODE LABEL

Listed solid fuel Room Heater/Pellet Type. Also suitable for Mobile Home Installation. This appliance has been tested and listed for use in Manufactured Homes in accordance with OAR 814-23-9000 through 841-23-909. OMNI-Test Laboratories, Inc. has determined that this appliance complies with Canadian Standards Association (CSA) B415.1 and Title 40 of the U.S. Code of Federal Regulations, Part 60, SubPart AAA. OMNI-Test Laboratories Accreditations: The Standards Council of Canada, the American National Standards Institute, and the U.S. Environmental Protection Agency. Tested to: ASTM E1509-04, ULC S627-00, ULC/ORD-C1482-M1990 Room Heating Pellet Burning Type, (UM) 84-HUD FOR USE ONLY WITH PELLETIZED WOOD OR SHELLED FIELD CORN FUEL. Do not use any other type of fuel. Input Rating: 30,600 Btu/s/hr Electrical Rating: 115 VAC, 60 Hz, Start 4.1 Amps, Run 1.1 Amps. Route power cord away from unit. Do not route cord under or in front of appliance. Do not obstruct the space beneath the heater.

**DANGER:** Risk of electrical shock. Disconnect power supply before servicing. Replace glass only with 5mm ceramic available from your dealer. To start, set thermostat above room temperature, the stove will light automatically. To shutdown, set thermostat to below room temperature. For further instruction refer to owner's manual. Keep viewing and ash removal doors tightly closed during operation.

**PREVENT HOUSE FIRES** - Install and use only in accordance with manufacturer's installation and operating instructions. Contact local building or fire officials about restrictions and inspections in your area.

**WARNING - FOR MOBILE HOMES:** Do not install appliance in a sleeping room. An outside combustion air inlet must be provided. The structural integrity of the mobile home floor, ceiling and walls must be maintained.

**DO NOT CONNECT THIS UNIT TO A CHIMNEY SERVING ANOTHER APPLIANCE.** Use a 3 in or 4 in diameter type "L" or "PL" venting system.

Appareil de chauffage solide/de type de boulettes. Accepté dans l'installation dans les maisons mobiles. Cet appareil a été testé et enregistré pour l'usage dans les Maisons Mobiles en accord avec OAR 814-23-9000 jusqu'à 814-23-909. OMNI-Test laboratories, Inc. a déterminé que cet appareil se conforme avec la norme de l'Association Canadienne de normalisation (CSA) B415.1 ainsi que le Titre 40 du Code Fédéral de Régulations des États-Unis, partie 60, sous-partie AAA. Accréditations OMNI-Test Laboratories : Le conseil Canadien des Normes (CCN/SCC), l'Institut des Standards Nationaux Américain (ANSI) et l'Agence de Protection Environnemental (EPA).

Testé à: ASTM E1509-04, ULC S627-00, ULC/ORD-C1482-M1990 Room Heating Pellet Burning Type, (UM) 84-HUD POUR USAGE AVEC LES BOULETTES DE BOIS OU DE COMBUSTIBLE DE MAIS ÉCOSSÉ DES CHAMPS. N'utiliser aucun autre genre de combustible puissance de Rendement: 30 600 Btu/s/hr. Puissance Électrique: 115 VAC, 60 Hz, Début 4.1 Amps, Courir 1.1 Amps. Éloignez le fill électrique del'appareil. Ne pas faire passer fil électrique au dessus ou en dessous de l'appareil. Ne pas bloquer l'espace au dessous de l'appareil.

**DANGER :** Risque de décharge électrique. Déconnectez le dil électrique de la prise de contact avant le service.

Remplacez la vitre seulement avec une vitre céramique de 5 mm disponible chez votre fournisseur.

Pour allumer, monter la température du thermostat en dessous de la température de oa pièce. Pour des instructions supplémentaires, référez vous au manuel du propriétaire. Gardez la porte d'ouverture et la porte des cendres fermées hermétiquement durant l'opération.

**PRÉVENTION DES FEUZE DE MASON** - Installez et utilisez en accord avec les instructions d'installation et d'opération du fabricant. Contactez le bureau de la construction ou le bureau des incendies au sujet des restrictions et des inspections d'installation dans votre voisinage. Ne pas obstruer l'espace en dessous de l'appareil.

**AVIS - Pour les Maisons Mobiles :** Ne pas installer dans une chambre à coucher. Un tuyau extérieur de combustion d'air doit être maintenue intacte. Référez vous aux instructions de fabricant et des codes locaux pour les précautions requises pour passer une cheminée à travers un mur ou un plafond combustibles, et es compensations maximums. Inspectez et nettoyez la cheminée fréquemment. Ne pas connecter cet appareil à une cheminée servant un autre appareil. Utilisez système de ventilation "L" ou "PL" diamètre 76mm ou 102mm.

## U.S. ENVIRONMENTAL PROTECTION AGENCY

Certified to comply with 2020 particulate standards at 1.10 G/Hr EPA Method 28R and ASTM 2779 using premium wood pellets.

This wood heater needs periodic inspection and repair for proper operation. Consult the owner's Manual for further information. It is against federal regulations to operate this wood heater in a manner inconsistent with operating instructions in owner's manual.

## ESPACES LIBRES MINIMUM DES MATÉRIUA COMBUSTIBLES:

- A Back Wall to Stove / Mur Arrière du poêle 2" / 51mm
- B Side Wall to Cast Top / Mur De Côté du haut 6" / 152mm

### Corner Installation / Installation du Coin:

- C Side Wall / Mur De Côté 2" / 51mm

### Vertical 3 in. - 6 in. Adapter Kit (Part #812-3570 Installation / Unassemblage Pour Adapteur 76mm - 152mm (Pièce 812-3570 Pour Installation verticale:

- D Back Wall to Flue Pipe / Mur Arrière tuyau rigide 3" / 76mm
- E Side Wall to Cast Top / Mur De Côté du haut 6" / 152mm

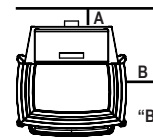
### Corner Installation with Vertical Adapter Kit / Installation du coin avec un assemblage d'adapteur verticale:

- F Side Wall / Mur De Côté 2" / 51mm

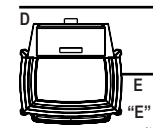
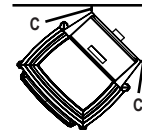
### Alcove Installation / Installation de l'alcove:

- Min. Alcove Height / Une hauteur minimum de l'alcove: 43" / 1092mm
- Min. Alcove Side Wall / Une hauteur minimum mur de côté de l'alcove: 6" / 152mm
- Max. Alcove Depth / La profondeur maximum de l'alcove: 36" / 914mm

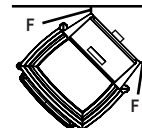
## MINIMUM CLEARANCES TO COMBUSTIBLE MATERIALS



"B" is to Cast Top ("B" du haut)



"E" is to Cast Top ("E" du haut)

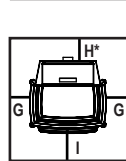


**NOTE 1:** In residential installations, when using Perts 811-0890, (3" - 3" Top Vent Adapter) and 812-3570 (3" - 6" Offset Adapter), 24 gauge 6" single wall flue connector may be used.

**NOTE 1:** Dans les installations résidentielles. Lorsque les pièces 811-0890, (dessus de l'adapteur 76mm - 76mm) et 812-3570 (dessus de l'adapteur 76mm - 152mm), un tuyau connecteur de 6" pour mur simple de calibre 24 peut être utilisé.

**NOTE 2:** In manufactured home installation, when using Part 811-0890, (3" - 3" Top Vent Adapter) and (3" - 6" Offset Adapter), use listed double wall flue connector. An Outside Air Kit (Part 811-0872), must be used with manufactured home installation.

**NOTE 2:** Pour l'utilisation dans les maisons préfabriquées, lorsque les pièces 811-0860, (dessus de l'adapteur de ventilation 76mm - 76mm) et 812-3570 (le ressaut de l'adapteur 76m - 152mm), utilisez un tuyau connecteur enregistré pour mur double. Un assemblage d'air extérieur (pièce 811-0872), doit être utilisé pour l'installation dans les maison préfabriquées.



**USA**  
G = 6" / 152mm  
H\* = 2" / 51mm  
I = 6" / 152mm

**CANADA**  
G = 203mm  
H\* = 51mm  
I = 457mm

## FLOOR PROTECTION / PROTECTION DU SOL

\*Non-combustible floor protection must extend beneath the flue pipe when installed with horizontal venting or under the Top Vent Adapter with vertical installation. Recommended in USA; Required in Canada. Floor protection must be non-combustible material, extending beneath heater and to the front/sides/rear as indicated. Measure ront distance (I) from the surface of the glass door.

\*La protection du sol non combustible doit se prolonger sous la conduite de fumée lorsqu'elle est installée avec une ventilation horizontale ou sous l'adapteur de ventilation supérieure avec une installation verticale. Recommandé aux USA; Obligatoire au Canada. La protection du sol doit être incombustible, s'étendant sous le radiateur et à l'avant / aux côtés / à l'arrière comme indiqué. Mesurer la distance avant (I) à partir de la surface de la porte vitrée.

Manufactured by: Fabriqué par

**HEARTH & HOME**  
technologies  
352 Mountain House Road,  
Halifax, PA 17032  
www.quadrafire.com

Date of Manufacture / Date de fabrication:

2019	2020	2021	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
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DO NOT REMOVE THIS LABEL / NE PAS ENLEVER L'ETIQUETTE

Made in the U.S.A. of US and imported parts. / Fabriqué aux États-Unis-d'Amérique par des pièces d'origine américaine et pièces importées.

7021-900A



**CAUTION:** HOT WHILE IN OPERATION DO NOT TOUCH, KEEP CHILDREN AND CLOTHING AWAY. CONTACT MAY CAUSE SKIN BURNS.  
**ATTENTION:** CHAUD LORS DE L'OPÉRATION. NE PAS TOUCHER. GARDEZ LES ENFANTS ET LES VÊTEMENTS LOIN DE L'ESPACE DÉSIGNÉ DE L'INSTALLATION. LE CONTACT PEUT CAUSER DES BRÛLURES À LA PEAU. GARDEZ LES MEUBLES ET LES MATÉRIAUX COMBUSTIBLES LOIN DE L'ESPACE DÉSIGNÉ DE L'APPAREIL. VOIR L'ÉTIQUETTE ET LES INSTRUCTIONS.

Listed Solid Fuel Room Heater/Pellet Type Insert. "For Use with Solid Wood Fuel and Shelled Field Corn Only". Also suitable for Mobile Home Installation. This appliance has been tested and listed for use in Manufactured Homes in accordance with OAR 814-23-9000 through 814-23-909. / Appareil de chauffage inséré de combustible solide/de type de boulettes. "Pour Usage Avec Bois Solide et Champ de Maïs égrené Seulement". Accepté dans l'installation dans les maisons mobiles. Cet appareil a été testé et enregistré pour l'usage dans les Maisons Mobiles en accord avec OAR 814-23-9000 jusqu'à 814-23-909.

**PREVENT HOUSE FIRES / PRÉVENTION DES FEUX DE MAISON**

Install and use only in accordance with manufacturer's installation and operating instructions. CONTACT LOCAL BUILDING OR FIRE OFFICIALS ABOUT RESTRICTIONS AND INSTALLATION INSPECTIONS IN YOUR AREA. **WARNING: FOR MOBILE HOMES:** Do not install appliance in a sleeping room. An outside combustion air inlet must be provided. The structural integrity of the mobile home floor, ceiling and walls must be maintained. Refer to manufacturer's instructions and local codes for precautions required for passing chimney through a combustible wall or ceiling. Inspect and clean vent system frequently in accordance with manufacturer's instructions. **DO NOT CONNECT THIS UNIT TO A CHIMNEY SERVING ANOTHER APPLIANCE.** Use a 3 or 4 inch (76-102mm) diameter type "L" or "PL" venting system. Installez et utilisez en accord avec les instructions d'installation et d'opération du fabricant. CONTACT BÂTIMENT LOCAL OU POUR CONNAÎTRE LES RESTRICTIONS ET INSPECTIONS INSTALLATION DANS VOTRE RÉGION. **AVIS - Pour Les Maisons Mobiles:** Ne pas installer dans une chambre à coucher. Un tuyau extérieur de combustion d'air doit être installé et ne doit pas être obstrué lorsque l'appareil est en usage. La structure intégrale du plancher, du plafond et des murs de la maison mobile doit être maintenue intacte. Référez vous aux instructions du fabricant et des codes locaux pour les précautions requises pour passer une cheminée à travers un mur ou un plafond combustibles, et les compensations maximums. Inspectez et nettoyez la cheminée fréquemment. **Ne pas connecter cet appareil à une cheminée servant un autre appareil.** Utilisez le système de ventilation de 3 or 4 inch (76-102mm) de diamètre de type "L" ou "PL".

Tested to: ASTM E1509-04, ULC S628-93, ULC/ORD-C1482-M1990 Room Heating Pellet Burning Type, (UM) 84-HUD FOR USE ONLY WITH PELLETIZED WOOD. DO NOT USE ANY OTHER TYPE OF FUEL. OMNI-Test Laboratories, Inc. has determined that this appliance complies with Canadian Standards Association (CSA) B415.1 and Title 40 of the U.S. Code of Federal Regulations, Part 60, SubPart AAA. OMNI-Test Laboratories Accrediations: The Standards Council of Canada, the American National Standards Institute, and the U.S. Environmental Protection Agency.

Input Rating: 30,600 BTU/HR. Electrical Rating: 115 VAC, 60 Hz, Start 4.1 Amps, Run 1.1 Amps. Route power cord away from unit. Do not route cord under or in front of appliance.

**DANGER:** Risk of electrical shock. Disconnect power supply before servicing. Replace glass only with 5mm ceramic available from your dealer. To start, set thermostat above room temperature, the stove will light automatically. To shutdown, set thermostat to below room temperature. For further instruction refer to owner's manual. **KEEP VIEWING AND ASH REMOVAL DOORS TIGHTLY CLOSED DURING OPERATION.**

Testé à : ASTM #1509-04, ULC S628-93, ULC/ORD-C1482-M1990 Room Heating. Pellet Burning Type, (UM) 84-HUD POUR USAGE AVEC LES BOULETTES DE BOIS. OMNI-Test Laboratories, Inc. a déterminé que cet appareil se conforme avec la norme de l'Association Canadienne de normalisation (CSA) B415.1 ainsi que le Titre 40 du Code Fédéral de Régulations des États-Unis, partie 60, sous-partie AAA. Accréditations OMNI-Test Laboratories : Le Conseil Canadien des Normes (CCN/SCC), l'Institut des Standards Nationaux Américain (ANSI) et l'Agence de Protection Environnemental (EPA).

Puissance de Rendement : 30 600 BTU/HR. Puissance Électrique : 115 VAC, 60 Hz, Débit 4.1 Amps, Courir 1.1 Amps,

Éloignez le fil électrique de l'appareil. Ne pas faire passer le fil électrique au dessus ou en dessous de l'appareil.

**DANGER :** Il y a risque de décharge électrique. Déconnectez le fil électrique de la prise de contact avant le service. Remplacez la vitre seulement avec une vitre céramique de 5 mm disponible chez votre fournisseur. Pour allumer, monter la température du thermostat au dessus de la température de la pièce, le poêle s'allumera automatiquement. Pour éteindre, descendre la température du thermostat en dessous de la température de la pièce. Pour des instructions supplémentaires, référez vous au manuel du propriétaire. Gardez la porte d'ouverture et la porte des cendres fermées hermétiquement durant l'opération.



Report / Rapport  
061-S-77d-6.2  
0061PM077E

**QUADRA-FIRE**

**CASTILE PELLET  
INSERT**

Serial No. / N° de série

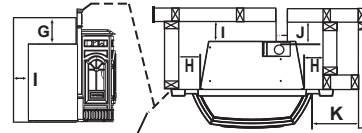
HF

BARCODE LABEL

**MINIMUM CLEARANCES TO COMBUSTIBLE MATERIALS**

**ESPACES LIBRES MINIMUM DES MATÉRIAUX COMBUSTIBLES:**

**AS A BUILT-IN UNIT / COMME APPAREIL INSÉRÉ**



- G 2 in. (51mm) Top Vent / Des Conduits Du Haut
- 2.5 in. (64mm) Rear Vent / Des Conduits Arrières
- H 2 in. (51mm) Side Wall / Mur De Côté
- I 4 in. (102mm) Back Wall to Insert / Mur Arrière du Inséré
- J 3 in. (76mm) Back Wall to Flue Pipe / Mur Arrière Tuyau Rigide

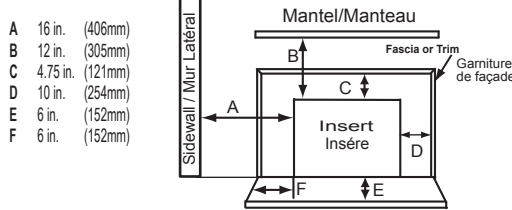
0 in. Clearance To Exposed Section and Face Trim / Espace libre de 0 mm de la section exposée et de la garniture du devant.

\*When constructing floor protection for your pellet appliance, any parts or materials used, must be non-combustible. / Lors de la construction de protection de sol pour votre appareil à granules, toute pièces ou matériaux utilisés, doivent être incombustibles.

**Masonry or Zero Clearance**

Dégagement de la maçonnerie ou Dégagement zéro

Maximum Mantel Depth - 10 inches  
Profondeur Maximale Mantel - 254mm



**U.S. ENVIRONMENTAL PROTECTION AGENCY**

Certified to comply with 2020 particulate standards at 1.10 g/hr EPA method 28R and ASTM 2779 using premium wood pellets.

This wood heater needs periodic inspection and repair for proper operation. Consult the owner's manual for further information. It is against federal regulations to operate this wood heater in a manner inconsistent with the operating instructions in the owner's manual.

2019	2020	2021												
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC

**DO NOT REMOVE THIS LABEL / NE PAS ENLEVER L'ÉTIQUETTE**

**7022-800A**

Manufactured by: Fabriqué par:



352 Mountain House Road, Halifax, PA 17032  
www.quadrafire.com

Made in U.S.A. of US and imported parts.

États-Unis-d'Amérique par des pièces d'origine américaine et pièces importées.

# Installation Manual

## Installation & Appliance Set-Up

**INSTALLER:** Leave this manual with party responsible for use and operation.

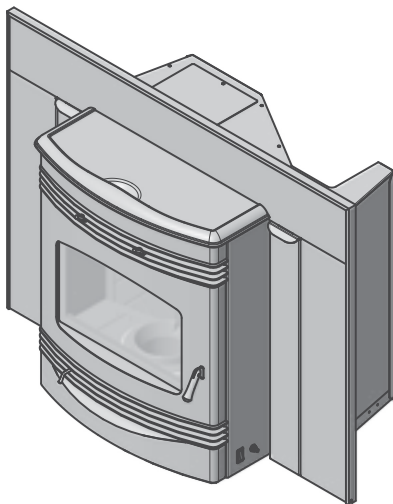
**OWNER:** Retain this manual for future reference.

**NOTICE: DO NOT DISCARD THIS MANUAL**

# QUADRA-FIRE®

## SANTA FE PELLET INSERT APPLIANCE

**MODEL:  
SANTAFEI-C**



### CAUTION

Check building codes prior to installation.

- Installation **MUST** comply with local, regional, state and national codes and regulations.
- Consult local building, fire officials or authorities having jurisdiction about restrictions, installation inspection, and permits.

Installation and service of this appliance should be performed by qualified personnel. Hearth & Home Technologies recommends HHT Factory Trained or NFI certified professionals.



### WARNING



If the information in these instructions is not followed exactly, a fire could result causing property damage, personal injury, or death.

- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- **Do not over fire** - If appliance or chimney connector glows, you are over firing. Over firing will void your warranty.
- Comply with all minimum clearances to combustibles as specified. Failure to comply may cause house fire.



### WARNING



#### HOT SURFACES!

Glass and other surfaces are hot during operation **AND** cool down. Hot glass will cause burns.

- Do not touch glass until it is cooled
- **NEVER** allow children to touch glass
- Keep children away
- **CAREFULLY SUPERVISE** children in same room as fireplace.
- Alert children and adults to hazards of high temperatures
- High temperatures may ignite clothing or other flammable materials.
- Keep clothing, furniture, draperies and other flammable materials away.



### CAUTION

Tested and approved for wood pellets only. Burning of any other type of fuel voids your warranty.

**NOTE:** To obtain a French translation of this manual, please contact your dealer or visit [www.quadrafire.com](http://www.quadrafire.com)  
**REMARQUE :** Pour obtenir une traduction française de ce manuel, s'il vous plaît contacter votre revendeur ou visitez [www.quadrafire.com](http://www.quadrafire.com)



### Safety Alert Key:

- **DANGER!** Indicates a hazardous situation which, if not avoided will result in death or serious injury.
- **WARNING!** Indicates a hazardous situation which, if not avoided could result in death or serious injury.
- **CAUTION!** Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
- **NOTICE and NOTE:** Indicates practices which may cause damage to the appliance or to property.

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➔ = Contains updated information

# 1 Important Safety Information

## A. Appliance Certification

<b>Model</b>	Santa Fe Pellet Insert (2020)
<b>Laboratory</b>	OMNI Test Laboratories, Inc.
<b>Report No.</b>	061-S-77d-6.2
<b>Type</b>	Solid Fuel Room Appliance/Pellet Fuel Burning Type Insert
<b>Standard</b>	ASTM E1509-2004, ULC S628-93 and ULC/ORD-C1482-M1990 Room Appliance Pellet Fuel Burning Type and (UM) 84-HUD, Mobile Home Approved

The Santa Fe insert is Certified to comply with 2020 particulate emission standards.



**NOTE:** This installation must conform with local codes. In the absence of local codes you must comply with the **ASTM E1509-2004, ULC S628-93, ULC/ORD-C-1482-M1990, (UM) 84-HUD.**

This pellet insert needs periodic inspection and repair for proper operation. It is against federal regulations to operate this pellet insert in a manner inconsistent with operating instructions in this manual.

## B. BTU & Efficiency Specifications

<b>Emissions Report #:</b>	0061PM077E
<b>EPA Certification #:</b>	175-19
<b>EPA Certified Emissions:</b>	1.1 grams per hour
<b>*LHV Tested Efficiency:</b>	70.4%
<b>**HHV Tested Efficiency:</b>	66.1%
<b>***EPA BTU Output:</b>	5,800 to 22,400 / hr
<b>****BTU Input:</b>	9,300 to 30,600 / hr
<b>Vent Size:</b>	3, 4 "L" or "PL", or 6 inches
<b>Hopper Capacity:</b>	45 lbs.
<b>Fuel</b>	Premium Wood Pellets
*Weighted average LHV (Low Heating Value) efficiency using data collected during EPA emissions test.	
**Weighted average HHV (High Heating Value) efficiency using data collected during EPA emissions test.	
***A range of BTU outputs based on EPA default efficiency and the burn rates from the low and high EPA tests.	
****Based on the maximum feed rate per hour multiplied by approximately 8600 BTU's which is the average BTU's from a pound of pellets.	
‡ Grade of pellet fuel as certified by Pellet Fuels Institute (PFI), ENPlus or CANplus.	

### C. Glass Specifications

This appliance is equipped with 5mm ceramic glass. Replace glass only with 5mm ceramic glass. Please contact your dealer for replacement glass.

### D. Electrical Rating

115 VAC, 60 Hz, Start 4.1 Amps, Run 1.1 Amps

### E. Mobile Home Approved

- This appliance is approved for mobile home installations when not installed in a sleeping room and when an outside combustion air inlet is provided.
- The structural integrity of the mobile home floor, ceiling, and walls must be maintained.
- The appliance must be properly grounded to the frame of the mobile home and use only Listed pellet vent Class "L" or "PL" connector pipe.
- Outside Air Kit, part OAK-ACC must be installed in a mobile home installation.

### F. Non-Combustible Materials

Material which will not ignite and burn, composed of any combination of the following:

- Steel
- Plaster
- Brick
- Iron
- Concrete
- Tile
- Glass
- Slate

Materials reported as passing **ASTM E 136, Standard Test Method for Behavior of Metals, in a Vertical Tube Furnace of 750° C.**

### G. Combustible Materials

Material made of/or surfaced with any of the following materials:

- Wood
- Compressed Paper
- Plant Fibers
- Plastic
- Plywood/OSB
- Sheet Rock (drywall)

Any material that can ignite and burn: flame proofed or not, plastered or non-plastered.

### H. Sleeping Room

When installed in a sleeping room it is recommended that 3ft of vertical be installed prior to horizontally exiting the room and a smoke/CO alarm be installed in the bedroom. The size of the room must be at least 50ft<sup>3</sup> per 1,000 Btu/hr stove input, if the stove exceeds the room size, out air must be installed.

### I. California - Prop65



#### WARNING

This product and the fuels used to operate this product (wood), and the products of combustion of such fuels, can expose you to chemicals including carbon black, which is known to the State of California to cause cancer, and carbon monoxide, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to: [WWW.P65Warnings.ca.gov](http://WWW.P65Warnings.ca.gov)



#### WARNING



#### Fire Risk.

Hearth & Home Technologies disclaims any responsibility for, and the warranty will be voided by, the following actions:

- Installation and use of any damaged appliance.
- Modification of the appliance.
- Installation other than as instructed by Hearth & Home Technologies.
- Installation and/or use of any component part not approved by Hearth & Home Technologies.
- Operating appliance without fully assembling all components.
- Operating appliance without legs attached (if supplied with appliance).
- Do NOT Over fire - If appliance or chimney connector glows, you are over firing.

Any such action that may cause a fire hazard.

Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage.

For assistance or additional information, consult a qualified installer, service agency or your dealer.

**NOTE:** Hearth & Home Technologies, manufacturer of this appliance, reserves the right to alter its products, their specifications and/or price without notice.



# 2 Getting Started

## A. Design, Installation & Location Considerations

### 1. Appliance Location

**NOTICE:** Check building codes prior to installation.

- Installation **MUST** comply with local, regional, state and national codes and regulations.
- Consult insurance carrier, local building inspector, fire officials or authorities having jurisdiction over restrictions, installation inspection and permits.

It is a good idea to plan your installation on paper, using exact measurements for clearances and floor protection, before actually beginning the installation. Location of the appliance and chimney will affect performance.

#### Consideration must be given to:

- Safety, convenience, traffic flow
- Placement of the chimney and chimney connector and to minimize the use of chimney offsets.
- Place the appliance where there will be a clear passage for a Listed chimney through the ceiling and roof (vertical) or through exterior wall (horizontal).
- Installing the required outside air kit will affect the location of the vent termination.

When locating vent and venting termination, the ideal location is to vent above roof line when possible. This minimizes the affects of wind loading.



Since pellet exhaust can contain ash, soot or sparks, you must consider the location of:

- Windows
- Air Intakes
- Air Conditioner
- Overhang, soffits, porch roofs, adjacent walls
- Landscaping, vegetation
- Horizontal or vertical vent termination

### 1. Floor Support

The supporting floor under the appliance must be able to handle the weight of the appliance, fuel load and the weight of the chimney.

Ensure that your floor will support these weights prior to installation. Add sufficient additional support to meet this weight requirement prior to installation. The weight of the appliance is 173 lbs.

 <b>WARNING</b>	
	<b>Risk of Fire.</b>
	Damaged parts could impair safe operation. Do NOT install damaged, incomplete or substitute components.

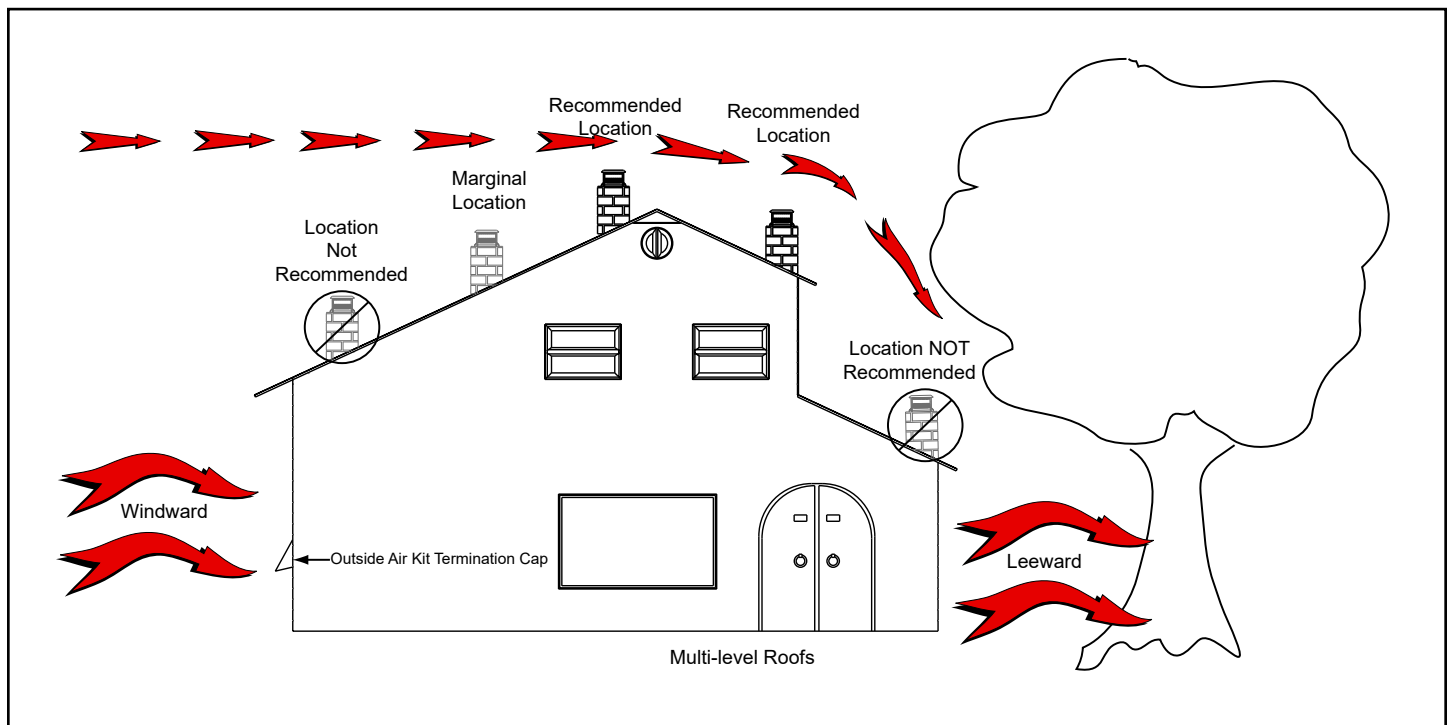


Figure 5.1



## WARNING



### Fire Risk.

Damaged parts could impair safe operation. Do NOT install damaged, incomplete or substitute components.



## WARNING



Hearth & Home Technologies disclaims any responsibility for, and the warranty will be voided by, the following actions:

- Installation and use of any damaged appliance.
  - Modification of the appliance.
  - Installation other than as instructed by Hearth & Home Technologies.
  - Installation and/or use of any component part not approved by Hearth & Home Technologies.
  - Operating appliance without fully assembling all components.
  - Operating appliance without legs attached (if supplied with appliance).
  - Do NOT Over fire
- Or any such action that may cause a fire hazard.

## B. Thermostat Wall Control Location

The thermostat wall control's location will have some affect on the appliance's operation.

- Maximum wire length from appliance is 100 feet (30.48m) continuous non-spliced wire. Recommended 20 gauge wire, solid copper.
- When located close to the appliance, it may require a slightly higher temperature setting to keep the rest of the house comfortable.
- When located in an adjacent room or on a different floor level, you will notice higher temperatures near the appliance.

## C. Tools And Supplies Needed

Tools and building supplies normally required for installation, unless installing into an existing masonry fireplace:

- Reciprocating Saw
- Channel Locks
- Hammer
- Phillips Screwdriver
- Tape Measure
- Plumb Line
- 1/4" Self-Tapping Screws
- Framing Material
- Hi-temp Caulking Material
- Gloves
- Safety Glasses
- Framing Square
- Electric Drill & Bits (1/4")
- Level

### May also need:

- Vent Support Straps
- Venting Paint

## D. Inspect Appliance and Components

- Open the appliance and remove all the parts and articles packed inside the Component Pack. Inspect all the parts and glass for shipping damage.
- Report to your dealer any parts damaged in shipment.
- All labels have been removed from the glass door.
- Plated surfaces have been wiped clean with a soft cloth, if applicable.
- Read all the instructions before starting the installation. Follow these instructions carefully during the installation to ensure maximum safety and benefit.
- Follow pipe manufacturer instructions for installation and air clearance requirements.

## E. Install Checklist

**ATTENTION INSTALLER:**  
**Follow this Standard Work Checklist**

This standard work checklist is to be used by the installer in conjunction with, not instead of, the instructions contained in this installation manual.

Customer: \_\_\_\_\_  
 Date Installed: \_\_\_\_\_  
 Lot/Address: \_\_\_\_\_  
 Location of Appliance: \_\_\_\_\_  
 Installer: \_\_\_\_\_  
 Dealer/Distributor Phone Number: \_\_\_\_\_  
 Serial Number: \_\_\_\_\_  
 Model Name: \_\_\_\_\_



**WARNING! Risk of Fire or Explosion! Failure to install appliance to these instructions can lead to a fire or explosion.**

**Appliance Install**

Verified clearance to combustibles.  
 Appliance is leveled and connector is secured to appliance.  
 Hearth extension size/height decided.  
 Outside air kit installed.  
 Floor protection requirements have been met.  
 If appliance is connected to a masonry chimney, it should be cleaned and inspected by a professional. If installed to a factory built metal chimney, the chimney must be installed according to the manufacturer's instructions and clearances.

**YES**

**IF NO, WHY?**

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Venting/Chimney**

Chimney configuration complies with diagrams.  
 Chimney installed, locked and secured in place with proper clearance.  
 Chimney meets recommended height requirements (5 feet minimum vertical).  
 Roof flashing installed and sealed.  
 Terminations installed and sealed.

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Electrical**

120 VAC unswitched power provided to the appliance.  
 Check outlet with multi-meter for proper polarity and voltage (115-120 VAC).  
 Record voltage reading: \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_

**Clearances**

Verified all clearances meet installation manual requirements.  
 Mantels and wall projections comply with installation manual requirements.  
 Floor protection and heart extensions installed per manual requirements.

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Appliance Setup**

All protective materials removed.  
 All labels have been removed from the door.  
 All packaging materials are removed from inside/under appliance.  
 Manual bag and all of its contents are removed from inside/under the appliance and given to the party responsible for use and operation.  
 Started appliance and verified that all motors and blowers operate as they should.  
 Checked draft using a Manometer. Record readings: \_\_\_\_\_  
 Checked vacuum using a Manometer. Record readings: \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Hearth & Home Technologies recommends the following:**

Photographing the installation and copying this checklist for your file.  
 That this checklist remain visible at all times on the appliance until the installation is complete.

**Comments:** Further description of the issues, who is responsible (Installer/Builder/Other Trades, etc.) and corrective action needed:  
 Comments communicated to party responsible \_\_\_\_\_ by \_\_\_\_\_ on \_\_\_\_\_  
 (Builder/Gen. Contractor) (Installer) (Date)

# 3 Dimensions and Clearances

## A. Appliance Dimensions

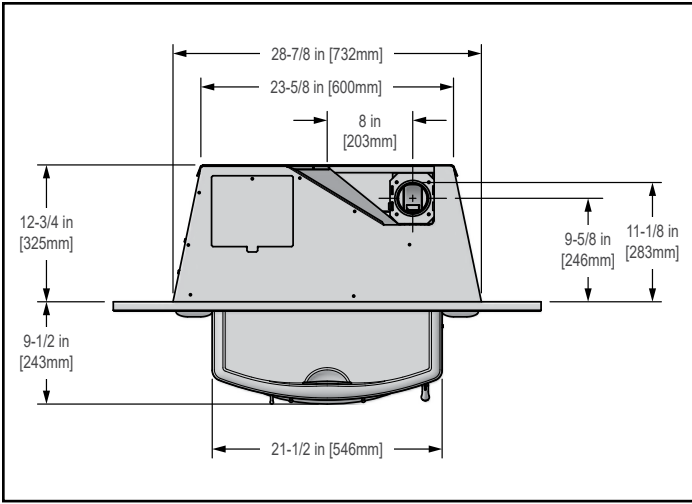


Figure 8.1 - Top View

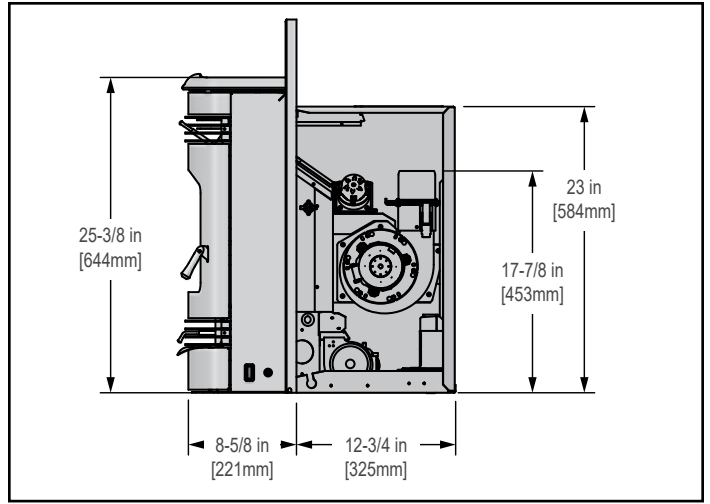


Figure 8.3 - Side View

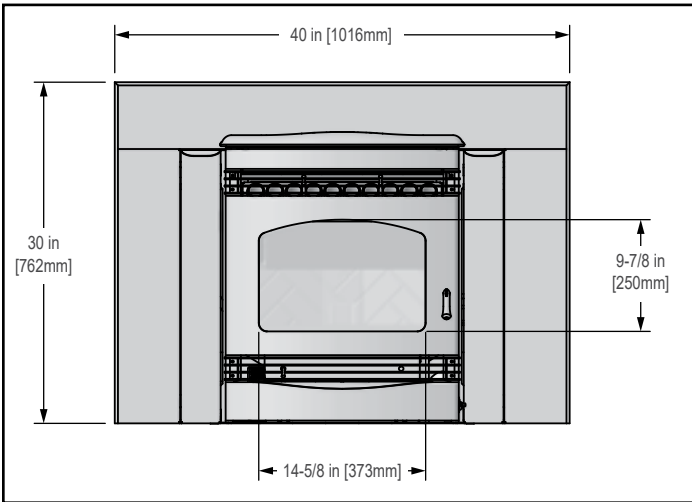


Figure 8.2 - Front View with small basic panel set

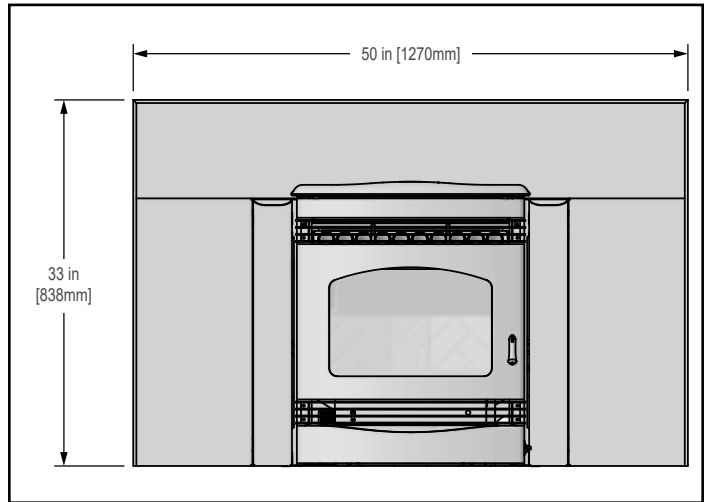


Figure 8.4 - Front View with large basic panel set

## B. Clearance To Combustibles, UL and ULC

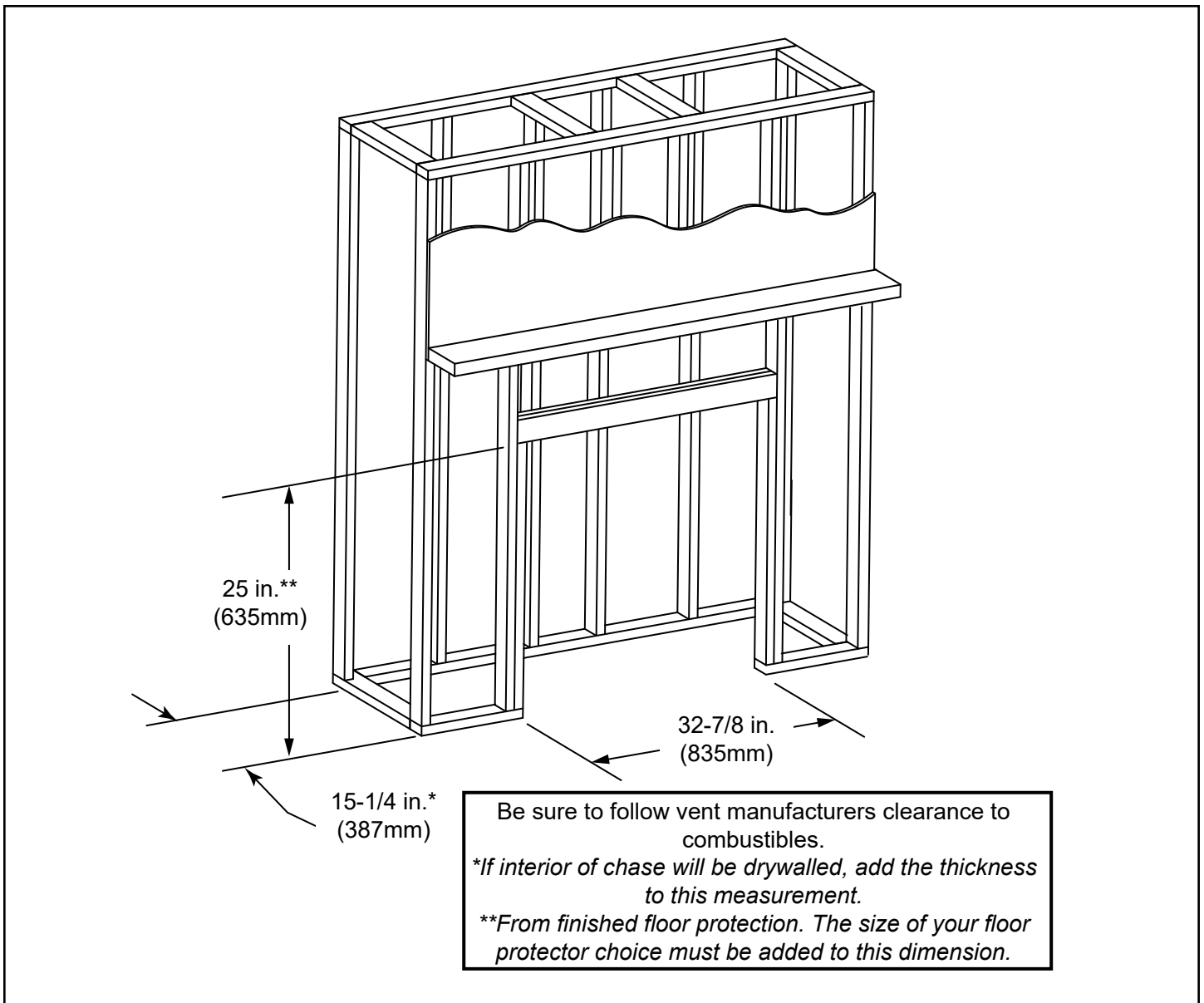




Figure 9.1

 **WARNING**

 **Fire Risk.**  
Comply with all minimum clearances to combustibles as specified.  
Failure to comply may cause house fire.

**NOTE:**

- Illustrations reflect typical installations and are FOR DESIGN PURPOSES ONLY.
- Illustrations/diagrams are not drawn to scale.
- Actual installation may vary due to individual design preference.

## C. Masonry Chimney and Fireplace Clearances



### CAUTION

Hearth and Home Technologies does not recommend adhesive based vinyl flooring due to thermal expansion. Floating-style flooring (LVP - luxury vinyl plank or LVT – luxury vinyl tile) can be used, but it will reach temperatures up to 110 °F in a room with ambient temperature of 70 °F. Consult flooring specifications to ensure compatibility.

HHT recommends wood stoves and inserts have 29 inches of alternative flooring in front of the stove before using LVP/LVT regardless if they sit flush on the floor or are elevated on a raised hearth.

For all other flooring, continue to follow clearance to combustible requirements in the installation manual.

**NOTICE:** Clearances that do not meet the minimum guidelines could result in damage or buckling to the vinyl flooring and is done at the installer's risk.

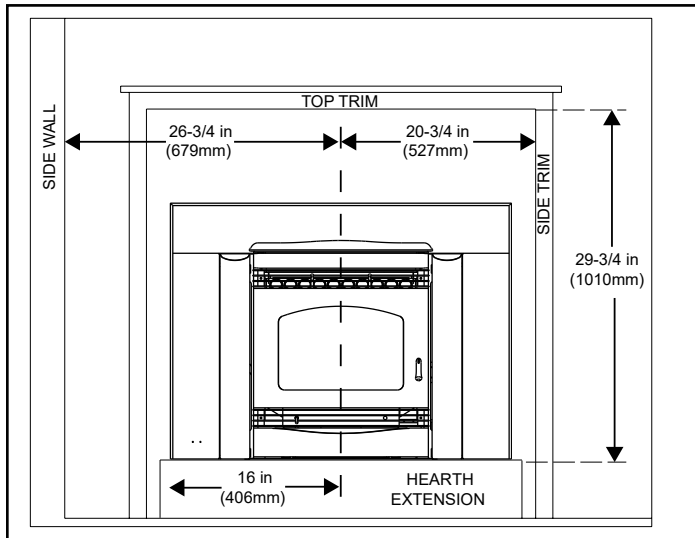


Figure 10.1

**NOTE:** If trim measurement is over 3/4 in (19mm) in depth use mantle or side clearances to combustibles.

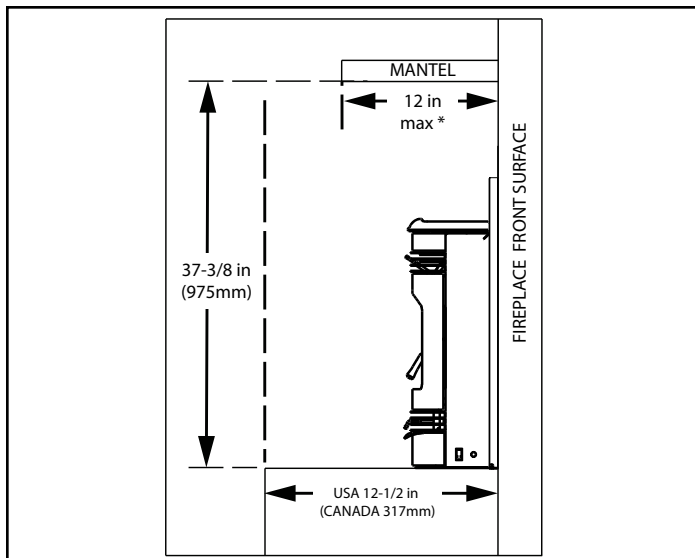


Figure 10.2

**NOTE:** It is necessary to permanently seal any opening between the masonry of the fireplace and the facing masonry.

## D. Minimum Opening for Masonry & ZC Fireplaces

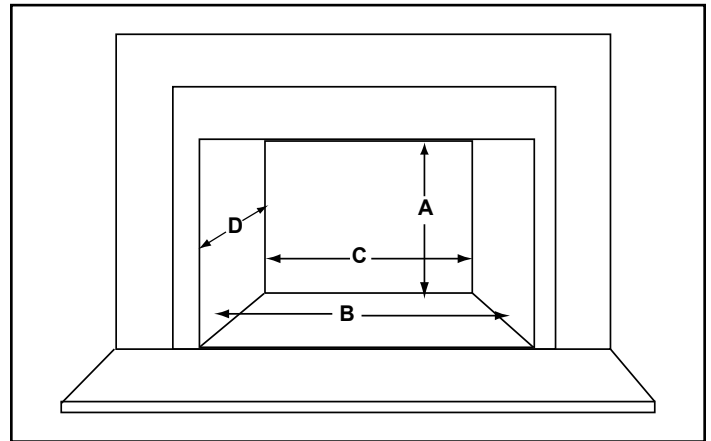


Figure 10.3

Location	Inches	Millimeters
A Height	23-1/4	591
B Front Width	29-3/8	746
C Rear Width	24-1/8	613
D Depth	13	330

Table 10.1

**NOTE:** Minimum opening dimensions include a 1/4" (6mm) clearance around unit.

## E. Hearth Extension

Use a non-combustible ember floor protector, extending beneath the appliance and to the front, and to the sides as indicated in sub-section F. Floor Protection.

## F. Floor Protection

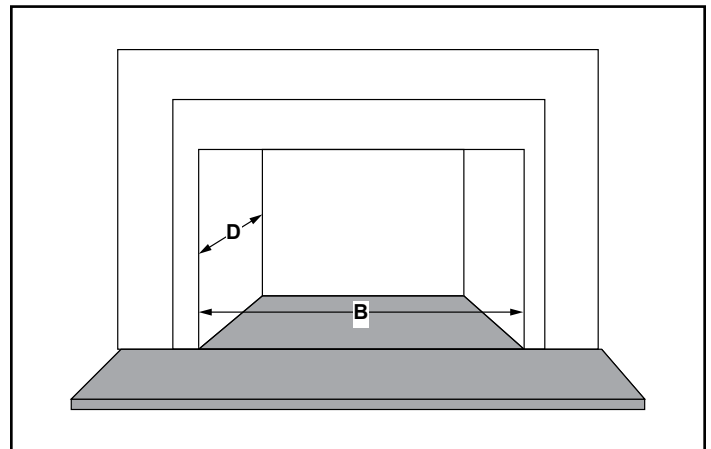


Figure 10.4

## G. Installation into a Factory-Built Fireplace

The following modifications are permissible:

- Removal of damper or locked in open position
  - Removal of smoke shelf or baffle
  - Removal of ember catches
  - Removal of fire grate
  - Removal of view screen/curtain
  - Removal of doors
  - Removal of factory-built fireplace floor
- External trim pieces which do not affect the operation of the fireplace may be removed providing they can be stored on or within the fireplace for reassembly if the insert is removed.
  - The permanent metal warning label provided must be attached to the back of the fireplace, with screws or nails, stating that the fireplace may have been altered to accommodate the insert, and must be returned to original condition for use as a conventional fireplace (Figure 11.1).

### WARNING

THIS FIREPLACE MAY HAVE BEEN ALTERED TO ACCOMMODATE AN INSERT. IT MUST BE RETURNED TO ITS ORIGINAL CONDITION BEFORE USE AS A SOLID FUEL BURNING FIREPLACE.

250-2061

Figure 11.1

- If the hearth extension is lower than the fireplace opening, the portion of the insert extending onto the hearth must be supported.
- Manufacturer designed adjustable support kit can be ordered from your dealer.

**NOTE:** Refer to chimney liner manufacturer for recommendations on supporting the liner. Installation into fireplaces without a permit will void the listing.

- The firebrick (refractory), glass doors, screen rails, screen mesh and log grates can be removed from a factory-built firebox in order to gain minimum insert opening requirements.
- Any smoke shelves, shields and baffles may be removed from a factory-built firebox if attached with mechanical fasteners.
- The metal floor of the factory-built firebox may be removed to facilitate the installation of the insert only when a 1 inch (25mm) airspace is provided between the insert and the floor of outer wrap.

The following is only one example as there are many different models of factory-built fireplaces.

**NOTE:** This example is for reference only. Any modifications must not compromise the structural integrity or reduce the protection for combustible materials.

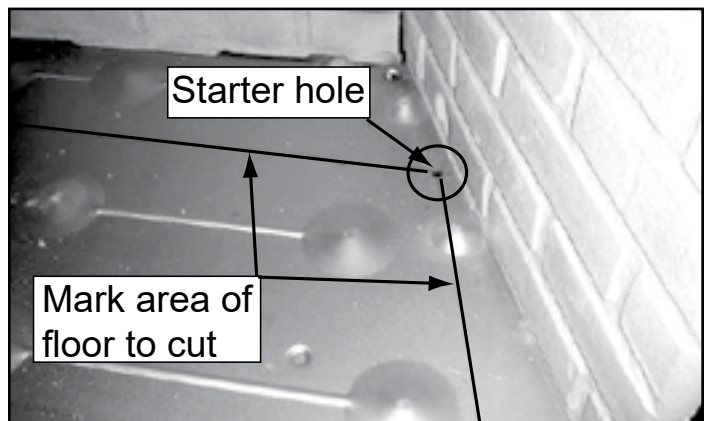


Figure 11.2

Measure and mark the metal floor for cutting. With a drill, make a starter hole in each corner.



Figure 11.3

Using a saws-all, cut out the floor.

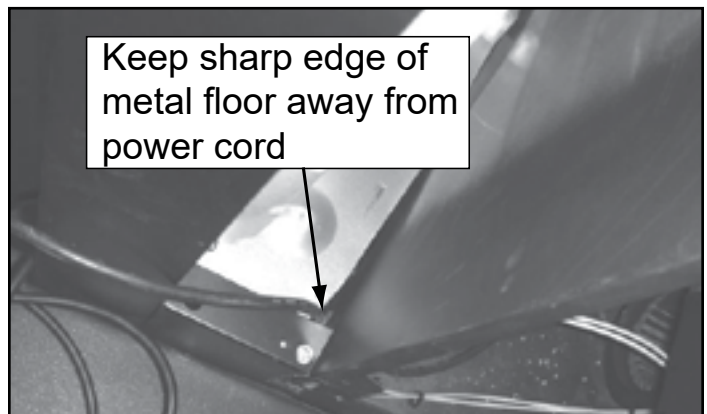


Figure 11.4

Place the insert into the factory-built firebox. Ensure that the power cord can not be damaged by the sharp metal edge. You may need to cut out a notch to accommodate the cord.

## H. Installation into a Masonry Fireplace

All modifications that can be made to a Factory Built Fireplace can be made to a Masonry Fireplace.

In addition DO NOT remove any brick or mortar from the existing fireplace.

**NOTE:** It is necessary to permanently seal any opening between the masonry of the fireplace and the facing masonry.



### WARNING

- Removing floor of fireplace must not weaken structure of firebox or reduce protection for combustible materials.
- Final approval of this installation type is contingent upon the appropriate local authority having jurisdiction.

## I. Prefabricated Metal Chimney

The chimney can be new or existing, masonry or prefabricated and must meet the following minimum requirements:

- Must be minimum 6 inch (152mm) inside diameter of high temperature chimney listed to **UL 103 HT (2100°F) or ULC-S628**.
- Must use components required by the manufacturer for installation.
- Must maintain clearances required by the manufacturer for installation.
- Refer to manufacturers instructions for installation
- This insert is listed to **ASTM E 1509-12 Standard** and is approved for installation into listed factory-built zero clearance fireplaces listed to **UL 127** conforming to the following specifications and instructions:
- The original factory-built clearance fireplace chimney cap must be re-installed after installing the approved chimney liner meeting type **UL 103 HT requirements (2100°F) per UL 1777**.
- If the chimney is not listed as meeting HT requirements, or if the factory built fireplace was tested prior to 1998, a full height listed chimney liner must be installed from the appliance flue collar to the chimney top.
- The liner must be securely attached to the insert flue collar and the chimney top.
- The air flow of the factory-built zero-clearance fireplace system must not be altered. The flue liner top support attachment must not reduce the air flow for the existing air-cooled chimney system.

- No dilution air is allowed to enter the chimney.
  - a. Secure the fireplace damper in the open position. If this cannot be accomplished, it will be necessary to remove the damper
  - b. Seal damper area of chimney around chimney connector with a high temperature sealant or seal insert against the face of the fireplace.
  - c. Both methods must be removable and replaceable for cleaning and re-installation.



### WARNING



#### Risk of Fire!

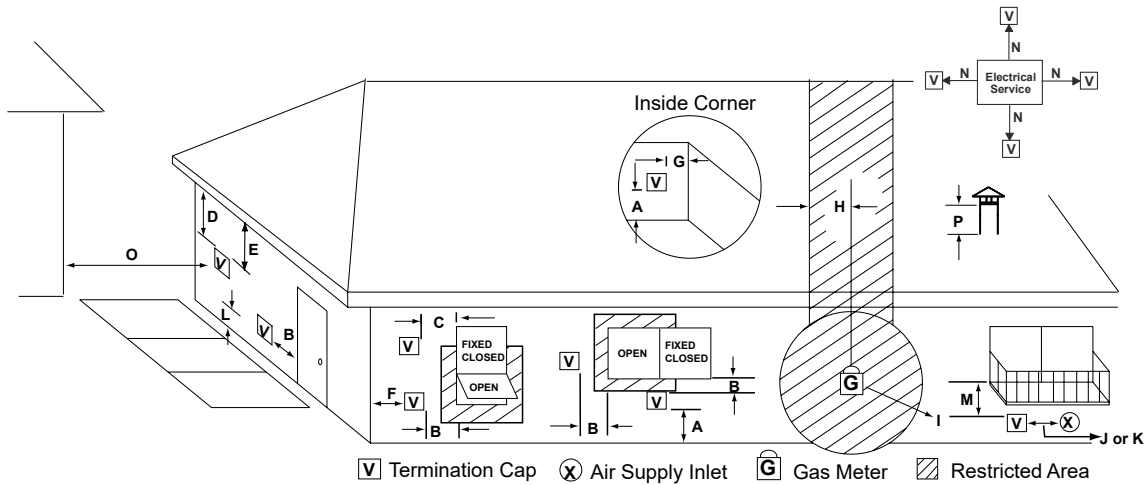
Follow venting manufacturer's clearances and instructions when installing venting system.

**NOTICE:** In Canada when using a factory-built chimney it must be safety listed, **Type UL103 HT (2100°F) [1149°C] CLASS "A" or conforming to CAN/ULC-S629M, STANDARD FOR 650°C FACTORY-BUILT CHIMNEYS.**



# 4 Vent Information

## A. Venting Termination Minimum Requirements



All minimum clearances are listed with an Outside Air Kit (OAK) installed, unless otherwise noted in table below.

<b>A</b>	12 in.	Above Finish Grade (the grade surface must be a non-combustible material)
<b>B</b>	12 in. 48 in. no OAK	Open door or window: below or to the side
<b>B</b>	12 in.	Open door or window: above
<b>C</b>	6 in.	Permanently closed window: above, below or to the side
<b>D</b>	18 in. 36 in. no OAK	Vertical clearance to a ventilated soffit located above the terminal within a horizontal distance of 2 ft from the center-line of the terminal
<b>E</b>	12 in.	Clearance to unventilated soffit
<b>F</b>	12 in.	Clearance to outside corner
<b>G</b>	12 in.	Clearance to inside corner
<b>H</b>	36 in.	Above gas meter/regulator measured from horizontal center-line of regulator
<b>I</b>	36 in. USA 72 in. Canada	Clearance to service regulator vent outlet
<b>J</b>	12 in. 48 in. no OAK	Clearance to non-mechanical air supply inlet to the building or the combustions air inlet to any other appliance
<b>K</b>	10 ft horizontal 3 ft vertical	Clearance to mechanical air supply
<b>L</b>	7 ft.	Above paved sidewalk, paved driveway located on <b>public</b> property
<b>M</b>	12 in.	Under an open veranda, porch, deck or balcony
<b>N</b>	See Note below*	Electric service: above, below or to the side (location must not obstruct or interfere with access)
<b>O</b>	24 in.	Adjacent building, fences and protruding parts of the structure
<b>P</b>	12 in.	Clearance above roof line for vertical terminations

24 in.	Above grass, top of plants, wood or any other combustible
12 in. 36 in. no OAK	Clearance from any forced air intake of other appliance
12 in.	Clearance horizontally from combustible wall
15 in.	Vented directly through a wall, minimum length of horizontal pipe
6 in. horizontal 12 in. vertical	Minimum horizontal or vertical terminations must protrude from wall

**NOTICE:** Termination must exhaust above air inlet elevation.

- It is recommended that at least 60 inches (1.52m) of vertical pipe be installed when appliance is vented directly through a wall. This will create a natural draft, which will help prevent the possibility of smoke or odor venting into the home during a power outage.
- It will also keep exhaust from causing a nuisance or hazard by exposing people or shrubs to high temperatures.
- The safest and preferred venting method is to extend the vent vertically through the roof or above the roof.

**NOTICE: Do NOT Terminate Vent:**

- In any location that will allow flue gases or soot from entering or staining the building.
- In any location which could create a nuisance or hazard.
- In any enclosed or semi-enclosed area such as a carport, garage, attic, crawl space, under a sun deck or porch, narrow walkway.
- Closely fenced area, or any location that can build up a concentration of fumes such as a stairwell, covered breezeway, etc.

\*NOTE: Consult local building, fire officials or authorities having jurisdiction. Local codes or regulations may require different clearances.

## B. Avoiding Smoke and Odors

### Negative Pressure, Shut-Down and Electrical Power Failure

To reduce the probability of back-drafting or burn-back in the pellet appliance during power failure or shut down conditions, it must be able to draft naturally without exhaust blower operation.

Negative pressure in the house will resist this natural draft if not accounted for in the pellet appliance installation.

Heat rises in the house and leaks out at upper levels. This air must be replaced with cold air from outdoors which flows into lower levels of the house.

Vents and chimneys into basements and lower levels of the house can become the conduit for air supply and reverse under these conditions.

### Outside Air

An outside air kit is recommended in all installations. The Outside Air Kit must be ordered separately.

Per national building codes, consideration must be given to combustion air supply to all combustion appliances. Failure to supply adequate combustion air for all appliance demands may lead to back-drafting of those and other appliances.

When the appliance is roof vented (strongly recommended):

- The air intake is best located on the exterior wall oriented towards the prevailing wind direction during the heating season.

When the appliance is side-wall vented:

- The air intake is best located on the same exterior wall as the exhaust vent outlet and located lower on the wall than the exhaust vent outlet.

The outside air supply kit can supply most of the demands of the pellet appliance, but consideration must be given to the total house demand.

House demand may consume the air needed for the appliance. It may be necessary to add additional ventilation to the space in which the pellet appliance is located.

Consult with your local HVAC professional to determine the ventilation demands for your house.

## Vent Configurations

When installing a pellet appliance with a horizontal vent configuration the frequency of power outages should be considered:

- Power outages during operation will cause the appliance to immediately turn off and may create conditions where smoke will back draft into the house. In order to reduce the likelihood of smoke back drafting into the house during a power outage, Hearth and Home Technologies strongly suggests:
  - Installing the pellet venting with a minimum vertical run of 5 feet (1.52m).
  - Installing the outside air kit at least 4 feet (1.22m) below the vent termination.

To prevent soot damage to exterior walls of the house and to prevent re-entry of soot or ash into the house:

- Maintain specified clearances to windows, doors and air inlets, including air conditioners.
- Vents should not be placed below ventilated soffits. Run the vent above the roof.
- Avoid venting into alcove locations.
- Vents should not terminate under overhangs, decks or onto covered porches.
- Maintain minimum clearance of 12 inches (305mm) from the vent termination to the exterior wall. If you see deposits developing on the wall, you may need to extend this distance to accommodate your installation conditions.



### CAUTION

- DO NOT CONNECT THIS Appliance TO A CHIMNEY FLUE SERVICING ANOTHER APPLIANCE.
- DO NOT CONNECT TO ANY AIR DISTRIBUTION DUCT OR SYSTEM.

**Hearth & Home Technologies assumes no responsibility for, not does the warranty extend to, smoke damage caused by reverse drafting of pellet appliances under shut down or power failure conditions.**

## C. Negative Pressure



### WARNING

#### Risk of Asphyxiation!

Negative pressure can cause spillage of combustion fumes and soot.

Negative pressure results from the imbalance of air available for the appliance to operate properly. It can be strongest in lower levels of the house.

#### Causes include:

- Exhaust fans (kitchen, bath, etc.)
- Range hoods
- Combustion air requirements for furnaces, water appliances and other combustion appliances
- Clothes dryers
- Location of return-air vents to furnace or air conditioning
- Imbalances of the HVAC air handling system
- Upper level air leaks such as:
  - Recessed lighting
  - Attic hatch
  - Duct leaks

#### To minimize the effects of negative air pressure:

- Install the outside air kit with the intake facing prevailing winds during the heating season
- Ensure adequate outdoor air for all combustion appliances and exhaust equipment
- Ensure furnace and air conditioning return vents are not located in the immediate vicinity of the appliance
- Avoid installing the appliance near doors, walkways or small isolated spaces
- Recessed lighting should be a “sealed can” design
- Attic hatches weather stripped or sealed
- Attic mounted duct work and air handler joints and seams taped or sealed

## D. Draft

Draft is the pressure difference needed to vent an appliance successfully. When an appliance is drafting successfully, all combustion byproducts are exiting the home through the chimney.

Install through the warm airspace enclosed by the building envelope. This helps to produce more draft, especially during lighting and die-down of the fire.

#### Considerations for successful draft include:

- Preventing negative pressure
- Location of appliance and chimney

**NOTICE:** Hearth & Home Technologies assumes no responsibility for the improper performance of the chimney system caused by:

- Inadequate draft due to environmental conditions
- Down drafts
- Tight sealing construction of the structure
- Mechanical exhausting devices

## E. Chimney and Exhaust Connection

**NOTE:** The appliance exhaust outlet is designed to accommodate 3 inch venting. Use of 4 inch venting requires the use of a 3-to-4 inch exhaust vent increaser in addition to any other venting components needed, sold separately.

1. **Chimney & Connector:** Use 3 or 4 inch (76-102mm) diameter type “L” or “PL” venting system. It can be vented vertically or horizontally.
2. **Mobile Home:** Approved for all Listed pellet vent. A Quadra-Fire Outside Air Kit must be used with manufactured home installations.
3. Install vent at clearances specified by the vent manufacturer.
4. Seal exhaust venting system to the unit with High Temp 500°F RTV silicone sealant. Secure the venting system to the unit with at least (3) screws. All pellet vent pipe must be secured together either by means provided by the pipe manufacturer or by (3) screws at each joint.
5. **DO NOT INSTALL A FLUE DAMPER IN THE EXHAUST VENTING SYSTEM OF THIS Appliance.**
6. **DO NOT CONNECT THIS Appliance TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE.**

**NOTE:** Follow venting manufacturers recommendations for sealing pipe joints.





### WARNING

USE ONLY RECOMMENDED VENTING COMPONENTS; OTHERWISE MAKESHIFT PARTS MAY RESULT IN PROPERTY DAMAGE, PERSONAL INJURY, OR DEATH.

## F. Equivalent Feet of Pipe

The table below can help you calculate the equivalent feet of pipe which is a method used to determine pellet vent size (Figure 16.1).


WARNING



Vent surfaces get HOT, can cause burns if touched. Non-combustible shielding or guards may be required.

### Example of 3 Elbow-Rear Vent Termination Calculation

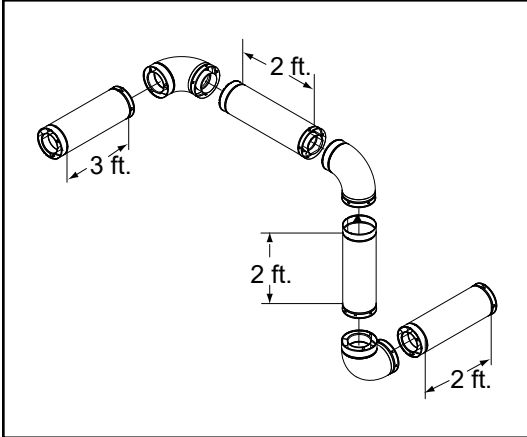


Figure 16.1

Pellet Venting Component	# of Elbows	Feet of Pipe	Multiplied By	Equivalent Feet	Components Equivalent Feet
90° Elbow or Tee	3		X	5	15
45° Elbow			X	3	
Horizontal Pipe		7	X	1	7
Vertical Pipe		2	X	0.5	1
Total Equivalent Feet					23

Table 16.1

**NOTE:** This is a generic example and is not intended to represent any specific fuel type.

## G. Pipe Selection Chart

The chart will help you in determining proper venting size according to the equivalent feet of pipe calculated previously and the altitude above sea level of this installation (Figure 16.2).

1. Locate the calculated equivalent feet of pipe on the vertical left side of the chart.
2. Move to the right horizontally on the chart until you reach your altitude above sea level.
3. If you fall below the diagonal line, 3 or 4 inch (76 to 102mm) pipe may be used.
4. If it is anywhere above the diagonal line, a 4 inch (102mm) diameter pipe is required.

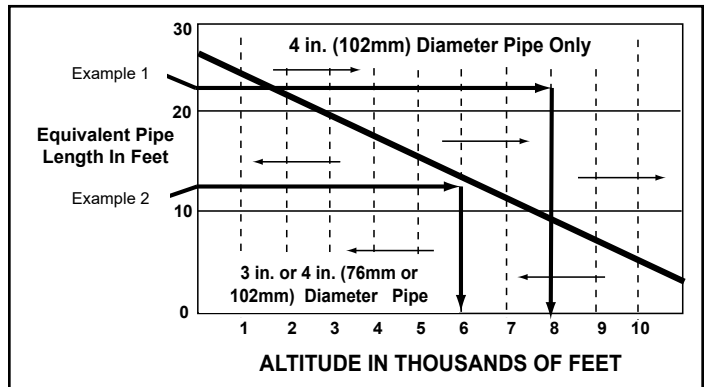




Figure 16.2

- **Example 1:** If the equivalent length of pipe is 23 feet (7m) with altitude of 8,000 feet (2438m) you must use 4 inch (102mm) diameter type "L" or "PL" vent.
- **Example 2:** If the equivalent length of pipe is 12 feet (3.7m) with altitude of 6,000 feet (1829m) you may use 3 or 4 inch (76 to 102mm) diameter type "L" or "PL" vent.

**NOTICE:** A 90° elbow is 5 times as restrictive to the flow of exhaust gases under positive pressure as 1 foot (305mm) of horizontal pipe. A foot of horizontal pipe is twice as restrictive as a foot of vertical pipe.


WARNING



**Risk of Fire!**

- Only LISTED venting components may be used.
- NO OTHER vent components may be used.
- Substitute or damaged vent components may impair safe operation.


WARNING



**Risk of Injury or Property Damage.**

- Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage.
- Refer to the owner's information manual provided with this appliance.
- For assistance or additional information consult a qualified installer, service agency or your dealer.

# 5 Vent system

## A. Direct Connect with Outside Air

## B. Direct Connect without Outside Air

**NOTE:** In Canada, only a full reline is allowed per **ULC S628-93, ORD ULC C1482-M1990.**

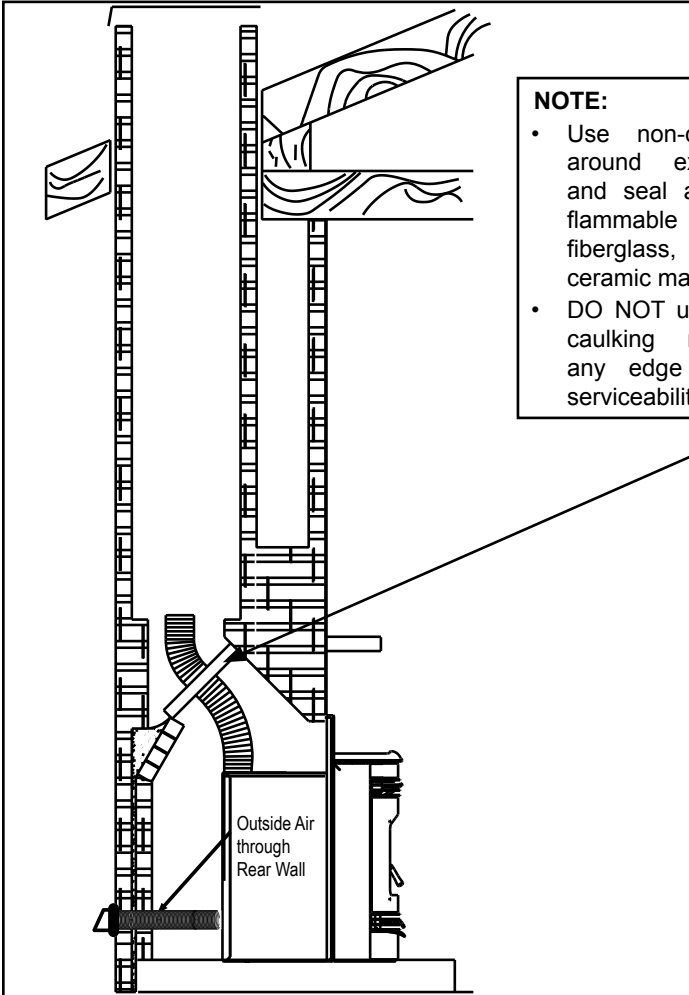


Figure 17.2

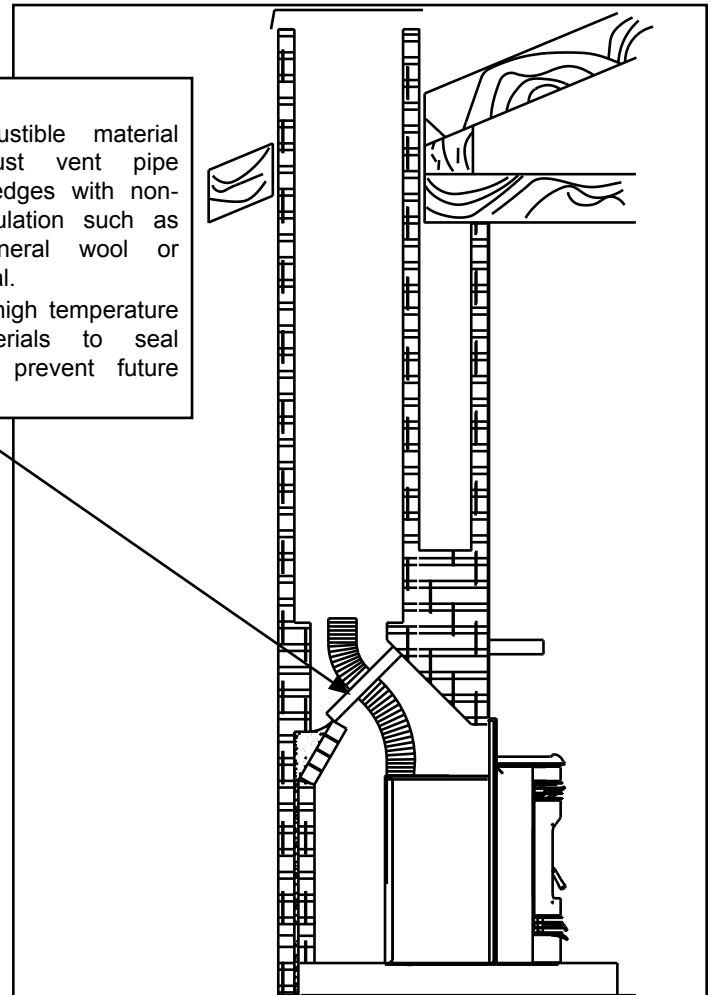


Figure 17.2

**NOTE:**

- Use non-comustible material around exhaust vent pipe and seal all edges with non-flammable insulation such as fiberglass, mineral wool or ceramic material.
- DO NOT use high temperature caulking materials to seal any edge to prevent future serviceability.

**NOTE:**

- Illustrations reflect typical installations and are FOR DESIGN PURPOSES ONLY.
- Illustrations/diagrams are not drawn to scale.
- Actual installation may vary due to individual design preference.



**CAUTION**

**Never draw outside combustion air from:**

- Wall, floor or ceiling cavity
- Enclosed space such as an attic or garage



**WARNING**



**Fire Risk.**

Inspection of Chimney:

- Masonry chimney must be in good condition.
- Meets minimum standard of **NFPA 211**
- Factory-built chimney must be a minimum 6 inch (152mm) **UL103 HT.**

**NOTE:** In Canada, where passage through a wall or partition of combustible construction is desired, the installation shall conform to **CAN/CSA-B365.**

### C. Full Reline With Outside Air - Horizontal



#### CAUTION

Never draw outside combustion air from:

- Wall, floor or ceiling cavity
- Enclosed space such as an attic or garage



#### WARNING



#### Fire Risk.

Inspection of Chimney:

- Masonry chimney must be in good condition.
- Meets minimum standard of **NFPA 211**
- Factory-built chimney must be a minimum 6 inch (152mm) **UL103 HT.**

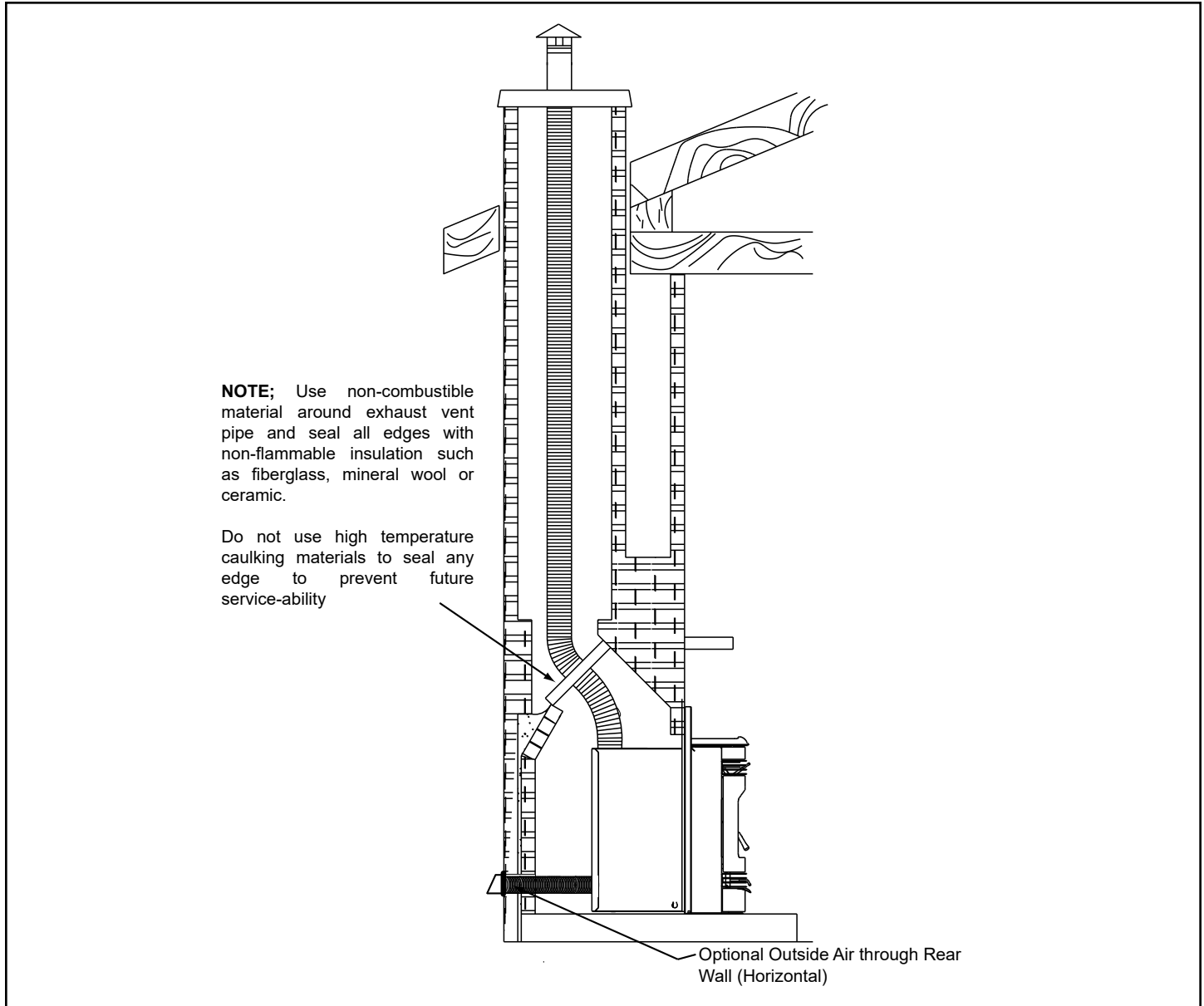


Figure 18.1

**NOTE:** In Canada, where passage through a wall or partition of combustible construction is desired, the installation shall conform to **CAN/CSA-B365**.

#### NOTE:

- Illustrations reflect typical installations and are FOR DESIGN PURPOSES ONLY.
- Illustrations/diagrams are not drawn to scale.
- Actual installation may vary due to individual design preference.

## D. Full Reline With Outside Air - Vertical

**NOTE:** Check clearances carefully for this type of installation to ensure adequate room for outside air venting.



### CAUTION

**Check building codes prior to installation.**

- Installation **MUST** comply with local, regional, state and national codes and regulations.
- Consult local building, fire officials or authorities having jurisdiction about restrictions, installation inspection, and permits.

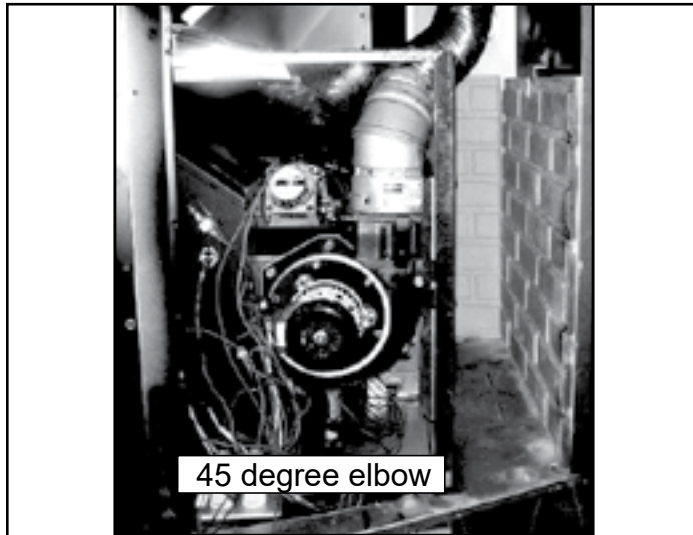


Figure 19.1

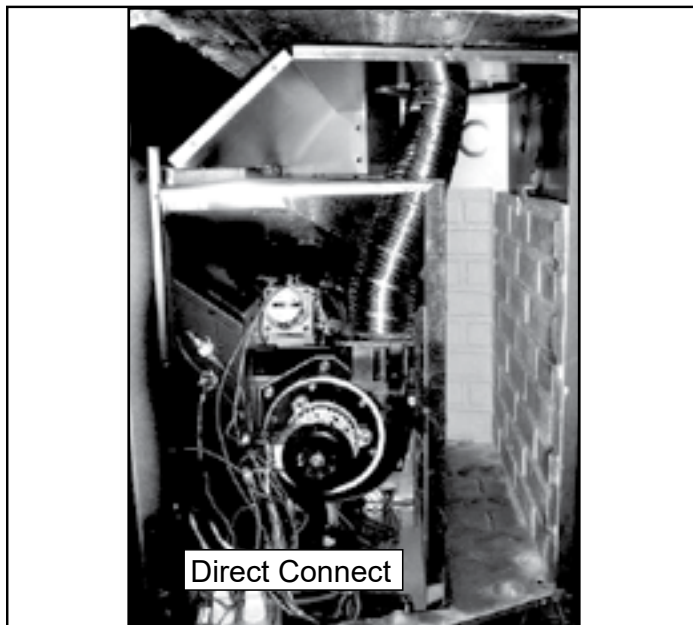


Figure 19.2

**NOTE:** In Canada, only a full reline is allowed per **ULC S628-93, ORD ULC C1482-M1990**.

**NOTE:** In Canada this fireplace insert must be installed with a continuous chimney liner extending from the fireplace insert to the top of the chimney. The chimney liner must conform to the **Class 3 requirements of CAN/ULC-S635, Standard for Lining Systems for Existing Masonry or Factory-Built Chimneys and Vents, or CAN/ULC-S640, Standard for Lining Systems for New Masonry Chimneys**.

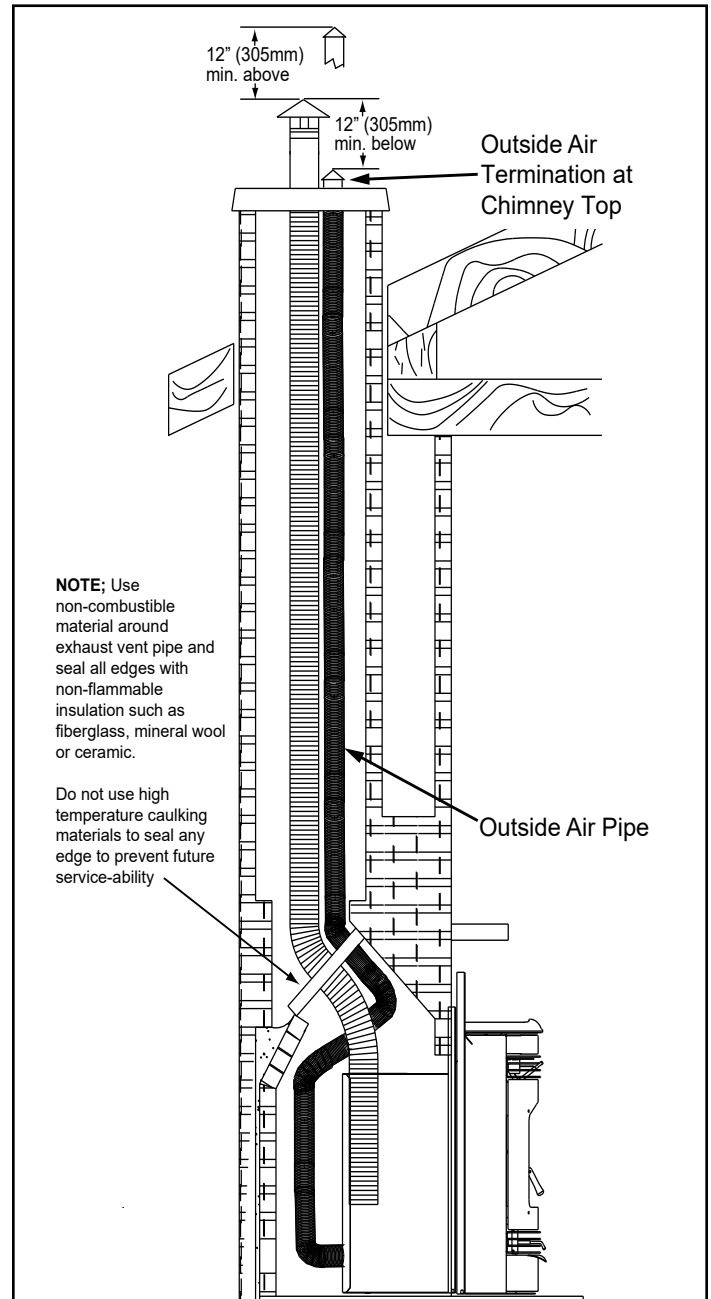


Figure 19.3

# 6 Appliance Set-Up

## A. Leveling System

The leveling bolts are located at the rear of the appliance. To access the bolts, remove the front access panels. Reach in and turn the bolt to the desired height to level the appliance (**Figures 20.1**).

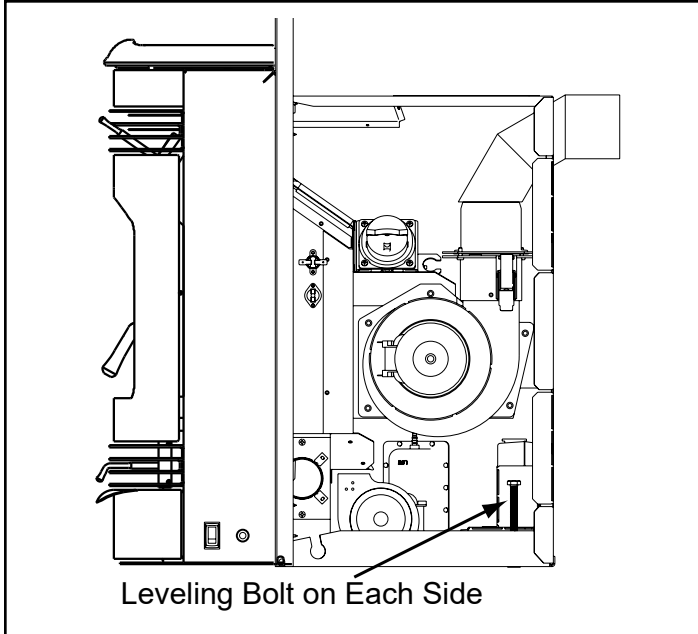


Figure 20.1

## B. Door Handle Removal

1. Open the door. Using a 5/32 Allen wrench, loosen set screw by a couple of turns, but do not remove.
2. Push the pin completely out and remove the handle.
3. Re-install in reverse order.

## C. Door Removal

1. Remove the door handle and face. Follow instructions from B above.
2. The door can now be lifted off the hinges.
3. Re-install in reverse order.

## D. Outside Air Kit Instructions

1. Measure distance from floor to air vent opening in appliance and mark location on wall.
2. Use saw to cut opening in wall. Cut a 2-1/2 to 3 inch (64-76mm) opening on inside wall and a 3 to 3-1/2 inch (76-89mm) opening on outside of house.
3. Use hose clamp to secure flex pipe to collar assembly (**Figure 20.2**).
4. Slide trim ring over flex pipe and run pipe through wall.
5. Attach hose to outside termination cap with second hose clamp.
6. Secure termination cap to outside surface.
7. Secure trim ring to interior wall.

Never draw outside combustion air from:

- Wall, floor or ceiling cavity
- Enclosed space such as an attic or garage

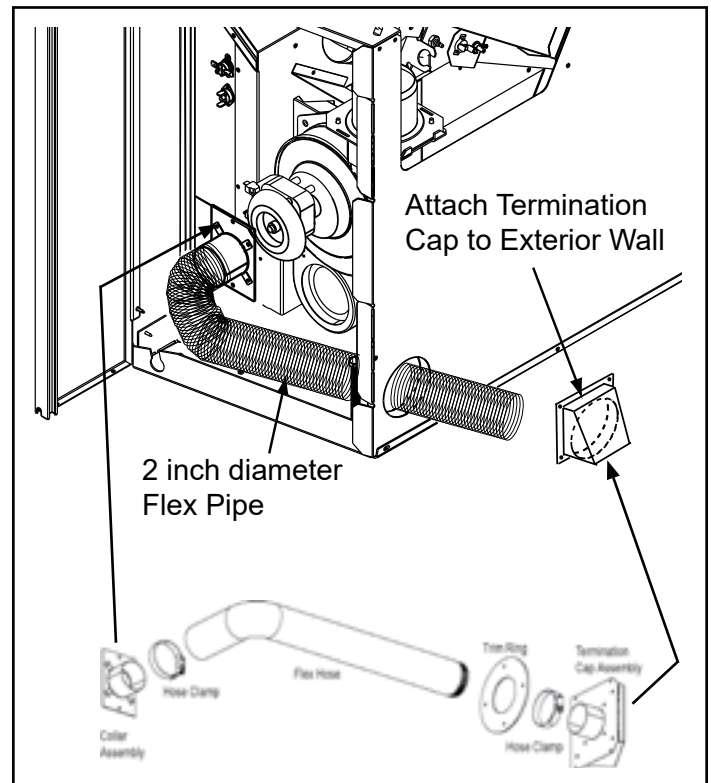


Figure 20.2



## E. Panel and Trim Set

1. Lay panel top and legs face down on protective covering to prevent scratching.
2. Attach the panel legs to the top panel using a Phillips head screwdriver. There are 2 screws for each leg (**Figure 21.2**).
3. Open the hopper lid by pulling toward you. This will make it easier to set the panels in place. Secure the panels to the insert, 2 screws per leg, as shown in **Figure 21.3**.
4. Connect the trim pieces together using the "L" Brackets supplied (**Figure 21.4**).
5. Slide the trim over the top of the panels.
6. Install the access panels. At the bottom of the access panel there are 2 hooks that slip into a slot at the bottom of the side panel and a magnet at the top that holds the access panel in place (**Figure 21.3**).

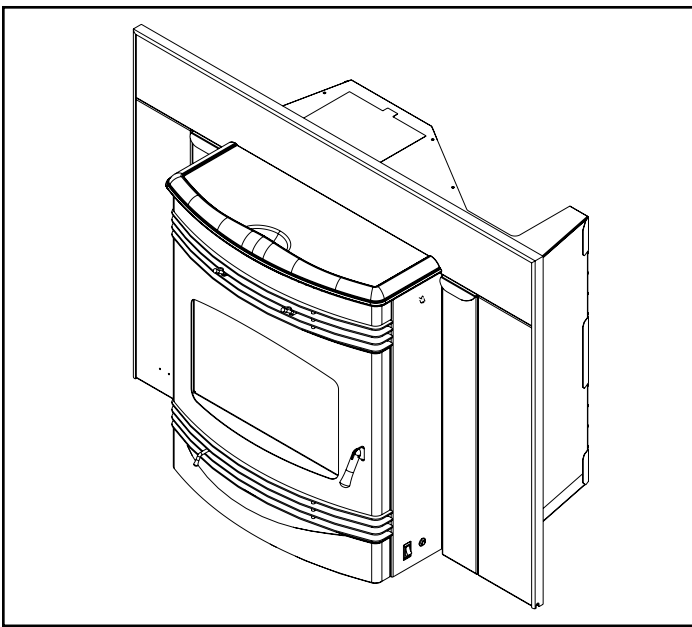


Figure 21.1 - Completed View

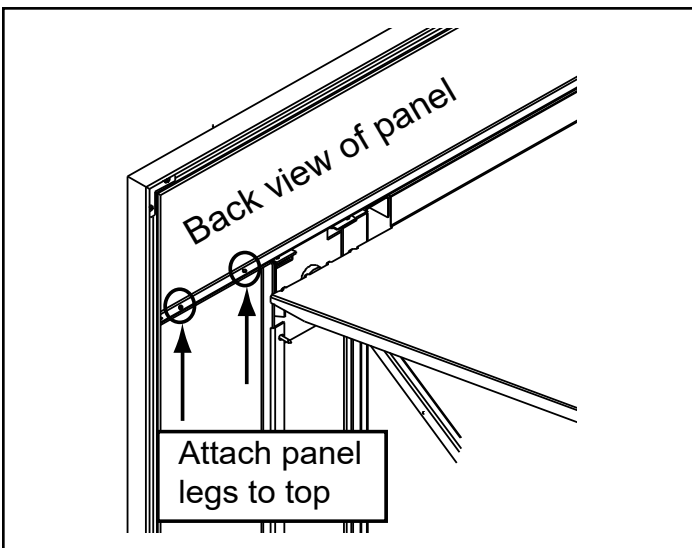


Figure 21.2

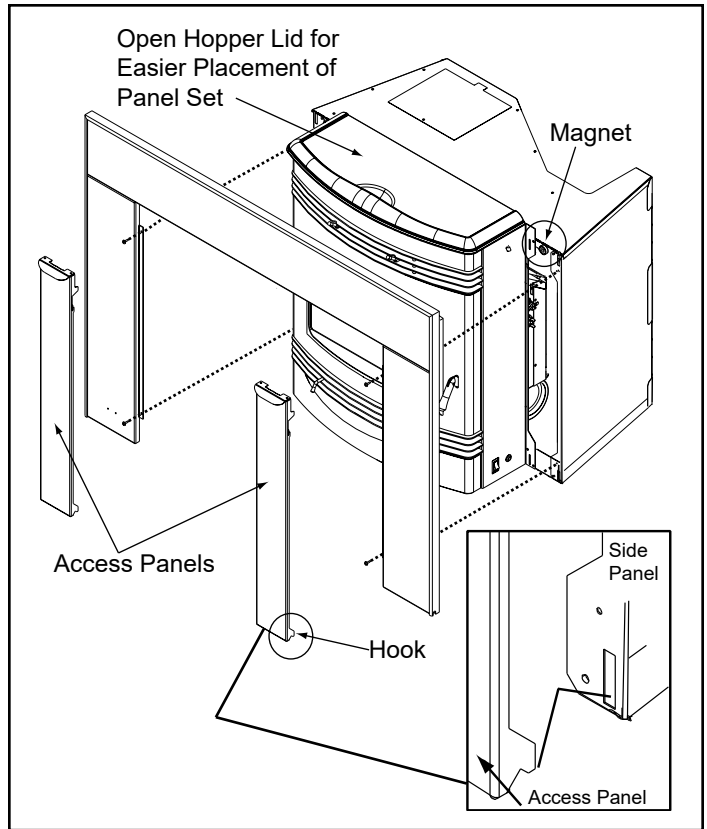


Figure 21.3

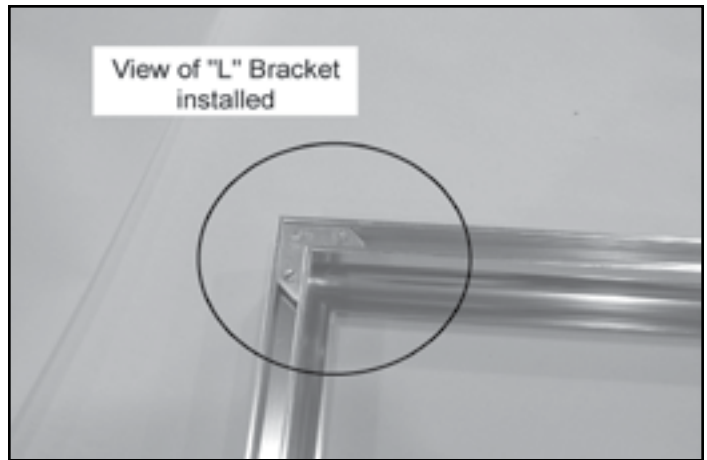



Figure 21.4

## F. Thermostat Installation

The kit comes with a programmable wall thermostat and 25' of thermostat wire. If you need to run more than 25' make sure you use a continuous strand of 18 to 22 gauge thermostat wire. For optimum performance your thermostat should be:

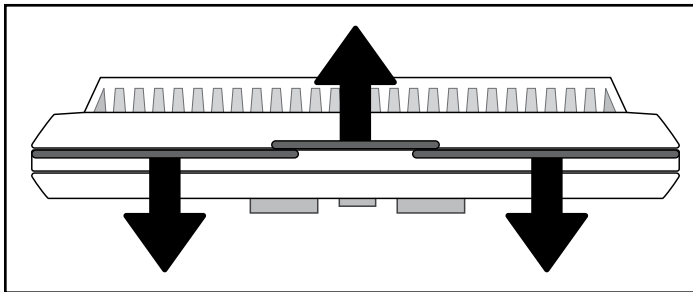
- Mounted on an inside wall, approximately 5' above the floor
- Do not locate where there is poor air circulation such as in a corner, alcove, behind doors, bookcase or other objects
- Located away from drafts, direct sunlight, above a lamp, television, radiator, a wall next to a window, or direct heat from the appliance
- Avoid damp environments as this can lead to corrosion that may shorten thermostat life
- If painting or construction work around, cover the thermostat completely or wait until work is complete before installation.


CAUTION

**Shock hazard.**

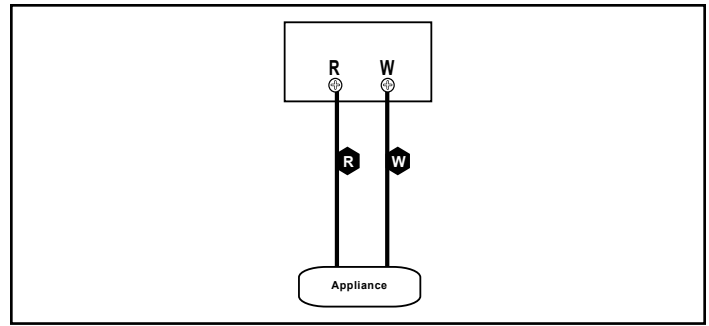
- Do NOT remove grounding prong from plug.
- Plug directly into properly grounded 3 prong receptacle.
- Route cord away from appliance.
- Do NOT route cord under or in front of appliance.

1. Separate the body of the thermostat from the mounting plate by gently pulling the two pieces apart (**Figure 23.1**).



**Figure 22.1**

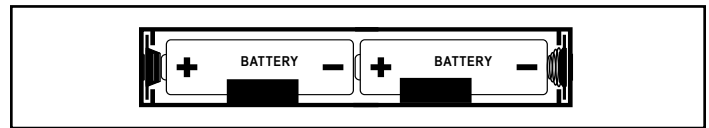
2. Use a drill with either a 3/16 drill bit for drywall or a 7/32 drill bit for plaster drill holes.
3. Using a hammer tap in wall anchors.
4. Route the wires through the opening in the base plate, and hold the base against the wall while aligning up to the holes. Attach base plate using a Phillips head screwdriver and two screws.
5. Connect your thermostat wire to the W and R terminals (**Figure 22.2**).



**Figure 22.2**

**NOTE:** Ensure bare wire ends are held ALL the way into the terminal block while the screws are being tightened.

6. There are two AA ALKALINE ONLY batteries already installed into the thermostat; to activate, remove black plastic tab that is located inside the battery compartment.

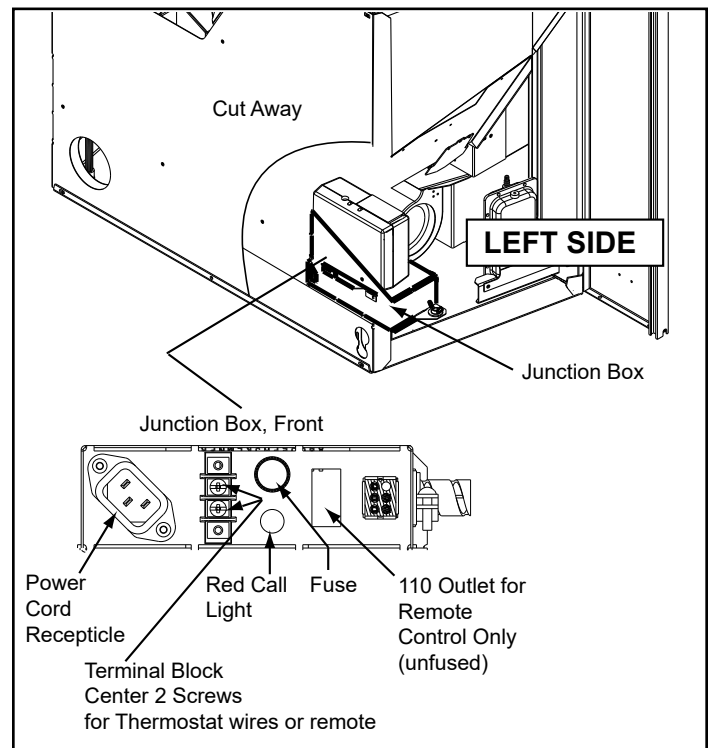


**Figure 23.3**

7. Snap the thermostat to the base plate.

### Connect thermostat wires to appliance:

There is a 4 screw terminal block located on the back lower left corner of the stove directly above the power cord inlet. The center 2 screws are for the thermostat wires (**Figure 22.3**).



**Figure 22.3**

## G. Optional Log Set Placement Instructions

### 2 Piece Log Set Installation

1. Open door to expose the firebox.
2. Install the left log first and then the right log (**Figure 23.1**).
3. Lean the logs against the cast iron brick in the back of the firebox.
4. Push the logs to the far left and far right against the sides of the firebox (**Figure 23.2**).
5. To clean the logs, use a vacuum and a soft brush attachment or a paint brush.



### CAUTION

Logs are FRAGILE. Use extreme care when handling or cleaning logs.

**NOTE:** Due to the abrasive nature of a pellet appliance fire, the logs are not covered under warranty. Any placement variation other than shown here can cause excessive heat and shall void the appliance warranty.



Figure 23.1

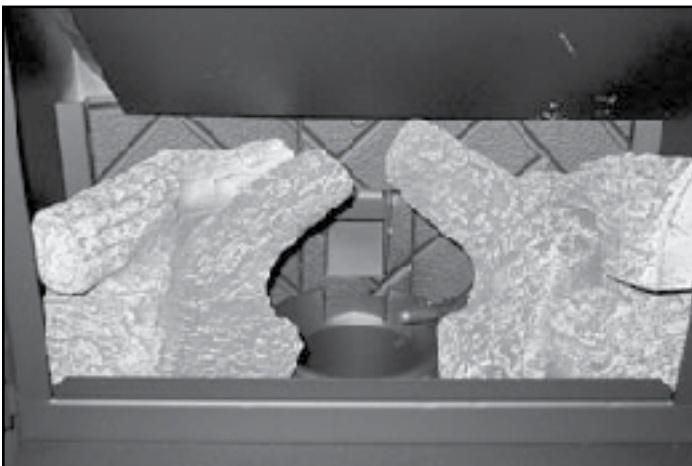


Figure 23.2

# 7 Mobile Home Installation

You must use a Quadra-Fire Outside Air Kit for installation in a mobile home.

1. An outside air inlet must be provided for the combustion air and must remain clear of leaves, debris, ice and/or snow. It must be unrestricted while the appliance is in use to prevent room air starvation which causes smoke spillage. Smoke spillage can also set off smoke alarms.
2. The combustion air duct system must be made of metal. It must permit zero clearance to combustible construction and prevent material from dropping into the inlet or into the area beneath the dwelling and contain a rodent screen.
3. The appliance must be secured to the mobile home structure by bolting it to the floor (using lag bolts). Use the same holes that secured the appliance to the shipping pallet.
4. The appliance must be grounded with #8 solid copper grounding wire or equivalent, terminated at each end with an NEC approved grounding device.
5. Refer to Clearances to Combustibles and floor protection requirements on **page 8** for listings to combustibles and appropriate chimney systems.
6. Use silicone to create an effective vapor barrier at the location where the chimney or other component penetrates to the exterior of the structure.
7. Follow the chimney manufacturer's instructions when installing the vent system for use in a mobile home.
8. Installation shall be in accordance with the **Manufacturers Home & Safety Standard (HUD) CFR 3280, Part 24.**

**PART NUMBER: 811-0872**



## WARNING

Products of combustion generate carbon monoxide and different fuels generate different levels. Carbon monoxide

- Only use approved fuels in this appliance.
- Always keep door shut during operation. Operating this appliance with doors open can allow CO to leak into the home.

CO can kill you before you are aware it is in your home. At lower levels of exposure, CO causes mild effects that are often mistaken for the flu. These symptoms include headaches, dizziness, disorientation, nausea and fatigue. The effects of CO exposure can vary greatly from person to person depending on age, overall health and the concentration and length of exposure.



## CAUTION

THE STRUCTURAL INTEGRITY OF THE MOBILE HOME FLOOR, WALL AND CEILING/ROOF MUST BE MAINTAINED

**Do NOT cut through:**

- Floor joist, wall, studs or ceiling trusses.
- Any supporting material that would affect the structural integrity.

This appliance is to be connected to a factory-built chimney conforming to **CAN/ULC-S629, Standard for 650°C Factory-Built Chimneys.**

For removal of the chimney for mobile home transportation, contact the proper transportation officials.

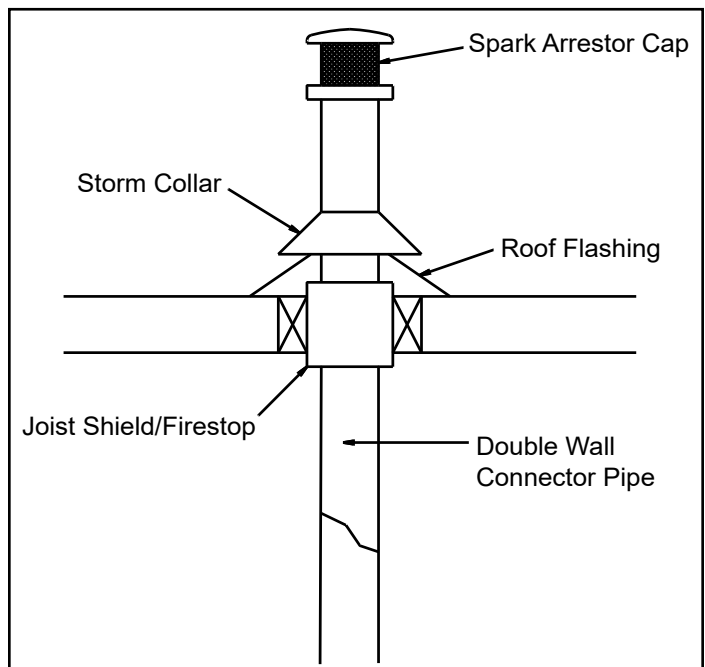


Figure 24.1



## CAUTION

Never draw outside combustion air from:

- Wall, floor or ceiling cavity
- Enclosed space such as an attic or garage



## WARNING

**It is critical to have a working smoke detector installed in the home of appliance operation.**

- Smoke alarms that are properly installed and maintained play a vital role in reducing fire deaths and injuries. Having a working smoke alarm reduces the chance of fire related injuries.

# **8 Reference Materials**

---

## **A. Service & Maintenance List**

<b>Date of Service</b>	<b>Performed By</b>	<b>Description of Service</b>



## B. Accessory List



# SANTAFEI-C

Beginning Manufacturing Date: Apr 2019  
Ending Manufacturing Date: Active

IMPORTANT: THIS IS DATED INFORMATION. Parts must be ordered from a dealer or distributor. **Hearth and Home Technologies does not sell directly to consumers.** Provide model number and serial number when requesting service parts from your dealer or distributor.



**Stocked  
at Depot**

ITEM	DESCRIPTION	COMMENTS	PART NUMBER	
	Log Set		LOGS-30-OE	
	Log, Rear Left		7050-144	
	Log, Rear Right		7050-143	
	Outside Air Kit, Rear		811-0872	
	Channel, Air Intake		SRV413-7040	
	Cover, Outside Air Kit, Floor		SRV411-1071	
	Hose, Alum Flex, 2 Inch X 3 Ft		SRV200-0860	
	Outside Air Cap Assembly		SRV7001-044	
	Outside Air Collar Assembly		SRV7001-045	
	Trim Plate, Outside Air Kit		SRV412-7100	
	Panel Set, Large	Black Nickel	SP-SFI3350-NB	
		Nickel	SP-SFI3350-NL	
	Bracket, -L-, Trim		832-0840	
	Logo, Quadra-Fire	Pkg of 10	7000-649/10	
	Trim, Panel Set	Black Nickel	7019-027	
	Panel Set, Small	Black Nickel	SP-SFI3040-NB	
		Nickel	SP-SFI3040-NL	
	Bracket, -L-, Trim		832-0840	
	Logo, Quadra-Fire	Nickel	7000-649/10	
	Reset Button Assembly		SRV7000-040	
	Smart-Batt II	<b>No longer available</b>	SMARTBATT-B	
	Smart-Stat II		SMART-STAT-HHT	
	Thermostat, Programmable		PROG-STAT	
	Vent Adapter, 3-4"		811-0720	
	Damper, 3 inch		PEL-DAMP3	<b>Y</b>
	Damper, 4 inch		PEL-DAMP4	

Additional service part numbers appear on following page.

Beginning Manufacturing Date: Apr 2019  
Ending Manufacturing Date: Active

IMPORTANT: THIS IS DATED INFORMATION. Parts must be ordered from a dealer or distributor. **Hearth and Home Technologies does not sell directly to consumers.** Provide model number and serial number when requesting service parts from your dealer or distributor.



**Stocked  
at Depot**

ITEM	DESCRIPTION	COMMENTS	PART NUMBER	
<b>FASTENERS</b>				
	Avk Rivnut Repair Kit		RIVNUT-REPAIR	Y
	Bolt, Hex Head, 1/4-20 X 1	Pkg of 10	25221A/10	Y
	Bumper, Rubber	Pkg of 12	SRV224-0340/12	Y
	Magnet Round		SRV7000-140	Y
	Nut, Capped, Push, 1/4	Pkg of 24	7000-157/24	Y
	Nut, Wing 1/4-20	Pkg of 12	226-0110/12	
	Nut, Wing, 8-32	Pkg of 24	226-0160/24	Y
	Pin 3/16 X 1/2		7000-229	
	Rivet, Iron, 1/4 X 1-1/4	Pkg of 25	229-0090/25	
	Screw Flat Head 1/4-20	Pkg of 24	7000-130/24	Y
	Screw Flat Head Philips 8-32 X 1/2	Pkg of 12	220-0490/12	Y
	Screw, Hwh Ms 1/4-20 X 3/4 Ns	Pkg of 25	220-0080/25	Y
	Screw, Machine Screw 1/4-20 X 5/8	Pkg of 24	220-0440/24	Y
	Screw, Pan Head Phillips 8-32 X 3/4	Pkg of 24	229-1100/24	Y
	Screw, Pan Head Phillips 8-32 X 3/8	Pkg of 40	225-0500/40	Y
	Screw, Ph, Phl Tc 8-32 X 1/2	Pkg of 25	220-0030/25	Y
	Screw, Set 5/16-18 X 1/4	Pkg of 25	225-0550/25	Y
	Screw, Pan Head Phillips, 10/32 X 1/4	Pkg of 24	229-1230/24	Y
	Screw, Sheet Metal #8 X 1/2 S-Grip	Pkg of 40	12460/40	Y
	Set Screw 5/16-18 X 1-1/2	Pkg of 24	7000-101/24	Y
	Washer, 1/4, Sae	Pkg of 24	28758/24	Y
	Wing Thumb Screw 8-32 X 1/2	Pkg of 24	7000-223/24	Y





# QUADRA-FIRE®

NOTHING BURNS LIKE A QUAD

## CONTACT INFORMATION

Hearth & Home Technologies  
352 Mountain House Road  
Halifax, PA 17032  
Division of HNI INDUSTRIES

Please contact your Quadra-Fire dealer with any questions or concerns.  
For the number of your nearest Quadra-Fire dealer  
log onto [www.quadrafire.com](http://www.quadrafire.com)



## CAUTION



### DO NOT DISCARD THIS MANUAL

- Important operating and maintenance instructions included.
- Read, understand and follow these instructions for safe installation and operation.
- Leave this manual with party responsible for use and operation of this appliance.



### We recommend that you record the following pertinent information for your heating appliance.

Date purchased/installed: \_\_\_\_\_

Serial Number: \_\_\_\_\_

Location on appliance: \_\_\_\_\_

Dealership purchased from: \_\_\_\_\_

Dealer Phone: 1(     ) - \_\_\_\_\_

Notes:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

This product may be covered by one or more of the following patents: (United States) 5341794, 5263471, 6688302, 7216645, 7047962 or other U.S. and foreign patents pending.

  
**HEARTH & HOME**  
technologies™

# Owner's Manual

## Operation & Care

**INSTALLER:** Leave this manual with party responsible for use and operation.  
**OWNER:** Retain this manual for future reference.

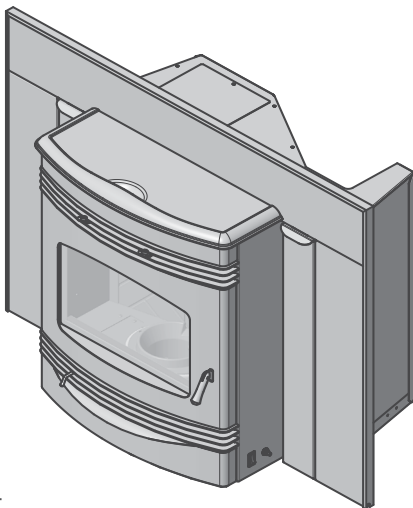
Contact your dealer with questions on installation, operation, or service.

**NOTICE: DO NOT DISCARD THIS MANUAL**

# QUADRA-FIRE®

## SANTA FE PELLET INSERT APPLIANCE

### MODEL NUMBER: SANTAFEI-C



### CAUTION

Check building codes prior to installation.

- Installation **MUST** comply with local, regional, state and national codes and regulations.
- Consult local building, fire officials or authorities having jurisdiction about restrictions, installation inspection, and permits.

Installation and service of this appliance should be performed by qualified personnel. Hearth & Home Technologies recommends HHT Factory Trained or NFI certified professionals.



### WARNING



If the information in these instructions is not followed exactly, a fire could result causing property damage, personal injury, or death.

- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- Do not over fire - If appliance or chimney connector glows, you are over firing. Over firing will void your warranty.
- Comply with all minimum clearances to combustibles as specified.

Failure to comply may cause house fire.



### WARNING



#### HOT SURFACES!

Glass and other surfaces are hot during operation AND cool down. Hot glass will cause burns.

- Do not touch glass until it is cooled
- **NEVER** allow children to touch glass
- Keep children away
- **CAREFULLY SUPERVISE** children in same room as fireplace.
- Alert children and adults to hazards of high temperatures
- High temperatures may ignite clothing or other flammable materials.
- Keep clothing, furniture, draperies and other flammable materials away.



### CAUTION

Tested and approved for wood pellets only. Burning of any other type of fuel voids your warranty.

**NOTE:** To obtain a French translation of this manual, please contact your dealer or visit [www.quadrafire.com](http://www.quadrafire.com)

**REMARQUE :** Pour obtenir une traduction française de ce manuel, s'il vous plaît contacter votre revendeur ou visitez [www.quadrafire.com](http://www.quadrafire.com)

# Congratulations



and Welcome to the Quadra-Fire Family!

**NOTE:** Clearances may only be reduced by means approved by the regulatory authority having jurisdiction

## A. Sample of Serial Number / Safety Label

LOCATION: On chain behind right access panel & Behind left access panel

**QUADRA-FIRE**

SANTAFEI-C

Serial No. / N° de série

US

BARCODE LABEL

Report / Rapport:  
061-S-77c-6.2  
0061PM077E

2023	JAN	FEB	MAR	APR
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2024	MAY	JUNE	JULY	AUG
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2025	SEPT	OCT	NOV	DEC
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**U.S. ENVIRONMENTAL PROTECTION AGENCY**  
Certified to comply with 2020 particulate emissions standards  
1.1 g/hr EPA Method 28R and ASTM 2779 using premium wood pellets.  
Input Rating: 30,600 Btu's/hr.

THIS WOOD HEATER NEEDS PERIODIC INSPECTION AND REPAIR FOR PROPER OPERATION. CONSULT THE OWNER'S MANUAL FOR FURTHER INFORMATION. IT IS AGAINST FEDERAL REGULATIONS TO OPERATE THIS WOOD HEATER IN A MANNER INCONSISTENT WITH THE OPERATING INSTRUCTIONS IN THE OWNER'S MANUAL.

**DO NOT REMOVE THIS LABEL / NE PAS ENLEVER L'ÉTIQUETTE**  
Made in China/ Fait Aux Chine 7019-799D

**SAFETY LABEL**

**QUADRA-FIRE**

SANTAFEI-C

Report No.  
#061-S-77c-6.2  
0061PM077E

Input Rating: 30,600 BTU/HR.  
Electrical Rating: 115 VAC, 60 Hz, Start 4.1 Amps, Run 1.1 AMPS.

Listed Solid Fuel Room Heater/Pellet Type Insert. Also suitable for Mobile Home Installation. This appliance has been tested and listed for use in Manufactured Homes in accordance with OAR 814-23-9000 through 814-23-909.

Tested to: ASTM E-1509-2004 and ULC S628-93 Room Heating Pellet Burning Type, (UM) 84-HUD FOR USE ONLY WITH PELLETIZED WOOD OR SHELLED FIELD CORN FUEL. Do not use any other type of fuel. OMNI-Test Laboratories, Inc. has determined that this appliance complies with Canadian Standards Association (CSA) B415.1 and Title 40 of the U.S. Code of Federal Regulations, Part 60, SubPart AAA. OMNI-Test Laboratories Accreditations: The Standards Council of Canada, the American National Standards Institute, and the U.S. Environmental Protection Agency.

Route power cord away from unit. Do not route cord under or in front of appliance.  
**DANGER:** Risk of electrical shock. Disconnect power supply before servicing. Replace glass only with 5mm ceramic available from dealer.

To start, set thermostat to room temperature, the appliance will light automatically. To shutdown, set thermostat to below room temperature. For further instruction refer to owner's manual.  
**KEEP VIEWING AND ASH REMOVAL DOORS TIGHTLY CLOSED DURING OPERATION.**

**PREVENT HOUSE FIRES**  
Install and use only in accordance with manufacturer's installation and operating instructions. CONTACT LOCAL BUILDING OR FIRE OFFICIALS ABOUT RESTRICTIONS AND INSTALLATION INSPECTION IN YOUR AREA.  
**WARNING - FOR MOBILE HOMES:** Do not install appliance in a sleeping room. An outside combustion air inlet must be provided. The structural integrity of the mobile home floor, ceiling and walls must be maintained. Refer to manufacturer's instructions and local codes for precautions required for passing chimney through a combustible wall or ceiling. Inspect and clean vent system frequently in accordance with manufacturer's instructions. Do Not Connect This Unit to a Chimney Serving Another Appliance. Use a 3" or 4" diameter type "L" or "PL" venting system.

**MINIMUM CLEARANCES TO COMBUSTIBLE MATERIALS AS A BUILT-IN UNIT**

A	Top of Hopper	Top Vent	2.0 in.	51mm
		Rear Vent	2.5 in.	64mm
B	Side of Hopper	Top/Rear Vent	2.0 in.	51mm
C	Back of Hopper	Top/Rear Vent	2.5 in.	64mm
D	Vent Pipe to Combustible	Top/Rear Vent	3.0 in.	76mm

0 in. Clearance To Exposed Section And Face Trim

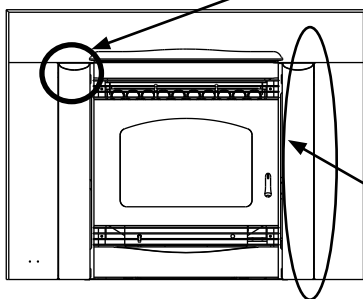
**Masonry or Zero Clearance**

A	Insert side to combustible side wall	16 in.	406mm
B	Insert top to mantel	12 in.	305mm
C	Insert top to max. 2.25 in. to top face trim	4.75 in.	121mm
D	Insert side to max. 2.25 in. to side face trim	10 in.	254mm
E	Hearth extension to from door opening - front	6 in.	152mm
F	Hearth extension from side of door opening	6 in.	152mm

\*When constructing floor protection for your pellet appliance, any parts or materials used, must be non-combustible.

**DO NOT REMOVE THIS LABEL** 7019-800C

**SAMPLE: SERIAL NUMBER LABEL**  
LOCATION: Behind left access panel.



**SAMPLE: CLEARANCE TO COMBUSTIBLES LABEL**  
LOCATION: On chain behind right access panel



**Safety Alert Key:**

- **DANGER!** Indicates a hazardous situation which, if not avoided will result in death or serious injury.
- **WARNING!** Indicates a hazardous situation which, if not avoided could result in death or serious injury.
- **CAUTION!** Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
- **NOTICE:** Indicates practices which may cause damage to the appliance or to property.

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→ = Contains updated information

## B. Warranty Policy

### Hearth & Home Technologies

#### LIMITED LIFETIME WARRANTY

Hearth & Home Technologies, on behalf of its hearth brands (“HHT”), extends the following warranty for HHT gas, wood, pellet and electric hearth appliances that are purchased from an HHT authorized dealer.

#### WARRANTY COVERAGE:

HHT warrants to the original owner of the HHT appliance at the site of installation, and to any transferee taking ownership of the appliance at the site of installation within two years following the date of original purchase, that the HHT appliance will be free from defects in materials and workmanship at the time of manufacture. After installation, if covered components manufactured by HHT are found to be defective in materials or workmanship during the applicable warranty period, HHT will, at its option, repair or replace the covered components. HHT, at its own discretion, may fully discharge all of its obligations under such warranties by replacing the product itself or refunding the verified purchase price of the product itself. The maximum amount recoverable under this warranty is limited to the purchase price of the product. This warranty is subject to conditions, exclusions and limitations as described below.

#### WARRANTY PERIOD:

Warranty coverage for consumers begins at the date of installation. In the case of new home construction, warranty coverage begins on the date of first occupancy of the dwelling or six months after the sale of the product by an independent, authorized HHT dealer/distributor, whichever occurs earlier. However, the warranty shall commence no later than 24 months following the date of product shipment from HHT, regardless of the installation or occupancy date. The warranty period for parts and labor for covered components is produced in the following table.

The term “Limited Lifetime” in the table below is defined as: 20 years from the beginning date of warranty coverage for gas appliances, and 10 years from the beginning date of warranty coverage for wood and pellet appliances. These time periods reflect the minimum expected useful lives of the designated components under normal operating conditions.

Warranty Period		HHT Manufactured Appliances and Venting					
Parts	Labor	Gas	Pellet	Wood	Electric	Venting	Components Covered
1 Year		X	X	X	X	X	All parts including handles, external enameled components and other material except as covered by Conditions, Exclusions, and Limitations listed
2 years			X	X			Igniters, Auger Motors, Electronic Components, and Glass
		X					Electrical components limited to modules, remotes/wall switches, valves, pilots, blowers, junction boxes, wire harnesses, transformers and lights (excluding light bulbs)
		X		X			Molded Refractory Panels, Glass Liners
3 years			X				Firepots, burnpots, mechanical feeders/auger assemblies
5 years	1 year	X					Vent Free Burners, Vent Free Logs
			X	X			Castings, Medallions and Baffles
6 years	3 years			X			Catalyst - Limitations Listed
7 years	3 years		X	X			Manifold tubes, HHT Chimney and Terminations
10 years	1 year	X					Burners, logs and refractory
Limited Lifetime	3 years	X	X	X			Firebox and heat exchanger, FlexBurn® System (engine, inner cover, access cover and fireback)
1 Year	None	X	X	X	X	X	All replacement parts beyond warranty period

See conditions, exclusions and limitations on the next page

## **WARRANTY CONDITIONS:**

- This warranty only covers HHT appliances that are purchased through an HHT authorized dealer or distributor. A list of HHT authorized dealers is available on the HHT branded websites.
- This warranty is only valid while the HHT appliance remains at the site of original installation.
- This warranty is only valid in the country in which the HHT authorized dealer or distributor that sold the appliance resides.
- Contact your installing dealer for warranty service. If the installing dealer or distributor is unable to provide necessary parts, contact the nearest HHT authorized dealer or supplier. Additional service fees may apply if you are seeking warranty service from a dealer other than the dealer from whom you originally purchased the product.
- Check with your dealer in advance for any costs to you when arranging a warranty call. Travel and shipping charges for parts are not covered by this warranty.
- Limited Catalyst Warranty
  - o For wood burning products containing a catalyst, the catalyst will be warranted for a six-year period to the original purchaser at the site of original installation. The purchaser must provide the name, address, and telephone number of the location where the product is installed, proof of original purchase date, date of failure, and any relevant information regarding the failure of the catalyst.

## **WARRANTY EXCLUSIONS:**

This warranty does not cover the following:

- Changes in surface finishes as a result of normal use. As a heating appliance, some changes in color of interior and exterior surface finishes may occur. This is not a flaw and is not covered under warranty.
- Damage to printed, plated, or enameled surfaces caused by fingerprints, accidents, misuse, scratches, melted items, or other external sources and residues left on the plated surfaces from the use of abrasive cleaners or polishes.
- Repair or replacement of parts that are subject to normal wear and tear during the warranty period are not covered. These parts include: paint, wood and pellet gaskets, firebricks, grates, flame guides, batteries and the discoloration of glass.
- Expansion, contraction, or movement of certain parts causing noise. These conditions are normal and complaints related to this noise are not covered by this warranty.
- Damages resulting from: (1) failure to install, operate, or maintain the appliance in accordance with the installation instructions, operating instructions, and listing agent identification label furnished with the appliance; (2) failure to install the appliance in accordance with local building codes; (3) shipping or improper handling; (4) improper operation, abuse, misuse, continued operation with damaged, corroded or failed components, accident, or improperly/incorrectly performed repairs (5) environmental conditions, inadequate ventilation, negative pressure, or drafting caused by tightly sealed constructions, insufficient make-up air supply, or handling devices such as exhaust fans or forced air furnaces or other such causes; (6) use of fuels other than those specified in the operation instructions; (7) installation or use of components not supplied with the appliance or any other components not expressly authorized and approved by HHT; (8) modification of the appliance not expressly authorized and approved by HHT in writing; and/or (9) interruptions or fluctuations of electrical power supply to the appliance.
- Non-HHT venting components, hearth connections or other accessories used in conjunction with the appliance.
- Any part of a pre-existing fireplace system in which an insert or a decorative gas appliance is installed.
- HHT's obligation under this warranty does not extend to the appliance's capability to heat the desired space. Information is provided to assist the consumer and the dealer in selecting the proper appliance for the application. Consideration must be given to the appliance location and configuration, environmental conditions, insulation and air tightness of the structure.

### **This warranty is void if:**

- The appliance has been over-fired, operated in atmospheres contaminated by chlorine, fluorine, or other damaging chemicals. Over-firing can be identified by, but not limited to, warped plates or tubes, deformation/warping of interior cast iron structure or components, rust colored cast iron, bubbling, cracking and discoloration of steel or enamel finishes.
- The appliance is subjected to prolonged periods of dampness or condensation.
- There is any damage to the appliance or other components due to water or weather damage which is the result of, but not limited to, improper chimney or venting installation.

## **LIMITATIONS OF LIABILITY**

- The owner's exclusive remedy and HHT's sole obligation under this warranty, under any other warranty, express or implied, or in contract, tort or otherwise, shall be limited to replacement, repair, or refund, as specified above. In no event will HHT be liable for any incidental or consequential damages caused by defects in the appliance. Some states do not allow exclusions or limitation of incidental or consequential damages, so these limitations may not apply to you. This warranty gives you specific rights; you may also have other rights, which vary from state to state. EXCEPT TO THE EXTENT PROVIDED BY LAW, HHT MAKES NO EXPRESS WARRANTIES OTHER THAN THE WARRANTY SPECIFIED HEREIN. THE DURATION OF ANY IMPLIED WARRANTY IS LIMITED TO DURATION OF THE EXPRESSED WARRANTY SPECIFIED ABOVE.

# 1 Listing and Code Approvals

## A. Appliance Safety Certification

<b>Model Number:</b>	SANTAFEI-C
<b>Laboratory:</b>	OMNI Test Laboratories, Inc.
<b>Report Number:</b>	061-S-77d-6.2
<b>Type:</b>	Solid Fuel Room Appliance/Pellet Fuel Burning Type Insert
<b>Standard:</b>	ASTM E1509-2004 and ULC S628-93 Room Appliance Pellet Fuel Burning Type and (UM) 84-HUD, Mobile Home Approved

## B. Appliance Emissions Certification

<b>Model Number:</b>	SANTAFEI-C
<b>Laboratory:</b>	OMNI Test Laboratories, Inc.
<b>Report Number:</b>	0061PM077E
<b>Standard:</b>	EPA method 28R, ASTM 2779 and ASTM E1509-2004
<b>Can be found at:</b>	<a href="http://www.quadrafire.com/about-us/epa-certification">www.quadrafire.com/about-us/epa-certification</a>

## C. BTU & Efficiency Specifications

<b>EPA Certification Number:</b>	Number: 175-19
<b>EPA Certified Emissions:</b>	1.1 grams per hour
<b>*LHV Tested Efficiency:</b>	70.4%
<b>**HHV Tested Efficiency:</b>	66.1%
<b>***EPA BTU Output:</b>	5,800 to 22,400 / hr.
<b>****BTU Input:</b>	9,300 to 30,600 / hr.
<b>Vent Size:</b>	3" or 4" Type "L" or "PL"
<b>Hopper Capacity:</b>	45 lbs.
<b>Fuel:</b>	Premium Wood Pellets
* Weighted average LHV (Low Heating Value) efficiency using data collected during EPA emissions tests in accordance with the requirements of CSA B415.1.	
** Weighted average HHV (High Heating Value) efficiency using data collected during EPA emissions tests in accordance with the requirements of CSA B415.1.	
*** A range of BTU outputs calculated using HHV efficiency and the burn rates from the EPA tests.	
**** Based on the maximum feed rate per hour multiplied by approximately 8600 BTU's which is the average BTU's from a pound of pellets.	

The SANTAFEI-C is Certified to comply with 2020 particulate emission standards.



This pellet insert needs periodic inspection and repair for proper operation. It is against federal regulations to operate this pellet insert in a manner inconsistent with operating instructions in this manual.

**NOTICE:** This installation must conform with local codes. In the absence of local codes you must comply with the **ASTM E1509-2004, ULC S628-93, ASTM 2779, and (UM) 84-HUD.**



## D. Glass Specifications

This appliance is equipped with 5mm ceramic glass. Replace glass only with 5mm ceramic glass. Please contact your dealer for replacement glass.

## E. Electrical Rating

115 VAC, 60 Hz, Start 4.1 Amps, Run 1.1 Amp

## F. Mobile Home Approved

- This appliance is approved for mobile home installations when not installed in a sleeping room and when an outside combustion air inlet is provided.
- The structural integrity of the mobile home floor, ceiling, and walls must be maintained.
- The appliance must be properly grounded to the frame of the mobile home and use only Listed pellet vent Class "L" or "PL" connector pipe.
- Outside Air Kit, part OAK-ACC must be installed in a mobile home installation.

## G. Sleeping Room

When installed in a sleeping room it is recommended that 3ft of vertical be installed prior to horizontally exiting the room and a smoke/CO alarm be installed in the bedroom; The size of the room must be at least 50ft<sup>3</sup> per 1,000 Btu/hr stove input, if the stove exceeds the room size, outside air must be installed.

## H. California - Prop65



### WARNING

This product and the fuels used to operate this product (wood), and the products of combustion of such fuels, can expose you to chemicals including carbon black, which is known to the State of California to cause cancer, and carbon monoxide, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to: [WWW.P65Warnings.ca.gov](http://WWW.P65Warnings.ca.gov)



### WARNING



#### Fire Risk.

Hearth & Home Technologies disclaims any responsibility for, and the warranty will be voided by, the following actions:




- Installation and use of any damaged appliance.
  - Modification of the appliance.
  - Installation other than as instructed by Hearth & Home Technologies.
  - Installation and/or use of any component part not approved by Hearth & Home Technologies.
  - Operating appliance without fully assembling all components.
  - Operating appliance without legs attached (if supplied with appliance).
  - Do NOT Over fire - If appliance or chimney connector glows, you are over firing.
- Any such action that may cause a fire hazard.

Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage.

For assistance or additional information, consult a qualified installer, service agency or your dealer.

**NOTE:** Hearth & Home Technologies, manufacturer of this appliance, reserves the right to alter its products, their specifications and/or price without notice.

# 2 Operating Instructions

 <b>WARNING</b>
 <b>Fire Risk.</b> <ul style="list-style-type: none"><li>• Do not operate appliance before reading and understanding operating instructions.</li><li>• Failure to operate appliance properly may cause a house fire.</li></ul>


Visit [www.quadrafire.com/shopping-tools/videos](http://www.quadrafire.com/shopping-tools/videos) to view product and use & care videos.

## A. Fire Safety

To provide reasonable fire safety, the following should be given serious consideration:

- Install at least one smoke detector and CO monitor on each floor of your home.
- Locate detectors away from the heating appliance and close to the sleeping areas.
- Follow the detector's manufacturer's placement and installation instructions and maintain regularly.
- A CO detector should be installed in the room with the appliance.
- Conveniently locate a Class A fire extinguisher to contend with small fires.
- In the event of a hopper fire:
  - Evacuate the house immediately.
  - Notify fire department.

## B. Non-Combustible Materials

Material which will not ignite and burn, composed of any combination of the following:

- Steel
- Plaster
- Brick
- Iron
- Concrete
- Tile
- Glass
- Slate

Materials reported as passing ASTM E 136, Standard Test Method for Behavior of Metals, in a Vertical Tube Furnace of 750° C.

## C. Combustible Materials

Material made of/or surfaced with any of the following materials:

- Wood
- Compressed Paper
- Plant Fibers
- Plastic
- Plywood/OSB
- Sheet Rock (drywall)

**Any material that can ignite and burn:** flame proofed or not, plastered or non-plastered.

## D. Fuel Material and Fuel Storage

Pellet fuel quality can greatly fluctuate. This appliance has been designed to burn a wide variety of fuels, giving you the choice to use the fuel that is most economical in your region.

Hearth & Home Technologies strongly recommends only using Pellet Fuel Institute (PFI) certified fuel.

### Fuel Material

- Made from sawdust or wood by-products
- Depending on the source material it may have a high or low ash content.

### Higher Ash Content Material


- Hardwoods with a high mineral content
- Fuel that contains bark
- Standard grade pellets and high ash pellets

### Lower Ash Content Material

- Softwoods
- Fuels with low mineral content
- Premium grade pellets

### Clinkers

Minerals and other non-combustible materials such as sand will turn into a hard, glass-like substance called a clinker when heated in the fire pot.

 <b>CAUTION</b>
<b>Do not burn fuel that contains an additive; (such as soybean oil).</b> <ul style="list-style-type: none"><li>• May cause hopper fires</li><li>• Damage to product may result</li></ul>

Trees from different areas will vary in mineral content. That is why some fuels produce more clinkers than others.

### **Moisture**

Always burn dry fuel. Burning fuel with high moisture content takes heat from the fuel and tends to cool the appliance, robbing heat from your home. Damp pellet fuel can clog the feed system.

### **Size**


- Pellets are either 1/4 inch or 5/16 inch (6-8mm) in diameter
- Length should be no more than 1-1/2 inches (38mm)
- Pellet lengths can vary from lot to lot from the same manufacturer
- Due to length variations, the feed rate may need adjusting occasionally

### **Performance**

- Higher ash content requires the fire pot and the ash drawer to be emptied more frequently
- Hardwoods require more air to burn properly
- Premium wood pellets produce the highest heat output
- Burning pellets longer than 1-1/2 inches (38mm) can cause an inconsistent fuel feed rate and/or missed ignitions or feed jams.

### **Changing to Different Fuel Type**

- Empty the hopper of the previous fuel
- Thoroughly vacuum hopper before filling with the new fuel

	<b>CAUTION</b>
Tested and approved for wood pellets only. Burning of any other type of fuel voids your warranty.	

The burn rate, BTU content and heat output will all vary depending on the fuel selected.

### **Storage**

- Wood pellets should be left in their original sealed bag until using to prevent moisture absorption
- Do not store any pellet fuel within the clearance requirements or in an area that would hinder routine cleaning and maintenance

## **E. Before Your First Fire**

1. First, make sure your appliance has been properly installed and that all safety requirements have been met. Pay particular attention to the fire protection, venting and thermostat installation instructions.
2. Double check that the ash drawer and firebox are empty!
3. Check the position of the thermocouple, located above the fire pot, and make sure that it protrudes approximately 3/4 inch (19mm) into the fire pot.
4. Close the front door.

<b>IMPORTANT DETAIL: The tip of the thermocouple must be in contact with the inside end of the thermocouple cover or missed ignitions can occur.</b>
--

## **F. Filling the Hopper**

Open the hopper lid by lifting the handle. Fill the hopper with fuel. Close the hopper lid. The unit will not feed with the hopper lid open and the fire will go out.

## G. General Operating Information

### 1. Thermostat Calls For Heat

The appliance is like most modern furnaces; when the thermostat calls for heat, your appliance will automatically light and deliver heat. When the room is up to temperature and the thermostat is satisfied, the red call light will shut off and the appliance will shut down. The red call light is located behind the left access panel.

### 2. Heat Output Controls

This appliance is equipped with a heat output control switch that has three settings or burn rates; low, medium and high (**Figure 10.1**). The appliance will turn on and off as the thermostat demands. When the thermostat calls for heat, the appliance will always start up on High. After burning approximately 4 minutes, the appliance will then burn at the rate at which it was originally set. If the appliance is set at one of the lower settings, it will run quieter but takes longer to heat up an area than if it were set at a higher burn rate. Regardless of the burn rate, when the area is warm enough to satisfy the thermostat, the appliance will shut off.

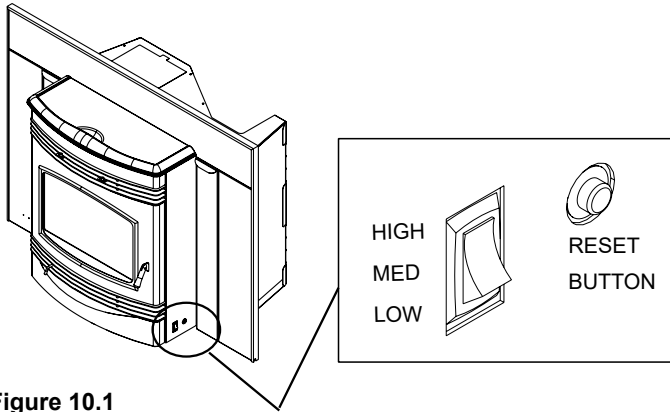




Figure 10.1



## WARNING




**Fire Hazard.**  
Keep combustible materials, gasoline and other flammable vapors and liquids clear of appliance.


- Do NOT store flammable materials in the appliance's vicinity.
- NEVER use gasoline, GASOLINE-TYPE lantern fuel, kerosene, charcoal lighter fluid, or similar liquids to start or "freshen up" a fire in this appliance. Keep all such liquids well away from the appliance while it is in use.
- DO NOT BURN GARBAGE OR FLAMMABLE FLUIDS SUCH AS GASOLINE, NAPHTHA OR ENGINE OIL.
- DO NOT USE CHEMICALS OF FLUIDS TO START THE FIRE.
- Combustible materials may ignite.

## H. Starting Your First Fire

1. A thermostat is required for proper operation of this appliance. At this time, fill the hopper with pellets, set the thermostat to its lowest setting. Plug the power cord into nearby outlet.
2. The exhaust blower will stay on for approximately 18 minutes even though the thermostat is not calling for heat. This is normal.
3. Locate the heat output control switch on the lower right side of the firebox in front of the right access panel. Set to the HIGH setting and then adjust the thermostat to its highest setting. The red call light will be on which is located on the front of the junction box behind the left access panel. This indicates the thermostat is calling for heat (**Figure 10.2**).
4. The fuel feed system and the igniter should now be on.
5. For your first fire it will be necessary to press the reset button once a minute until pellets start to drop into the fire pot, then press button 1 more time. This will fill the feed system and allow the appliance to begin dropping pellets. The appliance will continue to run as long as the thermostat is calling for heat.
6. Once the appliance has ignited, let it burn for approximately 15 minutes, then set the thermostat to the desired room temperature. Adjust the heat output control switch to the desired setting.



## WARNING



**Fire Risk**  
Do NOT operate appliance:

- With appliance door open.
- Fire pot floor open.
- Cleaning slide plates open.

Do NOT store fuel:

- Closer than required clearances to combustibles to appliance
- Within space required for loading or ash removal.

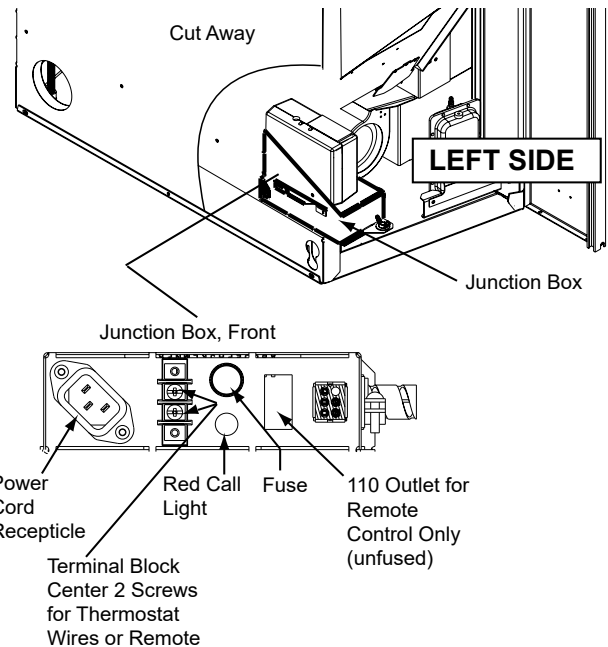


Figure 10.2

## I. Fire Characteristics

A properly adjusted fire with the heat output control button set on "HIGH" has a short active flame pattern that extends out of the fire pot approximately 4 inches (102mm). If the fire has tall flames with black tails and seems somewhat lazy, the feed rate will need to be reduced. If the fire is not 4 inches (102mm) tall, increase the feed rate. A medium and low setting will give a shorter flame. The flame will rise and fall somewhat. This is normal.

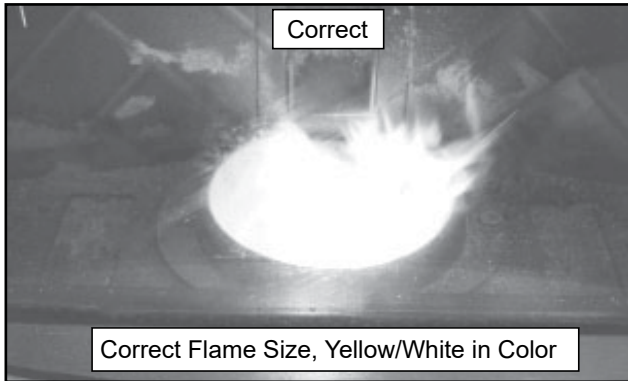


Figure 11.1

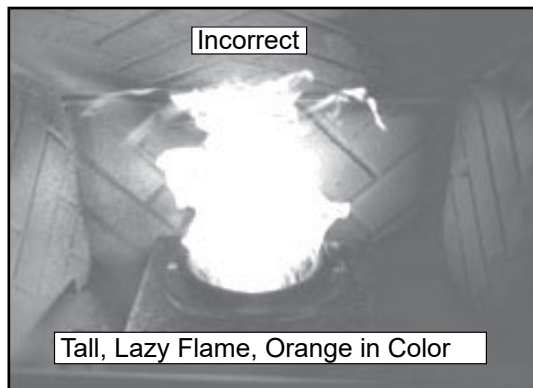




Figure 11.2

## J. Feed Rate Adjustment Instructions

The feed adjustment control rod is factory set, and should be adequate for most fuels. The set screw is located at the bottom of the hopper and set loose at the factory so the fuel adjustment control rod will slide by only loosening the wing nut. Do not re-tighten bottom set screw.

However, if the flame height is too high or too low, you will need to adjust the feed rate. Wait until the appliance has been burning for 15 minutes before making your adjustments and allow 15 minutes for feed adjustment to take effect. Make adjustments in approximately 1/2 inch increments.

1. Loosen the wing nut (**Figure 11.3**).
2. Adjust the fuel adjustment control rod towards the "+" symbol to increase the feed rate and flame height or towards the "-" symbol, to decrease the feed rate and flame height.
3. Re-tighten the wing nut.

 <b>WARNING</b>	
	<b>Fire Risk.</b>
	<ul style="list-style-type: none"><li>• High ask fuels, or lack of maintenance, can cause the fire pot to fill with ash and clinker. If the fire pot fills to the top, immediately shut down the appliance and clean.</li><li>• Failure to do so could result in smoking, sooting and possible hoper fires.</li></ul>

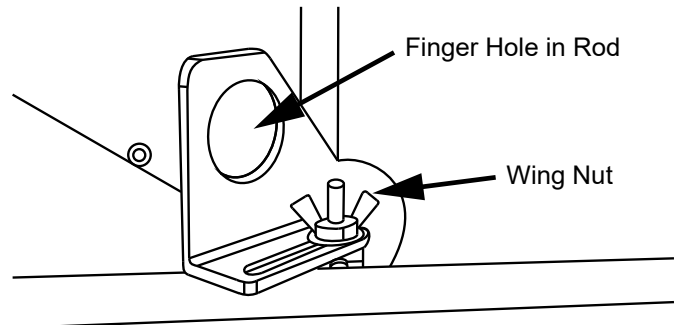


Figure 11.3

## K. Ignition Cycles

1. During each ignition cycle, it is normal to see some smoke in the firebox. The smoke will stop once the fire starts.
2. The convection blower will automatically turn on after your appliance has reached the set temperature. This blower transfers heat from your appliance into the room, and will continue to run after the thermostat has stopped calling for heat until the appliance has cooled down.
3. Occasionally the appliance may run out of fuel and shut itself down. When this happens, the red call light will be on (**Figure 10.2 on page 10**). To restart it, fill the hopper and press the reset button (**Figure 10.1 on page 10**). When you press the reset button the red call light will go out. Release the button and the light will come back on. You should see a fire shortly. If not, follow **Starting Your First Fire on page 10**.

 <b>WARNING</b>
 <b>Fire Risk</b> Do NOT operate appliance: <ul style="list-style-type: none"><li>• With appliance door open.</li><li>• Fire pot floor open.</li><li>• Cleaning slide plates open.</li></ul> Do NOT store fuel: <ul style="list-style-type: none"><li>• Closer than required clearances to combustibles to appliance</li><li>• Within space required for loading or ash removal.</li></ul>
 <b>CAUTION</b>
HOT WHILE IN OPERATION. KEEP CHILDREN, CLOTHING AND FURNITURE AWAY. CONTACT MAY CAUSE SKIN BURNS.

## L. Insert Removal

In the case that service or inspection is required the appliance may need to be removed from the wall.

1. Appliance must be unplugged before removal of appliance is possible. Unplug the appliance from its power source.
2. Remove insert surround from appliance, to ease the process of removal.
3. Remove the clip from the exhaust transition from the exhaust outlet in the back of the appliance. This is what connects the venting to the appliance. Removal of the clips will allow you to remove the appliance from the wall without damaging or adjusting the venting.
4. Slide appliance from the wall and rotate either direction as needed.

## M. Restarting the Appliance

### Restart Process

1. When the unit has run out of fuel, add pellet fuel to the hopper.
2. Dump the ashes and clinkers built up in the fire pot by pulling the ash dump removal handle out several times. Make sure clinkers have dropped into the ash pan then return the handle to fully closed position.
3. Press the reset button; the appliance will then begin its startup sequence.

### Restarting After a Power Failure



1. For an electrical disruption the appliance will start on its own without need for priming - providing the control system is asking for heat.
2. The appliance will always go through a normal shutdown sequence before restarting.



## N. Clear Space

**NOTICE:** Clearances may only be reduced by means approved by the regulatory authority having jurisdiction.

### Mantel:

Avoid placing candles and other heat-sensitive objects on mantel or hearth. Heat may damage these objects.

 <b>WARNING</b>
 <b>Fire Risk.</b> Do NOT place combustible objects in front of the appliance. High temperatures may ignite clothing, furniture or draperies. Maintain a minimum clearance of 3 feet (914mm) in front of appliance.

 <b>WARNING</b>
 <b>Fire Risk.</b> Keep combustible materials, gasoline and other flammable vapors and liquids clear of appliance. <ul style="list-style-type: none"><li>• Do NOT store flammable materials in the appliance's vicinity.</li><li>• <b>DO NOT USE GASOLINE, LANTERN FUEL, KEROSENE, CHARCOAL LIGHTER FLUID OR SIMILAR LIQUIDS TO START OR "FRESHEN UP" A FIRE IN THIS Appliance.</b></li><li>• <b>DO NOT BURN GARBAGE OR FLAMMABLE FLUIDS SUCH AS GASOLINE, NAPHTHA OR ENGINE OIL.</b></li><li>• <b>DO NOT USE CHEMICALS OR FLUIDS TO START THE FIRE.</b></li><li>• Keep all such liquids well away from the appliance while it is in use.</li><li>• Combustible materials may ignite.</li></ul>

## O. Thermostat Controls

### TEMPERATURE (HEAT / OFF) SWITCH:

Set this switch to HEAT to control your appliance. The off position will disable the appliance.

### SET (MULTI-FUNCTION) SLIDE SWITCH:

This provides easy access to common settings, and should always remain in RUN unless items are being adjusted.

**NOTE:** When thermostat is set to "Manual" non-programmable mode, all positions of the SET slide switch will act like RUN.

### UP / DOWN BUTTONS:

The UP and DOWN buttons are used to control the set temperature, or adjust any other on-screen items. An item flashing, is the item currently being adjusted.

### HOLD BUTTON:

This button activates and deactivates the manual Temperature HOLD feature, which maintains a fixed set temperature indefinitely without following a program routine.

### COPY BUTTON:

This is used to COPY temperature program items from one day to the next. Also used to access the menu setup.

### NEXT BUTTON:

This is used when setting items such as software options, and temperature programs when they are flashing on the screen. Pressing the next button will cycle through which item is flashing.

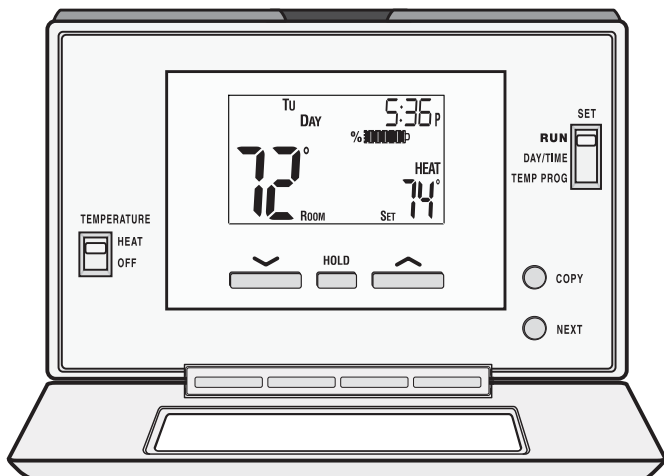


Figure 13.1

## P. Thermostat Setup Options

Setup options for how the thermostat will function are performed using a menu on the display screen.

### TO ACCESS THE SETUP MENU:

Move the System Mode Switch into the OFF position, and then hold down the COPY button for approximately 5 seconds until the screen changes. The menu will always start with item #01, and is advanced to each following item by a single press of the NEXT button. The options for each item are changed using the UP or DOWN buttons.

### ITEM #01 (CLK = CLOCK FORMAT):

- **12Hr, default:** This displays the clock times using standard AM and PM values.
- **24Hr:** This displays the clock times using the military-time format (example 22:00 hours, without using AM or PM).

### ITEM #02 (TMP = TEMPERATURE SCALE):

- **F, default:** Shows all temperature values in Fahrenheit.
- **C:** Shows all temperature values Celsius.

### ITEM #03 (PROGRAMMING STYLE):

- **7 Day, default:** This style uses a separate program routine for each of the 7 days in the week.
- **5/2 Day:** This style uses a weekday program routine for Monday, Tuesday, Wednesday, Thursday, Friday, and a separate weekend program routine for Saturday and Sunday.
- **Manual Non-Programmable:** In this setting, there are no program routines for the thermostat to follow and the temperature control will be set only by the UP and DOWN buttons on the front panel.

### ITEM #04 (PERD = EVENT OR PERIOD QUANTITY):

- **4P, default:** Thermostat uses four Events per day (called MORN, DAY, EVE, and NITE).
- **2P:** The thermostat uses two Events per day (called DAY and NITE).

**NOTE:** Event or Period Quantity feature is not accessible during Manual Non-Programmable mode.

### ITEM #07 (DLAY = DELAY TIME):

- **5, default:** Thermostat waits 5 minutes before turning the system back on after it was last run. This internal delay prevents the appliance from turning on too quickly after shutting down. The 5 minute setting is fine for most applications.
- **2:** Same operation as above but reduced to 2 minutes between state changes.

**NOTE:** This delay does not happen when the thermostat is manually turned up and down.

**ITEM #08 (TEMPERATURE DIFFERENTIAL):**

- The thermostat works by turning your heating system on and off whenever the room temperature varies from the desired set-point temperature.
- Use the UP/DOWN buttons to change the number value between 1 and 9. Generally your system should cycle on about 3 to 6 times per hour. A smaller differential number makes the system cycle more frequently, so the room temperature is more precise and constant. A larger differential number will make the system remain on for a longer duration each time and decreases the number of cycles per hour.
- Default is set to 4.

**TEMPERATURE HOLD:**

Temperature hold is used for maintaining a fixed set temperature; once a HOLD is initiated, the thermostat will maintain the set temperature indefinitely. To enter a HOLD state, press the HOLD button one time and the word HOLD will appear on the display. To cancel, press the HOLD button once again.

<b>STATIC NOTICE</b>
Thermostat is protected against normal static electric discharges, however to minimize the risk of damaging the thermostat in extremely dry weather, please touch a grounded metal object before touching the thermostat.

**Q. Thermostat Operation Instructions**

**SET DAY AND TIME:**

Place the SET switch into the DAY/TIME position. With the day flashing press UP or DOWN to set the day or the week. Press NEXT and the clock time will start flashing. Use UP or DOWN to set the time; verify the AM/PM indicator is correct. Return the SET switch to RUN position when finished.

**HEATING:**

Basic operation of the thermostat can be obtained with the SET switch in the RUN position. The temperature can be adjusted using the UP and DOWN buttons. When the thermostat is first powered on, it will follow a default temperature routine that is preset from the factory (**Table 14.1**).

Event	Time	Temperature
MORN	6:00 AM	70°F (21°C)
DAY	8:00 AM	62°F (17°C)
EVE	6:00 PM	70°F (21°C)
NITE	10:00 PM	62°F (17°C)

**Table 14.1**

**LCD DISPLAY BACK LIGHT:**

The display screen is lighted to assist viewing at nighttime, or in locations with low light levels. Press any button on the front panel to activate the approximate 10 second back light.

**TEMPERATURE OVERRIDE:**

While thermostat is in RUN mode, the set temperature can be temporarily changed by pressing UP or DOWN. The temporarily changed set temperature will return to the programmed value stored in memory when start time of the next upcoming scheduled event is reached (MORN, DAY, EVE, OR NITE). While the temporary changed set temperature is in effect, the word OVERRIDE will be shown on the display screen. To cancel, move TEMPERATURE switch to OFF and back to HEAT again.

**R. Thermostat Temperature Programs**

The thermostat by default has 4 separate program events they are: MORN, DAY, EVE, and NITE. Each event ends at the start time of the following event.

<b>NOTE:</b> If the thermostat is set for 2 events a day instead of 4, the thermostat will only use the DAY and NITE events.
--

**SET TEMPERATURE PROGRAMS:**

1. Move TEMPERATURE switch to HEAT.
2. Move SET switch to TEMP PROG position.
3. Starting with Monday, use the UP or DOWN buttons to adjust the start time and set temperature for the MORN event, and then press NEXT button to advance.
4. Adjust the start time and set temperature of the DAY event then press NEXT button.
5. Continue in this same manner to adjust the start time and set temperatures for the EVE and NITE events for Monday.

<b>NOTE:</b> When the last event is finished for each day or group of days, the thermostat will advance forward into the next day or group of days.
---

6. Use steps 3 through 5 to set up the events for the rest of the week or group of days.
7. Return the SET switch back to RUN.



### **COPY PROGRAM FEATURE:**

Using similar instructions as SET TEMPERATURE programs the COPY button will allow a whole day of set program events to be copied to another day.

1. Move Temperature switch to HEAT as well as move SET switch to TEMP PROG position.
2. Starting with Monday, use the UP or DOWN buttons to adjust the start time and set temperature for the MORN, DAY, EVE, and NITE events. Press the COPY button and then press the NEXT button to advance to Tuesday.
3. With Tuesday displayed press COPY button. As all programs events from Monday will be copied to Tuesday (this will advance automatically to the next day; Wednesday, as the word COPY will appear on the screen for one second).
4. Continue in this pressing COPY button to set desired days with original setting.

**NOTE:** The word COPY will not appear on the display for Monday, but will display each day afterwards for approximately one second and the day of the week will automatically advance forward to the next day.

### **S. Thermostat Other Features**

**NOTE:** All other features need to be completed in a timely manner as the thermostat will time out after 10 seconds.

### **TEMPERATURE CALIBRATION:**

The internal temperature sensor in this thermostat is accurately calibrated at the factory, and in most cases alterations to this setting should not be needed. The temperature calibration feature allows you to manually offset the measured temperature by as much as plus or minus 5°F (3°C) from its original value. If several thermostats are used in the same house, this feature can be used to synchronize this thermostat to the others.

#### **Change the temperature calibration:**

1. Move TEMPERATURE switch to OFF.
2. Move SET switch to RUN.
3. Press and hold both UP and DOWN buttons together for at least 5 seconds; the words SET and CAL will appear on the display along with a single flashing temperature digit.
4. Use the UP or DOWN buttons to change the number of degrees desired for adjustment; 0° is the default value and also means no correction will be applied.
5. Press the NEXT button to accept the setting.

### **KEYPAD LOCKOUT:**

There is the option to lock the front panel buttons to prevent unauthorized tampering of your thermostat settings.

#### **To Lock the Keypad:**

1. Move TEMPERATURE switch to HEAT.
2. Move SET switch to RUN.
3. Perform a single press of each button in the following sequence:

- NEXT, NEXT, NEXT, HOLD

A padlock will appear on the display screen.

#### **To Unlock the Keypad:**

1. Move TEMPERATURE switch to HEAT.
2. Move SET switch to RUN.
3. Perform a single press of each button in the following sequence:

- NEXT, NEXT, NEXT, HOLD

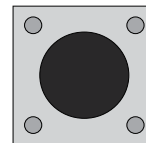
A padlock will no longer be present on the display screen.

### **HARDWARE RESET:**

The hardware reset button; labeled HW RST, is a small round push button that is located in the middle of the circuit board, just below the battery holder (**Figure 15.1**). Pressing this button will:

- Cause the LCD display screen to become fully populated
- Thermostat to perform an internal system check of its components

If the thermostat appears to be acting in an erratic manner, pressing the HW RST button may remedy this behavior. The temperature programs are not erased when a hardware reset is performed, however the clock will have to be changed to match the current day and time.



**HW  
RST**

Figure 15.1

### **SOFTWARE RESET:**

Software reset is used to erase ALL temperature events, and to return all user-adjustable software settings back to their original factory default settings.

#### **To Perform a Software Reset:**

1. Verify the thermostat's keypad is not locked.
2. Move TEMPERATURE switch to OFF.
3. Press and hold the UP, DOWN, and NEXT buttons all at the same time for at least 5 seconds. When the LCD display screen will become fully populated let go of all buttons at that point the screen will return to normal.

The clock will have to be changed to match the current day and time.

## T. Thermostat Battery Replacement

This thermostat is powered by two “AA” Alkaline batteries. The batteries should be replaced AT LEAST once per year to ensure reliable operation or sooner if the LO BATT appears on the display screen. The batteries are located on the back of the thermostat’s circuit board. The front portion of the thermostat can be removed from the back half by using the tabs on the top edge of the thermostat housing (Figure 16.1).

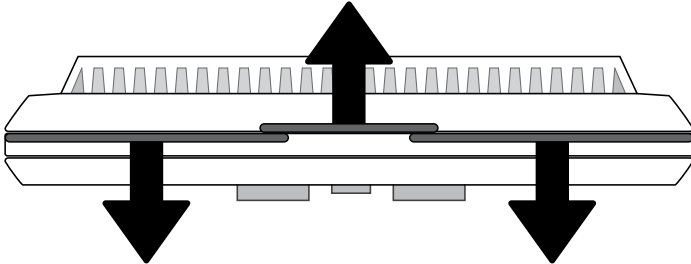


Figure 16.1

When installing new batteries, it is recommended using only brand new “AA” size alkaline batteries. Please verify the polarity markings shown in the battery compartment before adding batteries to the compartment. When finished, line up the front of the thermostat to the base, and firmly press together to securely latch the front and back halves together properly.

### BATTERY GRAPHIC:

Anytime time the batteries are physically present in the thermostat, there will be a visual indicator showing the life of the battery. This will appear on the display screen (Figures 16.2 and 16.3).



Figure 16.2 - Full battery icon



Figure 16.3 - Low battery icon

## CONNECT THERMOSTAT WIRES TO APPLIANCE:

There is a 4 screw terminal block located on the back lower left corner of the stove directly above the power cord inlet. The center 2 screws are for the thermostat wires (Figure 16.4).

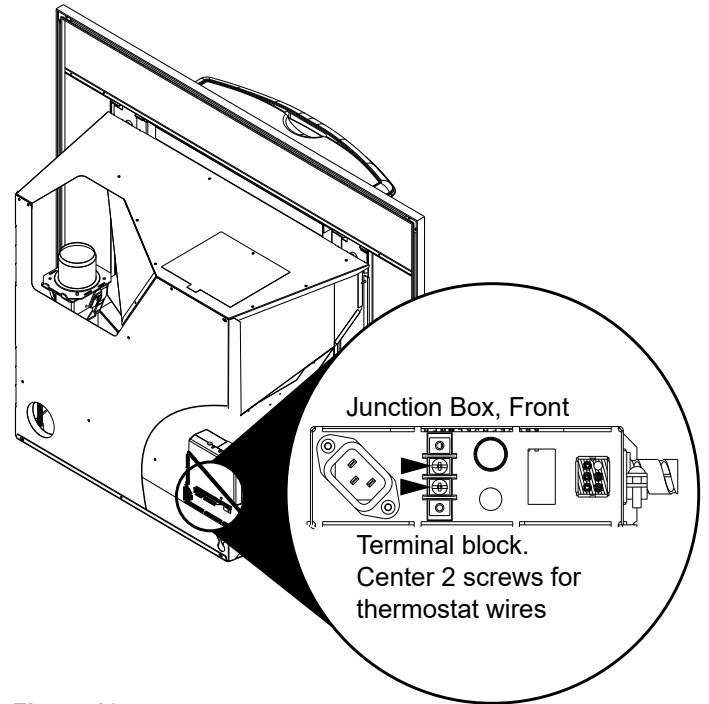




Figure 16.4

 <b>CAUTION</b>	
	<b>Shock hazard.</b>
	<ul style="list-style-type: none"> <li>• Do NOT remove grounding prong from plug.</li> <li>• Plug directly into properly grounded 3 prong receptacle.</li> <li>• Route cord away from appliance.</li> <li>• Do NOT route cord under or in front of appliance.</li> </ul>

## U. Frequently Asked Questions

### What causes my glass to become dirty?

If the glass has white ash build up it is normal and the glass should be cleaned. If it is a black soot build up airflow through the unit may be restricted. The most often cause is overdue maintenance and cleaning. See **Maintaining and Servicing** on [page 18](#) and/or make adjustments to the trim control.

### How can I get more heat out of the appliance?

The most often cause of diminished heat output is overdue maintenance and cleaning. See **Maintaining and Servicing** on [page 18](#).

### What should I do if I smell smoke or there is ash/soot coming from the appliance?

While there will always be some smoke smell from wood burning appliances (including pellet) you should investigate all venting to make sure it is sealed properly. Follow venting manufacturers recommendations for sealing pipe joints.

In addition most homes are built very tight today and with exhaust systems can create negative pressure in the home. See **Negative Pressure** on [page 15](#) in the [installation manual](#) if you have checked the venting but still have smoke coming from the appliance. For ash or soot check the above and the exhaust blower housing and seals.

### Why would my appliance run fine last winter but not start this fall?

It is possible that the stove was not properly prepared for the Non-burn season; see **Troubleshooting Guide** on [page 23](#) and [page 24](#).

### Is there a place to lubricate the blowers to quiet them down?

No. The most often cause of noisy blowers is from the impellers becoming dirty over time. See maintenance and service section for maintaining and servicing.

### What is the metal object with the bend in it that came inside the plastic bag?

It is a clean-out tool used to help clean the fire pot and remove any jams in the rare event they occur in the feed tube.

### Why is there a black residue building up on the outside of my home?

Wind can cause this to happen. If the appliance is operating correctly very little soot should ever exit the termination cap. Check to be sure the venting is installed per the owner's manual and local codes.

### Do I need an outside air kit?

Outside air is required for mobile home installs and in some jurisdictions. Refer to **Listing & Code Approvals** on [page 6](#), **Mobile Home Installation** on [page 23](#) of the [installation manual](#) and **Appliance Set-up** on [page 20](#) of the [installation manual](#). Also refer to local building codes.

### I am seeing sparks coming out of my pipe (termination cap) outside is this safe?

This is normal. As long as clearances to combustibles were followed this is safe.

### I have no power to anything. Does this unit have a circuit breaker or fuse or a reset button?

This unit has one fuse on the control board and a resettable snap disc mounted to the feed tube. If the appliance overheats then the snap disc can be reset; if the fuse is blown the control board must be replaced.

### Where is the serial # located on my unit?

The serial number is located on chain behind right access panel and behind left access panel.

### No pellets are dropping in my fire pot.

See Troubleshooting Guide on [page 23](#) and [page 24](#).

**Contact your dealer for additional information regarding operation and troubleshooting.  
Visit [www.quadrafire.com](http://www.quadrafire.com) to locate a dealer.**


# 3 Maintenance and Service

When properly maintained, your fireplace will give you many years of trouble-free service. Contact your dealer to answer question regarding proper operation, troubleshooting and service for your appliance. Visit [www.quadrafire.com/owner-resources](http://www.quadrafire.com/owner-resources) to view basic troubleshooting, FAQs, use & care videos. We recommend annual service by a qualified service technician.

## A. Proper Shutdown Procedure

Turn off the thermostat.


This pellet insert has a manufacturer-set minimum low burn rate that must not be altered. It is against federal regulations to alter this setting or otherwise operate this pellet insert in a manner inconsistent with operating instructions in this manual.



### CAUTION

**Shock and Smoke Hazard**

- Turn down thermostat, let appliance completely cool and exhaust blower must be off. Now you can unplug appliance before servicing.
- Smoke spillage into room can occur if appliance is not cool before unplugging.
- Risk of shock if appliance not unplugged before servicing appliance.



Follow the detailed instructions found in this section for each step listed in the chart below.

## B. Quick Reference Maintenance Chart

Cleaning or Inspection	Frequency		Daily	Weekly	Every 2 Weeks	Monthly	Yearly
Ash Pan - Burning Wood Pellets	Every 5 bags of fuel	OR		X			
Ash Pan - Burning Alternate Fuels	Every 1 bag of fuel	OR	X				
Ash Removal from Firebox	More frequently depending on the fuel type or ash build-up	OR		X			
Blower, Combustion (Exhaust)	More frequently depending on the fuel type	OR					X
Blower, Convection	More frequently depending on the operating environment	OR					X
Door Latch Inspection	Prior to heating season	OR				X	
Firebox - Prepare for Non-Burn Season	At end of heating season	OR					X
Fire pot - Burning Softwood Pellets	Every 5 bags	OR		X			
Fire pot - Burning Hardwood Pellets	Every 3 bags	OR		X			
Fire pot - Burning Alternate Fuels	Every 1 bag	OR	X				
Glass	When clear view of fire pot becomes obscured	OR		X			
Heat Exchanger & Drop Tube	Every 1 ton of fuel	OR			X		
Hopper	Every 1 ton of fuel or when changing fuel types	OR				X	
Venting System	More frequently depending on the fuel type	OR					X

Table 18.1

**NOTICE:** These are recommendations. Clean more frequently if you encounter heavy build-up of ash at the recommended interval or you see soot coming from the vent. Not properly cleaning your appliance on a regular basis will void your warranty.

## C. General Maintenance and Cleaning

### 1. Types of Fuel

Type of fuel you are burning will dictate how often you have to clean your fire pot.

If the fuel you are burning has a high dirt or ash content, it may be necessary to clean the fire pot more than once a day.

Dirty fuel will cause clinkers to form in the fire pot (**Figure 19.1**). A clinker is formed when dirt, ash or a non-burnable substance is heated to 2000°F (1093°C) and becomes glass-like. See **High Ash Content Maintenance** on **page 22** in this section for more details on fuels with high ash content.

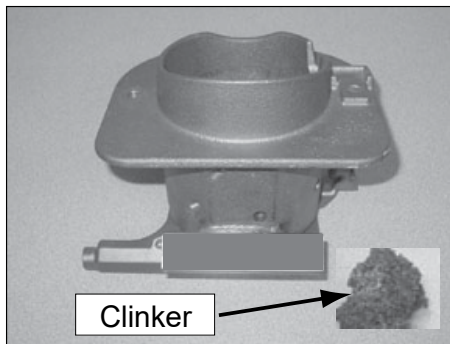


Figure 19.1

### 2. Cleaning Fire pot with Cleaning Rod & Fire pot Clean-Out Tool

- **Frequency:** Daily or more often as needed
- **By:** Homeowner
  - a. The appliance must be in complete shutdown and cool and the exhaust blower off.

**NOTE:** If you are just cleaning the fire pot, there is no need to unplug the insert.

- b. Pull fire pot cleaning rod OUT and IN a couple of times to help shake debris loose (**See page 10**).
  - If rod is hard to pull, it may be necessary to use your fire pot clean-out tool to chip away material that has built up on the bottom plate of the fire pot and to push out any clinkers. Larger clinkers may have to be removed from the top of the fire pot.
- c. The fire pot floor plate must be fully closed when finished (**Figure 19.2**).

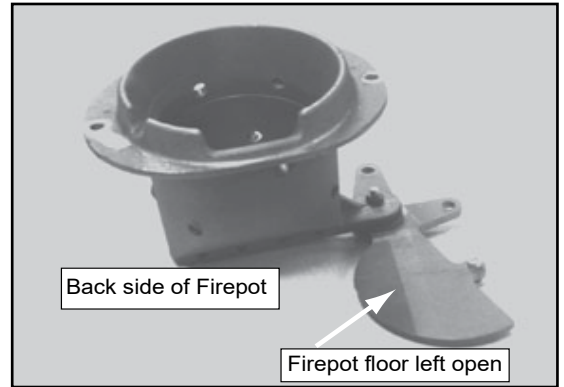


Figure 19.2


### 3. Ash Removal from Firebox


- **Frequency:** Weekly or more frequently depending on ash build-up
- **By:** Homeowner
  - a. There must not be any hot ashes in the firebox during cleaning so allow the appliance to completely cool. Frequent cleaning of the ash in the firebox will help slow down the build-up of ash in the exhaust blower and vent system.
  - b. Plug in your appliance, if unplugged, and turn the thermostat on and immediately shut it off to start the exhaust blower on its cycle time. It will pull fly ash out the exhaust instead of into the room.
  - c. Open door. There are 2 cleaning slide plates to the left and right of the fire pot with finger holes. Pull both slide plates out and sweep the remaining ash from the firebox into the 2 open holes. A paint brush works well for this. Close slide plates.
  - d. This ash is deposited in the same ash drawer as the fire pot debris. The ash drawer should be emptied every time you clean the firebox. Remember to place the ash and debris into a metal or non-combustible container.
  - e. The 2 cleaning slide plates must be fully closed when cleaning is complete.

### 4. Cleaning Ash Drawer

- **Frequency:** Weekly or every 5 bags of fuel
- **By:** Homeowner

Locate the ash drawer underneath the fire pot and slide the ash drawer straight out. Empty into a non-combustible container and re-install ash drawer (**Disposal of Ashes** on [page 20](#)).

**WARNING**



**Fire Risk.**  
NEVER pull fire pot cleaning rods or cleaning slide plates when appliance is operating. Hot pellets may fall into ash pan and may start a fire or have mis-starts due to lack of vacuum.

**WARNING**





**Fire Risk.**  
The cleaning slide plates must be fully CLOSED when appliance is operating. Hot pellets may fall into ash pan and start a fire.

## 5. Disposal of Ashes

- **Frequency:** As needed
- **By:** Homeowner

Ashes should be placed in a metal container with a tight-fitting lid. The closed container of ashes should be placed on a non-combustible floor or on the ground, well away from all combustible materials, pending final disposal.

If the ashes are disposed of by burial in soil or otherwise locally dispersed, they should be retained in the closed container until all cinders have been thoroughly cooled.

	<b>WARNING</b>
	<b>Disposal of Ashes.</b> <ul style="list-style-type: none"><li>• Ashes should be placed in metal container with tight fitting lid.</li><li>• Ashes should be retained in closed container until all cinders have thoroughly cooled.</li></ul>

## 6. Cleaning Heat Exchanger Chambers

- **Frequency:** Weekly or every 1 ton of fuel
- **By:** Homeowner

The amount of ash buildup in the firebox will be a good guide to determine how often you should clean the heat exchangers.

- Allow the appliance to completely cool down before pulling the cleaning rods. Turn the thermostat on and then immediately off to start the exhaust blower on its cycle time. It will pull fly ash out the exhaust instead of into the room.
- Locate the 2 exposed rods directly underneath the heat exchanger tubes (**Figure 20.1**).
- To clean, pull the rods straight out until it stops, approximately 8 inches (203mm). Slide the rods OUT and IN a couple of times.

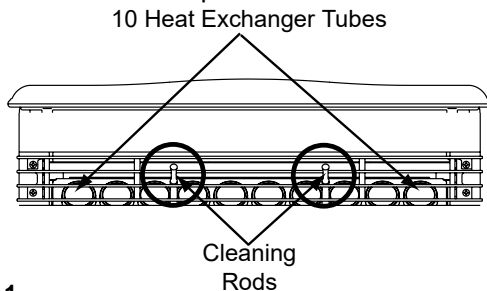





Figure 20.1

	<b>WARNING</b>
	Heat exchanger cleaning rods may be warm to the touch. For safety purposes wear gloves.
	Do not pull heat exchanger cleaning rods while appliance is operating.
	Push cleaning rods IN when done, DO NOT leave cleaning rods OUT. Injury can occur.

## 7. Cleaning Beneath Heat Exchanger

- **Frequency:** Monthly or every 1 ton of fuel
- **By:** Homeowner
  - Be sure the appliance is allowed to cool, has been unplugged and the exhaust blower is off.
  - A more thorough cleaning is needed to remove the excess ash that is left behind from the use of the cleaning rods for the heat exchanger tubes.
  - The ash will be resting on the back of the baffle. This will require removing the cast baffle. Please refer to page 35 for a detailed explanation of removing the baffle.

**NOTE:** Hearth & Home Technologies recommends to use a heavy duty vacuum cleaners specifically designed for solid fuel appliance cleaning.

## 8. Cleaning the Exhaust Path

- **Frequency:** Every 25 bags or monthly or more frequently depending on ash build-up.
- **By:** Homeowner
  - Appliance must be completely cool.
  - Open cast hinge face. Remove baffle and right brick and thoroughly vacuum the area and continue throughout the rest of the firebox.
  - Replace right brick and baffle and close cast hinge face.

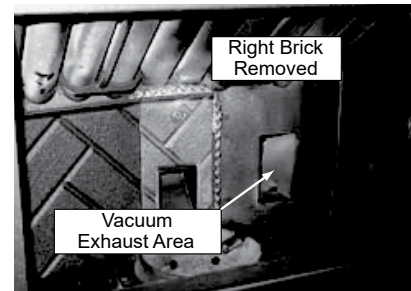


Figure 20.2

## 9. Cleaning the Hopper

- **Frequency:** Monthly or every 1 ton of fuel
  - **By:** Homeowner
- After burning approximately 1 ton of fuel you will need to clean the hopper to prevent sawdust build-up. A combination of sawdust and pellets on the auger reduces the amount of fuel supply to the fire pot. This can result in nuisance shutdowns and mis-starts.
- The appliance must be in complete shutdown. Allow the appliance to completely cool down.
  - Empty the hopper of any remaining pellets.
  - Vacuum the hopper and feed tube.

**10. Soot and Fly Ash: Formation & Need for Removal in Exhaust Venting System.**


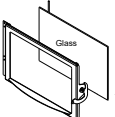
- **Frequency:** Yearly or more frequently depending on ash build-up
- **By:** Qualified Service Technician/Homeowner


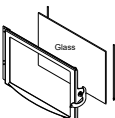
The products of combustion will contain small particles of fly-ash. The fly-ash will collect in the exhaust venting system and restrict the flow of the flue gases. Incomplete combustion, such as occurs during startup, shutdown, or incorrect operation of the room appliance will lead to some soot formation which will collect in the exhaust venting system. The exhaust venting system should be inspected at least once every year to determine if cleaning is necessary.

The venting system may need to be cleaned at least once a year or more often depending upon the quality of your fuel or if there is a lot of horizontal pipe sections. Ash will build up more quickly in the horizontal sections.

**11. Cleaning the Glass**

- **Frequency:** When clear view of the fire pot is obscure
- **By:** Homeowner
  - a. Appliance must be completely cool before cleaning glass.
  - b. Use a damp paper towel or any non-abrasive glass cleaner. Wipe off with dry towel.

 <b>CAUTION</b>	
	Handle glass assembly with care. <b>When cleaning glass:</b>
	<ul style="list-style-type: none"><li>• Avoid striking, scratching or slamming glass.</li><li>• Do NOT clean glass when hot.</li><li>• Do NOT use abrasive cleaners.</li><li>• Use a hard water deposit glass cleaner on white film.</li><li>• Refer to maintenance instructions.</li></ul>

 <b>WARNING</b>	
	Handle glass with care.
	<ul style="list-style-type: none"><li>• Inspect the gasket to ensure it is undamaged.</li><li>• Do NOT strike, slam or scratch glass.</li><li>• Do NOT operate appliance with glass assembly removed.</li></ul>

**12. Door Latch Inspection**

- **Frequency:** Prior to heating season
- **By:** Homeowner

The door latch is non-adjustable but the gasket between the glass and firebox should be inspected periodically to make sure there is a good seal.

**13. Cleaning Exhaust Blower - Requires No Lubrication**

- **Frequency:** Yearly or as needed
- **By:** Quality Service Technician/Homeowner



Remove left & right brick. The exhaust blower is behind the right brick. Vacuum this area thoroughly. See **page 26** for removing bricks. Re-install bricks when done.

**14. Cleaning Convection Blower - Requires No Lubrication**

- **Frequency:** Yearly or as needed
- **By:** Qualified Service Technician
- **Task:** Contact your local dealer.

**15. Preparing Firebox for Non-Burn Season**

- **Frequency:** At the end of the heating season
- **By:** Homeowner
  - a. Be sure the appliance is allowed to cool, has been unplugged and the exhaust blower is off.
  - b. Remove all ash from the firebox and vacuum thoroughly.
  - c. Paint all exposed steel, including cast-iron.
    - Use the Touch-Up paint supplied with the appliance; or,
    - Purchase paint from your local dealer.
    - Must use a high-temperature paint made specifically for heating appliances.

 <b>WARNING</b>	
	<b>Fire Risk</b>
	<ul style="list-style-type: none"><li>• High ash fuels, or lack of maintenance, can cause the fire pot to overflow. Follow proper shutdown procedure if ash build up exceeds half way point.</li><li>• Failure to do so could result in smoking, sooting and possible hopper fires.</li></ul>

### D. Soot or Creosote Fire Awareness

The chimney should be inspected periodically during the heating season to determine if a creosote build-up has occurred. If a significant layer of creosote has accumulated (1/8 inch [3mm] or more) it should be removed to reduce the risk of chimney fire.

Check daily for creosote build-up until experience shows how often you need to clean to be safe. Be aware that the hotter the fire the less creosote is deposited, and weekly cleaning may be necessary in the mild weather even though monthly cleaning may be enough in the coldest months. Contact your local municipal or provincial fire authority for information on how to handle a chimney fire.

**In the event of a soot or creosote fire, close the firebox door, exit the building immediately and contact the proper fire authorities.**

**DO NOT under any circumstances re-enter the building.**

### E. High Ash Fuel Content Maintenance

- **Frequency:** When the ash build-up exceeds more than half way up the fire pot.
  - **By:** Homeowner
- Poor quality pellet fuel, or lack of maintenance, can create conditions that make the fire pot fill quickly with ashes and clinkers.

This condition makes the appliance susceptible to overfilling the fire pot with pellets which may result in smoking, sooting and possible hopper fires. **Figure 22.1** shows an example where the fire pot overfills, pellets back up into the feed tube and ash has accumulated in the firebox.

An inefficient and non-economical method of burning of fuel caused by poor quality pellet fuel is shown in **Figure 22.2**. The correct flame size when good quality, premium pellet fuel is burned is shown in **Figure 22.3**.

If the ash buildup exceeds the half way point in the fire pot IMMEDIATE ATTENTION AND CLEANING IS REQUIRED.

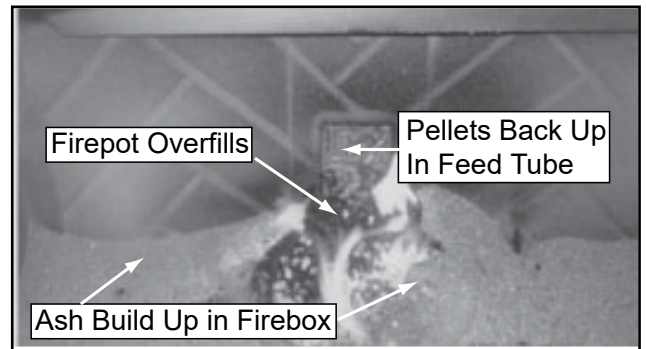


Figure 22.1

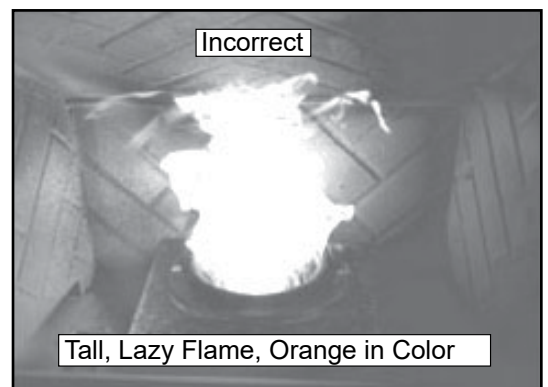


Figure 22.2

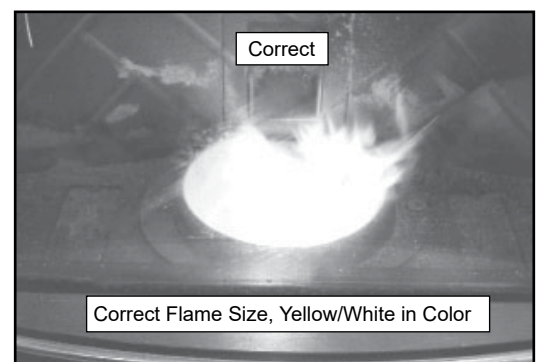


Figure 22.3



# 4 Troubleshooting Guide

With proper installation, operation, and maintenance your appliance will provide years of trouble-free service. If you do experience a problem, this troubleshooting guide will assist a qualified service person in the diagnosis of a problem and the corrective action to be taken. This troubleshooting guide can only be used by a qualified service technician.

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
Plug in appliance - No response.	No current to outlet. 7 amp fuse defective. #3 snap disc tripped or defective. Control box defective.	Check circuit breaker at service panel. Replace fuse. Reset or replace snap disc. Replace control box.
Call light on. No fire. No fuel in fire pot.	Out of fuel. #2 snap disc may be defective. Vacuum switch not closing, no vacuum.  Control box defective.	Check hopper. Fill with fuel. Replace snap disc. Check exhaust blower is plugged in and operating. Check vacuum switch is plugged in. Check vacuum hose is in good condition, clear and connected at both ends. Check thermocouple is in good condition and plugged in properly. Make sure venting system is clean. Make sure front door is closed. Replace control box.
Call light on. No fire. Partially burned fuel in fire pot.	Fire pot clean-out plate not closed.  Fire pot is dirty (missed ignition).	Check that fire pot clean-out plate is fully closed. Clean fire pot. Make sure there is no clinker in the fire pot. See <b>Cleaning Firepot with Cleaning Rod &amp; Firepot Scraper</b> on <a href="#">page 19</a> . Clinkers may have to be broken up with fire pot clean-out tool or other means.
Call light on. No fire. Unburned pellets in fire pot.	Fire pot clean-out plate not closed.  Fire pot is dirty.  The ignition hole between the igniter bracket and fire pot is blocked.  Igniter not working.  Control box defective.	Check that fire pot clean-out plate is fully closed. Clean fire pot. Make sure there is not a clinker in the fire pot. Clinkers may have to be pushed out of fire pot with fire pot clean-out tool or other means. Scrape with solid piece of wire. Remove ash drawer to see if igniter is glowing red on start-up. Check igniter wires for good connection. Replace igniter using 1/4 inch (6mm) male /female spade connectors. Replace control box.
Slow or smoky start-up.	Fire pot clean-out plate not closed. Fire pot is dirty.  Excessive amount of fuel at start-up.  Dirty exhaust and/or venting system.	Check that fire pot clean-out is fully closed. Clean fire pot. Make sure there is not a clinker in the fire pot. Clinkers may have to be pushed out of fire pot with fire pot clean-out tool or other means. Reduce feed rate using feed rate adjustment control rod located inside hopper. Check for ash build up in appliance, including behind rear panels, firebox, heat exchanger, exhaust blower and venting.
No call light. Appliance does not begin start sequence.	Thermostat not set to a high enough temperature. Snap Disc #3 tripped. No power. Fuse blown. Connections at thermostat and/or appliance not making proper contact. Defective thermostat or thermostat wiring.  Control box defective.	Adjust thermostat above room temperature. Reset snap disc. Connect to power. Replace fuse. Check connections at thermostat and appliance. Replace thermostat or wiring. <b>NOTE:</b> To test thermostat and wiring, use a jumper wire at the thermostat block on the appliance to by-pass thermostat and wiring. Replace control box.

Table 23.1

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
Feed system fails to start.	<p>Out of fuel. #2 snap disc may be defective.</p> <p>Vacuum switch not closing. No vacuum.</p> <p>Feed system jammed or blocked.</p> <p>Feed spring not turning with feed motor.</p> <p>Feed motor defective or not plugged in.</p>	<p>Check hopper, fill with fuel. Replace snap disc. Firebox door must be closed securely.</p> <p>Check exhaust blower is plugged in and operating. Check vacuum switch is plugged in. Check vacuum hose is in good condition, clear and connected at both ends. Check thermocouple is in good condition and plugged in properly. Make sure venting system is clean. <b>NOTE:</b> High winds blowing into the venting system can pressurize the firebox causing loss of vacuum. Empty hopper of fuel. Use a wet/dry vacuum cleaner to remove remaining fuel, from hopper, including feed tube. Check feed chute for obstructions. Loosen 2 screws and jiggle feed assembly. Check that set screw is tight on feed spring shaft at end of feed motor. Check connections on feed motor, replace if defective.</p>
Appliance fails to shut off.	Call light on.	<p>Turn thermostat off. If call light does not go out, disconnect thermostat wires from appliance. If call light does go out, thermostat or wires are defective.</p>
Convection blower fails to start	<p>#1 snap disc defective.</p> <p>Blower not plugged in.</p> <p>Blower is defective.</p> <p>Control box is defective.</p>	<p>Replace snap disc.</p> <p>Check that blower is plugged into wire harness.</p> <p>Replace blower.</p> <p>Replace control box.</p>
Exhaust blower fails to start or does not shut off.	<p>Blower not plugged in.</p> <p>Blower is clogged with ash.</p> <p>Blower is defective.</p> <p>Control box is defective.</p>	<p>Check that blower is plugged into wire harness.</p> <p>Clean exhaust system.</p> <p>Replace blower.</p> <p>Replace control box</p>
Large, lazy flame, orange color. Black ash on glass.	<p>Dirty appliance. Poor fuel quality, high ash content.</p> <p>Fire pot clean-out plate not completely closed.</p> <p>Excessive amount of fuel.</p>	<p>Clean appliance, including fire pot, heat exchangers and venting system. Remove stainless steel baffle from firebox to clean ash from on top of baffle. Clean behind rear brick panels. Change fuel brand to premium.</p> <p>Check that fire pot clean-out plate is fully closed.</p> <p>Reduce feed rate using feed rate adjustment control rod located inside hopper.</p>
Nuisance shutdowns.	<p>Low flame.</p> <p>Sawdust buildup in hopper.</p> <p>Feed motor is reversing.</p> <p>Defective thermocouple.</p> <p>Defective control box.</p> <p>Fire pot more than 1/2 full.</p>	<p>Increase feed by opening feed rate adjustment control rod located inside hopper.</p> <p>Clean hopper, see <a href="#">page 20</a>.</p> <p>Check for good connections between feed motor and wire harness.</p> <p>Replace thermocouple. Replace control box. See <a href="#">page 22</a> for detailed instructions for <b>High Ash Fuel Content Management</b></p>
Appliance calls for heat. Call light illuminates. Exhaust blower starts. No feed or igniter.	<p>Thermocouple is defective or not properly plugged in.</p> <p>Defective control box</p>	<p>Check connections on thermocouple or replace if defective. A flashing yellow light on the control box indicates a problem with the thermocouple.</p> <p>Replace control box.</p>
Hopper lid not closed all the way	Switch or magnet is out of adjustment (auger will not function)	Close the lid. If that doesn't work, adjust or replace the switch or magnet

**Table 24.1**

# 5 Service Parts Replacement

## A. Blowers

### 1. Combustion Blower

PART NUMBER: 812-4400

- Remove panel set and disconnect flue.
- Pull appliance out onto the hearth.
- Remove right access panel and then slide out right side panel of appliance, held in place with 2 screws, to expose the exhaust blower (**Figure 25.1**).
- Disconnect the white and blue wires from the blower. Remove blower mounting screws (not housing bolts), **Figure 25.2**, from blower housing and remove blower. The replacement blower is shipped with a housing. If you do not need the housing, discard it. If you do need to replace the housing you will also need to replace the gasket.
- Re-install in reverse order.

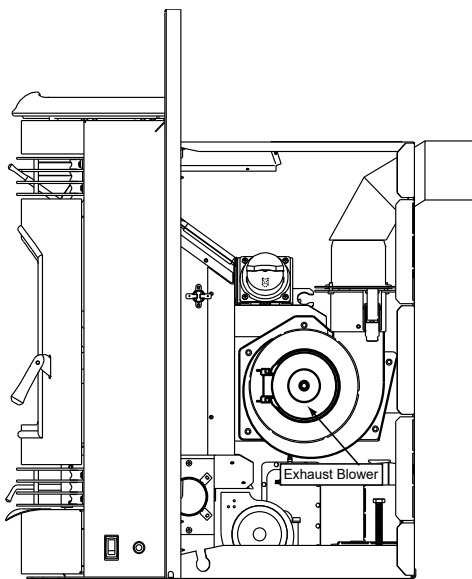


Figure 25.1

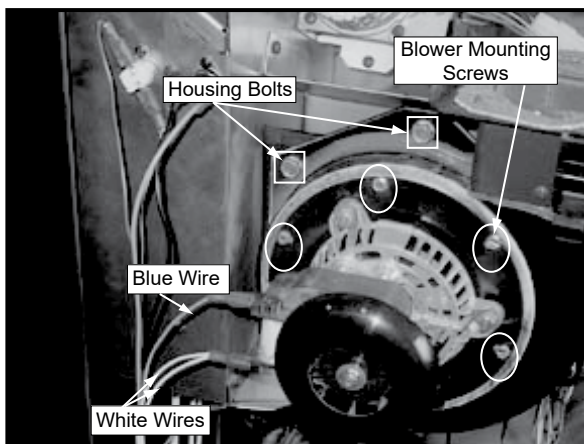


Figure 25.2

### 2. Convection Blower

PART NUMBER: 812-4900

- The blower is located at the bottom rear of the insert. If an outside air kit is also installed, you will first need to remove the outside air flange by removing the 2 screws using a Phillips head screwdriver. You do not need to remove the flex pipe from the flange.
- Remove panel set and disconnect flue.
- Pull appliance out onto the hearth.
- Remove left access panel and then slide out left side panel of appliance to expose the convection blower. Loosen wing nut on the vacuum switch and remove vacuum switch to allow room to remove the blower (**Figure 25.3**).
- Disconnect the wires from the blower. The wires coming from the wiring harness are purple & white and the wires from the blower are black.
- The blower is held in place with a magnet. A wing nut and plate are installed at the factory for shipping purposes only. This can be removed once the appliance is installed. Lift up blower from the magnet and remove.
- Re-install in reverse order.

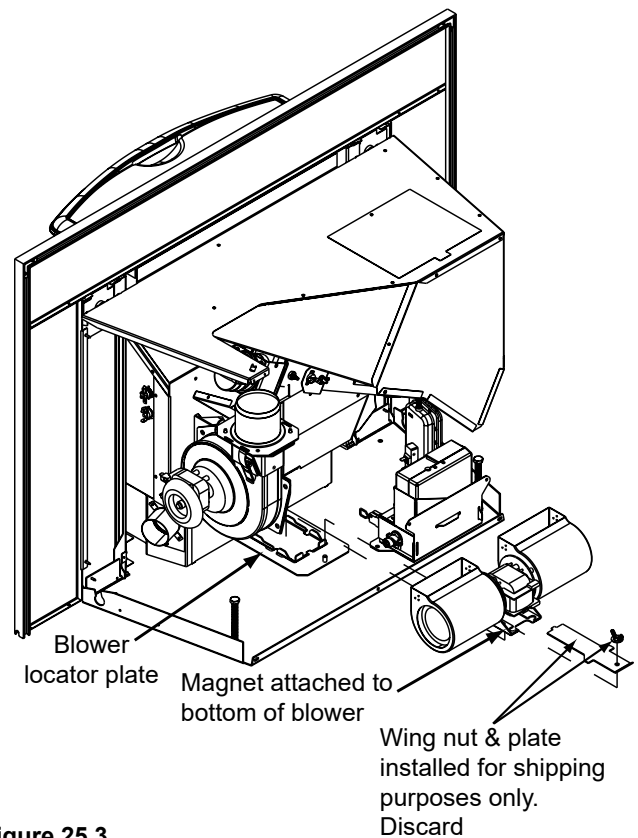


Figure 25.3

## B. Baffle

**PART NUMBER: 7001-034**

1. Follow **Proper Shutdown Procedures** on [page 18](#).
2. The top baffle has a hook on the bottom left side that rests on the top lip of the cast brick. There is a tab on the bottom right side that hooks into the side bracket. Remove the top baffle by first pulling the baffle forward until back edge drops down. Then slide baffle back until the front edge clears the shelf that it had been resting on (**Figure 26.1, Figure 26.2 and Figure 26.3**).
3. Reinstall new baffle.

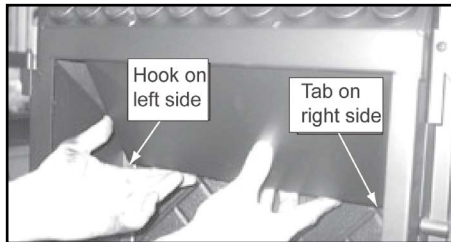


Figure 26.1



Figure 26.2

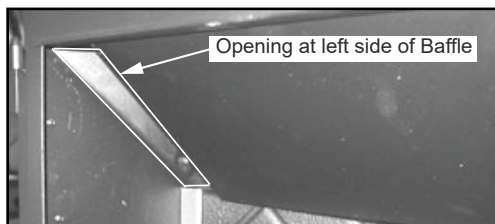


Figure 26.3

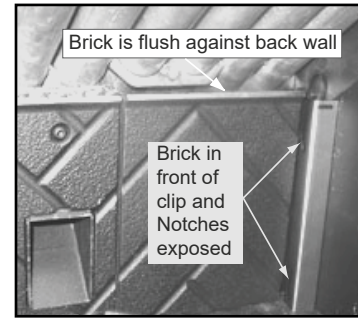


Figure 26.4

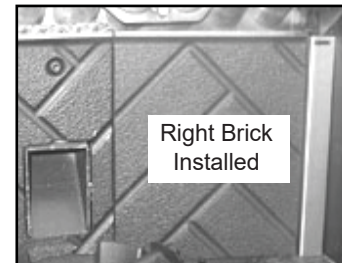


Figure 26.5

### Removal of center brick:

1. Follow Steps 1 & 2 from **Removal of left or right side brick** to remove left and right brick.
2. Use an 5/32 Allen wrench to remove bolt out of center brick and set aside; remove and discard brick.
3. Validate rope is still in place; rope is wrapped around drop tube and ends are secure with rope tape.
4. Add new center brick and taking care not to cross thread the bolt; reinstall brick (**Figure 26.6**).
5. Repeat Step 4 from **Removal of left or right side brick**.
6. Reinstall baffle (**See Baffle on [page 26](#)**).

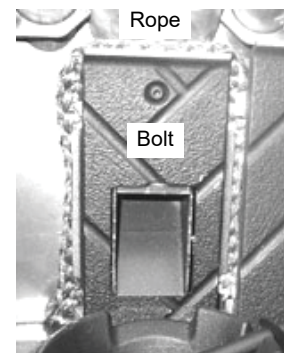


Figure 26.6

## C. Bricks

**PART NUMBERS:**  
**LEFT OR RIGHT BRICK: SRV414-0270**  
**CENTER: SRV414-0260**

The baffle must be removed before any brick removal.

### Removal of left or right side brick:

1. Remove the right brick by holding top lip of the brick and lifting up.
2. Repeat for left brick.
3. Reinstall bricks in reverse order ensuring that the bricks are flush against the back wall of the firebox (**Figure 26.4 and Figure 26.5**).

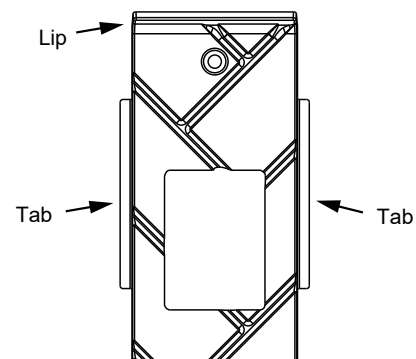


Figure 26.7

## D. Igniter

**PART NUMBER: SRV7000-462**

1. Shut down the appliance by turning down the thermostat and let the appliance completely cool down. After the appliance has cooled down, unplug it and remove the ash drawer.
2. The wire leads to the igniter are connected to the wire harness with 1/4 inch (6mm) male / female spade connectors. These wires will pull forward approximately 4 to 5 inches (102mm to 127mm) through the grommet at the back of the ash drawer chamber. Disconnect the spade connections and remove the igniter from the chamber. Loosen the thumb screw and slide igniter out (**Figure 27.1**).
3. Install new igniter into the chamber and tighten the thumb screw. Re-connect the wires to the 2 leads with the spade connectors.
4. Push excess wire leads back through the grommet, one wire at a time, to take-up the 4 to 5 inches (102mm to 107mm) previously pulled out. This will keep the wires out of the way of the ash drawer. Double check that the igniter wires are clear of any movement, i.e. ash drawer, fire pot cleaning rod, cleaning slide plates, etc.
5. Re-install the ash drawer and then re-install the side panel and re-connect the power.

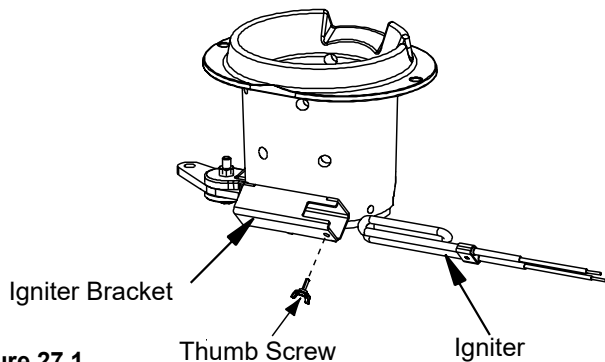


Figure 27.1

## E. Glass

**PART NUMBER: SRV7021-032**

1. Open the face and remove door from the appliance by lifting door off of hinge points and lay on a flat surface face down.
2. Using a flat head screwdriver pry out rope from door and clean any silicone around the screw heads.
3. Using a Phillips head screwdriver remove the seven screws and set aside.
4. Remove glass retainers and set aside.
5. Remove old glass assembly and discard.
6. Lay new glass assembly in place.
7. Add glass retainers.
8. Using a Phillips head screwdriver fasten glass retainers to door assembly ensure glass assembly is centered within the frames.
9. Add rope into crevice as shown below in **Figure 27.2**.
10. Re-install door and close face to appliance.

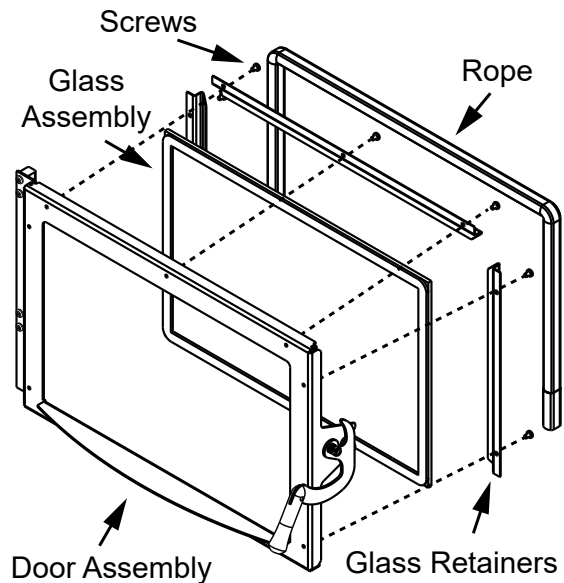






Figure 27.2

 <b>CAUTION</b>	
	<b>Shock Risk.</b>
	<ul style="list-style-type: none"><li>• Do NOT remove grounding prong from plug.</li><li>• Plug directly into properly grounded 3 prong receptacle.</li><li>• Route cord away from appliance.</li><li>• Do NOT route cord under or in front of appliance.</li></ul>

 <b>WARNING</b>	
	<b>Handle glass with Care.</b>
	<ul style="list-style-type: none"><li>• Glass is 5mm thick high temperature heat-resistant ceramic glass.</li><li>• DO NOT REPLACE with any other material.</li><li>• Alternate material may shatter and cause injury.</li></ul>

# 6 Reference Materials

## A. Component Functions

### 1. Control Box

- a. The control box is located on lower left side of appliance, on top of the junction box.
- b. There is a light located inside of the control box. The internal light will turn green when the appliance has reached a temperature of 200°F (93°C) in the fire pot. and will turn red when it reaches 600°F (315°C).
- c. There is also an internal blue light located in the upper left corner of the control box. When you plug in the appliance the blue light will automatically start blinking 6 blinks every 10 seconds for 60 seconds and then will stop.

**NOTE:** Do NOT open the control box. This will void the warranty. If you need to plug in or remove the control box you must first unplug the appliance.

### 2. Convection Blower

The convection blower is mounted at the bottom rear of the appliance. There are 2 impellers, one on each side of the motor. The convection blower pushes heated air through the heat exchange system into the room.

### 3. Exhaust Blower

The exhaust blower is mounted on the right side of the appliance behind the right side panel. The exhaust blower is designed to pull the exhaust from the appliance and push it out through the venting system.

### 4. Feed System

The feed system is located behind the firebox and can be removed as an entire assembly. The assembly includes the feed motor, mounting bracket, bearing and feed spring (auger). The hollow feed spring (auger) pulls pellets up the feed tube from the hopper area and drops them down the feed chute into the fire pot.

### 5. Fire pot

The fire pot is made of high quality ductile iron and has a cleaning pull-out rod. The floor of the fire pot opens for cleaning when you pull out the rod. Be sure that the floor returns to a completely closed position or your appliance will not operate properly.

### 6. Fuse

The fuse is located on the side of the junction box above the red call light. The fuse will blow should a short occur and shut off power to the appliance.

### 7. Heat Exchangers

The heat exchangers transfer heat from the exhaust system into convection air. There are 2 clean out rods located under the heat exchangers.



**When describing the location of a component, it is always AS YOU FACE THE FRONT OF THE APPLIANCE.**

### 8. Heat Output Switch

The heat output switch is located on the lower right side of firebox, in front of the right access panel and to the left of the reset button. The function of the heat output switch is to regulate the burn rates; low, medium and high settings.

### 9. Hopper Switch

The hopper switch is located in the upper right hand corner of the hopper. This switch is designed to shut down the feed motor whenever the hopper lid is opened.

### 10. Igniter

The igniter is mounted on the base of the fire pot. Combustion air travels over the red hot igniter creating super heated air that ignites the pellets.

### 11. Junction Box And Wiring Harness

The junction box is located on the lower left side of the appliance, behind the left front access panel. The junction box and wiring harness are replaced as one component.

### 12. Power Supply

The power outlet is located on the lower left side of the appliance on the front of the junction box. Check the wall receptacle for 120 volt, 60 Hz (standard current). Make sure the outlet is grounded and has the correct polarity. A good surge protector is recommended.

### 13. Red Call Light

The red call light is on the side of the junction box underneath the fuse. The function of the red call light is to indicate that the thermostat is calling for heat.

### 14. Reset Button

The reset button is located on the lower right side of firebox in front of the right access panel and to the right of the heat output control switch. The function of the switch is to momentarily open the thermostat circuit, which restarts the system.

### 15. Thermocouple

The thermocouple is located on top of the fire pot inside the thermocouple cover (ceramic protection tube). The thermocouple sends a millivolt signal to the control box indicating the preset temperatures of the green and red lights have been obtained.

### 16. Thermostat

The appliance is designed to run on a 12 volt AC thermostat. The heat anticipator, if present, should be set on the lowest setting available.

**17. Snap Disc #1 (Convection Blower) 110°F**

Snap disc #1 is located on the right side of the firebox. There are 2 purple wires connected to it. This snap disc turns the convection blower on and off as needed. Power is always present at snap disc #1.

**18. Snap Disc #2 (Fuel Delivery Interrupt) 250°F**

Snap disc #2 is located on the back side of the feed drop tube. (See Figure 31.2 on page 31). There is 1 orange wire and 1 black wire connected to it. This snap disc will turn off the feed system, which will turn off the appliance if an over fire condition should occur or if the convection blower should fail to operate. If this occurs the snap disc will automatically reset itself.

**19. Snap Disc #3 (Burn Back Protector) 250°F**

Snap disc #3 is mounted on the back of the auger tube in the center of the appliance and has a reset button. To access it remove the right side panel. If the fire tries to burn back into the feed system or push exhaust up the feed tube, this snap disc will shut the entire system off. This disc must be manually reset.

**20. Vacuum Switch**

The vacuum switch is located on the lower left side of the appliance behind left access panel. This switch turns the feed system on when vacuum is present in the firebox. The vacuum switch is a safety device to shut off the feed motor if the exhaust or the heat exchanger system is dirty or plugged or if the firebox door is open.

**21. Wiring Harness**

See Figure 29.1 below

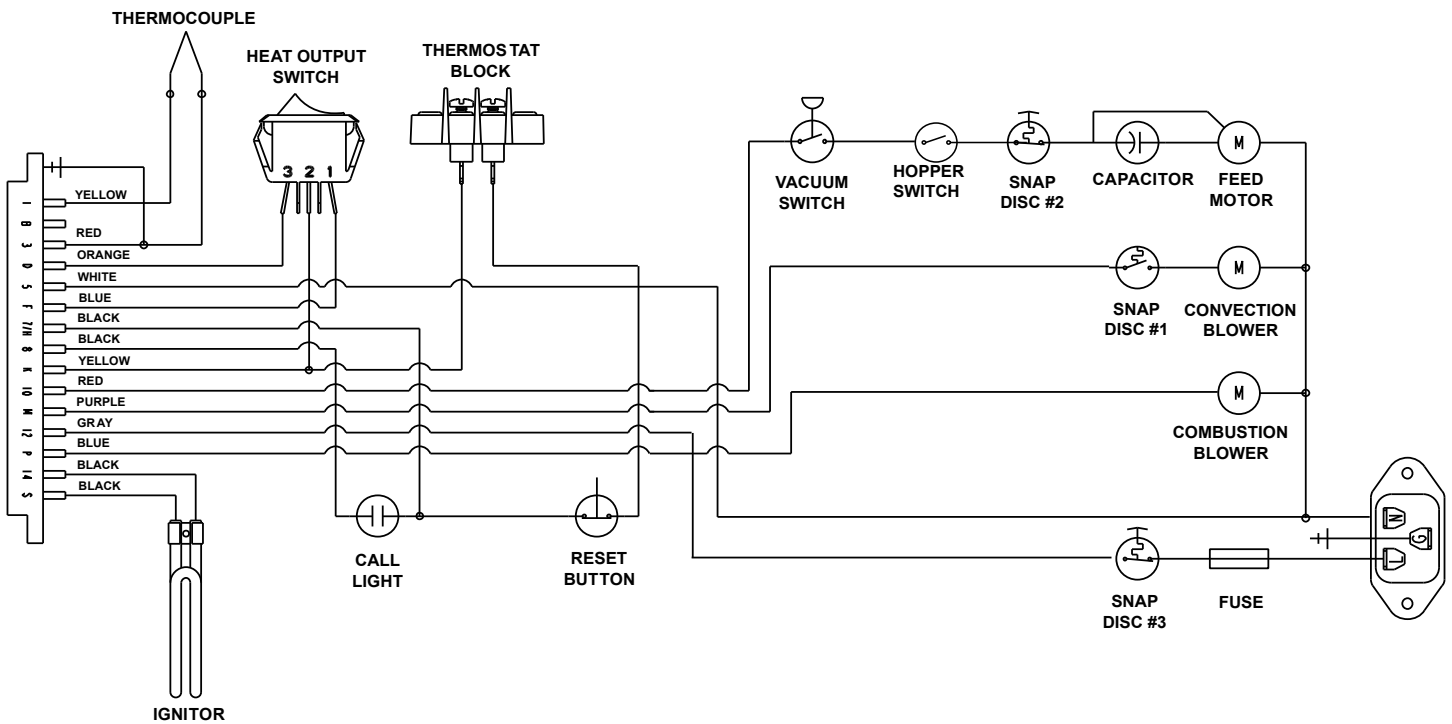


Figure 29.1

## B. Component Locations

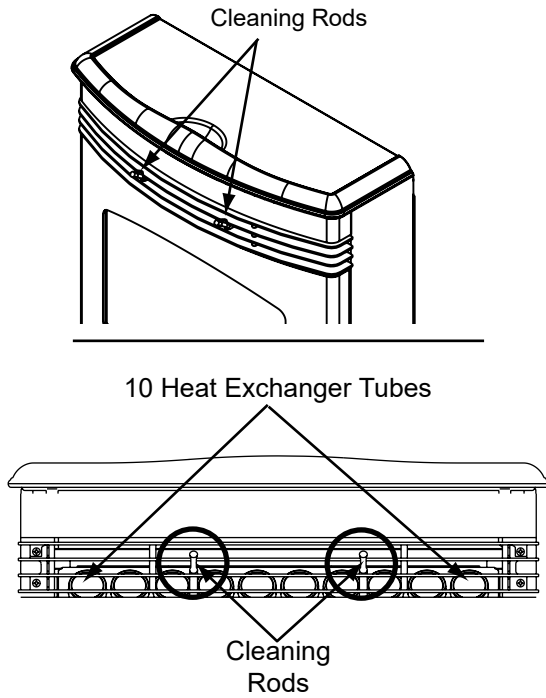


Figure 30.1 - Cleaning Rods & Heat Exchanger Tubes

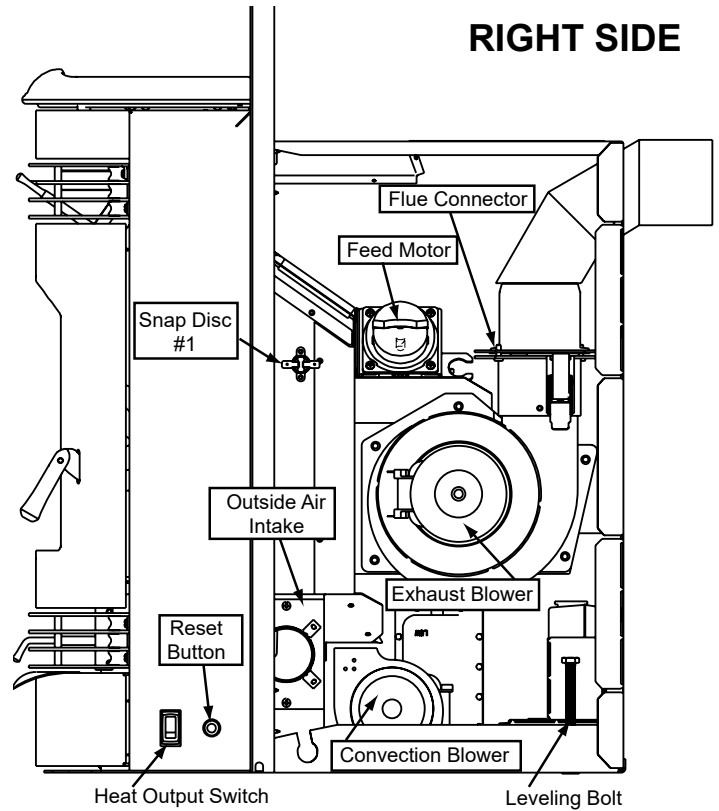


Figure 30.3 - Component Locations - Right Side

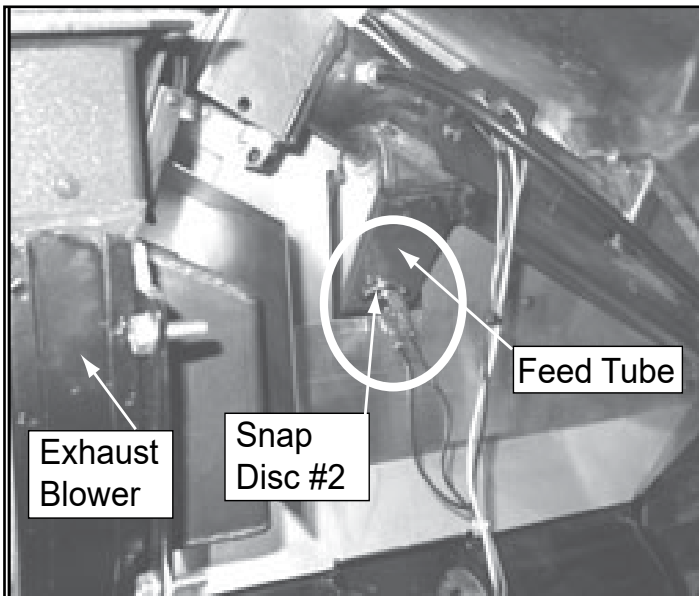


Figure 30.2 - Snap Disc #2 located on back of Feed Tube.

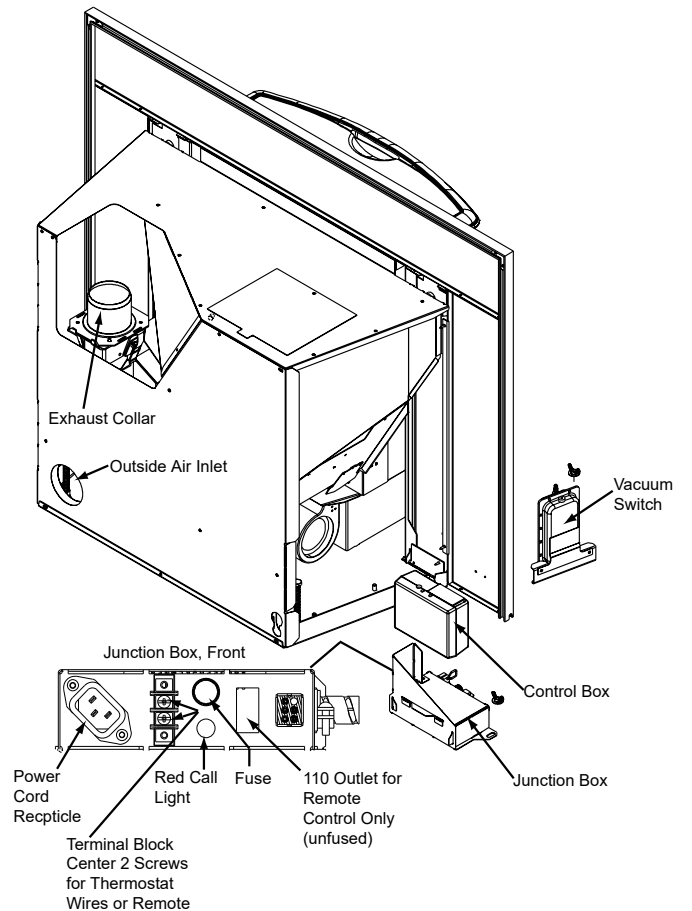


Figure 30.4 - Component Locations - Left Side









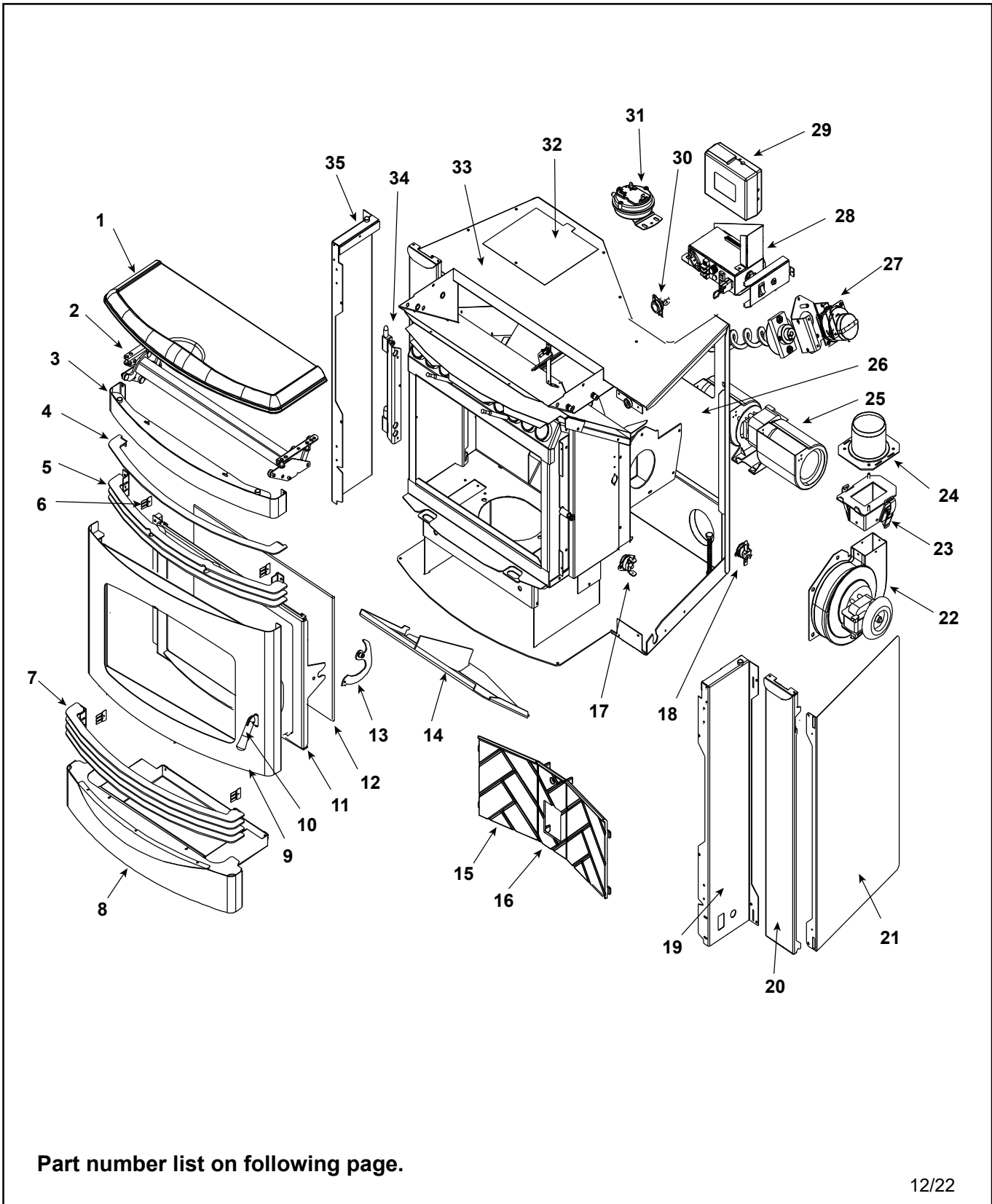
D. Exploded Drawing

**QUADRA-FIRE** Service Parts

**SANTAFEI-C**

Pellet Insert

Beginning Manufacturing Date: Apr 2019  
Ending Manufacturing Date: Active



Part number list on following page.

12/22

## E. Service Parts

**QUADRA-FIRE**® Service Parts

**SANTAFEI-C**

Beginning Manufacturing Date: Apr 2019  
Ending Manufacturing Date: Active

IMPORTANT: THIS IS DATED INFORMATION. Parts must be ordered from a dealer or distributor. **Hearth and Home Technologies does not sell directly to consumers.** Provide model number and serial number when requesting service parts from your dealer or distributor.



**Stocked  
at Depot**

ITEM	DESCRIPTION	COMMENTS	PART NUMBER	
1	Top, Hopper Lid		7019-227	
	Bumper, Rubber	Pkg of 12	SRV224-0340/12	Y
2	Top Hinge Assembly		7019-023	
3	Top Face Assembly		7019-047	
	Louver Grille Assembly - Complete Set	Black Nickel	GRL-SFI-NB	
		Nickel	GRL-SFI-NL	
4	Grill Bar (Scraper) - 1 Pc	Black	7019-119	
		Black Nickel	7019-191	
		Nickel	SRV7019-164	
5	Upper Grill Assembly - 3 Pc	Black	7019-007	
		Black Nickel	7019-189	
		Nickel	SRV7019-162	
6	Grill Bracket Cover		7019-199	
7	Lower Grill Assembly - 4 Pc	Black	7019-008	
		Black Nickel	7019-190	
		Nickel	SRV7019-163	
8	Ash Draw Assembly		7019-006	
9	Face Assembly w/Door		SRV7019-045	
	Face Skin Assembly		SRV7019-046	
10	Door Handle Assembly		SRV7019-037	
	Door Handle Black Nickel		SRV7019-174	
11	Door Assembly		SRV7019-058	
12	Glass Assembly/w Gasket - 17-1/4 in. W x 11-5/8 in H		SRV7021-032	
13	Door Latch Assembly		SRV7019-015	
	Pin 3/16 X 1/2		7000-229	
	Rope Gasket, 3/4 Inch	50 Ft	SRV240-0051M	
	Hinge, Female		SRV450-2910	
	Tape, 1/2" X 1/16 - Field Cut to Size	10 Ft	240-0290/10	Y
14	Baffle Assembly		SRV7001-034	Y
15	Brick, Left / Right, Cast		SRV414-0270	
16	Brick, Center, Cast		SRV414-0260	
17	Snap Disc Manual Reset # 3		SRV230-1290	Y
	Bracket, Snap Disc#3		7001-221	
18	Snap Disc, 110-20 # 1		SRV230-1220	Y
19	Face Right		SRV7019-116	
20	Access Panel Assembly		7019-025	

Additional service part numbers appear on following page.

Beginning Manufacturing Date: Apr 2019  
Ending Manufacturing Date: Active

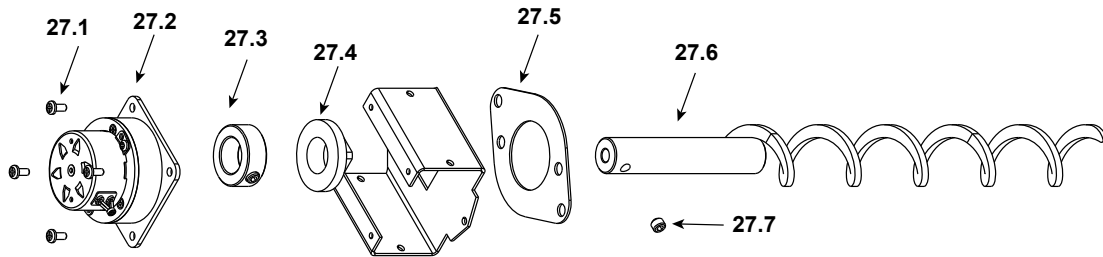
IMPORTANT: THIS IS DATED INFORMATION. Parts must be ordered from a dealer or distributor. **Hearth and Home Technologies does not sell directly to consumers.** Provide model number and serial number when requesting service parts from your dealer or distributor.



**Stocked at Depot**

ITEM	DESCRIPTION	COMMENTS	PART NUMBER	
21	Outer Skin Left / Right Side	Interchangeable	7019-100	
22	Blower, Exhaust Combustion		812-4400	Y
	Gasket, Exhaust Combustion Blower (between...)	...Motor & Housing	812-4710	Y
		...Housing & Stove	SRV240-0812	Y
23	Exhaust Transition Assembly		SRV414-5100	
	Flue Adapter Flange Gasket		SRV7036-180	
	Latch, Draw		229-0230	
24	Flue Collar Assembly		7019-031	
25	Blower, Convection		812-4900	Y
	Blower Magnet	Pkg of 10	7019-188/10	
26	Outer Skin Back		SRV7019-101	

**#27 Feed Assembly**



27	Feed Assembly		812-4760	Y
27.1	Screw 8-32 x 3/8	Pkg of 40	225-0500/40	Y
27.2	Feed Motor		812-4421	Y
27.3	Collar, Set, 7/8		229-0520	
27.4	Bearing, Feed System, Nylon		SRV7000-598	Y
27.5	Gasket, Feed Motor		SRV240-0731	Y
27.6	Feed Spring Assembly (Only)		SRV7001-046	Y
27.7	Screw, 5/16-18 x 1/4	Pkg of 25	225-0550/25	Y
28	Wire Harness/Junction Box		7019-166	Y
29	Control Board 3 Speed		SRV7000-704	Y
	Wing Thumb Screw 8-32 X 1/2	Pkg of 24	7000-223/24	Y
30	Snap Disc # 2		SRV7000-268	Y
	Bracket, Snap Disc		SRV7005-253	
31	Vacuum Switch		SRV7000-531	Y
32	Plate, Cover, Outer Can		480-1300	
33	Outer Skin, Top		SRV7019-106	

Additional service part numbers appear on following page.

Beginning Manufacturing Date: Apr 2019  
Ending Manufacturing Date: Active

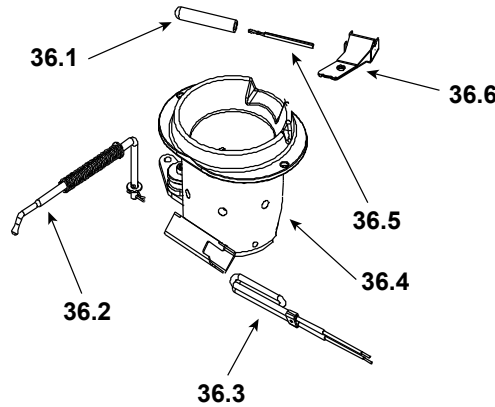
IMPORTANT: THIS IS DATED INFORMATION. Parts must be ordered from a dealer or distributor. **Hearth and Home Technologies does not sell directly to consumers.** Provide model number and serial number when requesting service parts from your dealer or distributor.



Stocked at Depot

ITEM	DESCRIPTION	COMMENTS	PART NUMBER
34	Door Hinge Assembly		SRV7019-014
	Hinge, Door, Male		SRV450-2810
35	Face Left		SRV7019-220

**#36 Firepot Assembly**



36.1	Thermocouple Cover	Pkg of 10	812-4920	Y
36.2	Pull Rod Assembly		7019-009	
	Pull Rod Black Nickel		SRV7019-172	
	Spring, Firepot		200-2050	
36.3	Heating Element Assembly 18" (Loop Igniter)		SRV7000-462	Y
		Pkg of 10	SRV7000-462/10	Y
36.4	Firepot Assembly		SRV414-5200	Y
	Bolt, Firepot, 1-1/4" Long	Pkg of 25	225-0120/25	Y
	Bushing, Firepot		410-8320	Y
	Floor, Firepot		414-0290	Y
	Gasket, Firepot		SRV240-0930	Y
36.5	Thermocouple		812-4470	Y
36.6	Thermocouple Clamp		SRV7001-203	Y
	Component Pack		SRV7019-059	
	Cleanout Tool		SRV414-1140	Y
	Harness, Thermostat Wire		230-0810	
	Power Cord		812-1180	Y
	Deflector, Bottom Airwash		SRV413-0680	
	Feed Adjustment Plate		SRV7019-110	
	Gasket, Flue Adapter		SRV240-0850	Y
	Hose, Vacuum, 5/32 Id - Field Cut to Size	3 Ft	SRV240-0450	Y
	Hose, Barb Assembly		SRV229-0920	
	Hopper Switch Assembly		SRV7019-053	Y

Additional service part numbers appear on following page.

F. Accessories



SANTAFEI-C

Beginning Manufacturing Date: Apr 2019  
Ending Manufacturing Date: Active

IMPORTANT: THIS IS DATED INFORMATION. Parts must be ordered from a dealer or distributor. **Hearth and Home Technologies does not sell directly to consumers.** Provide model number and serial number when requesting service parts from your dealer or distributor.



Stocked at Depot

ITEM	DESCRIPTION	COMMENTS	PART NUMBER	
	Hopper Switch Magnet Bracket		SRV7019-217	Y
	Magnetic Switch		SRV7000-375	Y
	Magnet Round		SRV7000-140	Y
	Plate, Ash Cleanout		SRV7001-186	
	Wire Harness Hopper Switch		SRV414-1220	Y
<b>ACCESSORIES</b>				
	Adjustable Hearth Support	12" x 50", 2-10" H	ADJSPT-12	
	Log Set		LOGS-30-OE	
	Log, Rear Left		7050-144	
	Log , Rear Right		7050-143	
	Outside Air Kit, Rear		811-0872	
	Channel, Air Intake		SRV413-7040	
	Cover, Outside Air Kit, Floor		SRV411-1071	
	Hose, Alum Flex, 2 Inch X 3 Ft		SRV200-0860	
	Outside Air Cap Assembly		SRV7001-044	
	Outside Air Collar Assembly		SRV7001-045	
	Trim Plate, Outside Air Kit		SRV412-7100	
	Panel Set, Large	Black Nickel	SP-SFI3350-NB	
		Nickel	SP-SFI3350-NL	
	Bracket, -L-, Trim		832-0840	
	Logo, Quadra-Fire	Pkg of 10	7000-649/10	
	Trim, Panel Set	Black Nickel	7019-027	
	Panel Set, Small	Black Nickel	SP-SFI3040-NB	
		Nickel	SP-SFI3040-NL	
	Bracket, -L-, Trim		832-0840	
	Logo, Quadra-Fire	Nickel	7000-649/10	
	Reset Button Assembly		SRV7000-040	
	Smart-Batt II	No longer available	SMARTBATT-B	
	Smart-Stat II		SMART-STAT-HHT	
	Thermostat, Programmable		PROG-STAT	
	Vent Adapter, 3-4"		811-0720	
	Damper, 3 inch		PEL-DAMP3	Y
	Damper, 4 inch		PEL-DAMP4	

Additional service part numbers appear on following page.





# QUADRA-FIRE®

NOTHING BURNS LIKE A QUAD

## CONTACT INFORMATION

Hearth & Home Technologies  
352 Mountain House Road  
Halifax, PA 17032  
Division of HNI INDUSTRIES

Please contact your Quadra-Fire dealer with any questions or concerns.  
For the number of your nearest Quadra-Fire dealer  
log onto [www.quadrafire.com](http://www.quadrafire.com)



## CAUTION



### DO NOT DISCARD THIS MANUAL

- Important operating and maintenance instructions included.
- Read, understand and follow these instructions for safe installation and operation.
- Leave this manual with party responsible for use and operation of this appliance.



### We recommend that you record the following pertinent information for your heating appliance.

Date purchased/installed: \_\_\_\_\_

Serial Number: \_\_\_\_\_

Location on appliance: \_\_\_\_\_

Dealership purchased from: \_\_\_\_\_

Dealer Phone: 1(     ) - \_\_\_\_\_

Notes:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

This product may be covered by one or more of the following patents: (United States) 5341794, 5263471, 6688302, 7216645, 7047962 or other U.S. and foreign patents pending.



HEARTH & HOME  
technologies™

# Installation Manual

## Installation & Appliance Set-Up

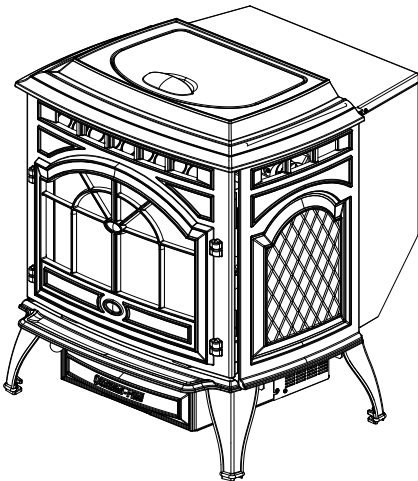
**INSTALLER:** Leave this manual with party responsible for use and operation.  
**OWNER:** Retain this manual for future reference.

**NOTICE: DO NOT DISCARD THIS MANUAL**

# QUADRA-FIRE®

## CASTILE-B PELLET APPLIANCE

**MODEL(S):**  
**CASTILE-MBK-C**  
**CASTILE-PMH-C**  
**CASTILE-TWL-C**



### CAUTION

Check building codes prior to installation.

- Installation **MUST** comply with local, regional, state and national codes and regulations.
- Consult local building, fire officials or authorities having jurisdiction about restrictions, installation inspection, and permits.

Installation and service of this appliance should be performed by qualified personnel. Hearth & Home Technologies recommends HHT Factory Trained or NFI certified professionals.



### WARNING



If the information in these instructions is not followed exactly, a fire could result causing property damage, personal injury, or death.

- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- Do not over fire - If appliance or chimney connector glows, you are over firing. Over firing will void your warranty.
- Comply with all minimum clearances to combustibles as specified. Failure to comply may cause house fire.



### WARNING



#### HOT SURFACES!

Glass and other surfaces are hot during operation AND cool down. Hot glass will cause burns.

- Do not touch glass until it is cooled
- **NEVER** allow children to touch glass
- Keep children away
- **CAREFULLY SUPERVISE** children in same room as fireplace.
- Alert children and adults to hazards of high temperatures
- High temperatures may ignite clothing or other flammable materials.
- Keep clothing, furniture, draperies and other flammable materials away.



### CAUTION

Tested and approved for wood pellets only. Burning of any other type of fuel voids your warranty.

### NOTE

To obtain a French translation of this manual, please contact your dealer or visit [www.quadrafire.com](http://www.quadrafire.com)

Pour obtenir une traduction française de ce manuel, s'il vous plaît contacter votre revendeur ou visitez [www.quadrafire.com](http://www.quadrafire.com)

## Safety Alert Key:



- **DANGER!** Indicates a hazardous situation which, if not avoided will result in death or serious injury.
- **WARNING!** Indicates a hazardous situation which, if not avoided could result in death or serious injury.
- **CAUTION!** Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
- **NOTICE:** Indicates practices which may cause damage to the appliance or to property.

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→ = Contains updated information

# 1 Important Safety Information

## A. Appliance Certification

<b>Model</b>	Castile Pellet Appliance
<b>Laboratory</b>	OMNI Test Laboratories, Inc.
<b>Report No.</b>	061-S-77d-6.2
<b>Type</b>	Solid Fuel Room Appliance/Pellet Fuel Burning Type
<b>Standard</b>	ASTM E1509-04, ULC S627-00 and ULC/ORD-C1482-M1990 Room Appliance Pellet Fuel Burning type and (UM) 84-HUD, Mobile Home Approved.

The Castile is Certified to comply with 2020 particulate emission standards.



This pellet appliance needs periodic inspection and repair for proper operation. It is against federal regulations to operate this pellet appliance in a manner inconsistent with operating instructions in this manual.

**NOTICE:** This installation must conform with local codes. In the absence of local codes you must comply with the **ASTM E1509-04, ULC S627-00, (UM) 84-HUD and ULC/ORD-C-1482-M1990.**

## B. BTU & Efficiency Specifications

<b>Emissions Report Number:</b>	0061PM077E
<b>EPA Certification #:</b>	175-19
<b>EPA Certified Emissions:</b>	1.1 grams per hour
<b>*LHV Tested Efficiency:</b>	70.4%
<b>**HHV Tested Efficiency:</b>	66.1%
<b>***EPA BTU Output:</b>	5,800 to 22,400 / hr.
<b>****BTU Input:</b>	9,300 to 30,600 / hr.
<b>Vent Size:</b>	3, 4 "L" or "PL", or 6 inches
<b>Hopper Capacity:</b>	45 lbs
<b>Fuel</b>	Premium Wood Pellets
* Weighted average LHV efficiency using data collected during EPA emissions test.	
**Weighted average HHV efficiency using data collected during EPA emissions test.	
***A range of BTU outputs based on HHV and the burn rates from the low and high EPA tests.	
****Maximum BTU input based on the high burn section of the EPA emissions test.	

### C. Glass Specifications

This appliance is equipped with 5mm ceramic glass. Replace glass only with 5mm ceramic glass. Please contact your dealer for replacement glass.

### D. Electrical Rating

115 VAC, 60 Hz, Start 4.1 Amps, Run 1.1 Amps

### E. Mobile Home Approved

- This appliance is approved for mobile home installations when not installed in a sleeping room and when an outside combustion air inlet is provided.
- The structural integrity of the mobile home floor, ceiling, and walls must be maintained.
- The appliance must be properly grounded to the frame of the mobile home and use only Listed pellet vent Class "L" or "PL" connector pipe.
- Outside Air Kit, part OAK-ACC must be installed in a mobile home installation.

### F. Non-Combustible Materials

Material which will not ignite and burn, composed of any combination of the following:

- Steel
- Plaster
- Brick
- Iron
- Concrete
- Tile
- Glass
- Slate

Materials reported as passing **ASTM E 136, Standard Test Method for Behavior of Metals, in a Vertical Tube Furnace of 750° C.**

### G. Combustible Materials

Material made of/or surfaced with any of the following materials:

- Wood
- Plastic
- Compressed Paper
- Plywood/OSB
- Plant Fibers
- Sheet Rock (drywall)

Any material that can ignite and burn: flame proofed or not, plastered or non-plastered.

### H. Sleeping Room

When installed in a sleeping room it is recommended that 3ft of vertical be installed prior to horizontally exiting the room and a smoke/CO alarm be installed in the bedroom. The size of the room must be at least 50ft<sup>3</sup> per 1,000 Btu/hr stove input, if the stove exceeds the room size, out air must be installed.

### I. California - Prop65

#### **WARNING**

This product and the fuels used to operate this product (wood), and the products of combustion of such fuels, can expose you to chemicals including carbon black, which is known to the State of California to cause cancer, and carbon monoxide, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to: [WWW.P65Warnings.ca.gov](http://WWW.P65Warnings.ca.gov)



#### **WARNING**



#### **Fire Risk.**

Hearth & Home Technologies disclaims any responsibility for, and the warranty will be voided by, the following actions:

- Installation and use of any damaged appliance.
  - Modification of the appliance.
  - Installation other than as instructed by Hearth & Home Technologies.
  - Installation and/or use of any component part not approved by Hearth & Home Technologies.
  - Operating appliance without fully assembling all components.
  - Operating appliance without legs attached (if supplied with appliance).
  - Do NOT Over fire - If appliance or chimney connector glows, you are over firing.
- Any such action that may cause a fire hazard.

Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage.

For assistance or additional information, consult a qualified installer, service agency or your dealer.

**NOTE:** Hearth & Home Technologies, manufacturer of this appliance, reserves the right to alter its products, their specifications and/or price without notice.

# 2 Getting Started

## A. Design, Installation & Location Considerations

### 1. Appliance Location

**NOTICE:** Check building codes prior to installation.

- Installation MUST comply with local, regional, state and national codes and regulations.
- Consult insurance carrier, local building inspector, fire officials or authorities having jurisdiction over restrictions, installation inspection and permits.

It is a good idea to plan your installation on paper, using exact measurements for clearances and floor protection, before actually beginning the installation. Location of the appliance and chimney will affect performance.

Consideration must be given to:

- Safety, convenience, traffic flow
- Placement of the chimney and chimney connector and to minimize the use of chimney offsets.
- Place the appliance where there will be a clear passage for a Listed chimney through the ceiling and roof (vertical) or through exterior wall (horizontal).
- Installing the required outside air kit will affect the location of the vent termination.

When locating vent and venting termination, the ideal location is to vent above roof line when possible. This minimizes the affects of wind loading.



Since pellet exhaust can contain ash, soot or sparks, you must consider the location of:

- Windows
- Air Intakes
- Air Conditioner
- Overhang, soffits, porch roofs, adjacent walls
- Landscaping, vegetation
- Horizontal or vertical vent termination

### 2. Floor Support

The supporting floor under the appliance must be able to handle the weight of the appliance, fuel load and the weight of the chimney.

Ensure that your floor will support these weights prior to installation. Add sufficient additional support to meet this weight requirement prior to installation. The weight of the appliance is 208 lbs.

 <b>WARNING</b>	
	<b>Risk of Fire.</b>
	Damaged parts could impair safe operation. Do NOT install damaged, incomplete or substitute components.

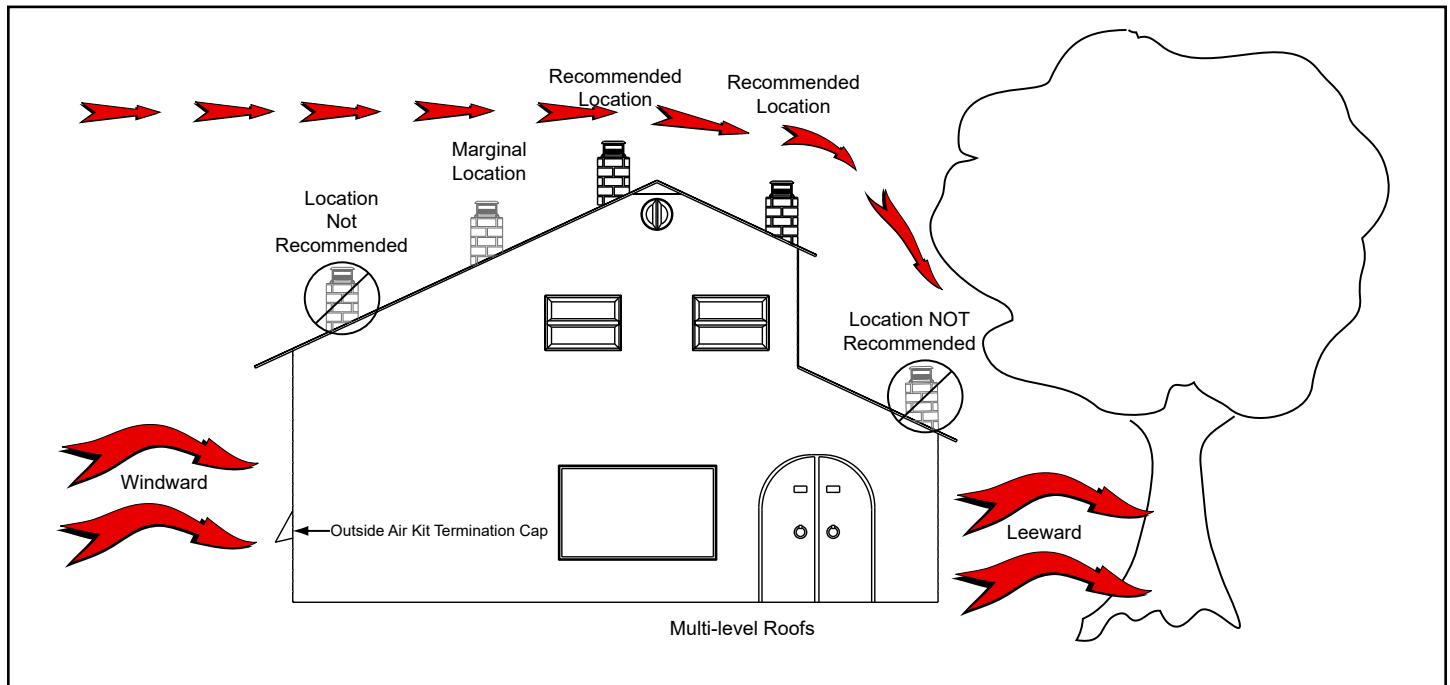


Figure 5.1

## B. Thermostat Wall Control Location

The thermostat wall control's location will have some affect on the appliance's operation.

- Maximum wire length from appliance is 100 feet (30.48m) with continuous non-spliced wire. Recommended 20 gauge wire, solid copper .
- When located close to the appliance, it may require a slightly higher temperature setting to keep the rest of the house comfortable.
- When located in an adjacent room or on a different floor level, you will notice higher temperatures near the appliance.

## C. Tools And Supplies Needed



**Tools and building supplies normally required for installation, unless installing into an existing masonry fireplace:**

- Reciprocating Saw
- Channel Locks
- Hammer
- Phillips Screwdriver
- Tape Measure
- Plumb Line
- 1/4" Self-Tapping Screws
- Framing Material
- Hi-temp Caulking Material
- Gloves
- Safety Glasses
- Framing Square
- Electric Drill & Bits (1/4")
- Level

### **May also need:**

Vent Support Straps  
Venting Paint

 <b>WARNING</b>	
	<b>Risk of Fire!</b>
	<ul style="list-style-type: none"><li>• Damaged parts could impair safe operation.</li><li>• Do NOT install damaged, incomplete or substitute components.</li></ul>

 <b>WARNING</b>	
	<b>Hearth &amp; Home Technologies disclaims any responsibility for, and the warranty will be voided by, the following actions:</b>
	<ul style="list-style-type: none"><li>• Installation and use of any damaged appliance.</li><li>• Modification of the appliance.</li><li>• Installation other than as instructed by Hearth &amp; Home Technologies.</li><li>• Installation and/or use of any component part not approved by Hearth &amp; Home Technologies.</li><li>• Operating appliance without fully assembling all components.</li><li>• Operating appliance without legs attached (if supplied with appliance).</li><li>• Do NOT Over fire</li></ul> <p><b>Or any such action that may cause a fire hazard.</b></p>

## D. Inspect Appliance and Components

- Open the appliance and remove all the parts and articles packed inside the Component Pack. Inspect all the parts and glass for shipping damage.
- Report to your dealer any parts damaged in shipment.
- All labels have been removed from the glass door.
- Plated surfaces have been wiped clean with a soft cloth, if applicable.
- Read all the instructions before starting the installation. Follow these instructions carefully during the installation to ensure maximum safety and benefit.
- Follow pipe manufacturer instructions for installation and air clearance requirements.



## E. Install Checklist

### ATTENTION INSTALLER: Follow this Standard Work Checklist

This standard work checklist is to be used by the installer in conjunction with, not instead of, the instructions contained in this installation manual.

Customer: \_\_\_\_\_  
 Date Installed: \_\_\_\_\_  
 Lot/Address: \_\_\_\_\_  
 Location of Appliance: \_\_\_\_\_  
 Installer: \_\_\_\_\_  
 Dealer/Distributor Phone Number: \_\_\_\_\_  
 Serial Number: \_\_\_\_\_  
 Model Name: \_\_\_\_\_



**WARNING! Risk of Fire or Explosion! Failure to install appliance to these instructions can lead to a fire or explosion.**

#### Appliance Install

Verified clearance to combustibles.

Appliance is leveled and connector is secured to appliance.

Hearth extension size/height decided.

Outside air kit installed.

Floor protection requirements have been met.

If appliance is connected to a masonry chimney, it should be cleaned and inspected by a professional. If installed to a factory built metal chimney, the chimney must be installed according to the manufacturer's instructions and clearances.

YES

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

IF NO, WHY?

_____
_____
_____
_____
_____
_____

#### Venting/Chimney

Chimney configuration complies with diagrams.

Chimney installed, locked and secured in place with proper clearance.

Chimney meets recommended height requirements (5 feet minimum vertical).

Roof flashing installed and sealed.

Terminations installed and sealed.

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

_____
_____
_____
_____
_____

#### Electrical

120 VAC unswitched power provided to the appliance.

Check outlet with multi-meter for proper polarity and voltage (115-120 VAC).

Record voltage reading: \_\_\_\_\_

<input type="checkbox"/>
<input type="checkbox"/>

_____
_____

#### Clearances

Verified all clearances meet installation manual requirements.

Mantels and wall projections comply with installation manual requirements.

Floor protection and heart extensions installed per manual requirements.

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

_____
_____
_____

#### Appliance Setup

All protective materials removed.

All labels have been removed from the door.

All packaging materials are removed from inside/under appliance.

Manual bag and all of its contents are removed from inside/under the appliance and given to the party responsible for use and operation.

Started appliance and verified that all motors and blowers operate as they should.

Checked draft using a Manometer. Record readings: \_\_\_\_\_

Checked vacuum using a Manometer. Record readings: \_\_\_\_\_

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

_____
_____
_____
_____
_____
_____

#### **Hearth & Home Technologies recommends the following:**

Photographing the installation and copying this checklist for your file.

That this checklist remain visible at all times on the appliance until the installation is complete.

**Comments:** Further description of the issues, who is responsible (Installer/Builder/Other Trades, etc.) and corrective action needed:

# 3 Dimensions and Clearances

## A. Appliance Dimensions

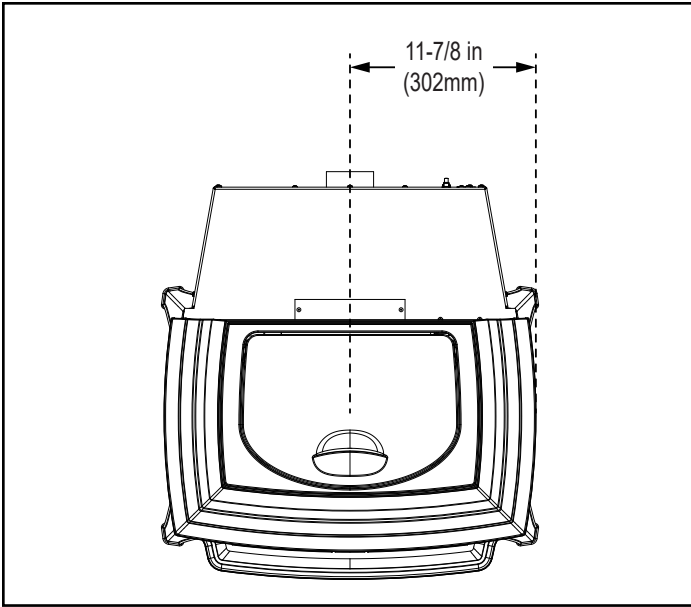


Figure 8.1 - Top View

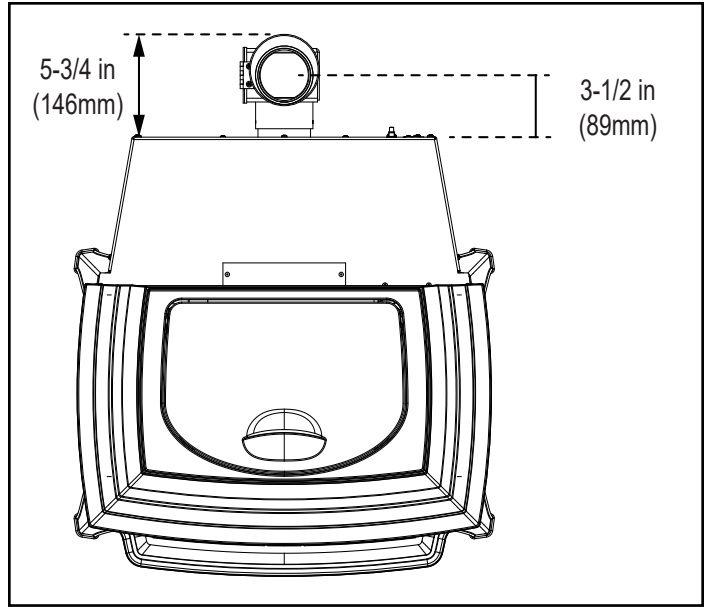


Figure 8.3 - Top View with TPVNT-6 and 811-0720

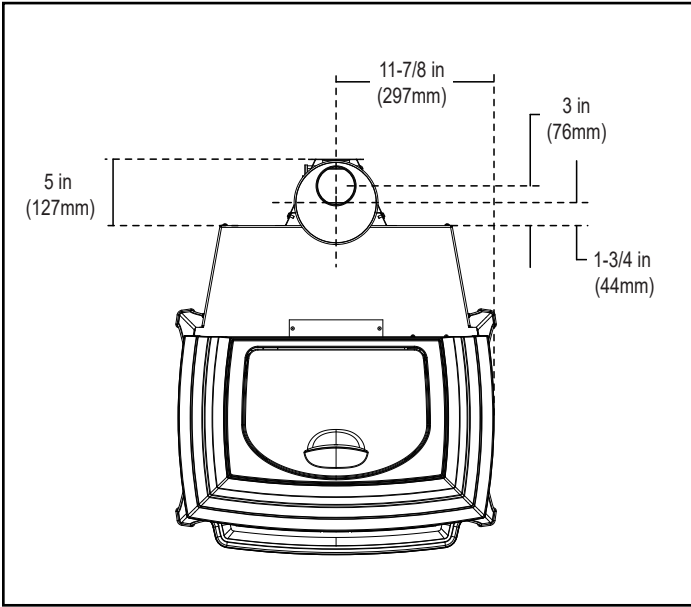


Figure 8.2 - Top View with TPVNT-2 and 812-3570

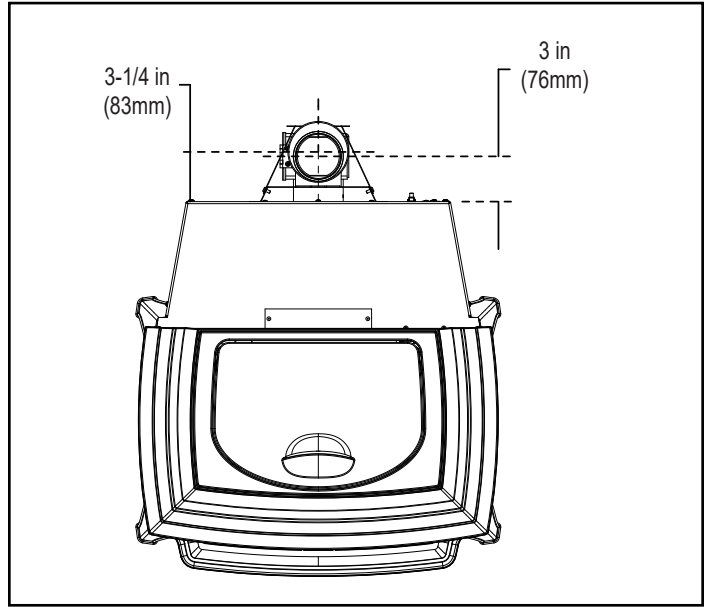


Figure 8.4 - Top view with TPVNT-2 and 811-0720

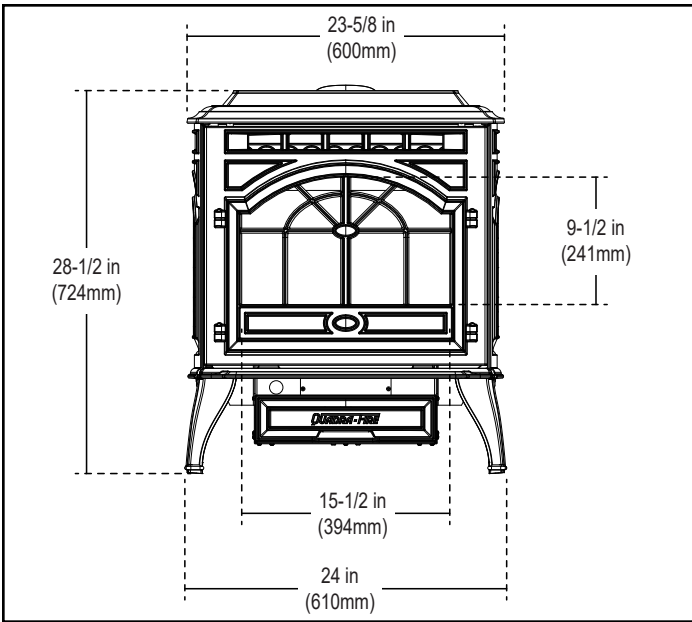


Figure 9.1 - Front View

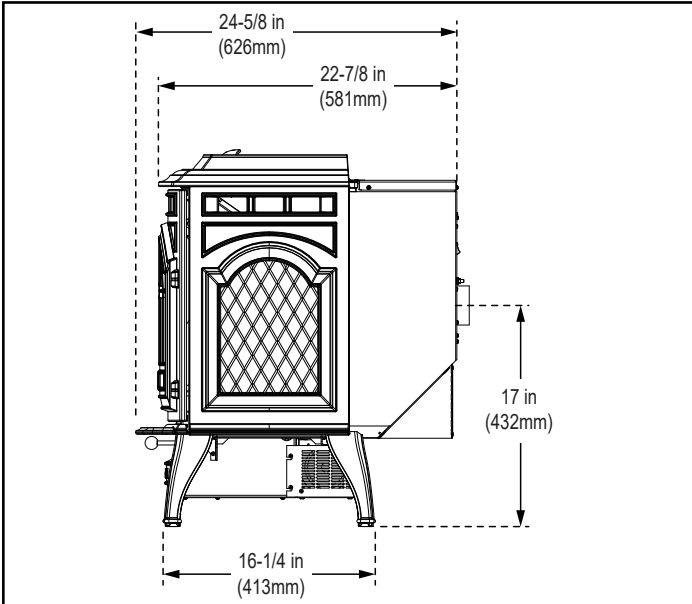


Figure 9.2 - Side View

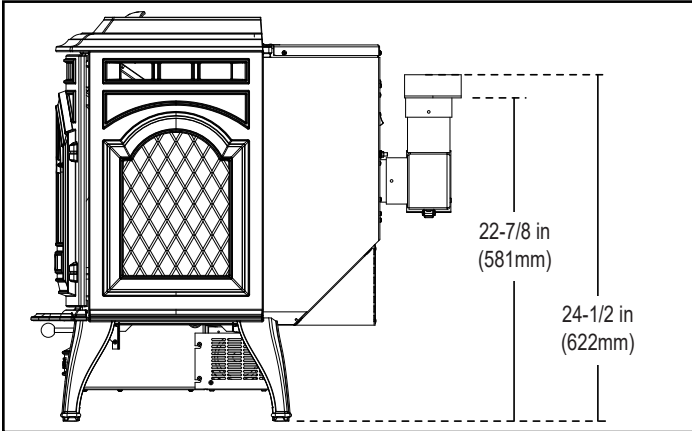


Figure 9.3 - Side View with TPVNT-6 and 811-0720

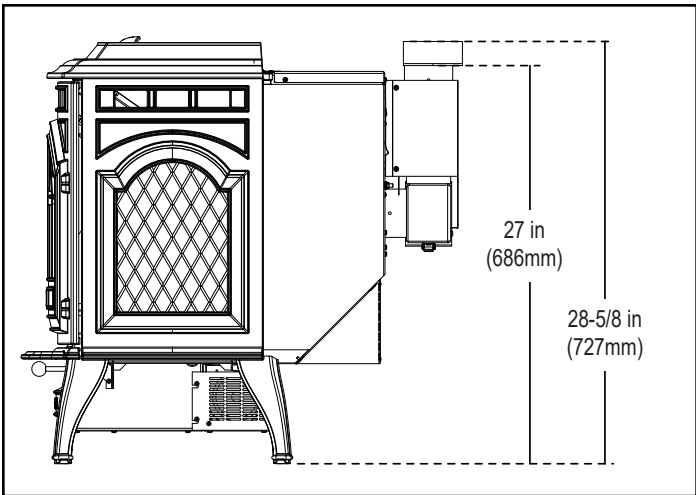


Figure 9.4 - Side View with TPVNT-2 and 811-0720

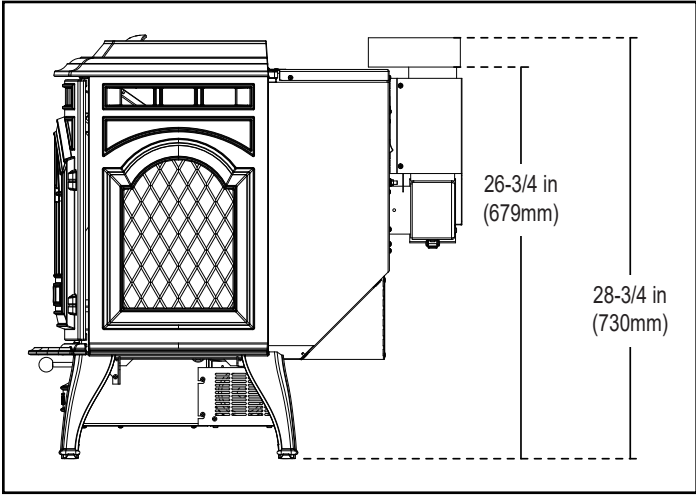
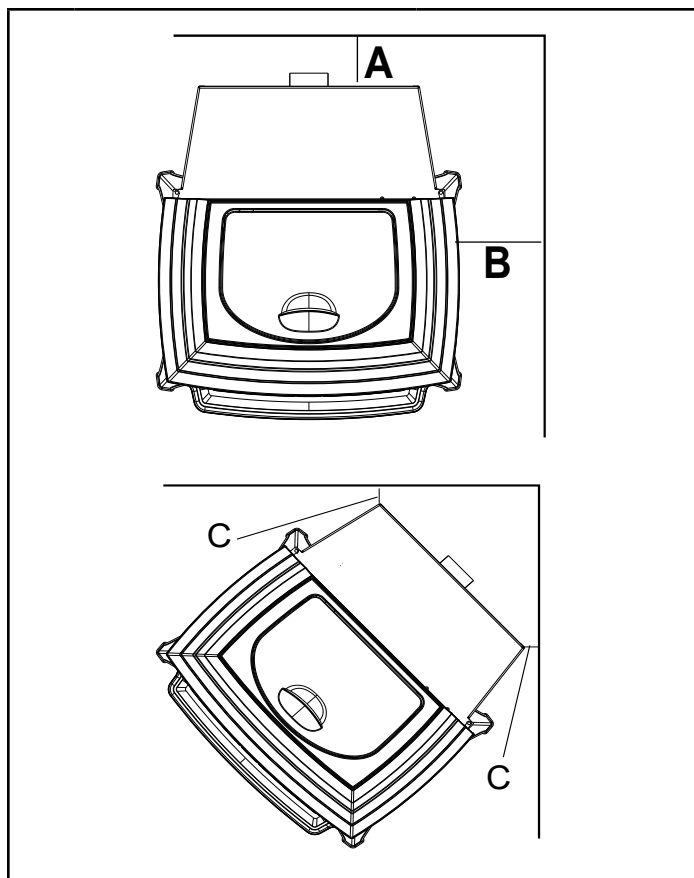


Figure 9.5 - Side View with TPVNT-2 and 812-3570

## B. Clearances to Combustibles (UL and ULC)

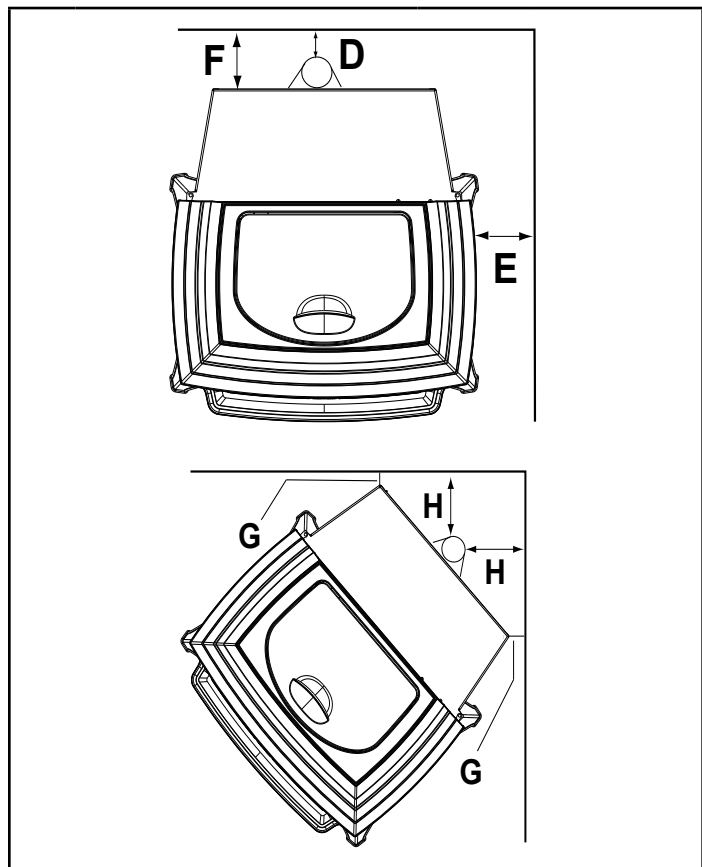


Horizontal Through the Wall		Inches	Millimeters
A	Back Wall to Appliance	2	51
B	Side Wall to Appliance	6	152
Corner Installation		Inches	Millimeters
C	Walls to Appliance	2	51

**NOTE:**

- Illustrations reflect typical installations and are FOR DESIGN PURPOSES ONLY.
- Illustrations/diagrams are not drawn to scale.
- Actual installation may vary due to individual design preference.

**Installations with:**  
 3 to 3 inch Top Vent Adapter and  
 3 to 6 inch Offset Adapter Kit



Vertical Installation		Inches	Millimeters
D	Back Wall to Flue Pipe	3	76
E	Side Wall to Appliance	6	152
F	Back Wall to Appliance	7	178
Corner Installation		Inches	Millimeters
G	Side Wall to Appliance Corner	2	51
H	Side Wall to Flue Pipe	3	76

## C. Hearth Pad Requirements (UL and ULC)

### CAUTION

Hearth and Home Technologies does not recommend adhesive based vinyl flooring due to thermal expansion. Floating-style flooring (LVP - luxury vinyl plank or LVT – luxury vinyl tile) can be used, but it will reach temperatures up to 110 °F in a room with ambient temperature of 70 °F. Consult flooring specifications to ensure compatibility.

HHT recommends wood stoves and inserts have 29 inches of alternative flooring in front of the stove before using LVP/LVT regardless if they sit flush on the floor or are elevated on a raised hearth.

For all other flooring, continue to follow clearance to combustible requirements in the installation manual.

**NOTICE:** Clearances that do not meet the minimum guidelines could result in damage or buckling to the vinyl flooring and is done at the installer's risk.

**EMBER PROTECTION:** It is necessary to install a Type I floor protector.

Floor protector must be non-combustible material, extending beneath appliance with a minimum of 6 inches (152mm) in front of glass and 6 inches (152mm) to both sides of the fuel loading door. Open the door and measure 6 inches (152mm) from the side edge of the opening in the face of the appliance. \*See exception.

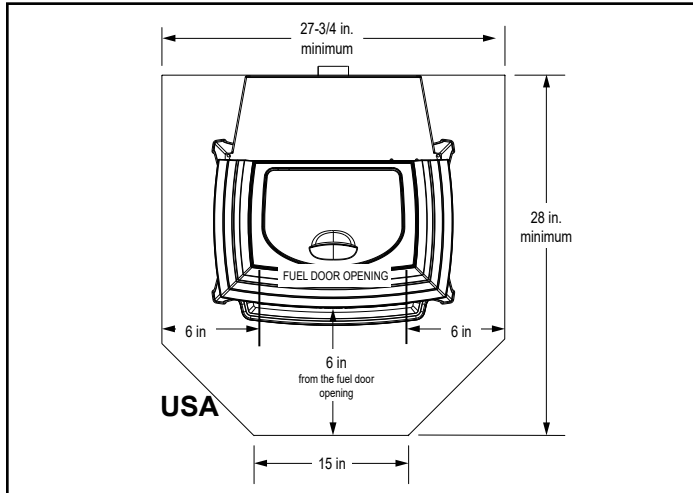


Figure 11.1

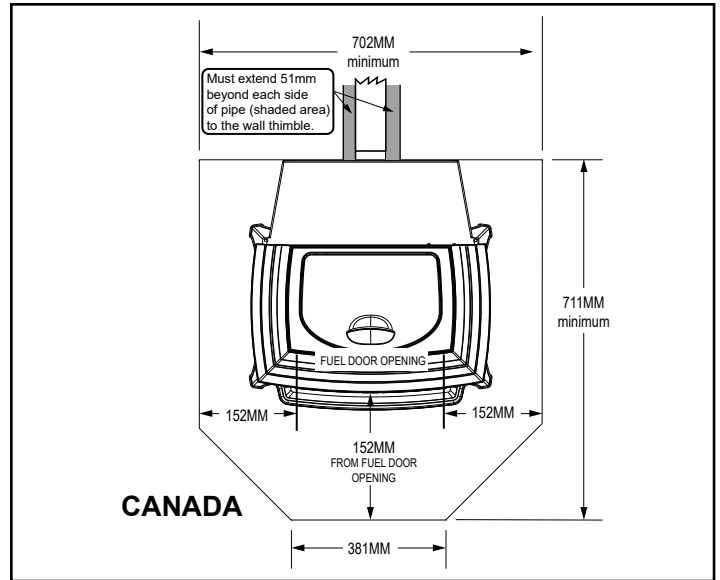


Figure 11.2

**USA INSTALLATIONS:** A non-combustible floor protection is recommended extending beneath the flue pipe when installed with horizontal venting or under the Top Vent Adapter with vertical installation.

**CANADA INSTALLATIONS:** A non-combustible floor protection extending beneath the flue pipe is **required** with horizontal venting or under the Top Vent Adapter with vertical installation.

### WARNING



#### Fire Risk

Comply with all minimum clearances to combustibles as specified. Failure to comply may cause house fire.

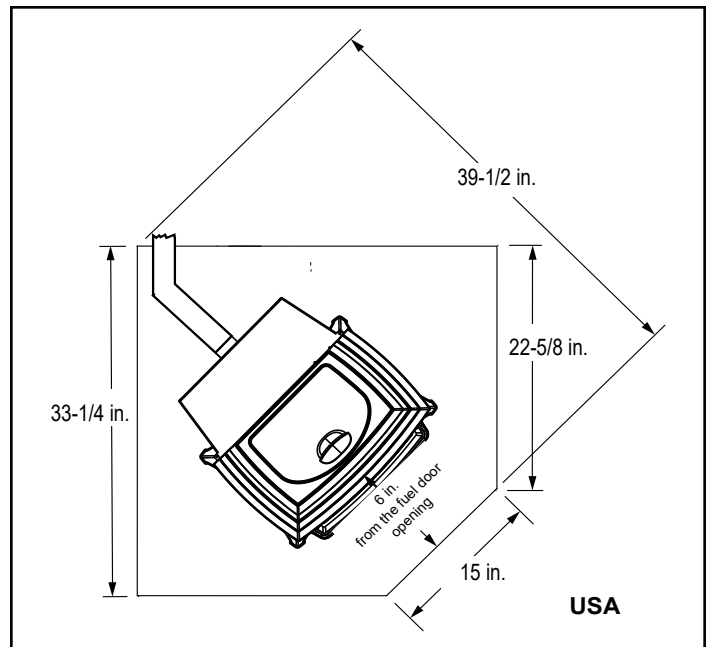


Figure 11.3

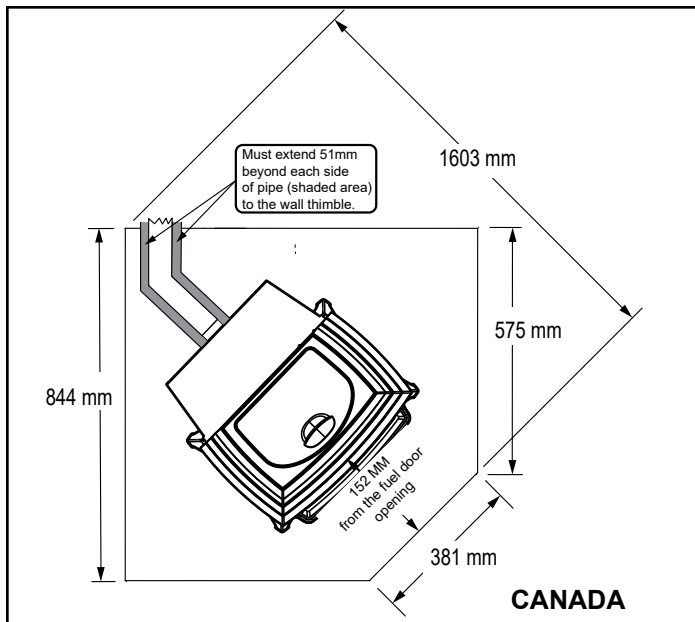


Figure 12.1

### D. Alcove

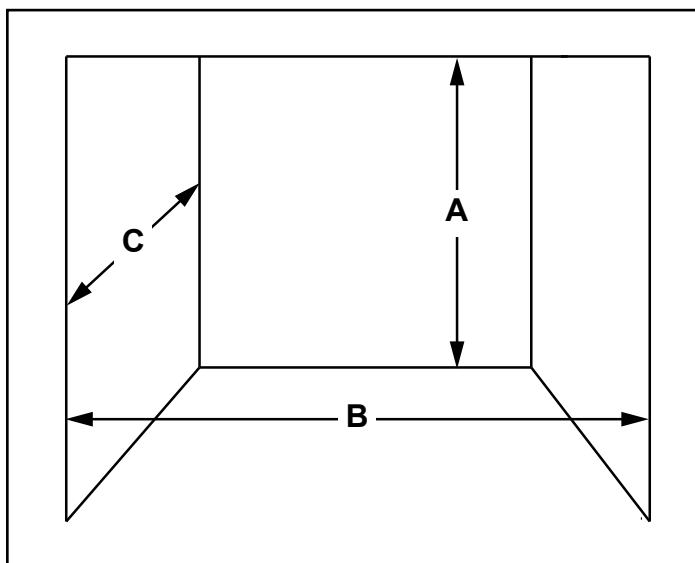


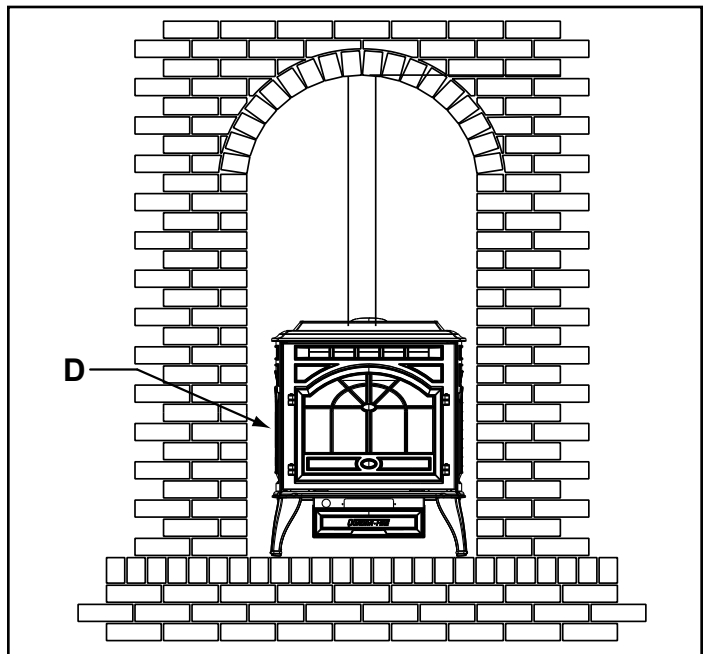
Figure 12.2

		Minimum*		Maximum	
		Inches	Millimeters	Inches	Millimeters
<b>A</b>	Height	43	1092	n/a	n/a
<b>B</b>	Width	38	965	n/a	n/a
<b>C</b>	Depth	n/a	n/a	36	914
<b>D</b>	To Side Wall	6	152	n/a	n/a

\*All minimums listed are to a combustible surface.

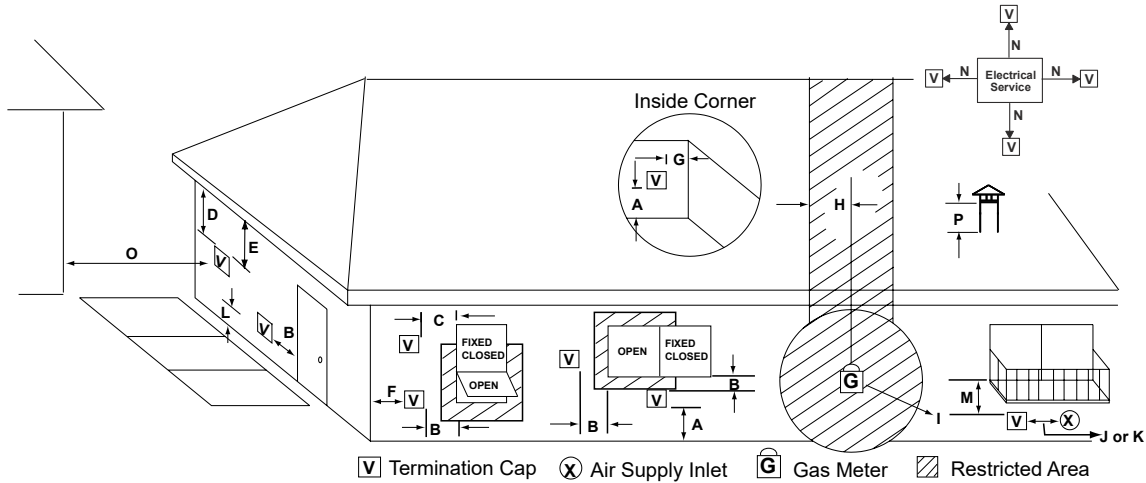
**NOTE:**

- Illustrations reflect typical installations and are FOR DESIGN PURPOSES ONLY.
- Illustrations/diagrams are not drawn to scale.
- Actual installation may vary due to individual design preference.



# 4 Vent Information

## A. Venting Termination Minimum Requirements



All minimum clearances are listed with an Outside Air Kit (OAK) installed, unless otherwise noted in table below.

<b>A</b>	12 in.	Above Finish Grade (the grade surface must be a non-combustible material)
<b>B</b>	12 in. 48 in. no OAK	Open door or window: below or to the side
<b>B</b>	12 in.	Open door or window: above
<b>C</b>	6 in.	Permanently closed window: above, below or to the side
<b>D</b>	18 in. 36 in. no OAK	Vertical clearance to a ventilated soffit located above the terminal within a horizontal distance of 2 ft from the center-line of the terminal
<b>E</b>	12 in.	Clearance to unventilated soffit
<b>F</b>	12 in.	Clearance to outside corner
<b>G</b>	12 in.	Clearance to inside corner
<b>H</b>	36 in.	Above gas meter/regulator measured from horizontal center-line of regulator
<b>I</b>	36 in. USA 72 in. Canada	Clearance to service regulator vent outlet
<b>J</b>	12 in. 48 in. no OAK	Clearance to non-mechanical air supply inlet to the building or the combustions air inlet to any other appliance
<b>K</b>	10 ft horizontal 3 ft vertical	Clearance to mechanical air supply
<b>L</b>	7 ft.	Above paved sidewalk, paved driveway located on <b>public</b> property
<b>M</b>	12 in.	Under an open veranda, porch, deck or balcony
<b>N</b>	See Note below*	Electric service: above, below or to the side (location must not obstruct or interfere with access)
<b>O</b>	24 in.	Adjacent building, fences and protruding parts of the structure
<b>P</b>	12 in.	Clearance above roof line for vertical terminations

24 in.	Above grass, top of plants, wood or any other combustible
12 in. 36 in. no OAK	Clearance from any forced air intake of other appliance
12 in.	Clearance horizontally from combustible wall
15 in.	Vented directly through a wall, minimum length of horizontal pipe
6 in. horizontal 12 in. vertical	Minimum horizontal or vertical terminations must protrude from wall

**NOTICE:** Termination must exhaust above air inlet elevation.

- It is recommended that at least 60 inches (1.52m) of vertical pipe be installed when appliance is vented directly through a wall. This will create a natural draft, which will help prevent the possibility of smoke or odor venting into the home during a power outage.
- It will also keep exhaust from causing a nuisance or hazard by exposing people or shrubs to high temperatures.
- The safest and preferred venting method is to extend the vent vertically through the roof or above the roof.

**NOTICE: Do NOT Terminate Vent:**

- In any location that will allow flue gases or soot from entering or staining the building.
- In any location which could create a nuisance or hazard.
- In any enclosed or semi-enclosed area such as a carport, garage, attic, crawl space, under a sun deck or porch, narrow walkway.
- Closely fenced area, or any location that can build up a concentration of fumes such as a stairwell, covered breezeway, etc.

\*NOTE: Consult local building, fire officials or authorities having jurisdiction. Local codes or regulations may require different clearances.

## B. Avoiding Smoke and Odors

### Negative Pressure, Shut-Down and Electrical Power Failure

To reduce the probability of back-drafting or burn-back in the pellet appliance during power failure or shut down conditions, it must be able to draft naturally without exhaust blower operation.

Negative pressure in the house will resist this natural draft if not accounted for in the pellet appliance installation.

Heat rises in the house and leaks out at upper levels. This air must be replaced with cold air from outdoors which flows into lower levels of the house.

Vents and chimneys into basements and lower levels of the house can become the conduit for air supply and reverse under these conditions.

### Outside Air

An outside air kit is recommended in all installations. The Outside Air Kit must be ordered separately.

Per national building codes, consideration must be given to combustion air supply to all combustion appliances. Failure to supply adequate combustion air for all appliance demands may lead to back drafting of those and other appliances.

When the appliance is roof vented (strongly recommended):

- The air intake is best located on the exterior wall oriented towards the prevailing wind direction during the heating season.

When the appliance is side-wall vented:

- The air intake is best located on the same exterior wall as the exhaust vent outlet and located lower on the wall than the exhaust vent outlet.

The outside air supply kit can supply most of the demands of the pellet appliance, but consideration must be given to the total house demand.

House demand may consume the air needed for the appliance. It may be necessary to add additional ventilation to the space in which the pellet appliance is located.

Consult with your local HVAC professional to determine the ventilation demands for your house.

## Vent Configurations

When installing a pellet appliance with a horizontal vent configuration the frequency of power outages should be considered:

- Power outages during operation will cause the appliance to immediately turn off and may create conditions where smoke will back draft into the house. In order to reduce the likelihood of smoke back drafting into the house during a power outage, Hearth and Home Technologies strongly suggests:
  - Installing the pellet venting with a minimum vertical run of 5 feet (1.52m).
  - Installing the outside air kit at least 4 feet (1.22m) below the vent termination.

To prevent soot damage to exterior walls of the house and to prevent re-entry of soot or ash into the house:

- Maintain specified clearances to windows, doors and air inlets, including air conditioners.
- Vents should not be placed below ventilated soffits. Run the vent above the roof.
- Avoid venting into alcove locations.
- Vents should not terminate under overhangs, decks or onto covered porches.
- Maintain minimum clearance of 12 inches (305mm) from the vent termination to the exterior wall. If you see deposits developing on the wall, you may need to extend this distance to accommodate your installation conditions.



### CAUTION

- DO NOT CONNECT THIS APPLIANCE TO A CHIMNEY FLUE SERVICING ANOTHER APPLIANCE.
- DO NOT CONNECT TO ANY AIR DISTRIBUTION DUCT OR SYSTEM.



## C. Negative Pressure



### WARNING

#### Risk of Asphyxiation!

Negative pressure can cause spillage of combustion fumes and soot.

Negative pressure results from the imbalance of air available for the appliance to operate properly. It can be strongest in lower levels of the house.

#### Causes include:

- Exhaust fans (kitchen, bath, etc.)
- Range hoods
- Combustion air requirements for furnaces, water appliances and other combustion appliances
- Clothes dryers
- Location of return-air vents to furnace or air conditioning
- Imbalances of the HVAC air handling system
- Upper level air leaks such as:
  - Recessed lighting
  - Attic hatch
  - Duct leaks

#### To minimize the effects of negative air pressure:

- Install the outside air kit with the intake facing prevailing winds during the heating season
- Ensure adequate outdoor air for all combustion appliances and exhaust equipment
- Ensure furnace and air conditioning return vents are not located in the immediate vicinity of the appliance
- Avoid installing the appliance near doors, walkways or small isolated spaces
- Recessed lighting should be a “sealed can” design
- Attic hatches weather stripped or sealed
- Attic mounted duct work and air handler joints and seams taped or sealed

## D. Draft

Draft is the pressure difference needed to vent an appliance successfully. When an appliance is drafting successfully, all combustion byproducts are exiting the home through the chimney.

Install through the warm airspace enclosed by the building envelope. This helps to produce more draft, especially during lighting and die-down of the fire.

Considerations for successful draft include:

- Preventing negative pressure
- Location of appliance and chimney

**NOTICE:** Hearth & Home Technologies assumes no responsibility for the improper performance of the chimney system caused by:

- Inadequate draft due to environmental conditions
- Down drafts
- Tight sealing construction of the structure
- Mechanical exhausting devices

## E. Chimney and Exhaust Connection

1. **Chimney & Connector:** Use 3 or 4 inch (76-102mm) diameter type “L” or “PL” venting system. It can be vented vertically or horizontally.

**NOTE:** The appliance exhaust outlet is designed to accommodate 3 inch venting. Use of 4 inch venting requires the use of a 3-to-4 inch exhaust vent increaser in addition to any other venting components needed, sold separately.

2. **Mobile Home:** Approved for all Listed pellet vent. If using the 3 inch (76mm) vertical Top Vent Adapter Kit or the 3 to 6 inch (76-152mm) Top Vent Offset Adapter, use Listed double wall flue connector. A Quadra-Fire Outside Air Kit must be used with manufactured home installations.
3. **Residential:** The 3 inch (76mm) vertical Top Vent Adapter Kit and the 3 to 6 inch (76 to 152mm) Top Vent Offset Adapter are tested to use 24 gauge single wall flue connector or Listed double wall flue connector to Class A Listed metal chimneys, or masonry chimneys meeting International Residential Code standards for solid fuel appliances.
4. **Install vent at clearances specified by the vent manufacturer.**
5. Seal exhaust venting system to the unit with High Temp 500°F RTV silicone sealant. Secure the venting system to the unit with at least (3) screws. All pellet vent pipe must be secured together either by means provided by the pipe manufacturer or by (3) screws at each joint.
6. **DO NOT INSTALL A FLUE DAMPER IN THE EXHAUST VENTING SYSTEM OF THIS Appliance.**
7. **DO NOT CONNECT THIS Appliance TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE.**

**NOTE:** Follow venting manufacturers recommendations for sealing pipe joints.





### WARNING

USE ONLY RECOMMENDED VENTING COMPONENTS; OTHERWISE MAKESHIFT PARTS MAY RESULT IN PROPERTY DAMAGE, PERSONAL INJURY, OR DEATH.

## F. Equivalent Feet of Pipe

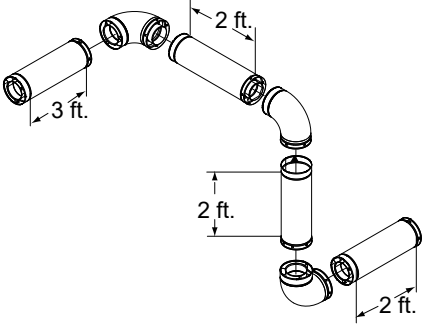
The table below can help you calculate the equivalent feet of pipe which is a method used to determine pellet vent size (Figure 16.1).


**WARNING**



Vent surfaces get HOT, can cause burns if touched. Non-combustible shielding or guards may be required.

### Example of 3 Elbow-Rear Vent Termination Calculation



Pellet Venting Component	# of Elbows	Feet of Pipe	Multiplied By	Equivalent Feet	Components Equivalent Feet
90° Elbow or Tee	3		X	5	15
45° Elbow			X	3	
Horizontal Pipe		7	X	1	7
Vertical Pipe		2	X	0.5	1
Total Equivalent Feet					23

**NOTE:** This is a generic example and is not intended to represent any specific fuel type.

Figure 16.1

## G. Pipe Selection Chart


The chart will help you in determining proper venting size according to the equivalent feet of pipe calculated previously and the altitude above sea level of this installation (Figure 16.2).

1. Locate the calculated equivalent feet of pipe on the vertical left side of the chart.
2. Move to the right horizontally on the chart until you reach your altitude above sea level.
3. If you fall below the diagonal line, 3 or 4 inch (76 to 102mm) pipe may be used.
4. If it is anywhere above the diagonal line, a 4 inch (102mm) diameter pipe is required.

**NOTICE:**

- A 90° elbow is 5 times as restrictive to the flow of exhaust gases under positive pressure as 1 foot (305mm) of horizontal pipe.
- A foot of horizontal pipe is twice as restrictive as a foot of vertical pipe.


**WARNING**



**Risk of Fire!**

- Only LISTED venting components may be used.
- NO OTHER vent components may be used.
- Substitute or damaged vent components may impair safe operation.

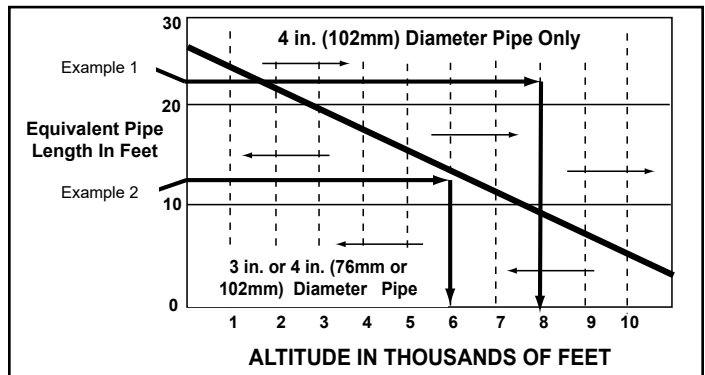


Figure 16.2

**Example 1:** If the equivalent length of pipe is 23 feet (7m) with altitude of 8,000 feet (2438m) you must use 4 inch (102mm) diameter type “L” or “PL” vent.

**Example 2:** If the equivalent length of pipe is 12 feet (3.7m) with altitude of 6,000 feet (1829m) you may use 3 or 4 inch (76 to 102mm) diameter type “L” or “PL” vent.


**WARNING**



**Risk of Injury or Property Damage.**

- Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage.
- Refer to the owner’s information manual provided with this appliance.
- For assistance or additional information consult a qualified installer, service agency or your dealer.

# 5 Venting Systems

## A. Through The Wall

Horizontal termination cap must be a minimum of 6 inches. (152mm) from the wall. Approved for mobile home installations. Must use 3 or 4 inch (76-102mm) "L" or "PL" Listed pellet venting or Listed double wall pipe and a Quadra-Fire Outside Air Kit in mobile homes.



### CAUTION

We strongly recommend that you DO NOT DOWNWARD VENT. The following may occur:

- The appliance will not vent properly
- Smoke spillage in the house
- Excessive sooting

**NOTE:** In Canada, where passage through a wall or partition of combustible construction is desired, the installation shall conform to CAN/CSA-B365

**NOTICE:** Please note that while the minimum clearance for the termination cap is 6 inches (152mm) there is the possibility of soot build-up around the termination area. If this occurs we suggest to move the termination further away from the house to prevent it.

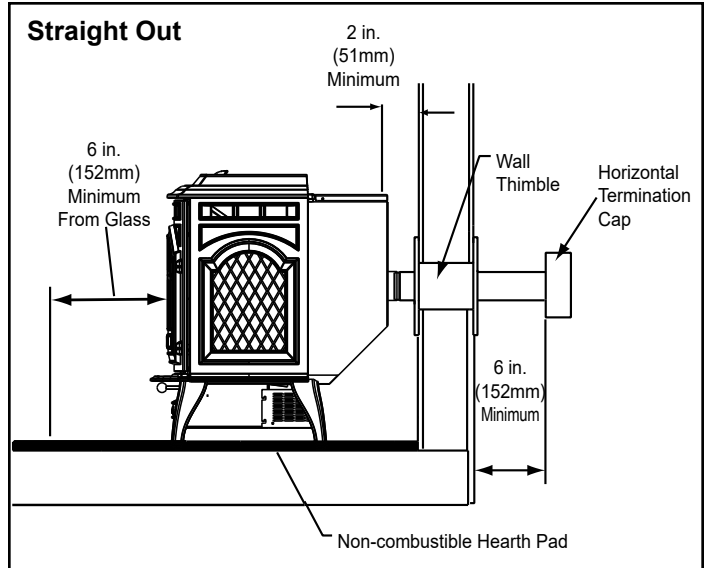


Figure 17.1

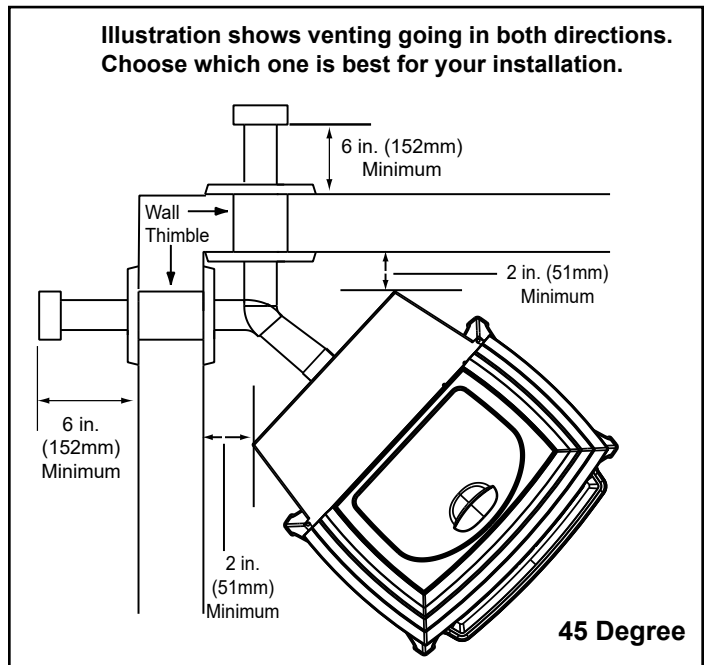


Figure 17.2

## B. Vertical into Existing Class A Chimney

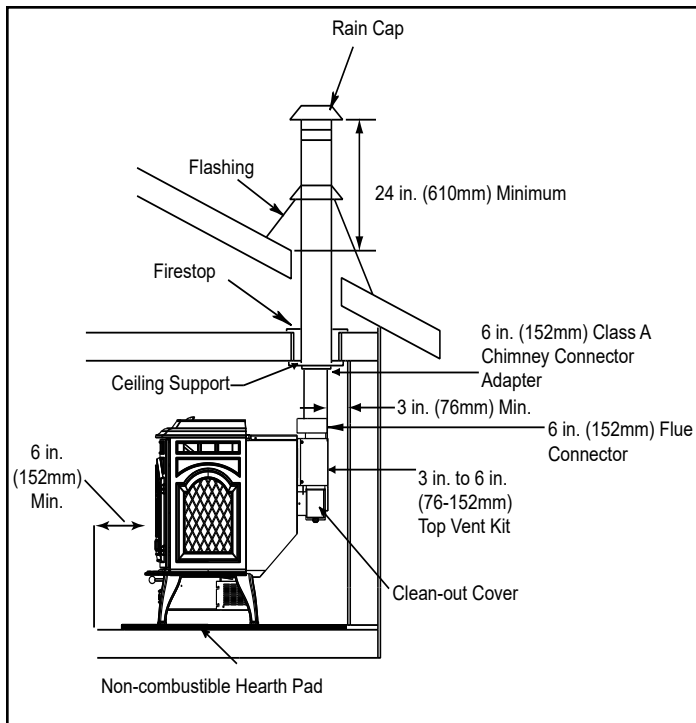


Figure 18.1

## C. Through The Wall & Vertical - Exterior

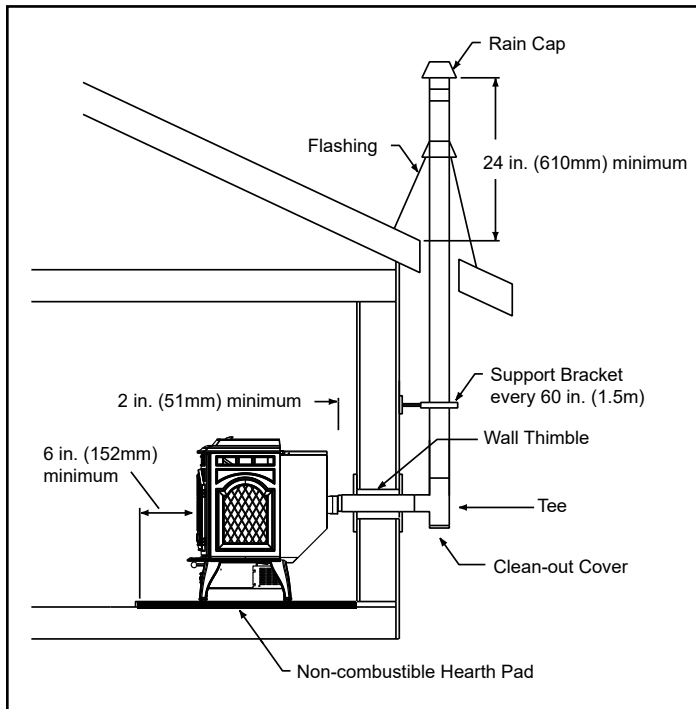


Figure 18.2

We recommend a minimum of 60 inches (1524mm) vertical, however above the eave is preferred.

All three installations are approved for mobile home installations. Must use 3 or 4 inch (76 to 102mm) "L" or "PL" Listed pellet venting or Listed double wall pipe and Quadra-Fire Outside Air Kit in mobile homes. Single wall pipe is approved for residential installations only.

**\*NOTE:** Clearance to combustibles are for standard pellet pipe. If pellet pipe manufacturer allows reduced clearances to their pipe, reduced clearances are allowed.

**NOTE:** A chimney connector shall not pass through an attic or roof space, closet or similar concealed space, or a floor or ceiling.

## D. Vertical - Interior - Typical Installation

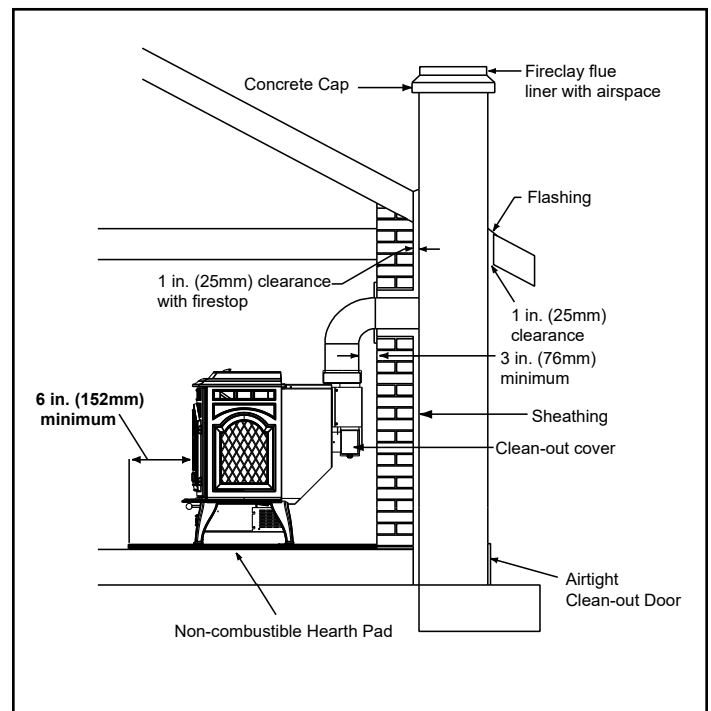


Figure 18.3

→ E. Interior - Rear Vent

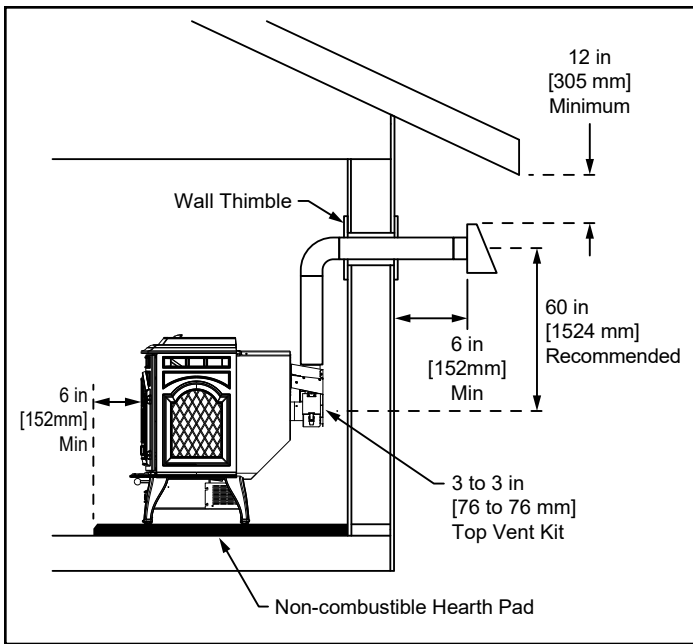


Figure 19.1

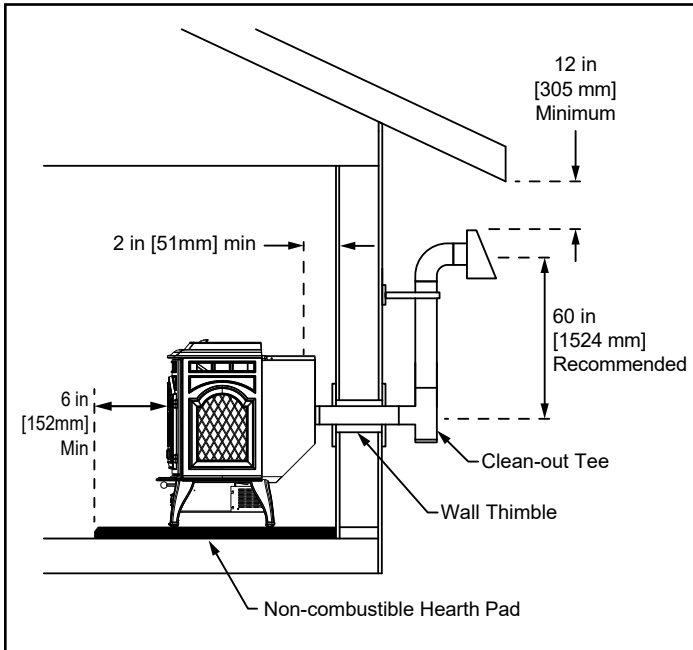


Figure 19.2

F. Masonry

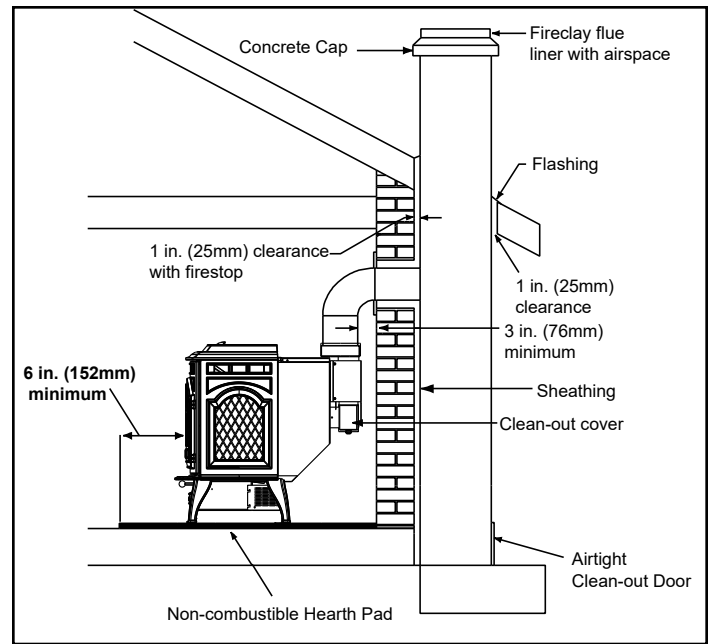


Figure 19.3

G. Alternate Masonry

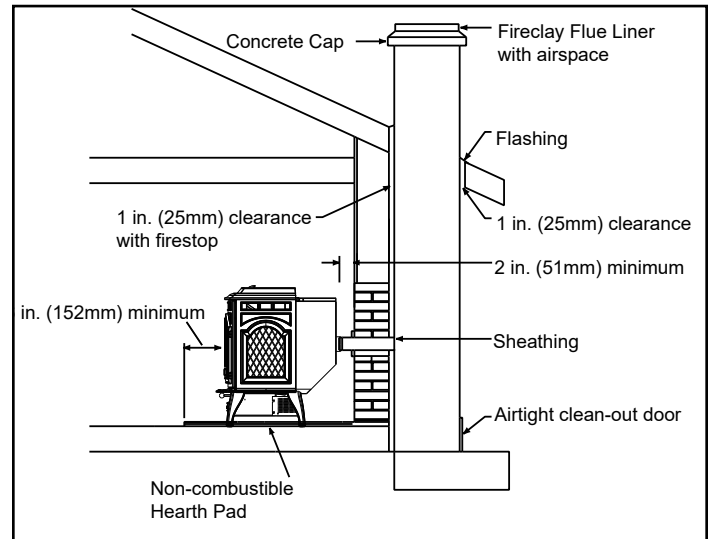


Figure 19.4



**WARNING**

**Fire Risk.**

Inspection of Chimney:

- Masonry chimney must be in good condition.
- Meets minimum standard of NFPA 211
- Factory-built chimney must be a minimum 6 inch (152mm) UL103 HT.



# 6 Appliance Set-Up

## A. Outside Air Kit Instructions

### CAUTION

Never draw outside combustion air from:

- Wall, floor or ceiling cavity
- Enclosed space such as an attic or garage

1. **Figure 20.1** shows bottom of convection blower mount and pre-cut air vent opening for reference only. Air channel should be mounted with appliance in upright position.

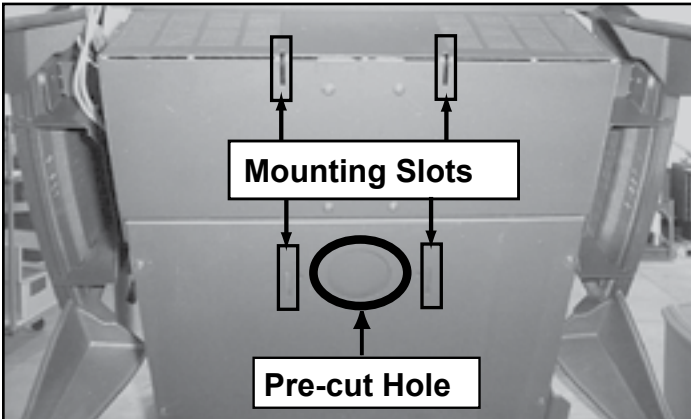


Figure 20.1

2. Align hooks in air channel with slots in convection blower mount and ash box (**Figure 20.2**). Push up and slide forward.

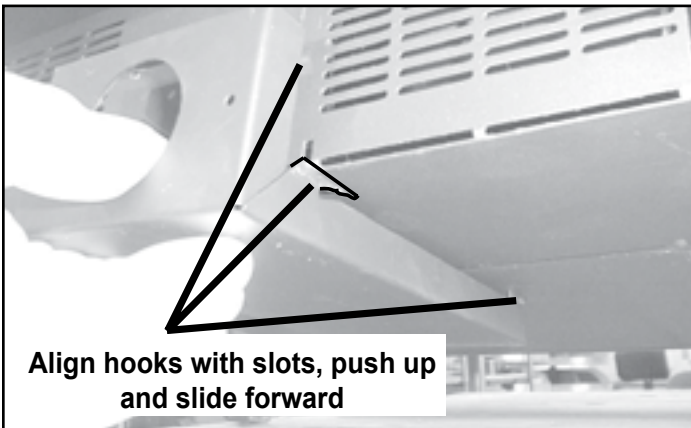


Figure 20.2

3. Secure air channel to appliance with 2 screws and secure the collar assembly to the air channel with 2 screws (**Figure 20.3**).

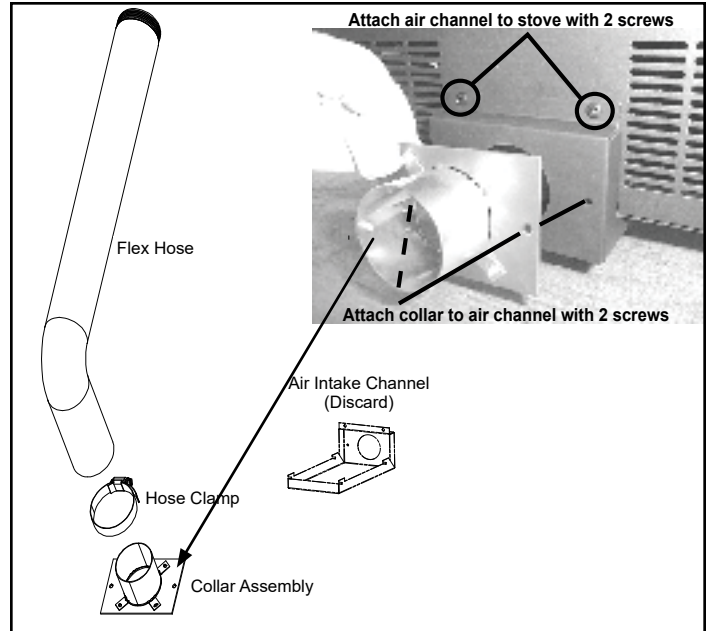


Figure 20.3

4. Measure distance from floor to air vent opening in appliance and mark location on wall. Use saw to cut opening in wall. Cut a 2-1/2 to 3 inch (64-76mm) opening on inside wall and a 3 to 3-1/2 inch (76-89mm) opening on outside of house.
5. Use hose clamp to secure flex pipe to collar assembly.
6. Slide trim ring over flex pipe and run pipe through wall.
7. Attach hose to outside termination cap with second hose clamp.
8. Secure termination cap to outside surface.
9. Secure trim ring to interior wall.

## B. Top Vent Adapter Installation

### 3 to 3 inch Top Vent Adapter

### 3 to 6 inch Top Vent Offset Adapter

#### Installing the Top Vent Adapter

1. Put a layer of high temperature silicone on the 3 inch (76mm) rear exhaust outlet. Do not put silicone inside of pipe (**Figure 21.1**).
2. Slide the top vent adapter onto the rear exhaust outlet and adjust the assembly to a vertical position (**Figure 21.1**).
3. Drill 4 holes with #26 drill bit (provided) into the back of the appliance using the outer shield as a pattern (make sure the assembly is vertical) (**Figure 21.1**).
4. Install the 4 mounting screws.
5. Drill 2 holes with #26 drill bit through the rear exhaust outlet using the 2 holes already in the short horizontal pipe in the top vent adapter as a guide. Install the 4 screws (**Figure 21.2**).
6. Install the vent pipe into the top vent adapter (Follow venting manufacturers recommendations for sealing pipe joints.).

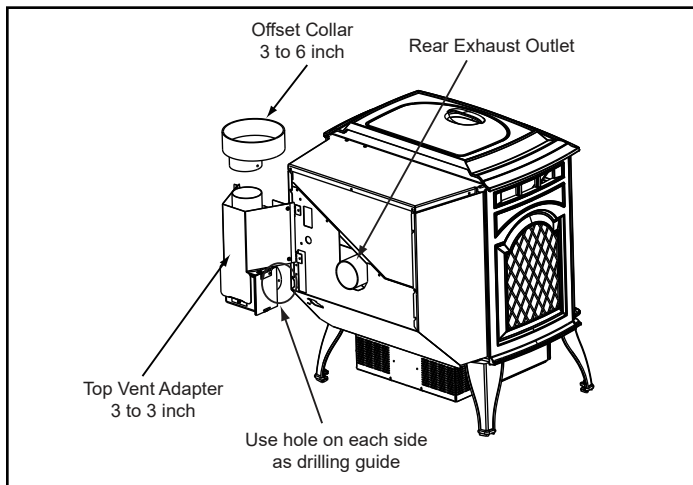


Figure 21.1

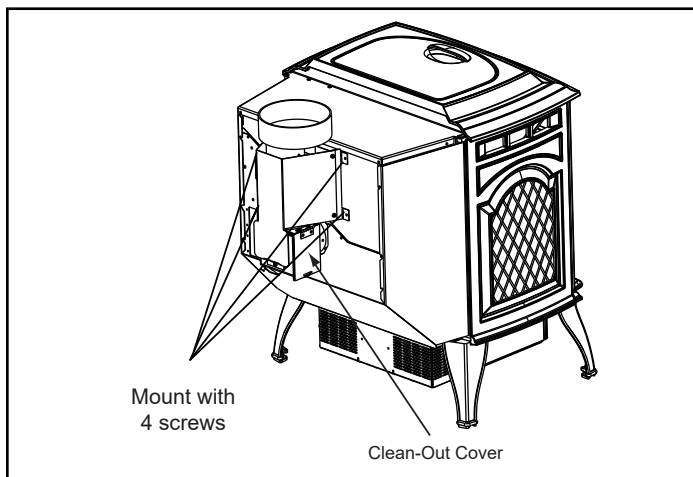


Figure 21.2

## C. Rear Vent & Rear Vent to Top Vent Adapter Installation

1. Put a layer of high temperature silicone on the 3 inch (76mm) exhaust outlet. Do not put silicone inside of pipe (**Figure 21.1**).
2. Slide the adapter onto the rear exhaust outlet and adjust the assembly to the appropriate position.
3. Install the vent pipe into the adapter (Follow venting manufacturers recommendations for sealing pipe joints.)

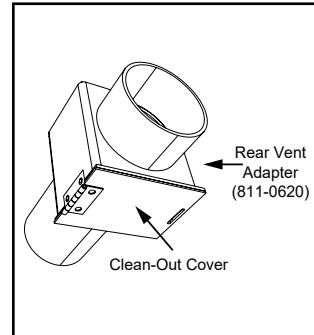


Figure 21.3 - Rear Vent Adapter

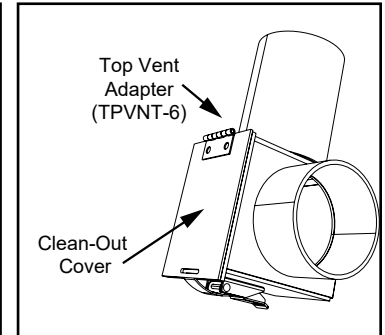


Figure 21.4 - Rear to Top Vent Adapter - 90°

## D. Thermostat Installation and Operation

The kit comes with a programmable wall thermostat and 25' of thermostat wire. If you need to run more than 25' make sure you use a continuous strand of 18 to 22 gauge thermostat wire. For optimum performance your thermostat should be:

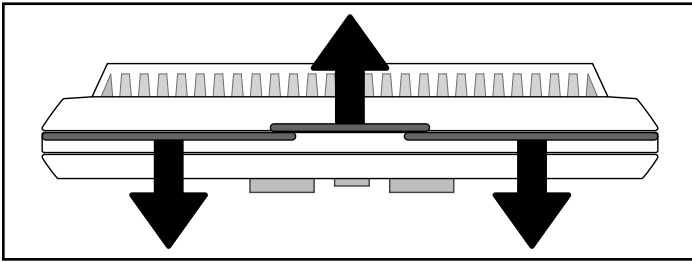
- Mounted on an inside wall, approximately 5' above the floor
- Do not locate where there is poor air circulation such as in a corner, alcove, behind doors, bookcase or other objects
- Located away from drafts, direct sunlight, above a lamp, television, radiator, a wall next to a window, or direct heat from the appliance
- Avoid damp environments as this can lead to corrosion that may shorten thermostat life
- If painting or construction work around, cover the thermostat completely or wait until work is complete before installation.

**CAUTION**

**Shock hazard.**

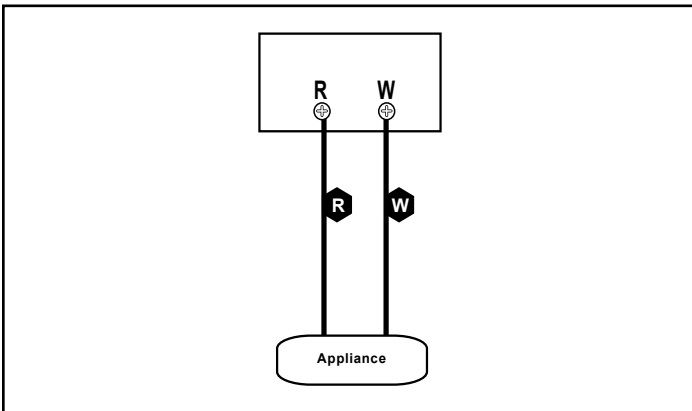
- Do NOT remove grounding prong from plug.
- Plug directly into properly grounded 3 prong receptacle.
- Route cord away from appliance.
- Do NOT route cord under or in front of appliance.

1. Separate the body of the thermostat from the mounting plate by gently pulling the two pieces apart (**Figure 22.1**)`



**Figure 22.1**

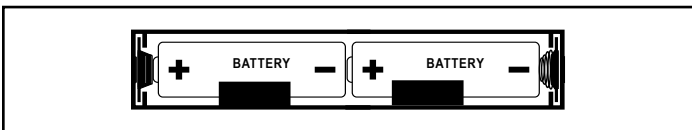
2. Use a drill with either a 3/16 drill bit for drywall or a 7/32 drill bit for plaster drill holes.
3. Using a hammer tap in wall anchors.
4. Route the wires through the opening in the base plate, and hold the base against the wall while aligning up to the holes. Attach base plate using a Phillips head screwdriver and two screws.
5. Connect your thermostat wire to the W and R terminals (**Figure 22.2**).



**Figure 22.2**

**NOTE:** Ensure bare wire ends are held ALL the way into the terminal block while the screws are being tightened.

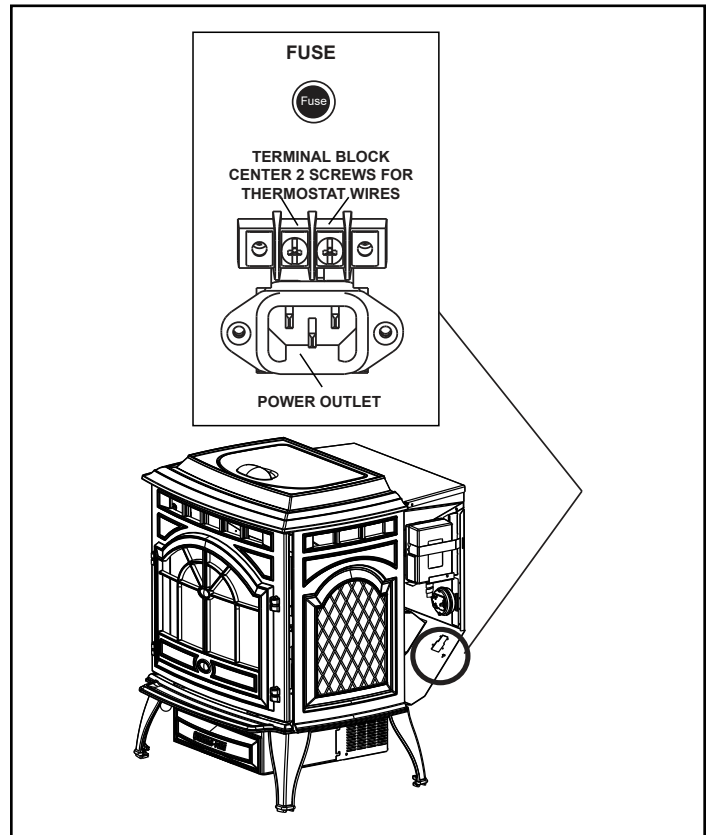
6. There are two **AA ALKALINE ONLY** batteries already installed into the thermostat; to activate, remove black plastic tab that is located inside the battery compartment.



**Figure 22.3**

7. Snap the thermostat to the base plate.

There is a 4 screw terminal block located on the back lower left corner of the appliance directly above the power cord inlet. The center 2 screws are for the thermostat wires.



**Figure 22.4**



## E. Leg Leveling System

1. Thread Allen bolts through nuts until flush (**Figure 23.1**). The Allen bolts and nuts are included in the component pack inside the appliance firebox.
2. Slide assembled nuts and bolts into slots on legs with the nuts on the bottom (**Figure 23.2**). Use a 5/32 in. (3.96mm) Allen wrench to adjust legs up and down to desired level (**Figure 23.3**).

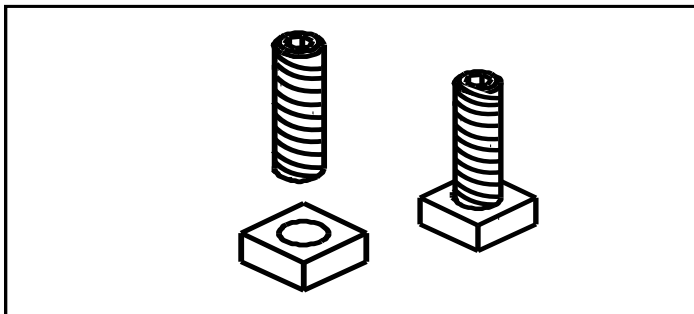


Figure 23.1

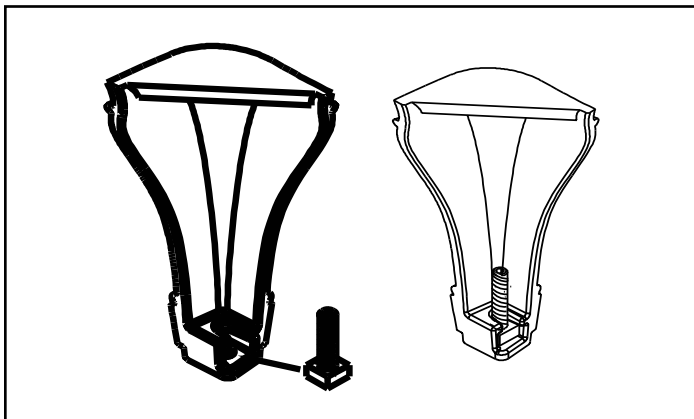


Figure 23.2

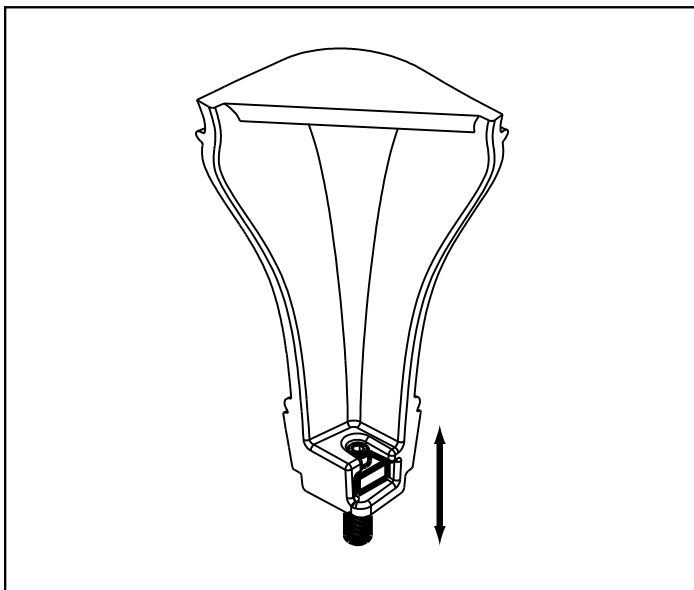


Figure 23.3 - Bolt fully extended

## F. Optional Log Set Placement Instructions

### 2 Piece Log Set Installation

1. Open door to expose the firebox.
2. Install the left log first and then the right log (**Figure 23.4**).
3. Lean the logs against the cast iron brick in the back of the firebox.
4. Push the logs to the far left and far right against the sides of the firebox (**Figure 23.5**).
5. To clean the logs, use a vacuum and a soft brush attachment or a paint brush.



### CAUTION

Logs are FRAGILE. Use extreme care when handling or cleaning logs.

**NOTE:** Due to the abrasive nature of a pellet appliance fire, the logs are not covered under warranty. Any placement variation other than shown here can cause excessive heat and shall void the appliance warranty.



Figure 23.4

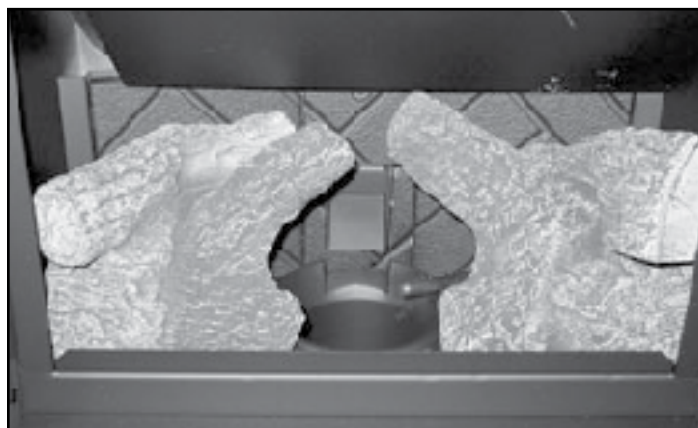


Figure 23.5

# 7 Mobile Home Installation

You must use a Quadra-Fire Outside Air Kit for installation in a mobile home.

1. An outside air inlet must be provided for the combustion air and must remain clear of leaves, debris, ice and/or snow. It must be unrestricted while the appliance is in use to prevent room air starvation which causes smoke spillage. Smoke spillage can also set off smoke alarms.
2. The combustion air duct system must be made of metal. It must permit zero clearance to combustible construction and prevent material from dropping into the inlet or into the area beneath the dwelling and contain a rodent screen.
3. The appliance must be secured to the mobile home structure by bolting it to the floor (using lag bolts). Use the same holes that secured the appliance to the shipping pallet.
4. The appliance must be grounded with #8 solid copper grounding wire or equivalent, terminated at each end with an NEC approved grounding device.
5. Refer to Clearances to Combustibles and floor protection requirements on page 8 for listings to combustibles and appropriate chimney systems.
6. Use silicone to create an effective vapor barrier at the location where the chimney or other component penetrates to the exterior of the structure.
7. Follow the chimney manufacturer's instructions when installing the vent system for use in a mobile home.
8. Installation shall be in accordance with the Manufacturers Home & Safety Standard (HUD) CFR 3280, Part 24.

**PART NUMBER: 811-0872**



## WARNING

Products of combustion generate carbon monoxide and different fuels generate different levels. Carbon monoxide

- Only use approved fuels in this appliance.
- Always keep door shut during operation. Operating this appliance with doors open can allow CO to leak into the home.

CO can kill you before you are aware it is in your home. At lower levels of exposure, CO causes mild effects that are often mistaken for the flu. These symptoms include headaches, dizziness, disorientation, nausea and fatigue. The effects of CO exposure can vary greatly from person to person depending on age, overall health and the concentration and length of exposure.



## CAUTION

THE STRUCTURAL INTEGRITY OF THE MOBILE HOME FLOOR, WALL AND CEILING/ROOF MUST BE MAINTAINED

**Do NOT cut through:**

- Floor joist, wall, studs or ceiling trusses.
- Any supporting material that would affect the structural integrity.

This appliance is to be connected to a factory-built chimney conforming to CAN/ULC-S629, Standard for 650°C Factory-Built Chimneys.

For removal of the chimney for mobile home transportation, contact the proper transportation officials.

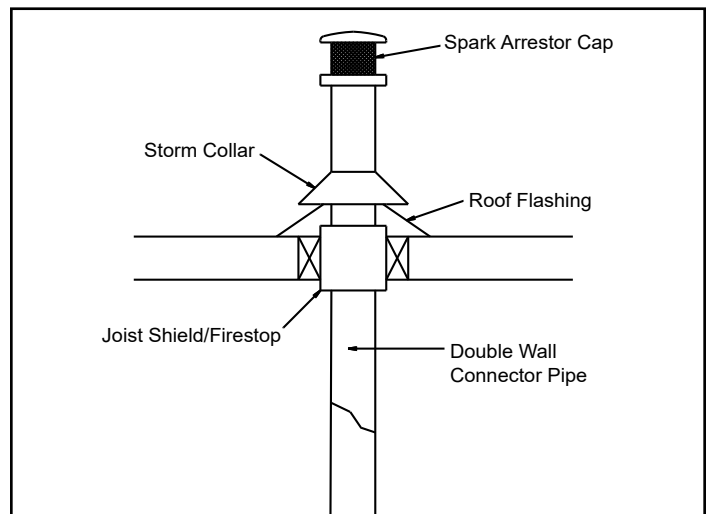


Figure 24.1



## CAUTION

Never draw outside combustion air from:

- Wall, floor or ceiling cavity
- Enclosed space such as an attic or garage



## WARNING

**It is critical to have a working smoke detector installed in the home of appliance operation.**

- Smoke alarms that are properly installed and maintained play a vital role in reducing fire deaths and injuries. Having a working smoke alarm reduces the chance of fire related injuries..



## WARNING

NEVER INSTALL IN A SLEEPING ROOM.







# QUADRA-FIRE®

NOTHING BURNS LIKE A QUAD

## CONTACT INFORMATION

Hearth & Home Technologies  
 352 Mountain House Road  
 Halifax, PA 17032  
 Division of HNI INDUSTRIES

Please contact your Quadra-Fire dealer with any questions or concerns.  
 For the number of your nearest Quadra-Fire dealer  
 log onto [www.quadrafire.com](http://www.quadrafire.com)



## CAUTION



### DO NOT DISCARD THIS MANUAL

- Important operating and maintenance instructions included.
- Read, understand and follow these instructions for safe installation and operation.
- Leave this manual with party responsible for use and operation of this appliance.



### We recommend that you record the following pertinent information for your heating appliance.

Date purchased/installed: \_\_\_\_\_

Serial Number: \_\_\_\_\_ Location on appliance: \_\_\_\_\_

Dealership purchased from: \_\_\_\_\_ Dealer Phone: 1( ) - \_\_\_\_\_

Notes: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

This product may be covered by one or more of the following patents: (United States) 5341794, 5263471, 6688302, 7216645, 7047962 or other U.S. and foreign patents pending.



# Owner's Manual

## Operation & Care

**INSTALLER:** Leave this manual with party responsible for use and operation.  
**OWNER:** Retain this manual for future reference.

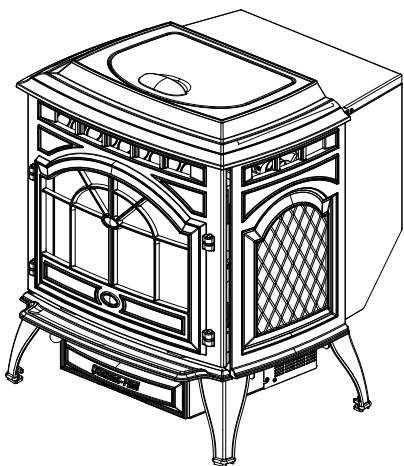
Contact your dealer with questions on installation, operation, or service.

**NOTICE: DO NOT DISCARD THIS MANUAL**

# QUADRA-FIRE®

## CASTILE PELLET APPLIANCE

**MODEL NUMBERS:**  
**CASTILE-MBK-C**  
**CASTILE-PMH-C**  
**CASTILE-TWL-C**



### CAUTION

Check building codes prior to installation.

- Installation **MUST** comply with local, regional, state and national codes and regulations.
- Consult local building, fire officials or authorities having jurisdiction about restrictions, installation inspection, and permits.

Installation and service of this appliance should be performed by qualified personnel. Hearth & Home Technologies recommends HHT Factory Trained or NFI certified professionals.



### WARNING



If the information in these instructions is not followed exactly, a fire could result causing property damage, personal injury, or death.

- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- Do not over fire - If appliance or chimney connector glows, you are over firing. Over firing will void your warranty.
- Comply with all minimum clearances to combustibles as specified.

Failure to comply may cause house fire.



### WARNING



#### HOT SURFACES!

Glass and other surfaces are hot during operation AND cool down. Hot glass will cause burns.

- Do not touch glass until it is cooled
- NEVER allow children to touch glass
- Keep children away
- CAREFULLY SUPERVISE children in same room as fireplace.
- Alert children and adults to hazards of high temperatures
- High temperatures may ignite clothing or other flammable materials.
- Keep clothing, furniture, draperies and other flammable materials away.



### CAUTION

Tested and approved for wood pellets only. Burning of any other type of fuel voids your warranty.

**NOTE:** To obtain a French translation of this manual, please contact your dealer or visit [www.quadrafire.com](http://www.quadrafire.com)

**REMARQUE :** Pour obtenir une traduction française de ce manuel, s'il vous plaît contacter votre revendeur ou visitez [www.quadrafire.com](http://www.quadrafire.com)

# Congratulations


and Welcome to the Quadra-Fire Family!

**NOTE:** Clearances may only be reduced by means approved by the regulatory authority having jurisdiction

## A. Sample of Serial Number / Safety Label

LOCATION: Back of Appliance

**Test Lab & Report No.**




Report / Rapport  
0061PS0775  
0061PM077E

**Model Name**

CASTILE-MBK-C \*PCASTILE-MBK-C\*

CASTILE-PMH-C \*PCASTILE-PMH-C\*

CASTILE-TWL-C \*PCASTILE-TWL-C\*



**Serial No.**

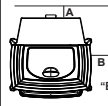
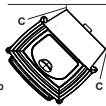
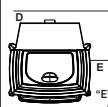
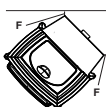

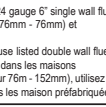
Serial No. / N° de série: **HF**

**BARCODE LABEL**

**ESPACE LIBRE MINIMUM DES MATÉRIEAUX COMBUSTIBLES:**

A Back Wall to Stove / Mur Arrière du poêle	2" / 51mm
B Side Wall to Cast Top / Mur De Côté du haut	6" / 152mm
<b>Corner Installation / Installation du Coin:</b>	
C Side Wall / Mur De Côté	2" / 51mm
<b>Vertical 3 in. - 6 in. Adapter Kit (Part #812-3570 Installation / Unassemblage Pour Adaptor 76mm - 152mm (Pièce 812-3570 Pour Installation verticale:</b>	
D Back Wall to Flue Pipe / Mur Arrière tuyau	3" / 76mm
E Side Wall to Cast Top / Mur De Côté du haut	6" / 152mm
<b>Corner Installation with Vertical Adapter Kit / Installation du coin avec un assemblage d'adaptateur verticale:</b>	
F Side Wall / Mur De Côté	2" / 51mm
<b>Alcove Installation / Installation de l'alcove</b>	
Min. Alcove Height / Hauteur minimum de l'alcove	43" / 1092mm
Min. Alcove Depth / Profondeur minimum de l'alcove	6" / 152mm
Min. Alcove Depth / Profondeur minimum de l'alcove:	36" / 914mm

**MINIMUM CLEARANCES TO COMBUSTIBLE MATERIALS**

**NOTES:** For vertical installation, when using Parts 811-0890, (3" - 3" Top Vent Adapter) and 812-3570 (3" - 6" Offset Adapter), 24 gauge 6" single wall flue pipe must be used. / **REMARQUE:** Dans les installations résidentielles. Lorsque les pièces 811-0890, (dessus de l'adaptateur 76mm - 76mm) et 812-3570 (dessus de l'adaptateur 76mm - 152mm), un tuyau connecteur de 6" pour mur simple de calibre 24 peut être utilisé.

**NOTES:** In manufactured home installation, when using Part 811-0890, (3" - 3" Top Vent Adapter) and (3" - 6" Offset Adapter), use listed double wall flue pipe. / **REMARQUE:** An Outside Air Kit (Part 811-0872), must be used with manufactured home installation. / **REMARQUE:** Pour l'utilisation dans les maisons préfabriquées, lorsque les pièces 811-0860, (dessus de l'adaptateur de ventilation 76mm - 76mm) et 812-3570 (le dessus de l'adaptateur 76mm - 152mm), utilisez un tuyau connecteur enregistré pour mur double. Un assemblage d'air extérieur (pièce 811-0872), doit être utilisé pour l'installation dans les maisons préfabriquées.

**FLOOR PROTECTION / PROTECTION DU SOL**

"Non-combustible floor protection must extend beneath the flue pipe when installed with horizontal venting or under the Top Vent Adapter with vertical installation. Recommended in USA, Required in Canada. / Floor protection must be non-combustible material, extending beneath heater and to the front/sides/rear as indicated. Measure ront distance (l) from the surface of the glass door.

"La protection du sol non combustible doit se prolonger sous la conduite de fumée lorsqu'elle est installée avec une ventilation horizontale ou sous l'adaptateur de ventilation supérieure avec une installation verticale. Recommandé aux USA, Obligatoire au Canada.

La protection du sol doit être incombustible, s'étendant sous le radiateur et à l'avant / aux côtés / à l'arrière comme indiqué. Mesurer la distance avant (l) à partir de la surface de la porte vitrée.

**U.S. ENVIRONMENTAL PROTECTION AGENCY**  
Certified to comply with 2020 particulate standards at 1.10 G/Hr  
EPA Method 28R and ASTM 2779 using premium wood pellets.

This wood heater needs periodic inspection and repair for proper operation. Consult the owner's Manual for further information. It is against federal regulations to operate this wood heater in a manner inconsistent with operating instructions in owner's manual.

Manufactured by/Fabriqu<sup>é</sup> par

**HEARTH & HOME TECHNOLOGIES**  
352 Mountain House Road,  
Halifax, PA 17032  
www.quadrafire.com

**Date of Manufacture / Date de fabrication:**

2022	2023	2024	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**DO NOT REMOVE THIS LABEL / NE PAS ENLEVER L'ETIQUETTE**

Mfg. Date



**CAUTION:** HOT WHILE IN OPERATION DO NOT TOUCH, KEEP CHILDREN, CLOTHING AND FURNITURE AWAY. CONTACT MAY CAUSE SKIN BURNS. SEE NAMEPLATE AND INSTRUCTIONS. Operate this unit only with fuel hopper lid closed. Failure to do so may result in emissions of products of combustion from the hopper under certain conditions. Maintain hopper seal in good condition. Do not over fill the hopper.

**ATTENTION:** CHAUD LORS DE L'OPÉRATION. NE PAS TOUCHER. GARDEZ LES ENFANTS ET LES VÊTEMENTS LOIN DE L'ESPACE DÉSIGNÉ DE L'INSTALLATION. LE CONTACT PEUT CAUSER DES BRÛLURES À LA PEAU. VOIR L'ÉTIQUETTE ET LES INSTRUCTIONS. Opérez cet appareil uniquement avec le couvercle de la trémie fermé. Le défaut de ne pas suivre les instructions peut résulter, sous certaines conditions, en une combustion des émissions des produits venant de la trémie. Ne pas remplir la trémie trop pleine.

7014-197C





### Safety Alert Key:

- **DANGER!** Indicates a hazardous situation which, if not avoided will result in death or serious injury.
- **WARNING!** Indicates a hazardous situation which, if not avoided, could result in death or serious injury.
- **CAUTION!** Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
- **NOTICE:** Indicates practices which may cause damage to the appliance or to property.

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→ = Contains updated information

## B. Warranty Policy

### Hearth & Home Technologies LLC LIMITED LIFETIME WARRANTY

Hearth & Home Technologies LLC (“HHT”) extends the following warranty for HHT gas, wood, pellet and electric hearth appliances (each a “Product” and collectively, the “Product(s)”) and certain component parts set forth in the table below (“Component Part(s)”) that are purchased from a HHT authorized dealer or distributor.

#### **WARRANTY COVERAGE:**

HHT warrants that the Products and their Component Parts will be free from defects in materials and workmanship for the applicable period of Warranty coverage set forth in the table below (“Warranty Period”). If a Product or Component Parts are found to be defective in materials or workmanship during the applicable Warranty Period, HHT will, at its option, repair the applicable Component Part(s), replace the applicable Component Part(s), or refund the purchase price of the applicable Product(s). The maximum amount recoverable under this Warranty is limited to the purchase price of the Product. This Warranty is transferable from the original purchaser to subsequent owners, but the Warranty Period will not be extended in duration or expanded in coverage for any such transfer. This Warranty is subject to conditions, exclusions, and limitations as described below.

#### **WARRANTY PERIOD:**

Warranty coverage begins at the date of installation. In the case of new home constructions, Warranty coverage begins on the date of first occupancy of the dwelling or six months after the sale of the Product(s) by an independent, authorized HHT dealer or distributor, whichever occurs earlier. However, the Warranty coverage shall commence no later than 24 months following the date of Product shipment from HHT, regardless of the installation or occupancy date.

The term “Lifetime” in the table below is defined as: 20 years from the beginning date of warranty coverage for gas appliances, 10 years from the beginning date of warranty coverage for wood and pellet appliances, and 5 years from the beginning of warranty coverage for standalone gas log sets. These time periods reflect the minimum expected useful lives of the designated Component Parts under normal operating conditions.

Warranty Period		HHT Manufactured Appliances and Venting					
Component Parts	Labor	Gas	Pellet	Wood	Electric	Venting	Component Parts Covered by this Warranty
1 Year		X	X	X		X	All parts including handles, external enameled components and other material except as covered by Warranty Conditions, Warranty Exclusions, and Warranty Limitations listed
2 Years					X		All parts except as covered by Warranty Conditions, Warranty Exclusions, and Warranty Limitations listed
2 years			X	X			Igniters, Auger Motors, Electronic Components, and Glass
		X					Electrical components limited to modules, remotes/wall switches, valves, pilots, blowers, junction boxes, wire harnesses, transformers and lights (excluding light bulbs)
		X		X			Molded Refractory Panels, Glass Liners
3 years			X				Firepots, burnpots, mechanical feeders/auger assemblies
5 years		X					Burners and logs for standalone gas log sets (Vented and Vent Free gas log sets not sold as components of the fireplace or stove)
5 years	1 year	X					Vent Free Burners and Vent Free Log components of HHT manufactured fireplaces or stoves
			X	X			Castings, Medallions and Baffles
6 years	3 years			X			Catalysts
7 years	3 years		X	X			Manifold tubes, HHT Chimney and Terminations
10 years	1 year	X					Burners, logs and refractory components of HHT manufactured fireplaces or stoves
Limited Lifetime	3 years	X	X	X			Firebox and heat exchanger, FlexBurn® System (engine, inner cover, access cover and fireback)
1 Year	None	X	X	X	X	X	All purchased replacement parts

## **WARRANTY CONDITIONS:**

- Because HHT cannot control the quality of any Products sold by unauthorized sellers, this Warranty only covers Products that are purchased through an HHT authorized dealer or distributor unless otherwise prohibited by law; a list of HHT authorized dealers is available on the HHT branded websites.
- This Warranty is only valid while the applicable Product remains at the site of original installation.
- This Warranty is only valid in the country in which the HHT authorized dealer or distributor that sold the applicable Product is authorized to sell applicable Product.
- Contact your installing distributor or dealer for Warranty service. If the installing dealer or distributor is unable to provide necessary parts, contact the nearest HHT authorized dealer or supplier. Additional service fees may apply if you are seeking Warranty service from a dealer other than the dealer from whom you originally purchased the applicable Product.
- No HHT consumer should bear cost of warranty service or costs incurred while servicing warranty claims (i.e., travel, gas, or mileage) when the service is performed within the terms of this Warranty. Check with your dealer or distributor in advance for any costs to you when arranging a warranty call. Travel and shipping charges for parts are not covered by this Warranty.

## **WARRANTY EXCLUSIONS:**

This Warranty does not cover the following:

- Changes in surface finishes as a result of normal use. As a heating appliance, some changes in color of interior and exterior surface finishes may occur. This is not a flaw and is not covered under the Warranty.
- Damage to printed, plated, or enameled surfaces caused by fingerprints, accidents, misuse, scratches, melted items or other external sources and residues left on the plated surfaces from the use of abrasive cleaners or polishes.
- Repair or replacement of parts that are subject to normal wear and tear during the Warranty Period are not covered. These parts include: paint, wood and pellet gaskets, firebricks, grates, flame guides, batteries and the discoloration of glass.
- Minor expansion, contraction, or movement of certain parts causing noise. These conditions are normal and complaints related to this noise are not covered by this Warranty.
- Damages resulting from: (1) failure to install, operate, or maintain the applicable Product in accordance with the installation instructions, operating instructions, and listing agent identification label furnished with the applicable Product; (2) failure to install the applicable Product in accordance with local building codes; (3) shipping or improper handling; (4) improper operation, abuse, misuse, continued operation with damaged, corroded or failed components, accident, or improperly/incorrectly performed repairs; (5) environmental conditions, inadequate ventilation, negative pressure, or drafting caused by tightly sealed constructions, insufficient make-up air supply, or handling devices such as exhaust fans or forced air furnaces or other such causes; (6) use of fuels other than those specified in the operation instructions; (7) installation or use of components not supplied with the applicable Product or any other components not expressly authorized and approved by HHT; (8) modification of the appliance not expressly authorized and approved by HHT in writing; and/or (9) interruptions or fluctuations of electrical power supply to the applicable Product.
- Non-HHT venting components, hearth connections or other accessories used in conjunction with the applicable Product.
- Any part of a pre-existing fireplace system in which an insert or a decorative gas applicable Product is installed.
- HHT's obligation under this Warranty does not extend to the Product's capability to heat the desired space. Information is provided to assist the consumer and the dealer in selecting the proper Product for the application. Consideration must be given to the Product location and configuration, environmental conditions, insulation and air tightness of the structure.

### **This warranty is void if:**

- The applicable Product has been over-fired, operated in atmospheres contaminated by chlorine, fluorine, or other damaging chemicals. Over-firing can be identified by, but not limited to, warped plates or tubes, deformation/warping of interior cast iron structure or components, rust colored cast iron, bubbling, cracking and discoloration of steel or enamel finishes.
- The applicable Product is subjected to prolonged periods of dampness or condensation.
- There is any damage to the applicable Product due to water or weather damage which is the result of, but not limited to, improper chimney or venting installation.

## **LIMITATIONS OF REMEDIES AND LIABILITY:**

- **EXCEPT TO THE EXTENT PROVIDED BY LAW, HHT MAKES NO EXPRESS WARRANTIES OTHER THAN THE WARRANTY SPECIFIED HEREIN. The owner's exclusive remedy and HHT's sole obligation under this Warranty or in contract, tort or otherwise, shall be limited to replacement of the Component Part(s), repair of the Component Part(s), or refund of the original purchase price of the applicable Product(s), as specified above; provided, however, that (i) if HHT is unable to provide replacement of the Component Part(s) and repair of the Component Part(s) is not commercially practicable or cannot be timely made, or (ii) the customer is willing to accept a refund of the purchase price of the applicable Product(s), HHT may discharge all such obligations by refunding the purchase price of the applicable Product. In no event will HHT be liable for any incidental or consequential damages caused by defects in the applicable Product. Some States do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This Warranty gives you specific legal rights and you may also have other rights which vary from State to State. THE DURATION OF ANY IMPLIED WARRANTY IS LIMITED TO DURATION OF THE EXPRESSED WARRANTY SPECIFIED ABOVE FOR THE APPLICABLE PRODUCT. Some States do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.**

# 1 Listing and Code Approvals

## A. Appliance Safety Certification

<b>Model Number:</b>	CASTILE-MBK-C, CASTILE-PMH-C, & CASTILE-TWL-C
<b>Laboratory:</b>	OMNI Test Laboratories, Inc.
<b>Report Number:</b>	061-S-77d-6.2
<b>Type:</b>	Solid Fuel Room Appliance/Pellet Fuel Burning Type
<b>Standard</b>	ASTM E1509-04 and ULC S627-00 Room Appliance Pellet Fuel Burning type and (UM) 84-HUD, Mobile Home Approved.

## B. Appliance Emissions Certification

<b>Model Number:</b>	CASTILE-MBK-C, CASTILE-PMH-C, & CASTILE-TWL-C
<b>Laboratory</b>	OMNI Test Laboratories, Inc.
<b>Report Number:</b>	0061PM077E
<b>Standard:</b>	EPA method 28R, ASTM 2779 and ASTM E1509-04
<b>Can be found at:</b> <a href="http://www.quadrafire.com/about-us/epa-certification">www.quadrafire.com/about-us/epa-certification</a>	

The Castile is Certified to comply with 2020 particulate emission standards.



**NOTICE:** This installation must conform with local codes. In the absence of local codes you must comply with the **ASTM E1509-04, ULC S627-00, and (UM) 84-HUD.**

This pellet appliance needs periodic inspection and repair for proper operation. It is against federal regulations to operate this pellet appliance in a manner inconsistent with operating instructions in this manual.

## C. BTU & Efficiency Specifications

<b>EPA Certification Number:</b>	Number: 175-19
<b>EPA Certified Emissions:</b>	1.1 grams per hour
<b>*LHV Tested Efficiency:</b>	70.4%
<b>**HHV Tested Efficiency:</b>	66.1%
<b>***EPA BTU Output:</b>	5,800 to 22,400 / hr.
<b>****BTU Input:</b>	9,300 to 30,600 / hr.
<b>Vent Size:</b>	3, 4 "L" or "PL"
<b>Hopper Capacity:</b>	45 lbs.
<b>Fuel</b>	Premium Wood Pellets
* Weighted average LHV (Low Heating Value) efficiency using data collected during EPA emissions tests in accordance with the requirements of CSA B415.1.	
** Weighted average HHV (High Heating Value) efficiency using data collected during EPA emissions tests in accordance with the requirements of CSA B415.1.	
*** A range of BTU outputs calculated using HHV efficiency and the burn rates from the EPA tests.	
**** Based on the maximum feed rate per hour multiplied by approximately 8600 BTU's which is the average BTU's from a pound of pellets.	

## D. Glass Specifications

This appliance is equipped with 5mm ceramic glass. Replace glass only with 5mm ceramic glass. Please contact your dealer for replacement glass.

## E. Electrical Rating

115 VAC, 60 Hz, Start 5 Amps, Run 1.25 Amps

## F. Mobile Home Approved

- This appliance is approved for mobile home installations when not installed in a sleeping room and when an outside combustion air inlet is provided.
- The structural integrity of the mobile home floor, ceiling, and walls must be maintained.
- The appliance must be properly grounded to the frame of the mobile home and use only Listed pellet vent Class "L" or "PL" connector pipe.
- Outside Air Kit, part OAK-ACC must be installed in a mobile home installation.

## G. Sleeping Room

When installed in a sleeping room it is recommended that 3ft of vertical be installed prior to horizontally exiting the room and a smoke/CO alarm be installed in the bedroom. The size of the room must be at least 50ft<sup>3</sup> per 1,000 Btu/hr stove input, if the stove exceeds the room size, outside air must be installed.

## H. California - Prop65

### **WARNING**

This product and the fuels used to operate this product (wood), and the products of combustion of such fuels, can expose you to chemicals including carbon black, which is known to the State of California to cause cancer, and carbon monoxide, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to: [WWW.P65Warnings.ca.gov](http://WWW.P65Warnings.ca.gov)



### **WARNING**



#### **Fire Risk.**

Hearth & Home Technologies disclaims any responsibility for, and the warranty will be voided by, the following actions:

- Installation and use of any damaged appliance.
  - Modification of the appliance.
  - Installation other than as instructed by Hearth & Home Technologies.
  - Installation and/or use of any component part not approved by Hearth & Home Technologies.
  - Operating appliance without fully assembling all components.
  - Operating appliance without legs attached (if supplied with appliance).
  - Do NOT Over fire - If appliance or chimney connector glows, you are over firing.
- Any such action that may cause a fire hazard.

Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage.

For assistance or additional information, consult a qualified installer, service agency or your dealer.

**NOTE:** Hearth & Home Technologies, manufacturer of this appliance, reserves the right to alter its products, their specifications and/or price without notice.

## 2 Operating Instructions



### WARNING



#### Fire Risk.

- Do not operate appliance before reading and understanding operating instructions.
- Failure to operate appliance properly may cause a house fire.

Visit [www.quadrafire.com/shopping-tools/videos](http://www.quadrafire.com/shopping-tools/videos) to view product and use & care videos.

### A. Fire Safety

To provide reasonable fire safety, the following should be given serious consideration:

- Install at least one smoke detector on each floor of your home.
- Install at least one carbon monoxide detector on each floor of your home.
- Locate smoke detector away from the heating appliance and close to the sleeping areas.
- Follow the smoke detector manufacturer's placement and installation instructions and maintain regularly.
- Follow the carbon monoxide manufacturer's placement and installation instructions and maintain regularly.
- Conveniently locate a Class A fire extinguisher to contend with small fires.
- In the event of a hopper fire:
  - Evacuate the house immediately.
  - Notify fire department.

### B. Non-Combustible Materials

Material which will not ignite and burn, composed of any combination of the following:

- Steel
- Plaster
- Brick
- Iron
- Concrete
- Tile
- Glass
- Slate

Materials reported as passing **ASTM E 136, Standard Test Method for Behavior of Metals, in a Vertical Tube Furnace of 750° C.**

### C. Combustible Materials

Material made of/or surfaced with any of the following materials:

- Wood
- Compressed Paper
- Plant Fibers
- Plastic
- Plywood/OSB
- Sheet Rock (drywall)

**Any material that can ignite and burn:** flame proofed or not, plastered or non-plastered.

### D. Fuel Material and Fuel Storage

Pellet fuel quality can greatly fluctuate. This appliance has been designed to burn a wide variety of fuels, giving you the choice to use the fuel that is most economical in your region.

Hearth & Home Technologies strongly recommends only using Pellet Fuel Institute (PFI) certified fuel.

#### **Fuel Material**

- Made from sawdust or wood by-products
- Depending on the source material it may have a high or low ash content.

#### **Higher Ash Content Material**

- Hardwoods with a high mineral content
- Fuel that contains bark
- Standard grade pellets, high ash pellets

#### **Lower Ash Content Material**

- Most softwoods
- Fuels with low mineral content
- Most premium grade pellets



## CAUTION

**Do not burn fuel that contains an additive; (such as soybean oil).**

- May cause hopper fires
- Damage to product may result

**Read the ingredients list on the package.**

### **Clinkers**

Minerals and other non-combustible materials such as sand will turn into a hard, glass-like substance called a clinker when heated in the fire pot.

Trees from different areas will vary in mineral content. That is why some fuels produce more clinkers than others.

### **Moisture**

Always burn dry fuel. Burning fuel with high moisture content takes heat from the fuel and tends to cool the appliance, robbing heat from your home. Damp pellet fuel can clog the feed system.

### **Size**

- Pellets are either 1/4 inch or 5/16 inch (6-8mm) in diameter
- Length should be no more than 1-1/2 inches (38mm)
- Pellet lengths can vary from lot to lot from the same manufacturer
- Due to length variations, the flame height (feed rate) may need adjusting occasionally, see **Feed Rate Adjustment Instructions** on [page 11](#).

### **Performance**

- Higher ash content requires the ash drawer to be emptied more frequently
- Hardwoods require more air to burn properly
- Premium wood pellets produce the highest heat output.
- Burning pellets longer than 1-1/2 inches (38mm) can cause an inconsistent fuel feed rate and/or missed ignitions or feed jams.

### **Changing to Different Fuel Type**

- Empty the hopper of the previous fuel
- Thoroughly vacuum hopper before filling with the new fuel

The burn rate, BTU content and heat output will all vary depending on the fuel selected.

### **Storage**

- Wood pellets should be left in their original sealed bag until using to prevent moisture absorption.
- Do not store any pellet fuel within the clearance requirements or in an area that would hinder routine cleaning and maintenance.

## **E. Before Your First Fire**

1. First, make sure your appliance has been properly installed and that all safety requirements have been met. Pay particular attention to the fire protection, venting and thermostat installation instructions.
2. Double check that the ash drawer and firebox are empty!
3. Check the position of the thermocouple, located above the fire pot, and make sure that it protrudes approximately 3/4 inch (19mm) into the fire pot.
4. Close the front door.

### **IMPORTANT DETAIL:**

The tip of the thermocouple must be in contact with the inside end of the thermocouple cover or missed ignitions can occur.

## **F. Filling the Hopper**

Open the hopper lid by lifting the handle. Fill the hopper with fuel. Close the hopper lid. The unit will not feed with the hopper lid open and the fire will go out.

## G. General Operating Information

1. **Thermostat Calls For Heat:** The appliance is like most modern furnaces; when the thermostat calls for heat, your appliance will automatically light and deliver heat. When the room is up to temperature and the thermostat is satisfied, the red call light will go off and the appliance will shut down.
2. **Heat Output Controls:** This appliance is equipped with a heat output control switch that has three settings or burn rates; low, medium and high. The appliance will turn on and off as the thermostat demands. When the thermostat calls for heat, the appliance will start up at the burn rate for which it is set. If the appliance is set at one of the lower settings, it will run quieter but take longer to heat up an area than if it were set at a higher burn rate. Regardless of the burn rate, when the area is warm enough to satisfy the thermostat, the appliance will shut off (Figure 10.1).

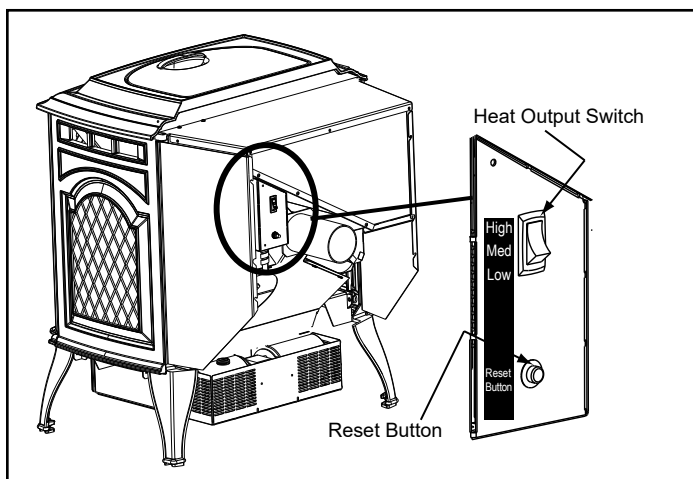


Figure 10.1

### WARNING



#### Fire Hazard.

Keep combustible materials, gasoline and other flammable vapors and liquids clear of appliance.

- Do NOT store flammable materials in the appliance's vicinity.
- NEVER use gasoline, GASOLINE-TYPE lantern fuel, kerosene, charcoal lighter fluid, or similar liquids to start or "freshen up" a fire in this appliance. Keep all such liquids well away from the appliance while it is in use.
- DO NOT BURN GARBAGE OR FLAMMABLE FLUIDS SUCH AS GASOLINE, NAPHTHA OR ENGINE OIL.
- DO NOT USE CHEMICALS OF FLUIDS TO START THE FIRE.
- Combustible materials may ignite.

## H. Starting Your First Fire

1. A thermostat is required for proper operation of this appliance. At this time, fill the hopper with pellets, set the thermostat to its lowest setting. Plug the power cord into nearby outlet.
2. The exhaust blower will stay on for approximately 18 minutes even though the thermostat is not calling for heat. This is normal.
3. Locate the heat output control switch mounted on the back of the appliance in the upper right corner (**Figure 10.2**). Turn it to the "high" setting by pushing the top of the control switch in and then adjust the thermostat to its highest setting. Remove the right side panel and the red call light located to the left of the control box will be on (**Figure 10.2**). This indicates the thermostat is calling for heat.
4. The fuel feed system and the igniter should now be on.
5. For your first fire it will be necessary to press the reset button once approximately 2 minutes after start up and again in 5 minutes. This will fill the feed system and allow the appliance to begin dropping pellets. The appliance will continue to run as long as the thermostat is calling for heat.
6. Once the appliance has ignited, let it burn for approximately 15 minutes, then set the thermostat to the desired room temperature. Adjust the heat output control switch to the desired setting.



### WARNING



#### Fire Risk

Do NOT operate appliance:

- With appliance door open.
- Fire pot floor open.
- Cleaning slide plates open.

Do NOT store fuel:

- Closer than required clearances to combustibles to appliance
- Within space required for loading or ash removal.

Red Call Light is located on top of Junction Box behind the Control Box.

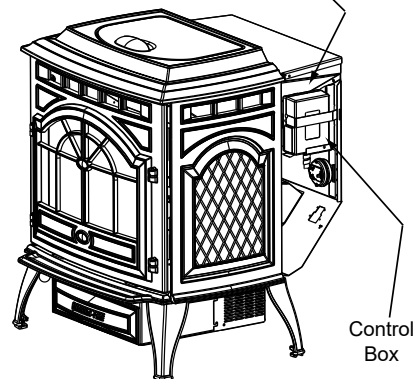


Figure 10.2



## I. Fire Characteristics

A properly adjusted fire with the heat output control switch set on “high” has a short active flame pattern that extends out of the fire pot approximately 4 inches (102mm). If the fire has tall flames with black tails and seems somewhat lazy, the feed rate will need to be reduced. This is done by sliding the fuel adjustment control rod down, which will reduce the feed. If the fire is not 4 inches (102mm) tall, slide the fuel adjustment control rod up to increase the feed. A medium and low setting will give a shorter flame. The flame will rise and fall somewhat. This is normal.

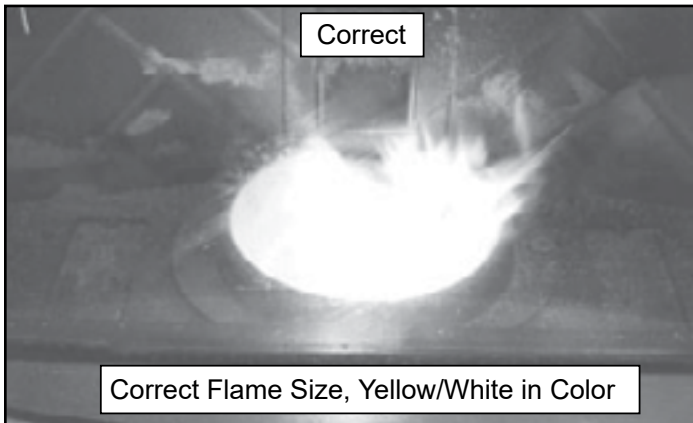


Figure 11.1

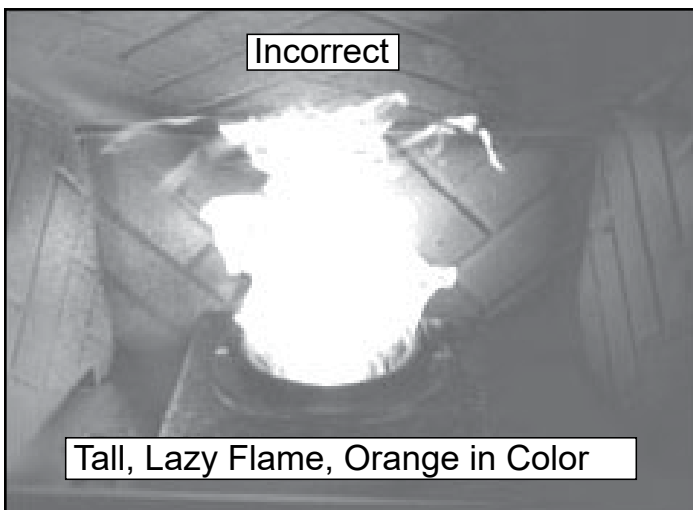




Figure 11.2

## J. Feed Rate Adjustment Instructions

The feed adjustment control rod is factory set, and should be adequate for most fuels. However, if the flame height is too high or too low, you will need to adjust the feed rate. Wait until the appliance has been burning for 15 minutes before making your adjustments and allow 15 minutes for feed adjustment to take effect.

1. Loosen the set screw 1/4 to 1/2 turn during set-up of appliance. This will allow movement of the feed adjustment control rod. Do not re-tighten set screw (**Figure 11.3**). Loosen the wing nut.
2. Adjust the feed adjustment control rod upward towards the “+” symbol to increase the feed rate and flame height or down towards the “-” symbol, to decrease the feed rate and flame height.
3. Re-tighten the wing nut.

 <b>WARNING</b>	
	<b>Fire Risk.</b>
	<ul style="list-style-type: none"><li>• High ask fuels, or lack of maintenance, can cause the fire pot to fill with ash and clinker. If the fire pot fills to the top, immediately shut down the appliance and clean.</li><li>• Failure to do so could result in smoking, sooting and possible hoper fires.</li></ul>

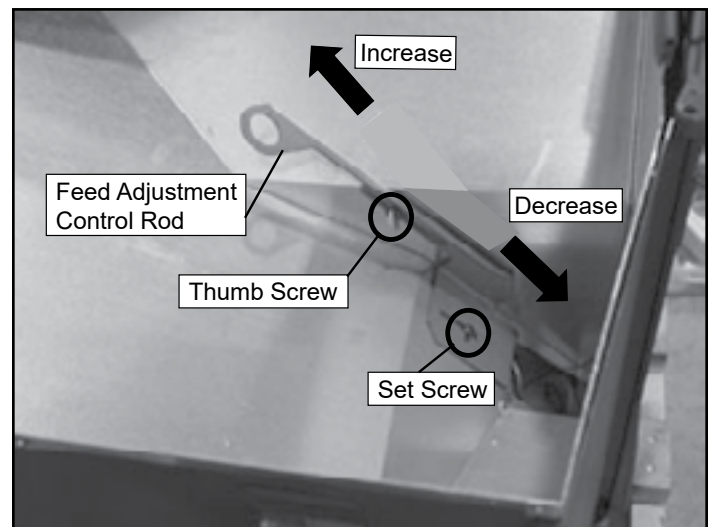





Figure 11.3

## K. Ignition Cycles

1. At the beginning of each ignition cycle, it is normal to see some smoke in the firebox. The smoke will stop once the fire starts.
2. The convection blower will automatically turn on after your appliance has been burning for approximately 10 minutes. This blower transfers heat from your appliance into the room, and will continue to run after the thermostat has stopped calling for heat until the appliance has cooled down.
3. Occasionally the appliance may run out of fuel and shut itself down. When this happens, the red call light will be on (**Figure 10.2 on page 10**). To restart it, fill the hopper and press the reset button (**Figure 10.1, page 10**). When you press the reset button the red call light will go out. Release the button and the light will come back on. You should see a fire shortly. If not, follow **Starting Your First Fire** on [page 10](#).

 <b>WARNING</b>	
	<b>Fire Risk</b> Do NOT operate appliance:
	<ul style="list-style-type: none"><li>• With appliance door open.</li><li>• Fire pot floor open.</li><li>• Cleaning slide plates open.</li></ul>
Do NOT store fuel:	
<ul style="list-style-type: none"><li>• Closer than required clearances to combustibles to appliance</li><li>• Within space required for loading or ash removal.</li></ul>	

 <b>CAUTION</b>	
HOT WHILE IN OPERATION. KEEP CHILDREN, CLOTHING AND FURNITURE AWAY. CONTACT MAY CAUSE SKIN BURNS.	

## L. Restarting the Appliance

### Restart Process

1. When the unit has run out of fuel, add pellet fuel to the hopper.
2. Dump the ashes and clinkers built up in the fire pot by pulling the ash dump removal handle out several times. Make sure clinkers have dropped into the ash pan then return the handle to fully closed position.
3. Press the reset button; the appliance will then begin its startup sequence.

### Restarting After a Power Failure



1. For an electrical disruption, the appliance will start on its own - providing the control system is asking for heat.



## M. Clear Space

**NOTICE:** Clearances may only be reduced by means approved by the regulatory authority having jurisdiction.

### Mantel:

Avoid placing candles and other heat-sensitive objects on mantel or hearth. Heat may damage these objects.

 <b>WARNING</b>	
	<b>Fire Risk.</b> Do NOT place combustible objects in front of the appliance. High temperatures may ignite clothing, furniture or draperies. Maintain a minimum clearance of 3 feet (914mm) in front of appliance.

 <b>WARNING</b>	
	<b>Fire Risk.</b> Keep combustible materials, gasoline and other flammable vapors and liquids clear of appliance.
	<ul style="list-style-type: none"><li>• Do NOT store flammable materials in the appliance's vicinity.</li><li>• <b>DO NOT USE GASOLINE, LANTERN FUEL, KEROSENE, CHARCOAL LIGHTER FLUID OR SIMILAR LIQUIDS TO START OR "FRESHEN UP" A FIRE IN THIS APPLIANCE.</b></li><li>• <b>DO NOT BURN GARBAGE OR FLAMMABLE FLUIDS SUCH AS GASOLINE, NAPHTHA OR ENGINE OIL.</b></li><li>• <b>DO NOT USE CHEMICALS OR FLUIDS TO START THE FIRE.</b></li><li>• Keep all such liquids well away from the appliance while it is in use.</li><li>• Combustible materials may ignite.</li></ul>

## N. Thermostat Controls

### TEMPERATURE (HEAT / OFF) SWITCH:

Set this switch to HEAT to control your appliance. The off position will disable the appliance.

### SET (MULTI- FUNCTION) SLIDE SWITCH:

This provides easy access to common settings, and should always remain in RUN unless items are being adjusted.

**NOTE:** When thermostat is set to "Manual" non-programmable mode, all positions of the SET slide switch will act like RUN.

### UP / DOWN BUTTONS:

The UP and DOWN buttons are used to control the set temperature, or adjust any other on-screen items. An item flashing, is the item currently being adjusted.

### HOLD BUTTON:

This button activates and deactivates the manual Temperature HOLD feature, which maintains a fixed set temperature indefinitely without following a program routine.

### COPY BUTTON:

This is used to copy temperature program items from one day to the next. Also used to access the menu setup.

### NEXT BUTTON:

This is used when setting items such as software options, and temperature programs when they are flashing on the screen. Pressing the NEXT button will cycle through which item is flashing.

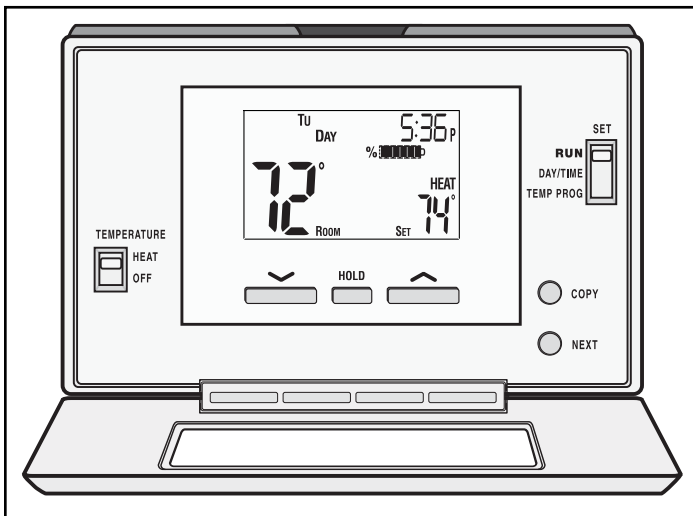


Figure 13.1

## O. Thermostat Setup Options

Setup options for how the thermostat will function are performed using a menu on the display screen.

### TO ACCESS THE SETUP MENU:

Move the TEMPERATURE switch into the OFF position, and then hold down the COPY button for approximately 5 seconds until the screen changes. The menu will always start with item #01, and is advanced to each following item by a single press of the NEXT button. The options for each item are changed using the UP or DOWN buttons.

### ITEM #01 (CLK = CLOCK FORMAT):

- 12Hr, default: This displays the clock times using standard AM and PM values.
- 24Hr: This displays the clock times using the military-time format (example 22:00 hours, without using AM or PM).

### ITEM #02 (TMP = TEMPERATURE SCALE):

- F, default: Shows all temperature values in Fahrenheit.
- C: Shows all temperature values Celsius.

### ITEM #03 (PROGRAMMING STYLE):

- 7 Day, default: This style uses a separate program routine for each of the 7 days in the week.
- 5/2 Day: This style uses a weekday program routine for Monday, Tuesday, Wednesday, Thursday, Friday, and a separate weekend program routine for Saturday and Sunday.
- Manual Non-Programmable: In this setting, there are no program routines for the thermostat to follow and the temperature control will be set only by the UP and DOWN buttons on the front panel.

### ITEM #04 (PERD = EVENT OR PERIOD QUANTITY):

- 4P, default: Thermostat uses four Events per day (called MORN, DAY, EVE, and NITE).
- 2P: The thermostat uses two Events per day (called DAY and NITE).

**NOTE:** Event or Period Quantity feature is not accessible during Manual Non-Programmable mode.

### ITEM #07 (DLAY = DELAY TIME):

- 5, default: Thermostat waits 5 minutes before turning the system back on after it was last run. This internal delay prevents the appliance from turning on too quickly after shutting down. The 5 minute setting is fine for most applications.
- 2: Same operation as above but reduced to 2 minutes between state changes.

**NOTE:** There is no delay available when the thermostat is manually turned up and down.

### ITEM #08 (TEMPERATURE DIFFERENTIAL):

- The thermostat works by turning your heating system on and off whenever the room temperature varies from the desired set-point temperature.
- Use the UP/DOWN buttons to change the number value between 1 and 9. Generally your system should cycle on about 3 to 6 times per hour. A smaller differential number makes the system cycle more frequently, so the room temperature is more precise and constant. A larger differential number will make the system remain on for a longer duration each time and decreases the number of cycles per hour.
- Default is set to 4.

## P. Thermostat Operation Instructions

### SET DAY AND TIME:

Place the Set switch into the DAY/TIME position. With the day flashing press UP or DOWN to set the day or the week. Press NEXT and the clock time will start flashing. Use UP or DOWN to set the time; verify the AM/PM indicator is correct. Return the Set switch to RUN position when finished.

### HEATING:

Basic operation of the thermostat can be obtained with the SET switch in the RUN position. The temperature can be adjusted using the UP and DOWN buttons. When the thermostat is first powered on, it will follow a default temperature routine that is preset from the factory (**Figure 14.1**).

Event	Time	Temperature
MORN	6:00 AM	70°F (21°C)
DAY	8:00 AM	62°F (17°C)
EVE	6:00 PM	70°F (21°C)
NITE	10:00 PM	62°F (17°C)

Table 14.1

### LCD DISPLAY BACK LIGHT:

The display screen is lighted to assist viewing at nighttime, or in locations with low light levels. Press any button on the front panel to activate the approximate 10 second back light.

### TEMPERATURE OVERRIDE:

While thermostat is in RUN mode, the set temperature can be temporarily changed by pressing UP or DOWN. The temporarily changed set temperature will return to the programmed value stored in memory when start time of the next upcoming scheduled event is reached (MORN, DAY, EVE, OR NITE). While the temporary changed set temperature is in effect, the word OVERRIDE will be shown on the display screen. To cancel, move TEMPERATURE switch to OFF and back to HEAT again.

### TEMPERATURE HOLD:

Temperature hold is used for maintaining a fixed set temperature; once a HOLD is initiated, the thermostat will maintain the set temperature indefinitely. To enter a HOLD state, press the HOLD button one time and the word HOLD will appear on the display. To cancel, press the HOLD button once again.

### STATIC NOTICE

Thermostat is protected against normal static electric discharges, however to minimize the risk of damaging the thermostat in extremely dry weather, please touch a grounded metal object before touching the thermostat.

## Q. Thermostat Temperature Programs

The thermostat by default has 4 separate program events they are: MORN, DAY, EVE, and NITE. Each event ends at the start time of the following event.

**NOTE:** If the thermostat is set for 2 events a day instead of 4, the thermostat will only use the DAY and NITE events.

### SET TEMPERATURE PROGRAMS:

1. Move Temperature switch to HEAT.
2. Move SET switch to TEMP PROG position.
3. Starting with Monday, use the UP or DOWN buttons to adjust the start time and set temperature for the MORN event, and then press NEXT button to advance.
4. Adjust the start time and set temperature of the DAY event then press NEXT button.
5. Continue in this same manner to adjust the start time and set temperatures for the EVE and NITE events for Monday.
6. Use steps 3 through 5 to set up the events for the rest of the week or group of days.
7. Return the SET switch back to RUN.

**NOTE:** When the last event is finished for each day or group of days, the thermostat will advance forward into the next day or group of days.

## COPY PROGRAM FEATURE:

Using similar instructions as set temperature programs the COPY button will allow a whole day of set program events to be copied to another day.

1. Move Temperature switch to HEAT as well as move SET switch to TEMP PROG position.
2. Starting with Monday, use the UP or DOWN buttons to adjust the start time and set temperature for the MORN, DAY, EVE, and NITE events. Press the COPY button and then press the NEXT button to advance to Tuesday.
3. With Tuesday displayed press COPY button. As all programs events from Monday will be copied to Tuesday (this will advance automatically to the next day; Wednesday, as the word COPY will appear on the screen for one second).
4. Continue in this pressing COPY button to set desired days with original setting.

**NOTE:** The word COPY will not appear on the display for Monday, but will display each day afterwards for approximately one second and the day of the week will automatically advance forward to the next day.

## R. Thermostat Other Features

**NOTE:** All other features need to be completed in a timely manner as the thermostat will time out after 10 seconds.

### TEMPERATURE CALIBRATION:

The internal temperature sensor in this thermostat is accurately calibrated at the factory, and in most cases alterations to this setting should not be needed. The temperature calibration feature allows you to manually offset the measured temperature by as much as plus or minus 5°F (3°C) from its original value. If several thermostats are used in the same house, this feature can be used to synchronize this thermostat to the others.

#### Change the temperature calibration:

1. Move TEMPERATURE switch to OFF.
2. Move SET switch to RUN.
3. Press and hold both UP and DOWN buttons together for at least 5 seconds; the words SET and CAL will appear on the display along with a single flashing temperature digit.
4. Use the UP or DOWN buttons to change the number of degrees desired for adjustment; 0° is the default value and also means no correction will be applied.
5. Press the NEXT button to accept the setting.

## KEYPAD LOCKOUT:

There is the option to lock the front panel buttons to prevent unauthorized tampering of your thermostat settings.

#### To Lock the Keypad:

1. Move TEMPERATURE switch to HEAT.
2. Move SET switch to RUN.
3. Perform a single press of each button in the following sequence:
  - NEXT, NEXT, NEXT, HOLD

A padlock will appear on the display screen.

#### To Unlock the Keypad:

1. Move TEMPERATURE switch to HEAT.
2. Move SET switch to RUN.
3. Perform a single press of each button in the following sequence:
  - NEXT, NEXT, NEXT, HOLD

A padlock will no longer be present on the display screen.

## HARDWARE RESET:

The hardware reset button; labeled HW RST, is a small round push button that is located in the middle of the circuit board, just below the battery holder (**Figure 16.1**). Pressing this button will:

- Cause the LCD display screen to become fully populated
- Thermostat to perform an internal system check of its components

If the thermostat appears to be acting in an erratic manner, pressing the HW RST button may remedy this behavior. The temperature programs are not erased when a hardware reset is performed, however the clock will have to be changed to match the current day and time.

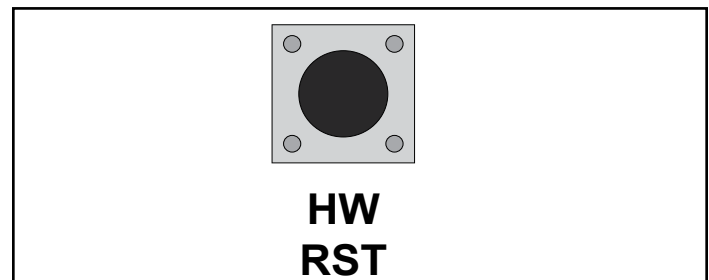


Figure 15.1

## SOFTWARE RESET:

Software reset is used to erase ALL temperature events, and to return all user-adjustable software settings back to their original factory default settings.

### To Perform a Software Rest:

1. Verify the thermostat's keypad is not locked.
2. Move TEMPERATURE switch to OFF.
3. Press and hold the UP, DOWN, and NEXT buttons all at the same time for at least 5 seconds. When the LCD display screen will become fully populated let go of all buttons at that point the screen will return to normal.

The clock will have to be changed to match the current day and time.

## S. Thermostat Battery Replacement

This thermostat is powered by two "AA" Alkaline batteries. The batteries should be replaced AT LEAST once per year to ensure reliable operation or sooner if the LO BATT appears on the display screen. The batteries are located on the back of the thermostat's circuit board. The front portion of the thermostat can be removed from the back half by using the tabs on the top edge of the thermostat housing (**Figure 16.1**).

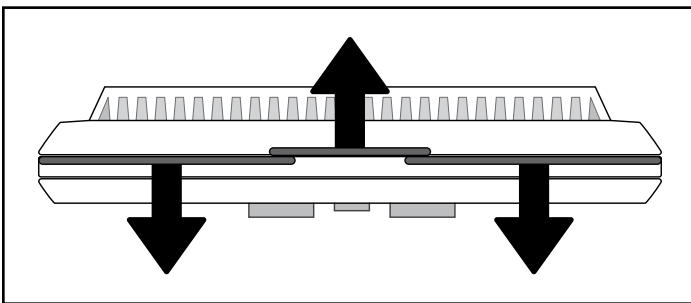


Figure 16.1

When installing new batteries, it is recommended using only brand new "AA" size alkaline batteries. Please verify the polarity markings shown in the battery compartment before adding batteries to the compartment. When finished, line up the front of the thermostat to the base, and firmly press together to securely latch the front and back halves together properly.

### BATTERY GRAPHIC:

Anytime time the batteries are physically present in the thermostat, there will be a visual indicator showing the life of the battery. This will appear on the display screen (**Figures 16.2 and Figure 16.3**).



Figure 16.2 - Full battery icon



Figure 16.3 - Low battery icon

## CONNECT THERMOSTAT WIRES TO APPLIANCE:

There is a 4 screw terminal block located on the back lower left corner of the stove directly above the power cord inlet. The center 2 screws are for the thermostat wires (**Figure 16.4**).

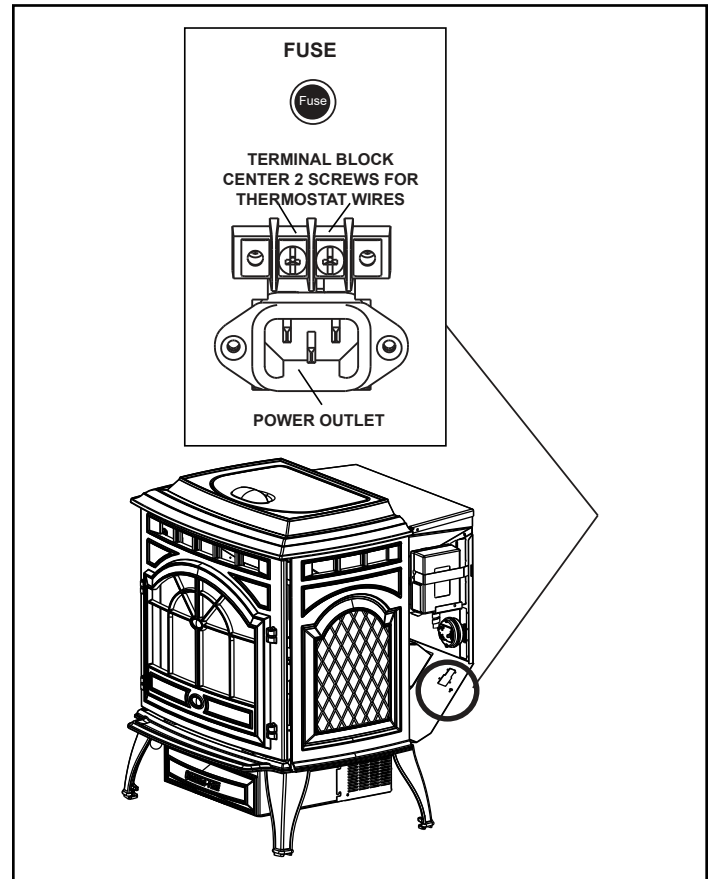


Figure 16.4



## CAUTION

### Shock hazard.

- Do NOT remove grounding prong from plug.
- Plug directly into properly grounded 3 prong receptacle.
- Route cord away from appliance.
- Do NOT route cord under or in front of appliance.



## T. Frequently Asked Questions

### What causes my glass to become dirty?

If the glass has white ash build up it is normal and the glass should be cleaned. If it is a black soot build up airflow through the unit may be restricted. The most often cause is overdue maintenance and cleaning. See **Maintaining and Servicing** on [page 18](#) and/or make adjustments to the trim control.

### How can I get more heat out of the appliance?

The most often cause of diminished heat output is overdue maintenance and cleaning. See **Maintaining and Servicing** on [page 18](#).

### What should I do if I smell smoke or there is ash/soot coming from the appliance?

While there will always be some smoke smell from wood burning appliances (including pellet) you should investigate all venting to make sure it is sealed properly. Follow venting manufacturers recommendations for sealing pipe joints.

In addition most homes are built very tight today and with exhaust systems can create negative pressure in the home. See **Negative Pressure** on [page 15](#) of the [installation manual](#). For ash or soot check the above and the exhaust blower housing and seals.

### Why would my appliance run fine last winter but not start this fall?

It is possible that the stove was not properly prepared for the Non-burn season; see **Troubleshooting Guide** starting on [page 23](#).

### Is there a place to lubricate the blowers to quiet them down?

No. The most often cause of noisy blowers is from the impellers becoming dirty over time. See maintenance and service section for maintaining and servicing.

### What is the metal object with the bend in it that came inside the plastic bag?

It is a clean-out tool used to help clean the fire pot and remove any jams in the rare event they occur in the feed tube.

### Why is there a black residue building up on the outside of my home?

Wind can cause this to happen. If the appliance is operating correctly very little soot should ever exit the termination cap. Check to be sure the venting is installed per the owner's manual and local codes.

### Do I need an outside air kit?

Outside air is required for mobile home installs and in some jurisdictions. Refer to **Listing & Code Approvals** on [page 6](#), **Mobile Home Installation** on [page 23](#) of the [installation manual](#) and **Appliance Set-up** on [page 20](#) of the [installation manual](#). Also refer to local building codes.

### I am seeing sparks coming out of my pipe (termination cap) outside is this safe?

This is normal. As long as clearances to combustibles were followed this is safe.

### I have no power to anything. Does this unit have a circuit breaker or fuse or a reset button?

This appliance has one fuse on the control board and a resettable snap disc mounted to the feed tube. If the appliance overheats then the snap disc can be reset; if the fuse is blown the control board must be replaced.

### Where is the serial # located on my unit?

The serial number is located on the back of the stove.

### No pellets are dropping in my fire pot.

See **Troubleshooting Guide** starting on [page 23](#).

**Contact your dealer for additional information regarding operation and troubleshooting.  
Visit [www.quadrafire.com](http://www.quadrafire.com) to locate a dealer.**

# 3 Maintenance and Service

When properly maintained, your fireplace will give you many years of trouble-free service. Contact your dealer to answer question regarding proper operation, troubleshooting and service for your appliance. Visit [www.quadrafire.com/owner-resources](http://www.quadrafire.com/owner-resources) to view basic troubleshooting, FAQs, use & care videos. We recommend annual service by a qualified service technician.

## A. Proper Shutdown Procedure

Turn off the thermostat.


This pellet insert has a manufacturer-set minimum low burn rate that must not be altered. It is against federal regulations to alter this setting or otherwise operate this pellet insert in a manner inconsistent with operating instructions in this manual.

**Follow the detailed instructions found in this section for each step listed in the chart below.**

## B. Quick Reference Maintenance Chart


Cleaning or Inspection	Frequency		Daily	Weekly	Every 2 Weeks	Monthly	Yearly
Ash Pan - Burning Wood Pellets	Every 5 bags of fuel	OR		X			
Ash Pan - Burning Alternate Fuels	Every 1 bag of fuel	OR	X				
Ash Removal from Firebox	More frequently depending on the fuel type or ash build-up	OR		X			
Blower, Combustion (Exhaust)	More frequently depending on the fuel type	OR					X
Blower, Convection	More frequently depending on the operating environment	OR					X
Door Latch Inspection	Prior to heating season	OR				X	
Firebox - Prepare for Non-Burn Season	At end of heating season	OR					X
Fire pot - Burning Softwood Pellets	Every 5 bags	OR		X			
Fire pot - Burning Hardwood Pellets	Every 3 bags	OR		X			
Fire pot - Burning Alternate Fuels	Every 1 bag	OR	X				
Glass	When clear view of fire pot becomes obscured	OR		X			
Heat Exchanger & Drop Tube	Every 1 ton of fuel	OR			X		
Hopper	Every 1 ton of fuel or when changing fuel types	OR				X	
Venting System	More frequently depending on the fuel type	OR					X

**NOTICE:** These are recommendations. Clean more frequently if you encounter heavy build-up of ash at the recommended interval or you see soot coming from the vent. Not properly cleaning your appliance on a regular basis will void your warranty.


**CAUTION**

**Shock and Smoke Hazard**

- Turn down thermostat, let appliance completely cool and exhaust blower must be off. Now you can unplug appliance before servicing.
- Smoke spillage into room can occur if appliance is not cool before unplugging.
- Risk of shock if appliance not unplugged before servicing appliance.





## C. General Maintenance and Cleaning

1. **Types of Fuel:** The type of fuel you are burning will dictate how often you have to clean your fire pot.

If the fuel you are burning has a high dirt or ash content, it may be necessary to clean the fire pot more than once a day.

Dirty fuel will cause clinkers to form in the fire pot (**Figure 19.1**). A clinker is formed when dirt, ash or a non-burnable substance is heated to 2000°F (1093°C) and becomes glass-like. **High Ash Content Maintenance** on [page 22](#) in this section for more details on fuels with high ash content.

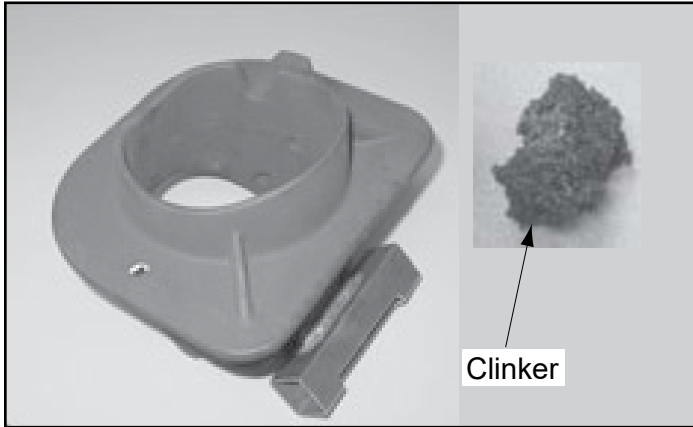



Figure 19.1

### 2. Cleaning Fire pot with Cleaning Rod & Fire pot Scraper


- **Frequency:** Daily or more often as needed
- **By:** Homeowner
  - a. The appliance must be in complete shutdown and cool and the exhaust blower off.

**NOTE:** If you are just cleaning the fire pot, there is no need to unplug the appliance.

- b. Pull fire pot cleaning rod OUT a couple of times to help shake debris loose.
  - If rod is hard to pull, it may be necessary to use your fire pot clean-out tool to chip away material that has built up on the bottom plate of the fire pot and to push out any clinkers. Larger clinkers may have to be removed from the top of the fire pot.
- c. The fire pot floor plate must be fully closed when finished (**Figure 19.2**).



### WARNING



**Fire Risk**

- NEVER pull fire pot cleaning rod or cleaning slide plates out when appliance is operating.
- The cleaning slide plates must be fully CLOSED when appliance is operating.
- Hot pellets may fall into ash pan and start a fire or mis-starts due to lack of vacuum.

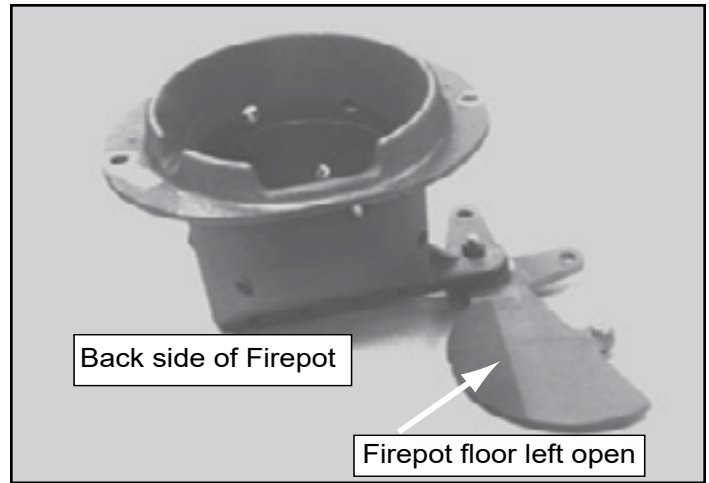


Figure 19.2

### 3. Ash Removal from Firebox

- **Frequency:** Every 5 bags or weekly or more frequently depending on ash build-up.
- **By:** Homeowner
  - a. There must not be any hot ashes in the firebox during cleaning so allow the appliance to completely cool. Frequent cleaning of the ash in the firebox will help slow down the build-up of ash in the exhaust blower and vent system.
  - b. Plug in your appliance, if unplugged, and turn the thermostat on and immediately shut it off to start the exhaust blower on its cycle time. It will pull fly ash out the exhaust instead of into the room.
  - c. Open door. There are 2 cleaning slide plates to the left and right of the fire pot with finger holes. Pull both slide plates out and sweep the remaining ash from the firebox into the 2 open holes. A paint brush works well for this. Close slide plates.
  - d. This ash is deposited in the same ash drawer as the fire pot debris. The ash drawer should be emptied every time you clean the firebox. Remember to place the ash and debris into a metal or non-combustible container.
  - e. The 2 cleaning slide plates must be fully closed when cleaning is complete.

### 4. Cleaning Ash Pan

- **Frequency:** Weekly or every 5 bags of fuel
- **By:** Homeowner

Locate the ash pan underneath the fire pot. Open the bottom ash door and slide the ash pan straight out. Empty into a non-combustible container and re-install ash pan (**Disposal of Ashes on [page 20](#)**).



### WARNING



**Fire Risk**



- The cleaning slide plates must be fully CLOSED when appliance is operating. Hot pellets may fall into ash pan and start a fire.

## 5. Disposal of Ashes

- **Frequency:** As needed
- **By:** Homeowner

Ashes should be placed in a steel container with a tight-fitting lid. The container of ashes should be moved outdoors immediately and placed on a non-combustible floor or on the ground, well away from all combustible materials, pending final disposal.

If the ashes are disposed of by burial in soil or otherwise locally dispersed, they should be retained in the closed container until all cinders have thoroughly cooled. Other waste shall not be placed in this container.

 <b>WARNING</b>	
	<b>Disposal of Ashes</b>
	<ul style="list-style-type: none"><li>• Ashes should be placed in metal container with tight fitting lid.</li><li>• Ashes should be retained in closed container until all cinders have thoroughly cooled.</li></ul>

## 6. Cleaning Heat Exchanger Chambers & Drop Tube

- **Frequency:** Monthly or every 1 ton of fuel
- **By:** Homeowner

The amount of ash buildup in the fire pot will be a good guide to determine how often you should clean the heat exchangers.

- Allow the appliance to completely cool down before pulling the cleaning rods. Turn the thermostat on and then immediately off to start the exhaust blower on its cycle time. It will pull fly ash out the exhaust instead of into the room.
- Locate the 2 exposed rods directly underneath the heat exchanger tubes (**Figure 20.1**).
- To clean, pull the rods straight out until it stops, approximately 8 inches (203mm). Slide the rods OUT and IN a couple of times.

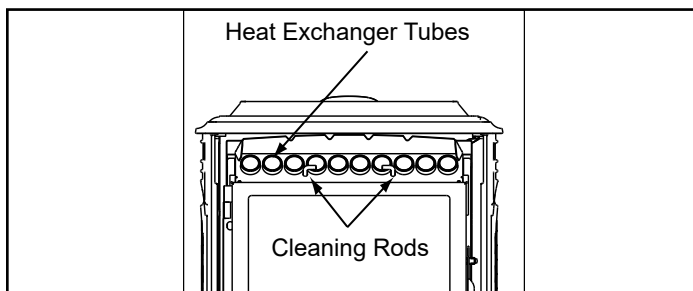





Figure 20.1

 <b>WARNING</b>	
 	Heat exchanger cleaning rods may be warm to the touch. For safety purposes wear gloves.
	Do not pull heat exchanger cleaning rods while appliance is operating. Push cleaning rods IN when done, DO NOT leave cleaning rods OUT. Injury can occur.

## 7. Cleaning Beneath Heat Exchanger

- **Frequency:** Monthly or after burning 1 ton of fuel
- **By:** Homeowner
  - Be sure the appliance is allowed to cool, has been unplugged and the exhaust blower is off.
  - A more thorough cleaning is needed to remove the excess ash that is left behind from the use of the cleaning rods for the heat exchanger tubes.
  - The ash will be resting on the back of the baffle. This will require removing the baffle. Refer to **Baffle** on [page 27](#).

**NOTE:** Hearth & Home Technologies recommends to use a heavy duty vacuum cleaners specifically designed for solid fuel appliance cleaning.

## 8. Cleaning the Exhaust Path

- **Frequency:** Every 25 bags or monthly or more frequently depending on ash build-up.
- **By:** Homeowner
  - Appliance must be completely cool.
  - Open cast hinge face. Remove baffle and right brick and thoroughly vacuum the area and continue throughout the rest of the firebox.
  - Replace right brick and baffle and close cast hinge face.

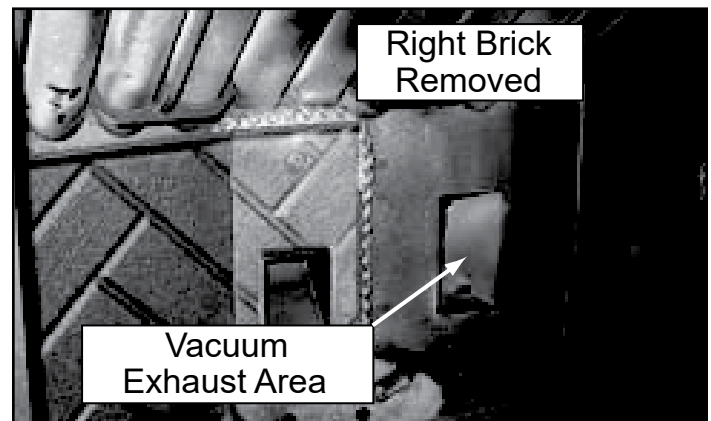


Figure 20.2

## 9. Cleaning the Hopper

- **Frequency:** Monthly or after burning 50 bags of fuel or when changing fuel type
- **By:** Homeowner

After burning approximately 1 ton of fuel you will need to clean the hopper to prevent sawdust build-up.

A combination of sawdust and pellets on the auger reduces the amount of fuel supply to the fire pot. This can result in nuisance shutdowns and mis-starts.

- The appliance must be in complete shutdown. Allow the appliance to completely cool down.
- Empty the hopper of any remaining pellets.
- Vacuum the hopper and feed tube.

## 10. Soot and Fly Ash: Formation & Need for Removal in Exhaust Venting System.

- **Frequency:** Yearly or more frequently depending on ash build-up.
- **By:** Qualified Service Technician/Homeowner

Be sure the appliance is allowed to cool, has been unplugged and the exhaust blower is off.

The products of combustion will contain small particles of fly ash. The fly ash will collect in the exhaust venting system and restrict the flow of the flue gases.

At start-up if there is incomplete combustion, or if there is a shutdown or incorrect operation of the appliance it will lead to some soot formation. This will collect in the exhaust venting system.

The venting (chimney) system may need to be cleaned at least once a year or more often depending upon the quality of your fuel or if there is a lot of horizontal pipe sections. Ash will build up more quickly in the horizontal sections.

## 11. Cleaning the Glass

- **Frequency:** When clear view of the fire pot becomes obscure
- **By:** Homeowner
  - a. Appliance must be completely cool before cleaning glass.
  - b. Vacuum fly ash from glass and door rope.
  - c. Use a damp paper towel or any non-abrasive glass cleaner. Wipe off with dry towel.

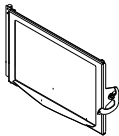


### CAUTION

Handle glass assembly with care.

#### When cleaning glass:

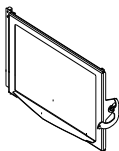
- Avoid striking, scratching or slamming glass.
- Do NOT clean glass when hot.
- Do NOT use abrasive cleaners.
- Refer to maintenance instructions.



### WARNING

#### Handle glass with care.

- Inspect the gasket to ensure it is undamaged.
- Do NOT strike, slam or scratch glass.
- Do NOT operate appliance with glass assembly removed.
- Do NOT operate with glass cracked, broken or scratched.



## 12. Door Latch Inspection

- **Frequency:** Prior to heating season
- **By:** Homeowner

The door latch is non-adjustable but the gasket between the glass and firebox should be inspected periodically to make sure there is a good seal.

## 13. Cleaning Exhaust Blower - Requires No Lubrication

- **Frequency:** Yearly or as needed
- **By:** Qualified Service Technician
- **Task:** Contact your local dealer

## 14. Cleaning Convection Blower - Requires No Lubrication

- **Frequency:** Yearly or as needed
- **By:** Qualified Service Technician
- **Task:** Contact your local dealer.

## 15. Cleaning the Top Vent Adapter

- a. The appliance must be in complete shutdown and the exhaust blower should be off. Allow the appliance to completely cool down.
- b. Open the clean out cover (**Figure 21.1**).
- c. Sweep out any ash build-up.

**NOTE:** There are heavy duty vacuum cleaners specifically designed for solid fuel appliance cleaning.

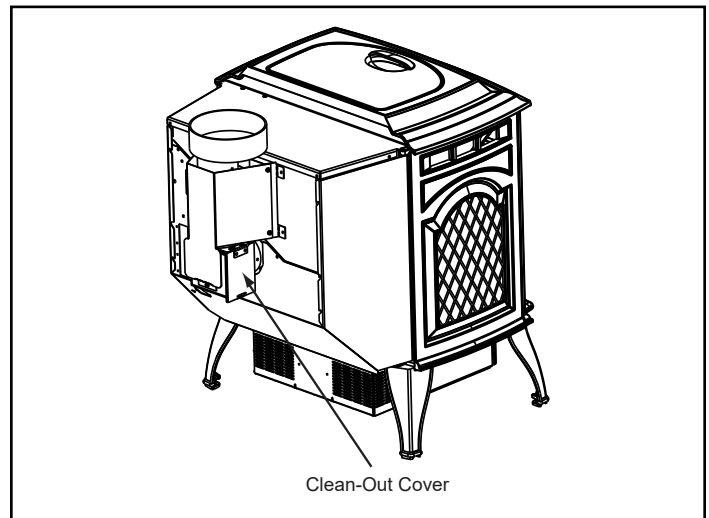


Figure 21.1

## 16. Preparing Firebox for Non-Burn Season

- **Frequency:** Yearly at the end of the heating season
- **By:** Homeowner
  - a. Be sure the appliance is allowed to cool, has been unplugged and the exhaust blower is off.
  - b. Remove all ash from the firebox and vacuum thoroughly.
  - c. Paint all exposed steel, including cast-iron.
    - Use the Touch-Up paint supplied with the appliance; **or**;
    - Purchase paint from your local dealer.
    - Must use a high-temperature paint made specifically for heating appliances.

## D. Soot or Creosote Fire Awareness

The chimney should be inspected periodically during the heating season to determine if a creosote build-up has occurred. If a significant layer of creosote has accumulated (1/8 inch [3mm] or more) it should be removed to reduce the risk of chimney fire.

Check daily for creosote build-up until experience shows how often you need to clean to be safe. Be aware that the hotter the fire the less creosote is deposited, and weekly cleaning may be necessary in the mild weather even though monthly cleaning may be enough in the coldest months. Contact your local municipal or provincial fire authority for information on how to handle a chimney fire.

**In the event of a soot or creosote fire, close the firebox door, exit the building immediately and contact the proper fire authorities.**

**DO NOT under any circumstances re-enter the building.**

## E. High Ash Fuel Content Maintenance

- **Frequency:** As needed
- **By:** Homeowner

Poor quality pellet fuel, or lack of maintenance, can create conditions that make the fire pot fill quickly with ashes and clinkers.

This condition makes the appliance susceptible to overfilling the fire pot with pellets which may result in smoking, sooting and possible hopper fires. **Figure 22.1** shows an example where the fire pot overfills, pellets back up into the feed tube and ash has accumulated in the firebox.

An inefficient and non-economical method of burning of fuel caused by poor quality pellet fuel is shown in **Figure 22.2**. The correct flame size when good quality, premium pellet fuel is burned is shown in **Figure 22.3**.

If the ash buildup exceeds the half way point in the fire pot **IMMEDIATE ATTENTION AND CLEANING IS REQUIRED.**

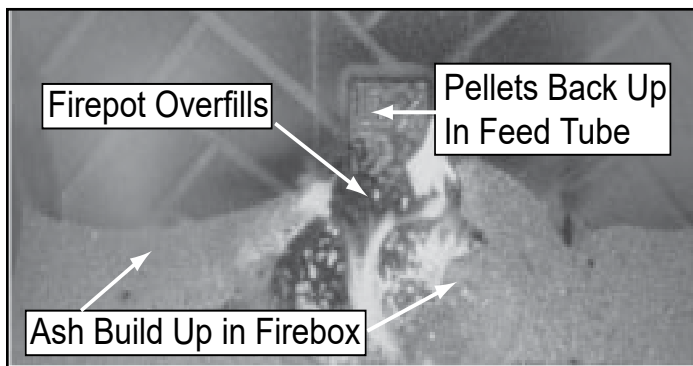


Figure 22.1

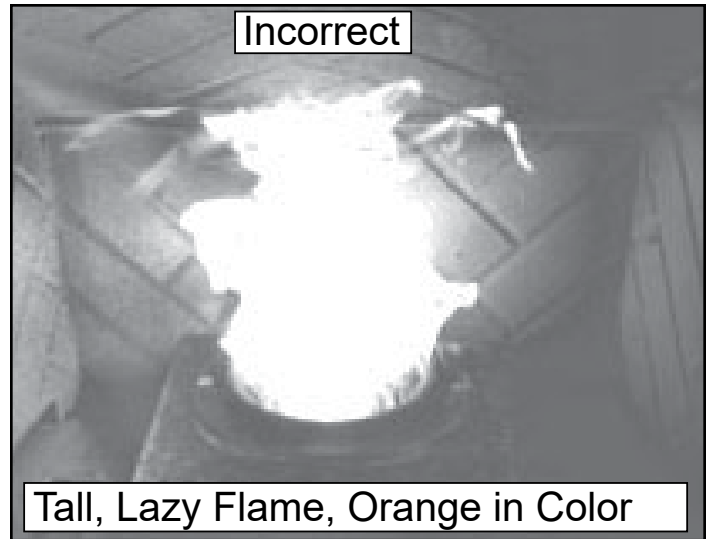


Figure 22.2

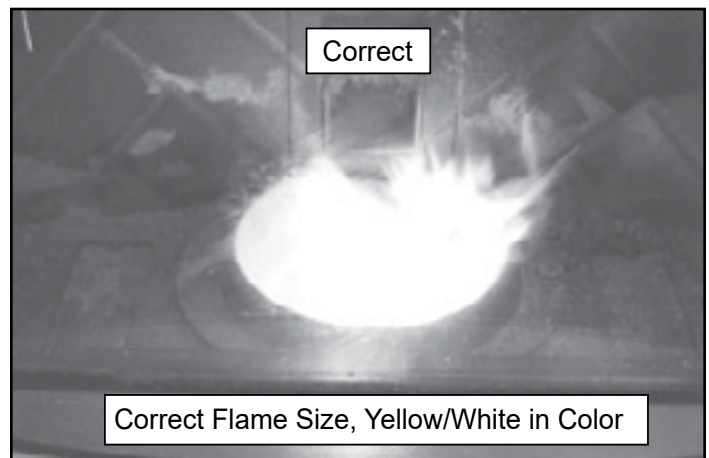


Figure 22.3

# 4 Troubleshooting Guide

With proper installation, operation, and maintenance your appliance will provide years of trouble-free service. If you do experience a problem, this troubleshooting guide will assist a qualified service person in the diagnosis of a problem and the corrective action to be taken. This troubleshooting guide can only be used by a qualified service technician.

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
Plug in appliance - No response.	No current to outlet.	Check circuit breaker at service panel.
	7 amp fuse defective.	Replace fuse.
	#3 snap disc tripped or defective.	Reset or replace snap disc.
	Control box defective.	Replace control box.
Call light on. No fire. No fuel in fire pot.	Out of fuel.	Check hopper. Fill with fuel.
	#2 snap disc may be defective.	Replace snap disc.
	Vacuum switch not closing, no vacuum.	Check exhaust blower is plugged in and operating.
		Check vacuum switch is plugged in.
		Check vacuum hose is in good condition, clear and connected at both ends.
		Check thermocouple is in good condition and plugged in properly.
		Make sure venting system is clean.
Make sure front door is closed.		
Control box defective.	Replace control box.	
Call light on. No fire. Partially burned fuel in fire pot.	Fire pot clean-out plate not closed.	Check that fire pot clean-out plate is fully closed. Clean fire pot. Make sure there is no clinker in the fire pot. See <b>Cleaning Fire Pot with Cleaning Rod &amp; Fire Pot Scraper</b> on <a href="#">page 19</a> .
	Fire pot is dirty (missed ignition).	Clinkers may have to be broken up with fire pot clean-out tool or other means.
Call light on. No fire. Unburned pellets in fire pot.	Fire pot clean-out plate not closed.	Check that fire pot clean-out plate is fully closed.
	Fire pot is dirty. The ignition hole between the igniter bracket and fire pot is blocked.	Clean fire pot. Make sure there is not a clinker in the fire pot. Clinkers may have to be pushed out of fire pot with fire pot clean-out tool or other means. Scrape with solid piece of wire.
	Igniter not working.	Remove ash drawer to see if igniter is glowing red on start-up. Check igniter wires for good connection. Replace igniter using 1/4 inch (6mm) male /female spade connectors.
	Control box defective.	Replace control box.
Slow or smoky start-up.	Fire pot clean-out plate not closed. Fire pot is dirty.	Check that fire pot clean-out is fully closed. Clean fire pot. Make sure there is not a clinker in the fire pot. Clinkers may have to be pushed out of fire pot with fire pot clean-out tool or other means.
	Excessive amount of fuel at start-up.	Reduce feed rate using feed rate adjustment control rod located inside hopper.
	Dirty exhaust and/or venting system.	Check for ash build up in appliance, including behind rear panels, firebox, heat exchanger, exhaust blower and venting.
No call light. Appliance does not begin start sequence.	Thermostat not set to a high enough temperature.	Adjust thermostat above room temperature.
	Snap Disc #3 tripped.	Reset snap disc.
	No power.	Connect to power.
	Fuse blown.	Replace fuse.
	Connections at thermostat and/or appliance not making proper contact.	Check connections at thermostat and appliance.
	Defective thermostat or thermostat wiring.	Replace thermostat or wiring. <b>NOTE:</b> To test thermostat and wiring, use a jumper wire at the thermostat block on the appliance to bypass thermostat and wiring.
Control box defective.	Replace control box.	

Table 23.1

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
Feed system fails to start.	Out of fuel.	Check hopper, fill with fuel.
	#2 snap disc may be defective.	Replace snap disc. Firebox door must be closed securely.
	Vacuum switch not closing. No vacuum.	Check exhaust blower is plugged in and operating. Check vacuum switch is plugged in. Check vacuum hose is in good condition, clear and connected at both ends. Check thermocouple is in good condition and plugged in properly. Make sure venting system is clean. <b>NOTE:</b> High winds blowing into the venting system can pressurize the firebox causing loss of vacuum.
	Feed system jammed or blocked.	Empty hopper of fuel. Use a wet/dry vacuum cleaner to remove remaining fuel, from hopper, including feed tube. Check feed chute for obstructions. Loosen 2 screws and jiggle feed assembly.
	Feed spring not turning with feed motor.	Check that set screw is tight on feed spring shaft at end of feed motor.
Feed motor defective or not plugged in.	Check connections on feed motor, replace if defective.	
Appliance fails to shut off.	Call light on.	Turn thermostat off. If call light does not go out, disconnect thermostat wires from appliance. If call light does go out, thermostat or wires are defective.
Convection blower fails to start	#1 snap disc defective.	Replace snap disc.
	Blower not plugged in.	Check that blower is plugged into wire harness.
	Blower is defective.	Replace blower.
	Control box is defective.	Replace control box.
Exhaust blower fails to start or does not shut off.	Blower not plugged in.	Check that blower is plugged into wire harness.
	Blower is clogged with ash.	Clean exhaust system.
	Blower is defective.	Replace blower.
	Control box is defective.	Replace control box
Large, lazy flame, orange color. Black ash on glass.	Dirty appliance. Poor fuel quality, high ash content.	Clean appliance, including fire pot, heat exchangers and venting system. Remove stainless steel baffle from firebox to clean ash from on top of baffle. Clean behind rear brick panels. Change fuel brand to premium.
	Fire pot clean-out plate not completely closed.	Check that fire pot clean-out plate is fully closed.
	Excessive amount of fuel.	Reduce feed rate using feed rate adjustment control rod located inside hopper.
Nuisance shutdowns.	Low flame.	Increase feed by opening feed rate adjustment control rod located inside hopper.
	Sawdust buildup in hopper.	Clean hopper, see <a href="#">page 20</a> .
	Feed motor is reversing.	Check for good connections between feed motor and wire harness.
	Defective thermocouple.	Replace thermocouple.
	Defective control box.	Replace control box.
	Fire pot more than 1/2 full.	See <b>High Ash Fuel Content Management</b> on <a href="#">page 22</a>
Appliance calls for heat. Call light illuminates. Exhaust blower starts. No feed or igniter.	Thermocouple is defective or not properly plugged in.	Check connections on thermocouple or replace if defective. A flashing yellow light on the control box indicates a problem with the thermocouple.
	Defective control box	Replace control box.
Hopper lid not closed all the way	Switch or magnet is out of adjustment (auger will not function)	Close the lid. If that doesn't work, adjust or replace the switch or magnet

**Table 24.1**

# 5 Service Parts Replacement

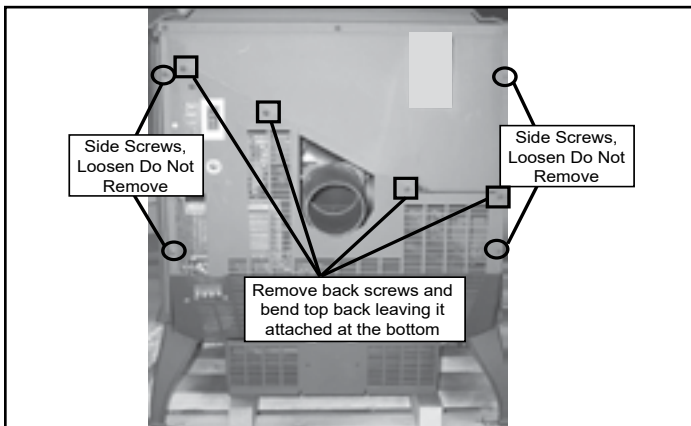
## A. Blowers

### 1. Convection Blower

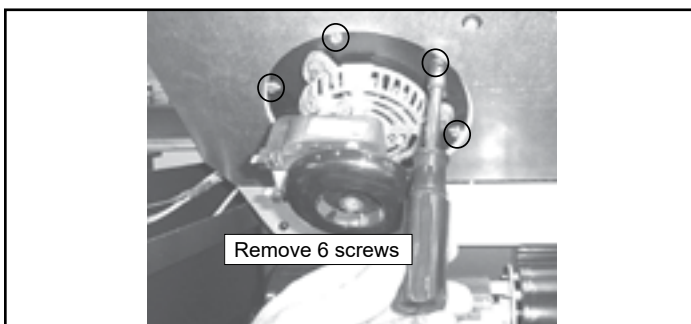
**PART NUMBER:** 812-4900

**NOTE:** The convection blower must be removed before the exhaust blower can be removed.

- Turn down thermostat, let appliance completely cool and then unplug appliance before servicing.
- Remove both side curtains by loosening 2 screws (do not remove) and pull side panels away.
- Remove 4 screws from the back screen and pivot the top of the screen toward you leaving the bottom attached to appliance (**Figure 25.1**).
- Remove 2 screws to remove the thermostat block and disconnect the 2 yellow wires.
- Remove the 2 screws from the power inlet and rotate it through the hole and out of the screen, leaving the wires attached.
- Disconnect the vacuum hose and both wires (orange and red) from the vacuum switch attached to the rear screen.
- Remove both wires from exhaust blower (blue and double white).
- Remove 6 screws using a flathead screwdriver or a 1/4" nut-driver. Retain screws for use on replacement blower (**Figure 25.2**).
- Remove exhaust blower and gasket.
- Install new gasket and blower. Discard blower housing if not needed.
- Re-install in reverse order.



**Figure 25.1**

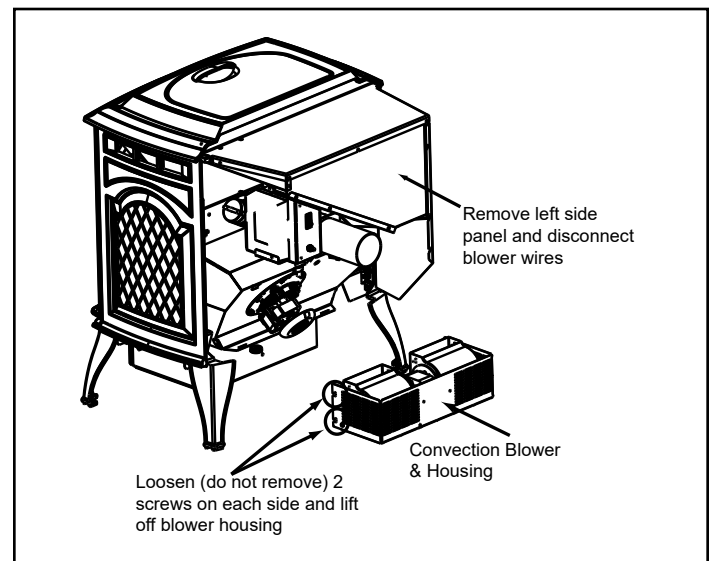


**Figure 25.2**

### 2. Combustion Blower

**PART NUMBER:** 812-4400

- Turn down thermostat, let appliance completely cool and then unplug appliance before servicing.
- The convection blower is located at the bottom rear of the appliance and is housed inside a screen box. Remove the 2 screws facing forward in the center of the blower chamber at the very back of the appliance.
- If an outside air kit is installed on the appliance, these screws attach the intake air channel piece of the outside air kit to the appliance. Remove the 2 screws and pull backwards on the channel and it will slide down and away from the appliance. The air channel, collar and outside air hose will be removed as one piece.
- There are 2 screws on each side of the housing. Loosen all 4 screws, but do not remove them. Lift the blower housing up slightly and slide towards you (**Figure 25.3**).
- Remove the left side panel by loosening 2 screws (do not remove) and pull side panel away. Unplug the 2 black blower wires by disconnecting the spade connectors.
- To remove blower from the housing, remove 2 screws in the front of the housing and very carefully bend the 2 housing sides out and bend the back of the housing away from the blower. This allows for room to access the back 2 screws and nuts (4 total) that is securing the blower to the housing.
- Remove blower and replace with new blower.
- Re-install in reverse order.



**Figure 25.3**

## B. Snap Disc #2

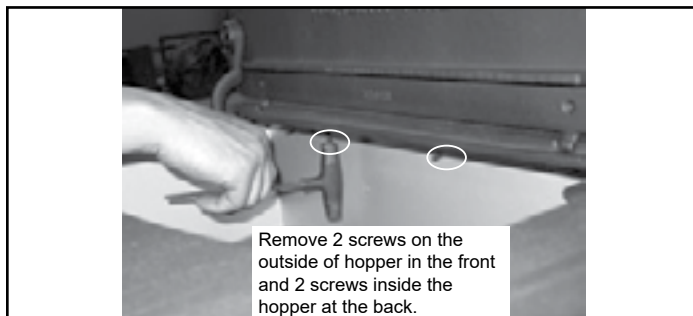
**PART NUMBER:** SRV7000-268

**NOTE:** Combustion Blower Gasket is also required. Sold separately under Part Number SRV240-0812.

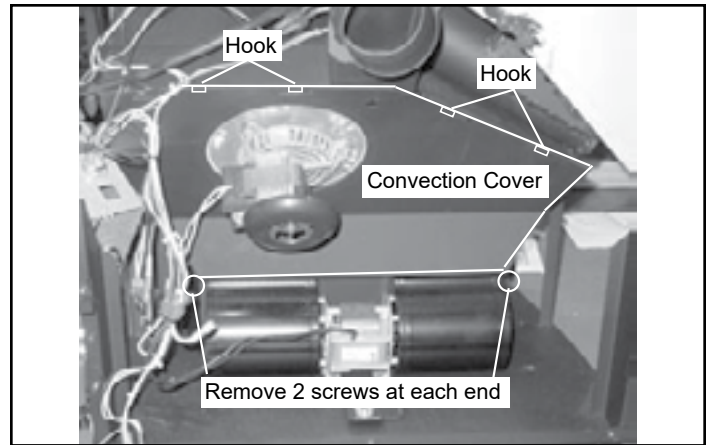
1. Turn down thermostat, let appliance cool completely if running. Then unplug appliance before servicing. Disconnect appliance from venting at the rear of appliance.
2. Remove both upper and lower side curtains by removing the six 7/16" nuts on the rear of the appliance.
3. Disconnect the vacuum hose and wires from the vacuum switch. Disconnect the blue and white wires from the combustion blower. Remove control box retainer clip. Remove two screws that hold the junction box. Set aside carefully. Disconnect hopper switch.
4. Remove cast top from appliance. Two fasteners are located outside the hopper on each side. The other two are located in the hopper along the back (**Figure 26.1**). Remove the rear screen of the appliance (be sure the vent is disconnected) by removing the seven screws. Lift slightly upwards as to not damage the hopper switch and set aside.
5. Remove lower screw by removing five screws. Lay flat on ground.
6. Remove convection cover by removing the two screws at the bottom (one each side) and slide to the left, then set aside.
7. Remove the five 7/16" bolts holding the combustion blower housing to the exhaust plenum. Discard gasket. (Clean blower impeller and plenum if needed).
8. Disconnect wires from snap disc #2 (**Figure 26.3**).
9. Loosen wing nut to relieve the pressure on snap disc from the bracket. The shaded area of the snap disc is inserted into a hole in the feed tube

**NOTE:** You may need pliers to start the wing nut (**Figure 26.4**).

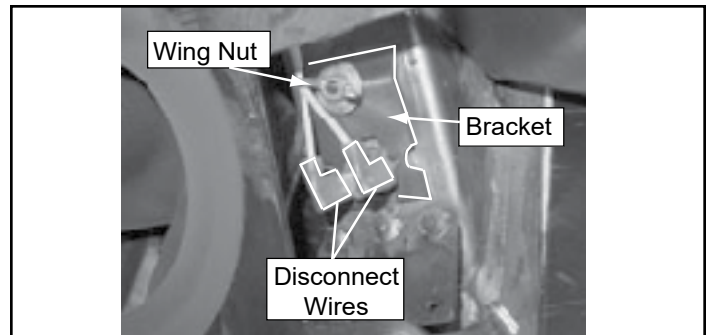
10. When bracket is loose enough, rotate the bracket counterclockwise and away from feed tube (**Figure 26.5**).
11. Reach behind bracket and remove old snap disc. Install new snap disc and rotate back to original position ensuring the snap disc is inserted in the hole in the feed tube. Tighten the wing nut and re-attach the wires to the new snap disc.
12. Re-install in reverse order. Be sure to use new gasket when installing combustion blower housing.



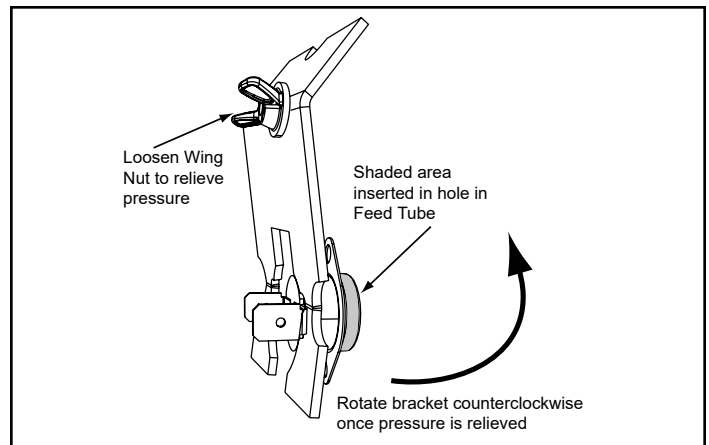
**Figure 26.1**



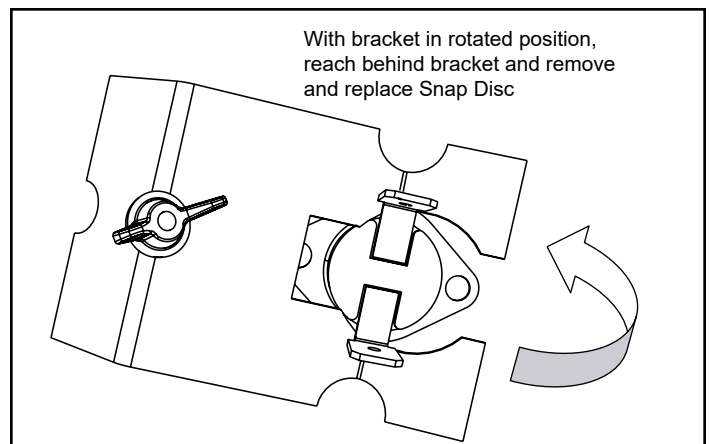
**Figure 26.2**



**Figure 26.3**



**Figure 26.4**



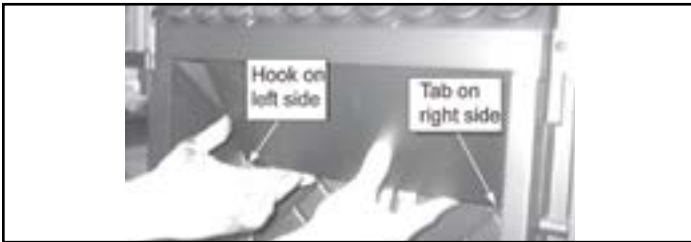
**Figure 26.5**



## C. Baffle

**PART NUMBER:** 7001-034

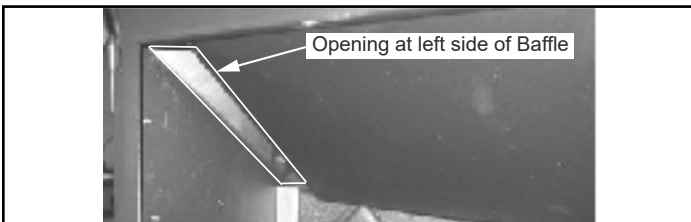
1. Follow **Proper Shutdown Procedures** on [page 18](#).
2. The top baffle has a hook on the bottom left side that rests on the top lip of the cast brick. There is a tab on the bottom right side that hooks into the side bracket. Remove the top baffle by first pulling the baffle forward until back edge drops down. Then slide baffle back until the front edge clears the shelf that it had been resting on (**Figure 27.1**, **Figure 27.2** and **Figure 27.3**).
3. Reinstall new baffle.



**Figure 27.1**



**Figure 27.2**



**Figure 27.3**

## D. Brick

**PART NUMBERS:**

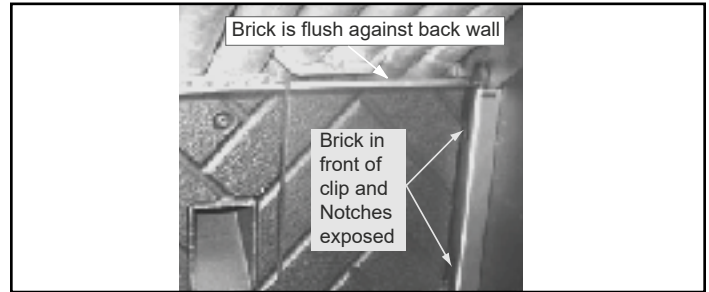
**LEFT OR RIGHT BRICK:** SRV414-0270

**CENTER:** SRV414-0260

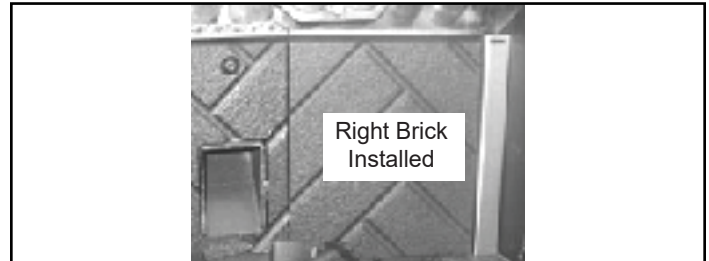
The baffle must be removed before any brick removal.

### Removal of left or right side brick:

1. Remove the right brick by holding top lip of the brick and lifting up.
2. Repeat for left brick.
3. Reinstall bricks in reverse order ensuring that the bricks are flush against the back wall of the firebox (**Figure 27.4** and **Figure 27.5**).



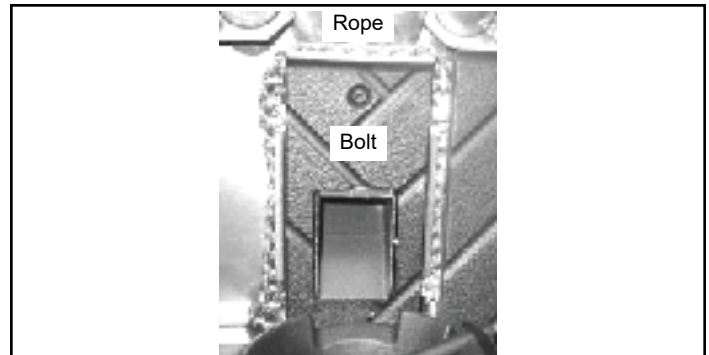
**Figure 27.4**



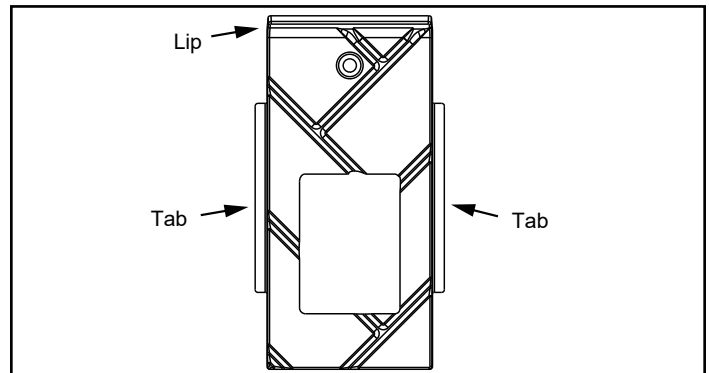
**Figure 27.5**

### Removal of center brick:

1. Follow **Steps 1 & 2** from **Removal of left or right side brick** to remove left and right brick.
2. Use an 5/32 Allen wrench to remove bolt out of center brick and set aside; remove and discard brick.
3. Validate rope is still in place; rope is wrapped around drop tube and ends are secure with rope tape.
4. Add new center brick and taking care not to cross thread the bolt; reinstall brick (**Figure 27.6**).
5. Repeat **Step 4** from **Removal of left or right side brick**.
6. Reinstall baffle (**Baffle** on [page 27](#)).



**Figure 27.6**



**Figure 27.7**

## E. Igniter

**PART NUMBER:** SRV7000-462

1. Shut down the appliance by turning down the thermostat and let the appliance completely cool down. After the appliance has cooled down, unplug it and remove the ash drawer.
2. The wire leads to the igniter are connected to the wire harness with 1/4 inch male / female spade connectors. Disconnect the spade connections and remove the igniter from the chamber. Loosen thumb screw and slide igniter out.
3. Install new igniter into the chamber and tighten thumb screw. Re-connect the wires to the 2 leads with the spade connectors.
4. Double check that the igniter wires are clear of any movement, i.e. ash drawer, fire pot cleaning rod, cleaning slide plates, etc.
5. Re-install the ash drawer and side panel and re-connect the power.

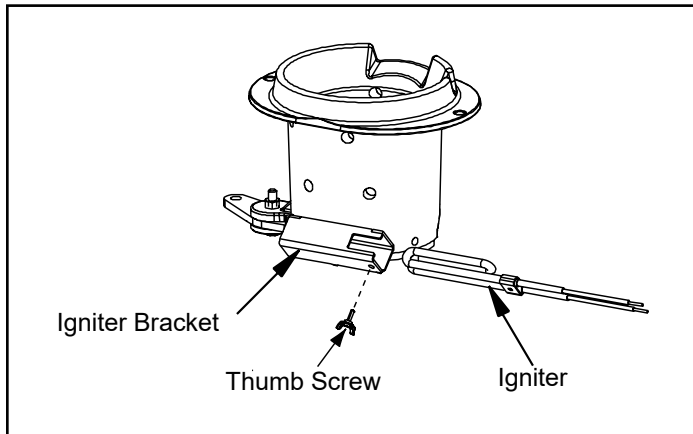


Figure 28.1



### CAUTION

#### Shock Risk.



- Do NOT remove grounding prong from plug.
- Plug directly into properly grounded 3 prong receptacle.
- Route cord away from appliance.
- Do NOT route cord under or in front of appliance.

## F. Glass

**PART NUMBER:** SRV7021-032

1. Open the face and remove door from the appliance by lifting door off of hinge points and lay on a flat surface face down.
2. Using a flat head screwdriver pry out rope from door and clean any silicone around the screw heads.
3. Using a Phillips head screwdriver remove the seven screws and set aside.
4. Remove glass retainers and set aside.
5. Remove old glass assembly and discard.
6. Lay new glass assembly in place.
7. Add glass retainers.
8. Using a Phillips head screwdriver fasten glass retainers to door assembly ensure glass assembly is centered within the frames.
9. Add rope into crevice as shown below in **Figure 28.2**.
10. Re-install door and close face to appliance.

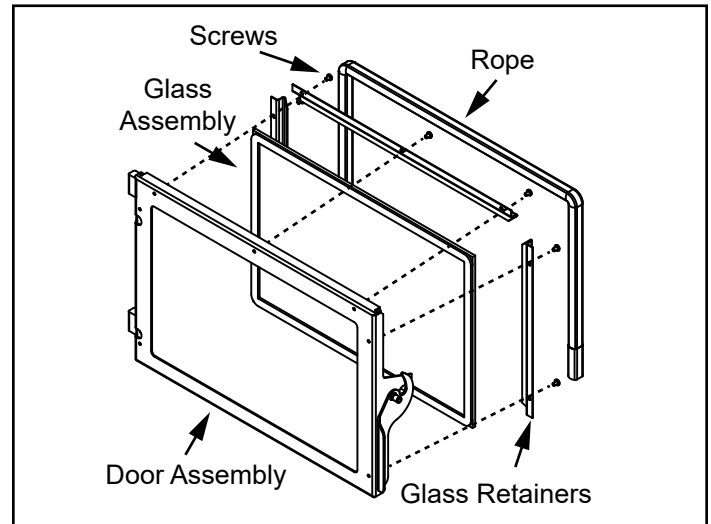


Figure 28.2



### WARNING

#### Handle glass with Care.



- Glass is 5mm thick high temperature heat-resistant ceramic glass.
- DO NOT REPLACE with any other material.
- Alternate material may shatter and cause injury.

# 6 Reference Materials

## A. Component Functions

### 1. Control Box

- a. The control box is located on upper right side of appliance, behind the right side panel and above the vacuum switch.
- b. There is a light located inside of the control box. The internal light will turn green when the appliance has reached a temperature of 200°F (93°C) in the fire pot and will turn red when it reaches 600°F (315°C).
- c. There is also an internal blue light located in the upper left corner of the control box. When you plug in the appliance the blue light will automatically start blinking 6 times in a row for 60 seconds and then will stop.

**NOTE:** Do NOT open the control box. This will void the warranty. If you need to plug in or remove the control box you must first unplug the appliance.

2. **Convection Blower:** The convection blower is mounted at the bottom rear of the appliance. There are 2 impellers, one on each side of the motor. The convection blower pushes heated air through the heat exchange system into the room.
3. **Exhaust Blower:** The exhaust blower is mounted on the right side of the appliance. The exhaust blower is designed to pull the exhaust from the appliance and push it out through the venting system.
4. **Feed System:** The feed system is located on the right side of the appliance and can be removed as an entire assembly. The assembly includes the feed motor, mounting bracket, bearing and feed spring (auger). The hollow feed spring (auger) pulls pellets up the feed tube from the hopper area and drops them down the feed chute into the fire pot.
5. **Fire pot:** The fire pot is made of high quality ductile iron and has a cleaning pull-out rod. The floor of the fire pot opens for cleaning when you pull out the rod. Be sure that the floor returns to a completely closed position or your appliance will not operate properly.
6. **Fuse:** The fuse is located on the front of the junction box next to the red call light. The fuse will blow should a short occur and shut off power to the appliance.
7. **Heat Exchangers:** The heat exchangers transfer hot air from the exhaust system into convection air. Remove the stainless steel top baffle to access the heat exchangers. There are 2 clean out rods located under the heat exchangers.



**When describing the location of a component, it is always AS YOU FACE THE FRONT OF THE APPLIANCE.**

8. **Heat Output Switch:** The heat output switch is located on the upper right rear panel. The function of the heat output switch is to regulate the burn rates; low, medium and high settings.
9. **Hopper Switch:** The hopper switch is located in the upper right hand corner of the hopper. This switch is designed to shut down the feed motor whenever the hopper lid is opened.
10. **Igniter:** The igniter is mounted on the base of the fire pot. Combustion air travels over the red hot igniter creating super heated air that ignites the pellets.
11. **Junction Box And Wiring Harness:** The junction box is located on the right side of the appliance, behind the right side panel. The junction box and wiring harness are replaced as one component.
12. **Power Supply:** The power outlet is located behind the control box on the back of the appliance, lower left corner. Check the wall receptacle for 120 volt, 60 Hz (standard current). Make sure the outlet is grounded and has the correct polarity. A good surge protector is recommended.
13. **Red Call Light:** The red call light is on the side of the junction box, next to the fuse. The function of the red call light is to indicate that the thermostat is calling for heat.
14. **Reset Button:** The reset button is located on the back of the appliance in the upper right corner below the heat output control switch. The function of the button is to momentarily open the thermostat circuit, which restarts the system.
15. **Thermocouple:** The thermocouple is located on top of the fire pot inside the thermocouple cover (ceramic protection tube). The thermocouple sends a millivolt signal to the control box indicating the preset temperatures of the green and red lights have been obtained.
16. **Thermostat:** The appliance is designed to run on a 12 volt AC thermostat. The heat anticipator should be set on the lowest setting available.

17. **Snap Disc #1 (Convection Blower) 110°F:** Snap disc #1 is located on the right side of the appliance on the bottom of the heat exchanger box. There are 2 purple wires connected to it. This snap disc turns the convection blower on and off as needed. Power is always present at snap disc #1.
18. **Snap Disc #2 (Fuel Delivery Interrupt) 250°F:** Snap disc #2 is also located on the back side of the feed drop tube. There are 2 orange wires connected to it. This snap disc will turn off the feed system which will turn off the appliance if an over fire condition should occur or if the convection blower should fail to operate. If this occurs the snap disc will automatically reset itself.
19. **Snap Disc #3 (Back Burn Protector) 250°F:** Snap disc #3 is mounted on the back of the auger tube in the center of the appliance and has a reset button. To access it remove the right side panel. If the fire tries to burn back into the feed system or push exhaust up the feed tube, this snap disc will shut the entire system off. This disc must be manually reset.
20. **Vacuum Switch:** The vacuum switch is located on the lower right side of the appliance behind right side panel. This switch turns the feed system on when vacuum is present in the firebox. The vacuum switch is a safety device to shut off the feed motor if the exhaust or the heat exchanger system is dirty or plugged or if the firebox door is open.
21. **Wiring Harness:** See **Figure 30.1** below.

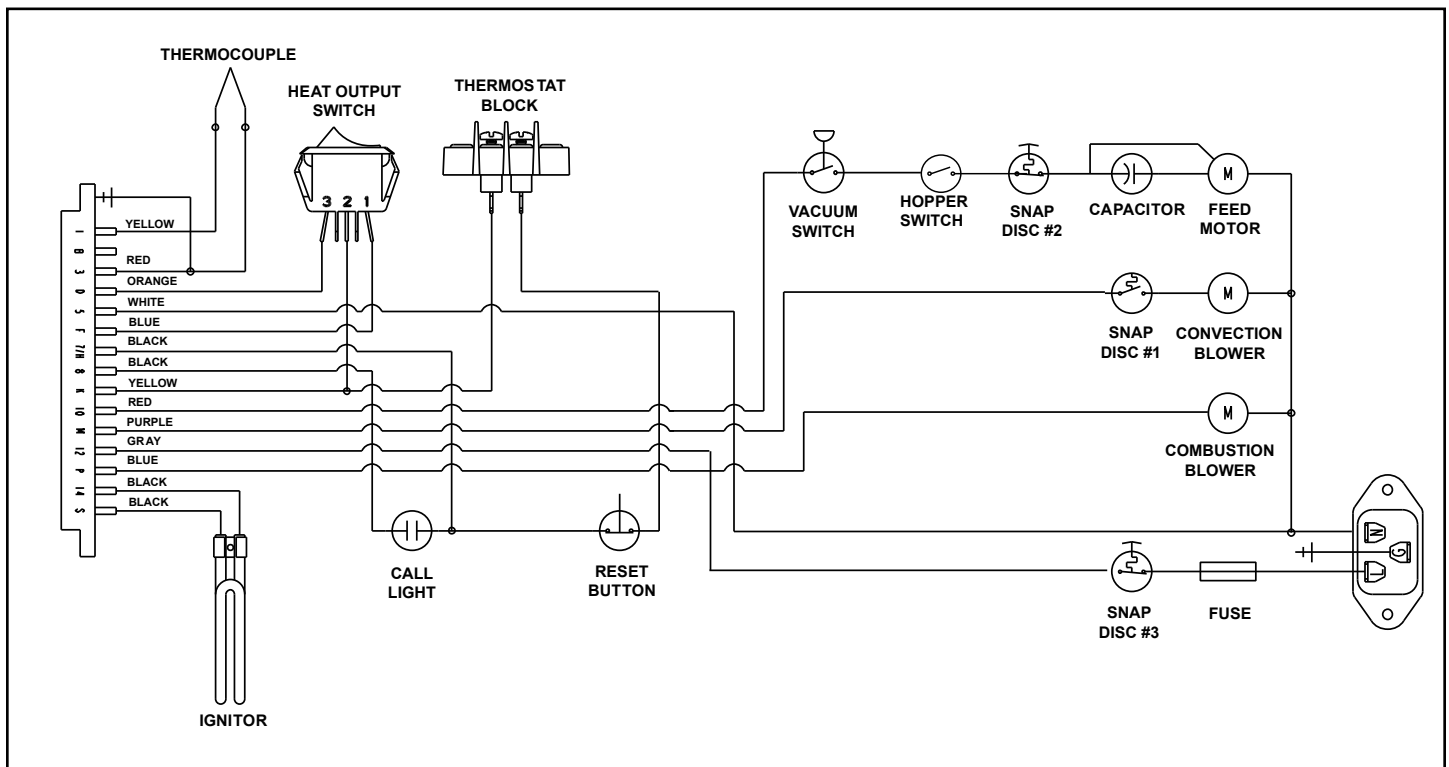


Figure 30.1

## B. Component Locations

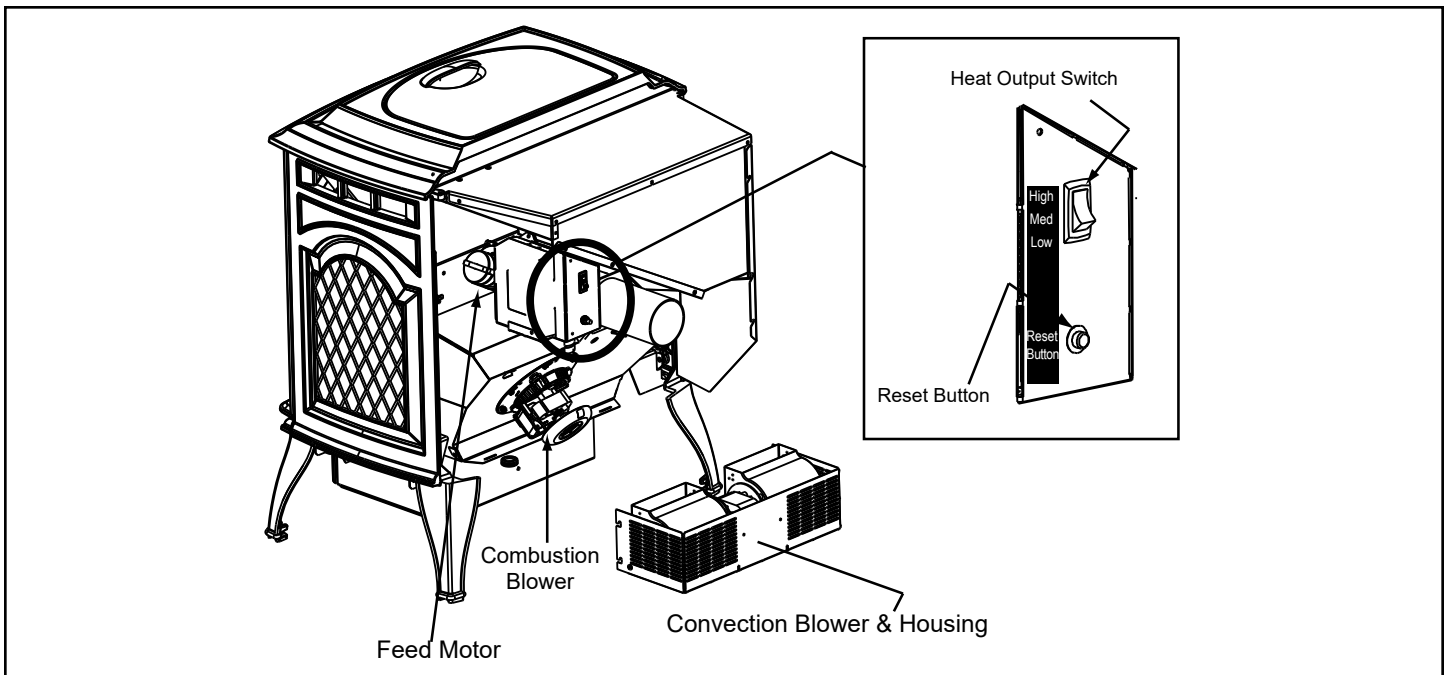


Figure 31.1

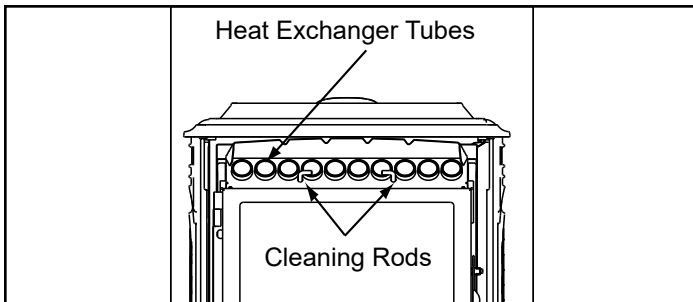


Figure 31.2

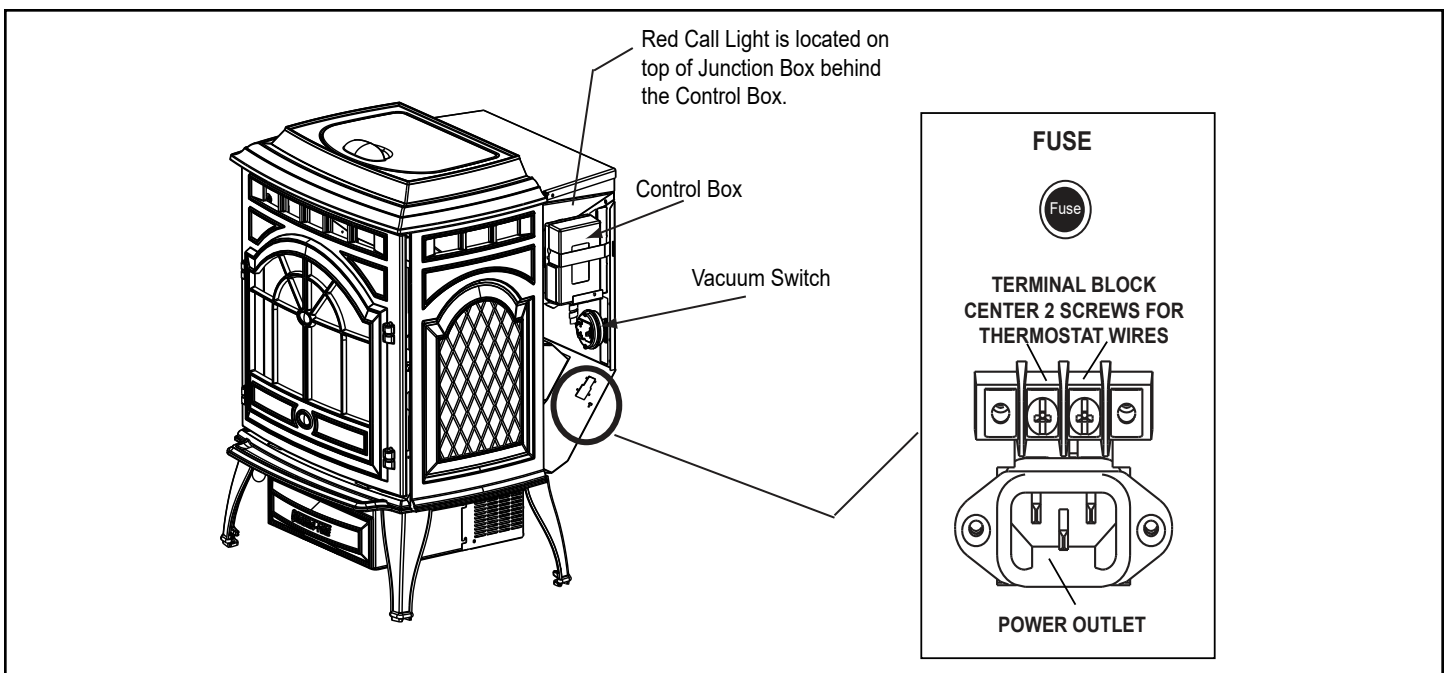
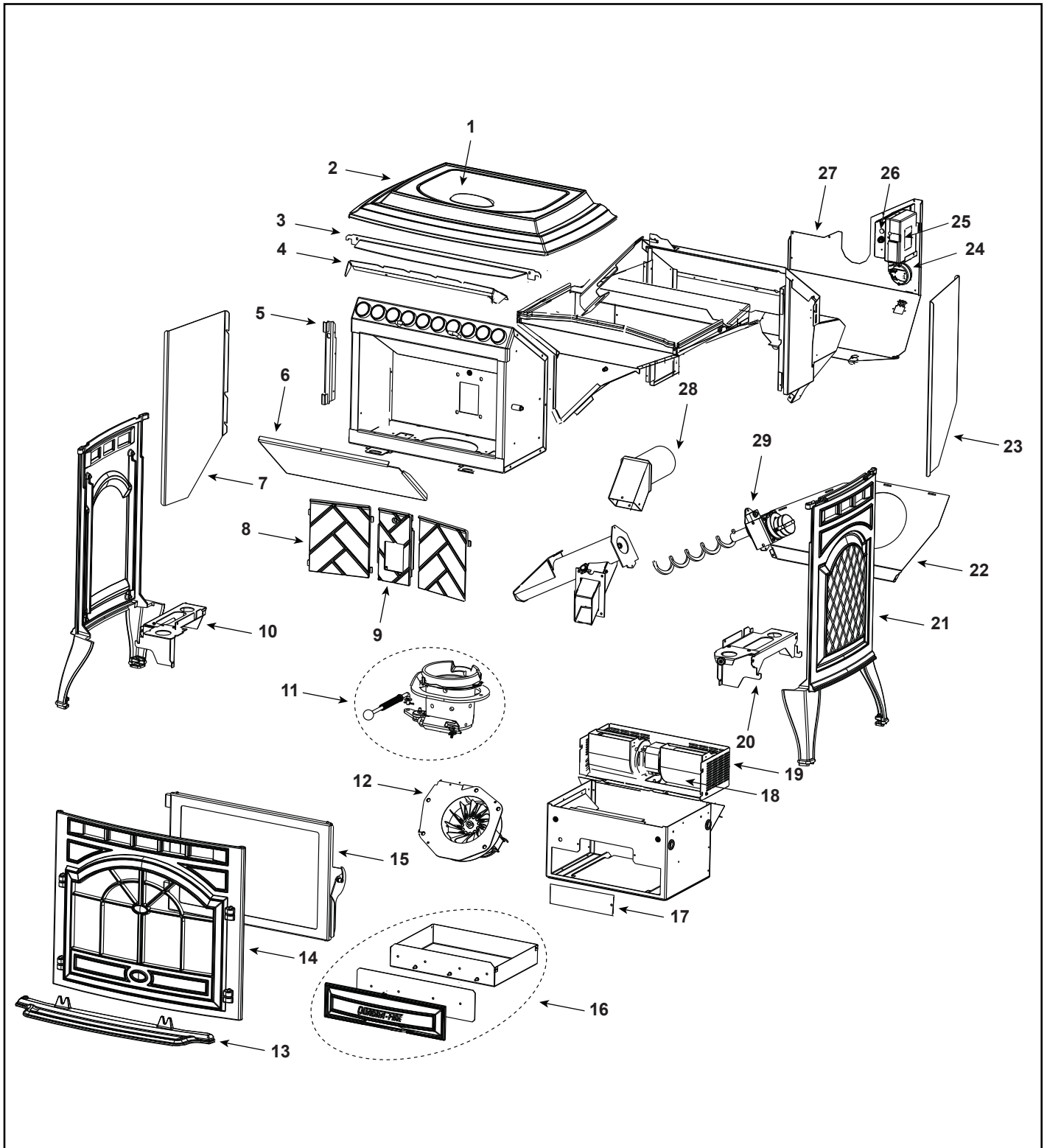


Figure 31.3





CASTILE-TWL-C, CASTILE-MBK-C, CASTILE-PMH-C



Part number list on following pages.

02/23



Beginning Manufacturing Date: April 2019  
Ending Manufacturing Date: Active

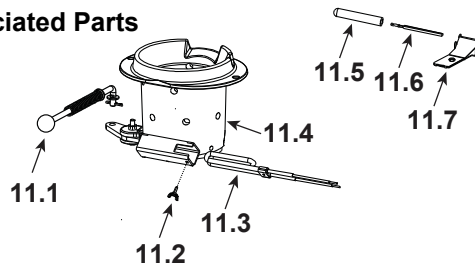
IMPORTANT: THIS IS DATED INFORMATION. Parts must be ordered from a dealer or distributor. **Hearth and Home Technologies does not sell directly to consumers.** Provide model number and serial number when requesting service parts from your dealer or distributor.



**Stocked at Depot**

ITEM	DESCRIPTION	COMMENTS	PART NUMBER	
1	Hopper Lid Assembly	Black	SRV7021-022MBK	
		Mahogany	SRV7021-022PMH	
		Twilight	SRV7021-022TWL	
2	Top	Black	7021-101MBK	
		Mahogany	7021-101PMH	
		Twilight	7021-101TWL	
3	Cast Retainer Upper		SRV7021-141	
4	Convection Air Director		SRV7021-123	
5	Hinge Bracket		SRV7021-115	
6	Baffle Assembly		SRV7001-034	Y
7	Outer Skin Left		SRV7021-119	
8	Brick, Left / Right, Cast		SRV414-0270	
9	Brick, Center, Cast		SRV414-0260	
10	Cast Retainer Lower Left Assembly		SRV7021-018	

### #11 Firepot Assembly and Associated Parts



11.1	Pull Rod Assembly		SRV7021-005	
	Knob, Ash Dump Control Rod		832-3020	
	Spring, Firepot		200-2050	
11.2	Wing Thumb Screw 8-32 x 1/2	Pkg of 24	7000-223/24	Y
11.3	Heating Element Assembly 18" (Loop Igniter)	Pkg of 1	SRV7000-462	Y
		Pkg of 10	SRV7000-462/10	Y
11.4	Firepot Assembly		SRV414-5200	Y
	Bushing, Firepot		410-8320	Y
	Floor, Firepot		414-0290	Y
	Gasket, Firepot		SRV240-0930	Y
	Nut, Lock 1/4-20	Pkg of 25	226-0090/25	Y
	Bolt, Firepot, 1-1/4" Long	Pkg of 25	225-0120/25	Y
11.5	Thermocouple Cover	Pkg of 1	812-1322	Y
		Pkg of 10	812-4920	Y
11.6	Thermocouple		812-4470	Y
11.7	Thermocouple Clamp		SRV7001-203	Y

Additional service part numbers appear on following page.

Beginning Manufacturing Date: April 2019  
Ending Manufacturing Date: Active

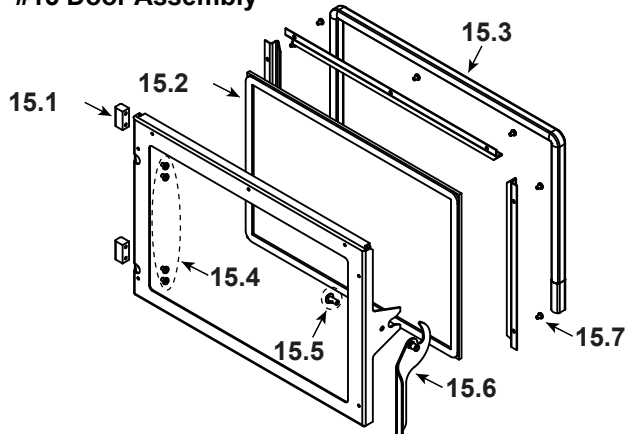
IMPORTANT: THIS IS DATED INFORMATION. Parts must be ordered from a dealer or distributor. **Hearth and Home Technologies does not sell directly to consumers.** Provide model number and serial number when requesting service parts from your dealer or distributor.



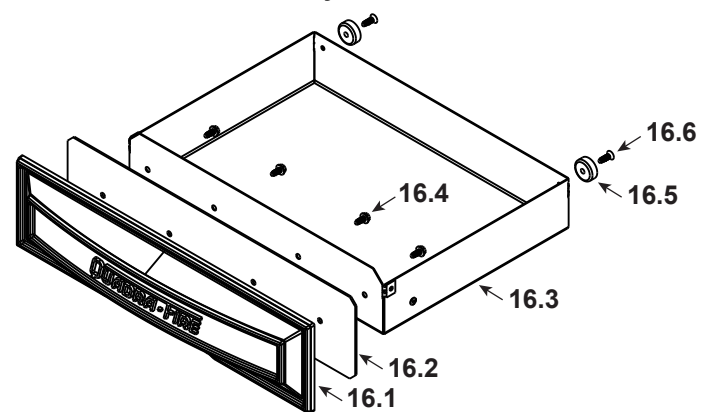
**Stocked at Depot**

ITEM	DESCRIPTION	COMMENTS	PART NUMBER	
12	Exhaust Combustion Blower, 45 CFM		812-4400	Y
	Gasket, Exhaust Combustion Blower (between...)	...Housing & Stove	SRV240-0812	Y
		...Motor & Housing	812-4710	Y
13	Ashcatcher - Must specify color	Black	413-0010BK	
		Mahogany	413-0010PMH	
		Twilight	413-0010TWL	
14	Face - Must specify color	Black	413-0030BK	
		Mahogany	413-0030PMH	
		Twilight	413-0030TWL	

**#15 Door Assembly**



**#16 Ash Drawer Assembly**



15	Door Assembly		SRV7021-031	
15.1	Hinge, Female		SRV450-2910	Y
15.2	Glass Assembly		SRV7021-032	Y
15.3	3/4 Inch Rope Gasket	50 Ft	SRV240-0051M	
		100 Ft	832-1520	
15.4	Screw, Pan Head Philips, 10/32 x 1/4	Pkg of 24	229-1230/24	Y
15.5	Screw, Machine Screw 1/4-20 x 5/8	Pkg of 24	220-0440/24	Y
15.6	Door Latch Assembly		SRV7021-006	
15.7	Screw, 8-32 X 1/4	Qty: 40	225-0240/40	
16	Ash Drawer Assembly		SRV7021-020	
16.1	Ash Drawer Front		SRV7021-138	
16.2	Ash Drawer Gasket		SRV7021-139	
16.3	Ash Drawer		SRV7021-140	
16.4	Screw, Pan Head Philips 8-32 X 3/8	Pkg of 40	SRV060-883-40	
16.5	Magnet Round		SRV7000-140	Y
16.6	Screw, Flat Head Philips 8-32X1/2	Pkg of 12	220-0490/12	Y

Additional service part numbers appear on following page.

Beginning Manufacturing Date: April 2019  
Ending Manufacturing Date: Active

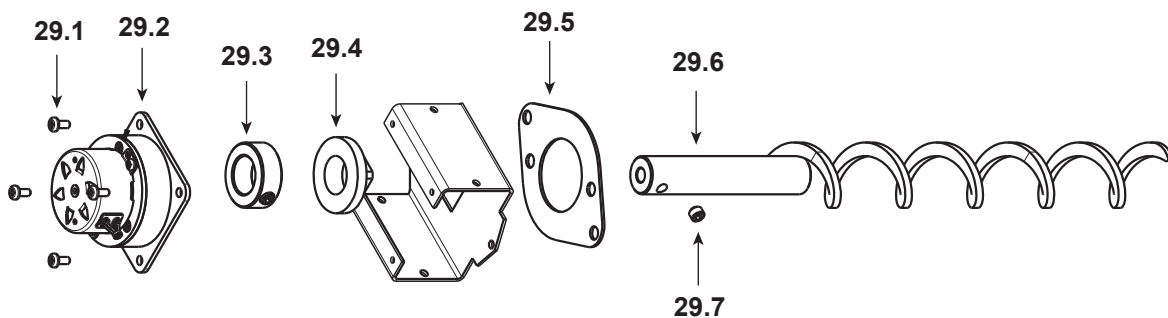
IMPORTANT: THIS IS DATED INFORMATION. Parts must be ordered from a dealer or distributor. **Hearth and Home Technologies does not sell directly to consumers.** Provide model number and serial number when requesting service parts from your dealer or distributor.



**Stocked at Depot**

ITEM	DESCRIPTION	COMMENTS	PART NUMBER	
17	Igniter Access Plate		SRV413-0380	
18	Convection Blower, 150 CFM		812-4900	Y
19	Shroud, Convection Blower		SRV413-0300	
20	Cast Retainer Lower Right Assembly		SRV7021-021	
21	Side	Black	SRV7021-125MBK	
		Mahogany	SRV7021-125PMH	
		Twilight	SRV7021-125TWL	
22	Convection Plenum Back		SRV7021-120	
23	Outer Skin Right		SRV7021-118	
24	Vacuum Switch		SRV7000-531	Y
25	Control Board 3 Speed		SRV7000-704	Y
26	Wire Harness / Junction Box/ Heat Output Switch		SRV7001-194	Y
	Block, Thermostat Term Dv		SRV230-0690	
27	Outer Skin Back		SRV7021-117	
28	Exhaust Transition Assembly		SRV7021-003	

### 29 Feed Assembly



29	Feed Assembly		812-4760	Y
29.1	Screw 8-32 x 3/8	Pkg of 40	225-0500/40	Y
29.2	Feed Motor		812-4421	Y
29.3	Collar, Set, 7/8		229-0520	
29.4	Bearing, Feed System, Nylon		SRV7000-598	Y
29.5	Gasket, Feed Motor		SRV240-0731	Y
29.6	Feed Spring Assembly (Only)		SRV7001-046	Y
29.7	Screw 5/16 - 18 x 1/4	Pkg of 25	225-0550/25	Y

Additional service part numbers appear on following page.

IMPORTANT: THIS IS DATED INFORMATION. Parts must be ordered from a dealer or distributor. **Hearth and Home Technologies does not sell directly to consumers.** Provide model number and serial number when requesting service parts from your dealer or distributor.



**Stocked  
at Depot**

ITEM	DESCRIPTION	COMMENTS	PART NUMBER	
	Brick Hangers (Left & Right)	1 Set	SRV8787-013	
	Component Pack Assembly	Black	SRV7021-034	
		Mahogany	SRV7021-035	
		Twilight	SRV7021-033	
	Cleanout Tool		SRV414-1140	Y
	Harness, Thermostat Wire		230-0810	
	Leveling Assembly		SRV7000-000	
	Paint Touch-Up, 4 Oz	Matte Black	3-42-19905	
		Mahogany	1-00-0014	
		Twilight	0001285	
	Power Cord		3-20-51578	Y
	Deflector, Bottom Airwash		SRV413-0680	
	Feed Adjustment Plate		SRV7001-182	
	Fuse, 7 Amp, Junction Box	Pkg of 10	812-0380/10	Y
	Fuse, 8 Amp, Control Box	Pkg of 10	812-3780/10	Y
	Gasket, Hopper, Front/Back		SRV7021-147	
	Hinge, Door, Male		SRV450-2810	
	Hopper Lid Switch Assembly		SRV7021-023	Y
	Hopper Lid Magnetic Switch		SRV7000-375	Y
	Hopper Top		SRV7021-108	
	Hose, Vacuum, 5/32 Id	3 Ft.	SRV240-0450	Y
	Hose, Barb Assembly		SRV229-0920	
	Magnet Bracket		SRV7021-129	
	Plate, Ash Cleanout		SRV7001-186	
	Reset Button Assembly		SRV7000-040	
	Scraper Repair Kit		SCRAPER-CSTL	
	Snap Disc ( #3 )	Manual Reset	SRV230-1290	Y
	Snap Disc, 110-20 ( #1 )		SRV230-1220	Y
	Snap Disc ( #2 )	On Droptube	SRV7000-268	Y
	Bracket, Snap Disc		SRV7005-253	
	Wire Harness Hopper Switch		SRV7050-130	Y
	Wire Harness, Snap Disc #2		SRV7001-224	
	Thermostat, programmable		PROG-STAT	

Additional service part numbers appear on following page.



# QUADRA-FIRE®

NOTHING BURNS LIKE A QUAD

## CONTACT INFORMATION

Hearth & Home Technologies  
352 Mountain House Road  
Halifax, PA 17032  
Division of HNI INDUSTRIES

Please contact your Quadra-Fire dealer with any questions or concerns.  
For the number of your nearest Quadra-Fire dealer  
log onto [www.quadrafire.com](http://www.quadrafire.com)



## CAUTION



### DO NOT DISCARD THIS MANUAL

- Important operating and maintenance instructions included.
- Read, understand and follow these instructions for safe installation and operation.
- Leave this manual with party responsible for use and operation of this appliance.



### We recommend that you record the following pertinent information for your heating appliance.

Date purchased/installed: \_\_\_\_\_

Serial Number: \_\_\_\_\_

Location on appliance: \_\_\_\_\_

Dealership purchased from: \_\_\_\_\_

Dealer Phone: 1(     )     -     \_\_\_\_\_

Notes:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

This product may be covered by one or more of the following patents: (United States) 5341794, 5263471, 6688302, 7216645, 7047962 or other U.S. and foreign patents pending.



HEARTH & HOME  
technologies™

# Installation Manual

## Installation & Appliance Set-Up

**INSTALLER:** Leave this manual with party responsible for use and operation.

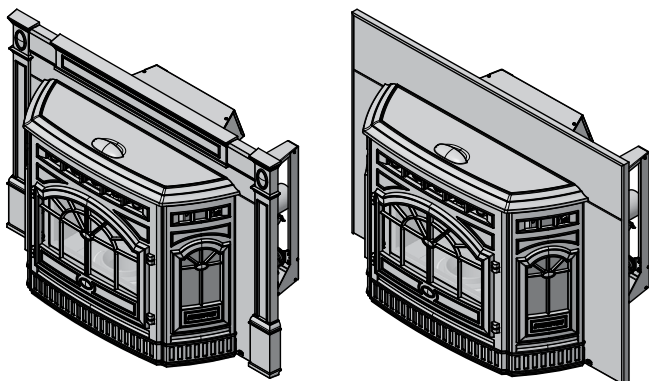
**OWNER:** Retain this manual for future reference.

**NOTICE: DO NOT DISCARD THIS MANUAL**

# QUADRA-FIRE®

## CASTILE PELLET INSERT APPLIANCE

**MODEL(S):**  
CASTILEI-MBK-C  
CASTILEI-PMH-C  
CASTILEI-TWL-C



### CAUTION

Check building codes prior to installation.

- Installation **MUST** comply with local, regional, state and national codes and regulations.
- Consult local building, fire officials or authorities having jurisdiction about restrictions, installation inspection, and permits.

Installation and service of this appliance should be performed by qualified personnel. Hearth & Home Technologies recommends HHT Factory Trained or NFI certified professionals.



### WARNING



If the information in these instructions is not followed exactly, a fire could result causing property damage, personal injury, or death.

- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- Do not over fire - If appliance or chimney connector glows, you are over firing. Over firing will void your warranty.
- Comply with all minimum clearances to combustibles as specified. Failure to comply may cause house fire.

### WARNING



#### **HOT SURFACES!**

Glass and other surfaces are hot during operation AND cool down.

**Hot glass will cause burns.**

- Do not touch glass until it is cooled
- NEVER allow children to touch glass
- Keep children away
- CAREFULLY SUPERVISE children in same room as fireplace.
- Alert children and adults to hazards of high temperatures
- High temperatures may ignite clothing or other flammable materials.
- Keep clothing, furniture, draperies and other flammable materials away.

### CAUTION

Tested and approved for wood pellets only. Burning of any other type of fuel voids your warranty.

**NOTE:** To obtain a French translation of this manual, please contact your dealer or visit [www.quadrafire.com](http://www.quadrafire.com)

**REMARQUE :** Pour obtenir une traduction française de ce manuel, s'il vous plaît contacter votre revendeur ou visitez [www.quadrafire.com](http://www.quadrafire.com)

**Safety Alert Key:**



- **DANGER!** Indicates a hazardous situation which, if not avoided will result in death or serious injury.
- **WARNING!** Indicates a hazardous situation which, if not avoided could result in death or serious injury.
- **CAUTION!** Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
- **NOTICE:** Indicates practices which may cause damage to the appliance or to property.

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→ = Contains updated information



# 1 Important Safety Information

## A. Appliance Certification

<b>Model</b>	Castile Pellet Insert
<b>Laboratory</b>	OMNI Test Laboratories, Inc.
<b>Safety Report No.</b>	061-S-77d-6.2
<b>Type</b>	Solid Fuel Room Appliance/Pellet Fuel Burning Type Insert
<b>Standard</b>	ASTM E1509-2004, ULC S628-93 and ULC/ORD-C1482-M1990 Room Appliance Pellet Fuel Burning Type and (UM) 84-HUD, Mobile Home Approved

## B. BTU & Efficiency Specifications

<b>Emissions Report #:</b>	0061PM077E
<b>EPA Certification #:</b>	175-19
<b>EPA Certified Emissions:</b>	1.1 grams per hour
<b>*LHV Tested Efficiency:</b>	70.4%
<b>**HHV Tested Efficiency:</b>	66.1%
<b>***EPA BTU Output:</b>	5,800 to 22,400 / hr.
<b>****BTU Input:</b>	9,300 to 30,600 / hr.
<b>Vent Size:</b>	3 or 4 "L" or "PL", or 6 inches
<b>Hopper Capacity:</b>	45 lbs.
<b>Fuel</b>	Premium Wood Pellets
*Weighted average LHV (Low Heating Value) efficiency using data collected during EPA emissions test.	
**Weighted average HHV (High Heating Value) efficiency using data collected during EPA emissions test.	
***A range of BTU outputs based on EPA default efficiency and the burn rates from the low and high EPA tests.	
****Based on the maximum feed rate per hour multiplied by approximately 8600 BTU's which is the average BTU's from a pound of pellets.	
‡ Grade of pellet fuel as certified by Pellet Fuels Institute (PFI), ENPlus or CANplus.	

The Castile insert is Certified to comply with 2020 particulate emission standards.



This pellet insert needs periodic inspection and repair for proper operation. It is against federal regulations to operate this pellet insert in a manner inconsistent with operating instructions in this manual.

**NOTE:** This installation must conform with local codes. In the absence of local codes you must comply with the **ASTM E1509-2004, ULC S628-93, ULC/ORD-C-1482-M1990, (UM) 84-HUD.**

## CASTILE INSERT

### C. Glass Specifications

This appliance is equipped with 5mm ceramic glass. Replace glass only with 5mm ceramic glass. Please contact your dealer for replacement glass.

### D. Electrical Rating

115 VAC, 60 Hz, Start 4.1 Amps, Run 1.1 Amps

### E. Mobile Home Approved

- This appliance is approved for mobile home installations when not installed in a sleeping room and when an outside combustion air inlet is provided.
- The structural integrity of the mobile home floor, ceiling, and walls must be maintained.
- The appliance must be properly grounded to the frame of the mobile home and use only Listed pellet vent Class "L" or "PL" connector pipe.
- Outside Air Kit, part OAK-ACC must be installed in a mobile home installation.

### F. Non-Combustible Materials

Material which will not ignite and burn, composed of any combination of the following:

- Steel
- Plaster
- Brick
- Iron
- Concrete
- Tile
- Glass
- Slate

**Materials reported as passing ASTM E 136, Standard Test Method for Behavior of Metals, in a Vertical Tube Furnace of 750°C.**

### G. Combustible Materials

Material made of/or surfaced with any of the following materials:

- Wood
- Compressed Paper
- Plant Fibers
- Plastic
- Plywood/OSB
- Sheet Rock (drywall)

Any material that can ignite and burn: flame proofed or not, plastered or non-plastered.

### H. Sleeping Room

When installed in a sleeping room it is recommended that 3ft of vertical be installed prior to horizontally exiting the room and a smoke/CO alarm be installed in the bedroom. The size of the room must be at least 50ft<sup>3</sup> per 1,000 Btu/hr stove input, if the stove exceeds the room size, out air must be installed.

### I. California - Prop65

#### WARNING

This product and the fuels used to operate this product (wood), and the products of combustion of such fuels, can expose you to chemicals including carbon black, which is known to the State of California to cause cancer, and carbon monoxide, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to: [WWW.P65Warnings.ca.gov](http://WWW.P65Warnings.ca.gov)

#### WARNING



#### Fire Risk.

Hearth & Home Technologies disclaims any responsibility for, and the warranty will be voided by, the following actions:

- Installation and use of any damaged appliance.
  - Modification of the appliance.
  - Installation other than as instructed by Hearth & Home Technologies.
  - Installation and/or use of any component part not approved by Hearth & Home Technologies.
  - Operating appliance without fully assembling all components.
  - Operating appliance without legs attached (if supplied with appliance).
  - Do NOT Over fire - If appliance or chimney connector glows, you are over firing.
- Any such action that may cause a fire hazard.

Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage.

For assistance or additional information, consult a qualified installer, service agency or your dealer.

**NOTE:** Hearth & Home Technologies, manufacturer of this appliance, reserves the right to alter its products, their specifications and/or price without notice.

# Install Guide

## 2 Getting Started

### A. Design, Installation & Location Considerations

#### 1. Appliance Location

**NOTICE:** Check building codes prior to installation.

- Installation **MUST** comply with local, regional, state and national codes and regulations.
- Consult insurance carrier, local building inspector, fire officials or authorities having jurisdiction over restrictions, installation inspection and permits.

It is a good idea to plan your installation on paper, using exact measurements for clearances and floor protection, before actually beginning the installation. Location of the appliance and chimney will affect performance.

#### Consideration must be given to:

- Safety, convenience, traffic flow
- Placement of the chimney and chimney connector and to minimize the use of chimney offsets.
- Place the appliance where there will be a clear passage for a Listed chimney through the ceiling and roof (vertical) or through exterior wall (horizontal).
- Installing the required outside air kit will affect the location of the vent termination.

When locating vent and venting termination, the ideal location is to vent above roof line when possible. This minimizes the affects of wind loading.

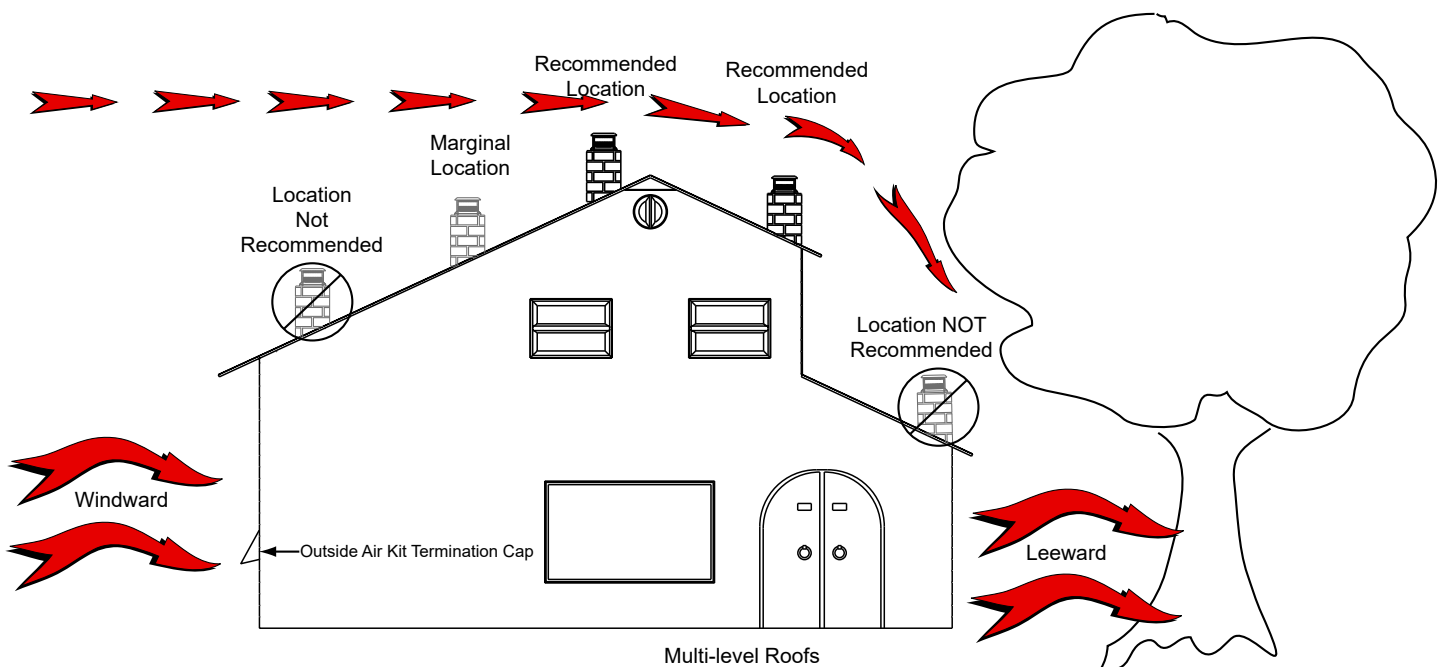


Figure 5.1


Since pellet exhaust can contain ash, soot or sparks, you must consider the location of:



- Windows
- Air Intakes
- Air Conditioner
- Overhang, soffits, porch roofs, adjacent walls
- Landscaping, vegetation
- Horizontal or vertical vent termination

#### 2. Floor Support

The supporting floor under the appliance must be able to handle the weight of the appliance, fuel load and the weight of the chimney.

Ensure that your floor will support these weights prior to installation. Add sufficient additional support to meet this weight requirement prior to installation. The weight of the appliance is 192 lbs.

	WARNING
<p><b>Risk of Fire.</b> Damaged parts could impair safe operation. Do NOT install damaged, incomplete or substitute components.</p>	

	<b>WARNING</b>
	<p><b>Risk of Fire!</b></p> <ul style="list-style-type: none"> <li>• Damaged parts could impair safe operation.</li> <li>• Do NOT install damaged, incomplete or substitute components.</li> </ul>

	<b>WARNING</b>
	<p>Hearth &amp; Home Technologies disclaims any responsibility for, and the warranty will be voided by, the following actions:</p> <ul style="list-style-type: none"> <li>• Installation and use of any damaged appliance.</li> <li>• Modification of the appliance.</li> <li>• Installation other than as instructed by Hearth &amp; Home Technologies.</li> <li>• Installation and/or use of any component part not approved by Hearth &amp; Home Technologies.</li> <li>• Operating appliance without fully assembling all components.</li> <li>• Operating appliance without legs attached (if supplied with appliance).</li> <li>• <u>Do NOT Over fire</u></li> </ul> <p><b>Or any such action that may cause a fire hazard.</b></p>

**B. Thermostat Wall Control Location**

The thermostat wall control's location will have some affect on the appliance's operation.

- Maximum wire length from appliance is 100 feet (30.48m) with continuous non-spliced wire. Recommended 20 gauge wire, solid copper.
- When located close to the appliance, it may require a slightly higher temperature setting to keep the rest of the house comfortable.
- When located in an adjacent room or on a different floor level, you will notice higher temperatures near the appliance.

**C. Tools And Supplies Needed**

Tools and building supplies normally required for installation, unless installing into an existing masonry fireplace:

- Reciprocating Saw
- Channel Locks
- Hammer
- Phillips Screwdriver
- Tape Measure
- Plumb Line
- 1/4" Self-Tapping Screws
- Framing Material
- Hi-temp Caulking Material
- Gloves
- Safety Glasses
- Framing Square
- Electric Drill & Bits (1/4")
- Level

**May also need:**

- Vent Support Straps
- Venting Paint

**D. Inspect Appliance and Components**

- Open the appliance and remove all the parts and articles packed inside the Component Pack. Inspect all the parts and glass for shipping damage.
- Report to your dealer any parts damaged in shipment.
- All labels have been removed from the glass door.
- Plated surfaces have been wiped clean with a soft cloth, if applicable.
- Read all the instructions before starting the installation. Follow these instructions carefully during the installation to ensure maximum safety and benefit.
- Follow pipe manufacturer instructions for installation and air clearance requirements.

**E. Install Checklist**

**ATTENTION INSTALLER:  
Follow this Standard Work Checklist**

This standard work checklist is to be used by the installer in conjunction with, not instead of, the instructions contained in this installation manual.

Customer: \_\_\_\_\_  
 Date Installed: \_\_\_\_\_  
 Lot/Address: \_\_\_\_\_  
 Location of Appliance: \_\_\_\_\_  
 Installer: \_\_\_\_\_  
 Dealer/Distributor Phone Number: \_\_\_\_\_  
 Serial Number: \_\_\_\_\_  
 Model Name: \_\_\_\_\_



**WARNING! Risk of Fire or Explosion! Failure to install appliance to these instructions can lead to a fire or explosion.**

**Appliance Install**

Verified clearance to combustibles.  
 Appliance is leveled and connector is secured to appliance.  
 Hearth extension size/height decided.  
 Outside air kit installed.  
 Floor protection requirements have been met.  
 If appliance is connected to a masonry chimney, it should be cleaned and inspected by a professional. If installed to a factory built metal chimney, the chimney must be installed according to the manufacturer's instructions and clearances.

**YES**

**IF NO, WHY?**

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Venting/Chimney**

Chimney configuration complies with diagrams.  
 Chimney installed, locked and secured in place with proper clearance.  
 Chimney meets recommended height requirements (5 feet minimum vertical).  
 Roof flashing installed and sealed.  
 Terminations installed and sealed.

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Electrical**

120 VAC unswitched power provided to the appliance.  
 Check outlet with multi-meter for proper polarity and voltage (115-120 VAC).  
 Record voltage reading: \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_

**Clearances**

Verified all clearances meet installation manual requirements.  
 Mantels and wall projections comply with installation manual requirements.  
 Floor protection and heart extensions installed per manual requirements.

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Appliance Setup**

All protective materials removed.  
 All labels have been removed from the door.  
 All packaging materials are removed from inside/under appliance.  
 Manual bag and all of its contents are removed from inside/under the appliance and given to the party responsible for use and operation.  
 Started appliance and verified that all motors and blowers operate as they should.  
 Checked draft using a Manometer. Record readings: \_\_\_\_\_  
 Checked vacuum using a Manometer. Record readings: \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Hearth & Home Technologies recommends the following:**

Photographing the installation and copying this checklist for your file.  
 That this checklist remain visible at all times on the appliance until the installation is complete.

**Comments:** Further description of the issues, who is responsible (Installer/Builder/Other Trades, etc.) and corrective action needed:  
 Comments communicated to party responsible \_\_\_\_\_ by \_\_\_\_\_ on \_\_\_\_\_  
 (Builder/Gen. Contractor) (Installer) (Date)

# 3 Dimensions and Clearances

## A. Appliance Dimensions

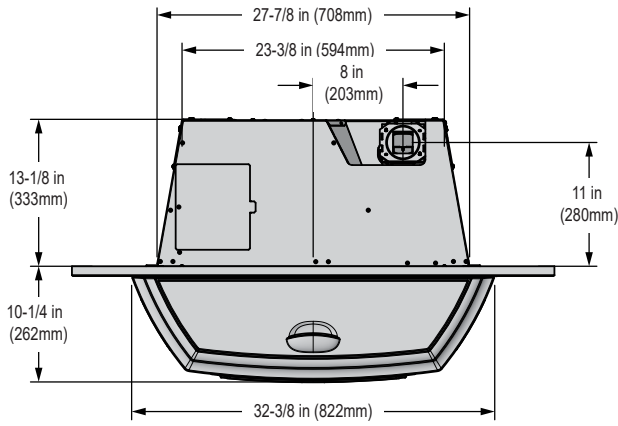


Figure 8.1 - Top View with Small Surround Panel Set

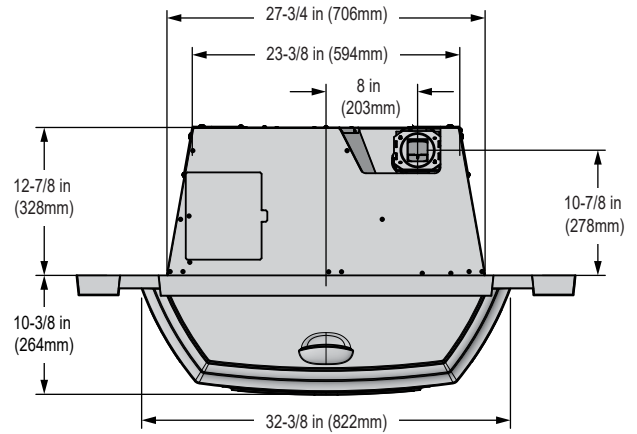


Figure 8.4 - Top View with Cast Panel Set

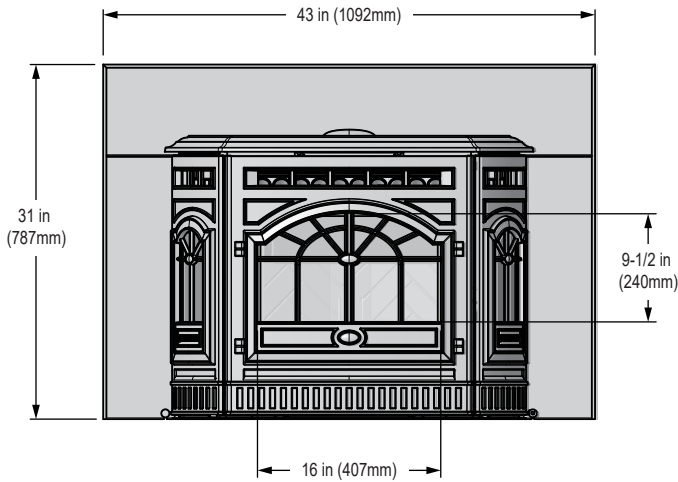


Figure 8.2 - Front View with Small Surround Panel Set

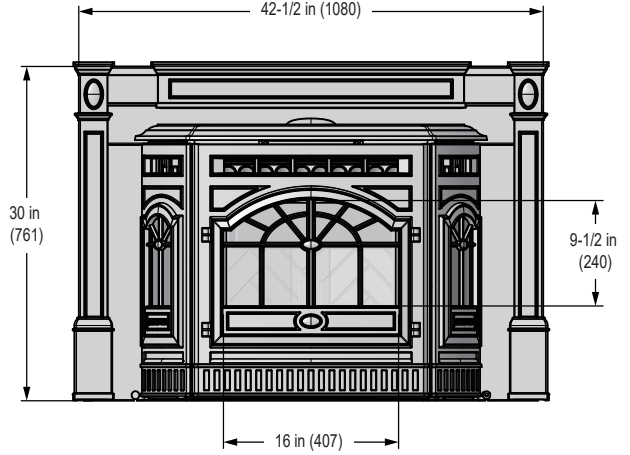


Figure 8.5 - Front View with Small Surround and Cast Panel Set

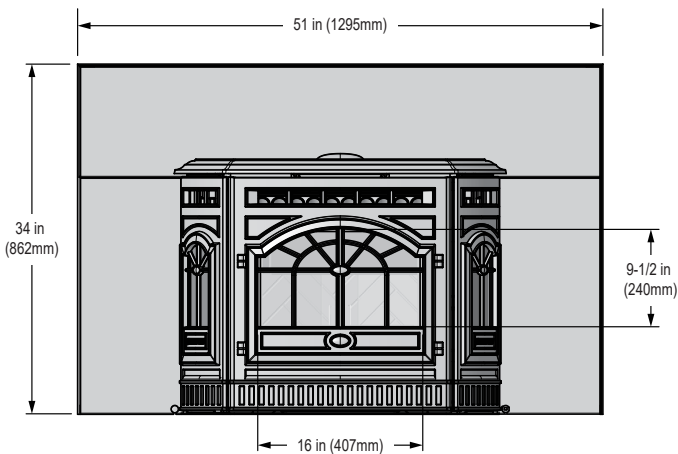


Figure 8.3 - Front View with Large Surround Panel Set

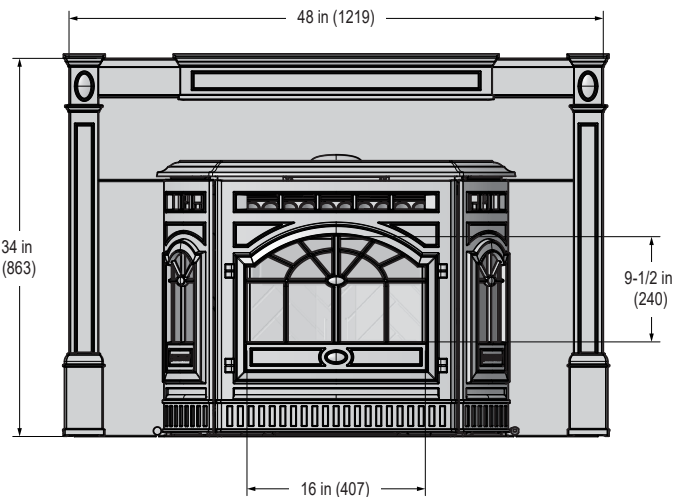


Figure 8.6 - Front View with Large Surround and Cast Panel Set

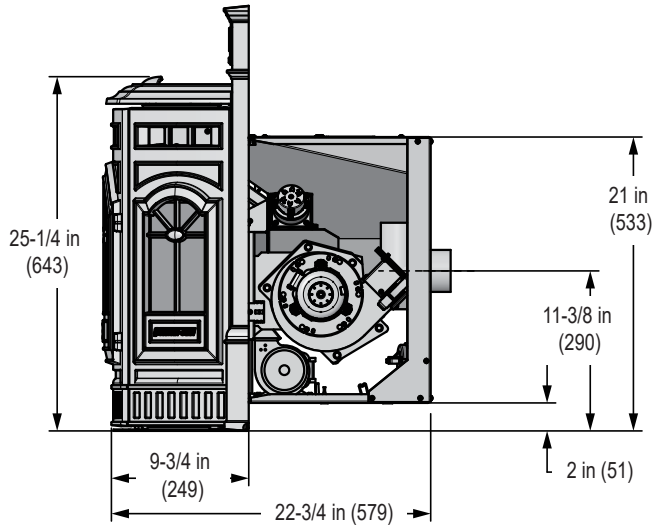


Figure 9.1 - Side View with Small or Large Surround and Cast Panel Set

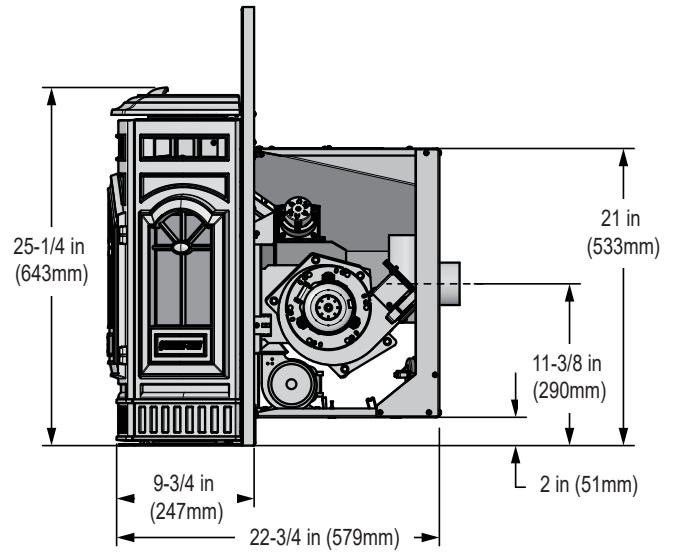


Figure 9.2 - Side View with Small or Large Surround Panel Set

B. Clearance To Combustibles, UL and ULC

AS A BUILT-IN - Framing Dimensions

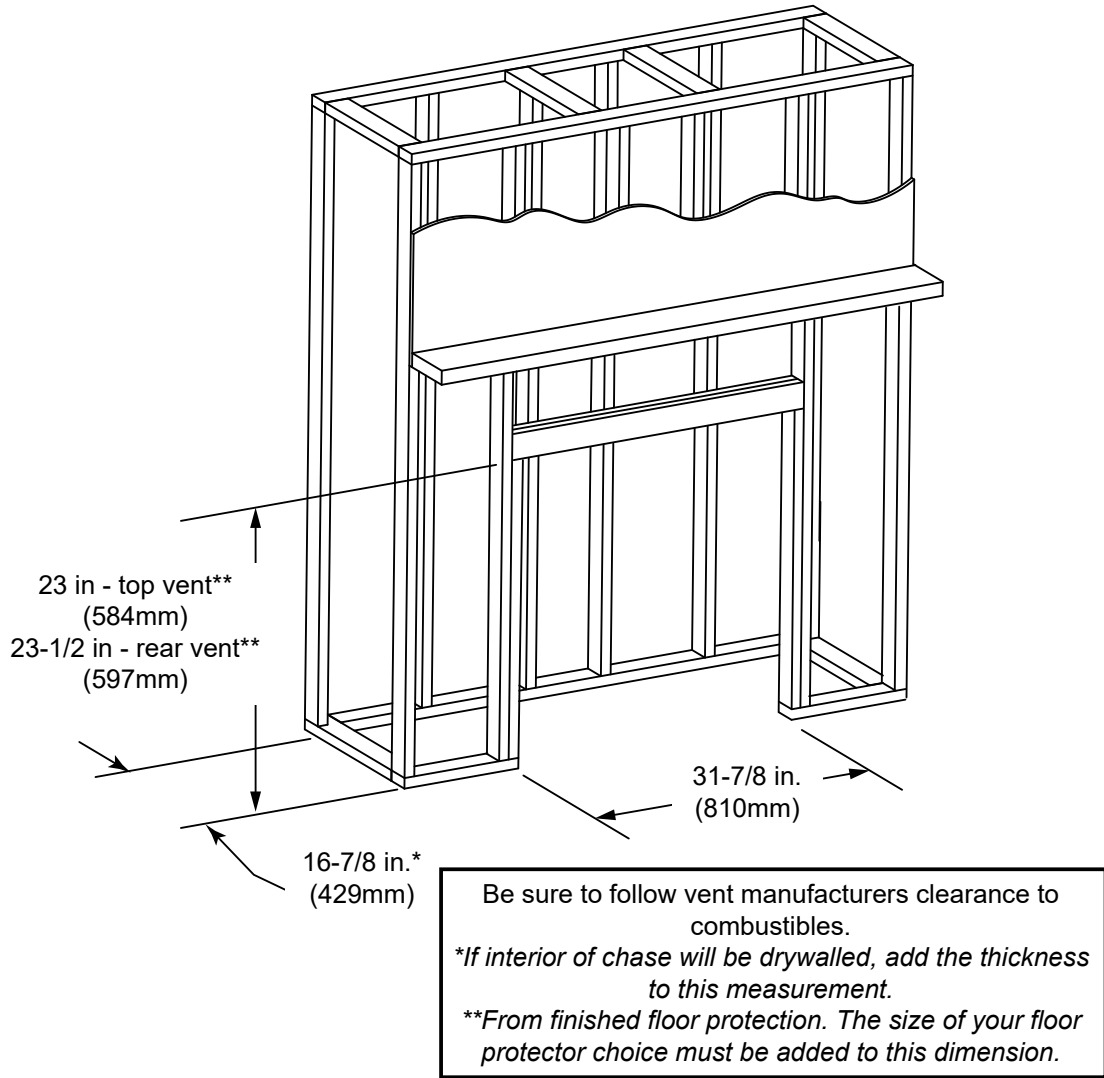


Figure 10.1

	<b>WARNING</b>
	<b>Fire Risk.</b> Comply with all minimum clearances to combustibles as specified. Failure to comply may cause house fire.

<b>NOTE:</b> <ul style="list-style-type: none"><li>• Illustrations reflect typical installations and are <u>FOR DESIGN PURPOSES ONLY</u>.</li><li>• Illustrations/diagrams are not drawn to scale.</li><li>• Actual installation may vary due to individual design preference.</li></ul>
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**C. Masonry Chimney and Fireplace Clearances**

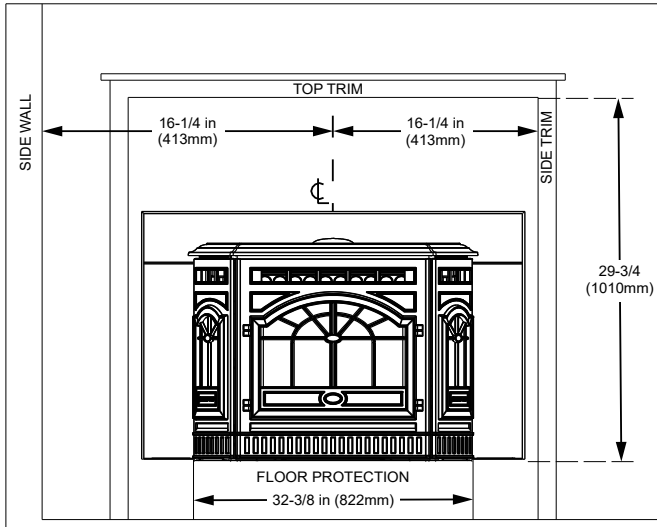


Figure 11.1

**NOTE:** If trim measurement is over 3/4 in (19mm) in depth use mantle or side clearances to combustibles.

**D. Minimum Opening for Masonry & ZC Fireplaces**

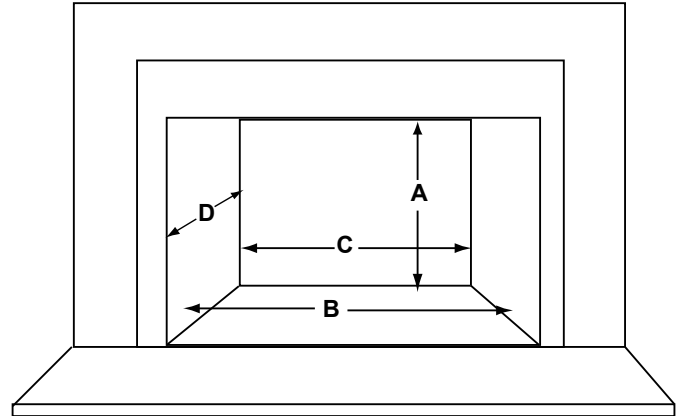


Figure 11.3

Location		Inches	Millimeters
A	Height	21-1/4	540
B	Front Width ( <i>Steel Panel Set</i> )	28-3/8	721
	Front Width ( <i>Cast Panel Set</i> )	28-1/4	718
C	Rear Width	23-7/8	606
D	Depth ( <i>Steel Panel Set</i> )	13-3/8	340
	Depth ( <i>Cast Panel Set</i> )	13-1/8	333

Table 11.1

**NOTE:** Minimum opening dimensions include a 1/4" (6mm) clearance around unit.

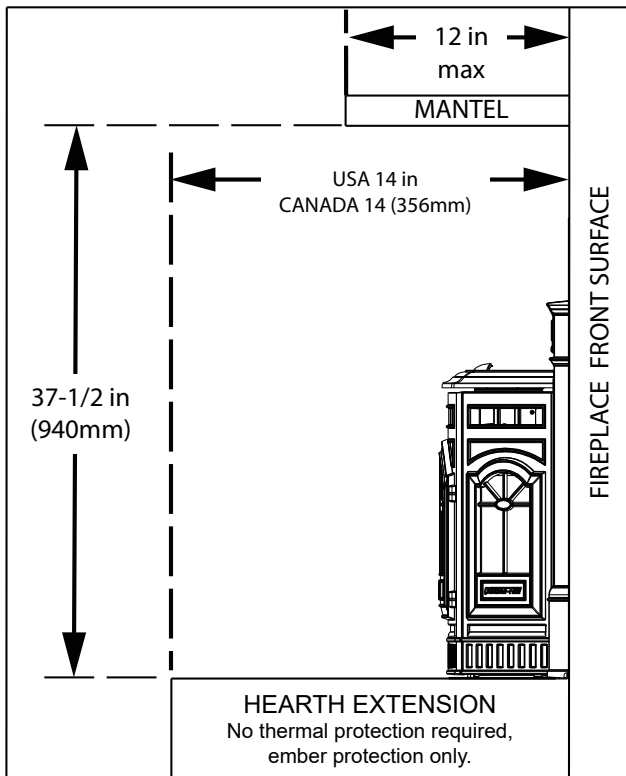


Figure 11.2

**NOTE:** It is necessary to permanently seal any opening between the masonry of the fireplace and the facing masonry.

**E. Hearth Extension**

Use a non-combustible ember floor protector, extending beneath the appliance and to the front, and to the sides as indicated in Floor Protection below.

**F. Floor Protection**

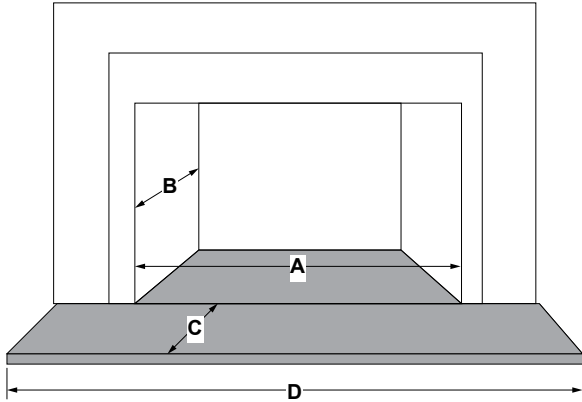


Figure 12.1

Minimum Floor Protection Dimensions		Inches	Millimeters
A	Front Width (Steel Panel Set)	28-3/8	540
	Front Width (Cast Panel Set)	28-1/4	721
B	Depth (Steel Panel Set)	13-3/8	718
	Depth (Cast Panel Set)	13-1/8	606
C	Floor Protection Depth	14	356
D	Floor Protection Width	32-3/8	822

Table 12.1

**G. Installation into a Factory-Built Fireplace**

The following modifications are permissible:

- Removal of damper or locked in open position
- Removal of smoke shelf or baffle
- Removal of ember catches
- Removal of fire grate
- Removal of view screen/curtain
- Removal of doors
- Removal of factory-built fireplace floor
- External trim pieces which do not affect the operation of the fireplace may be removed providing they can be stored on or within the fireplace for reassembly if the insert is removed.
- The permanent metal warning label provided must be attached to the back of the fireplace, with screws or nails, stating that the fireplace may have been altered to accommodate the insert, and must be returned to original condition for use as a conventional fireplace (Figure 12.2).

**WARNING**

THIS FIREPLACE MAY HAVE BEEN ALTERED TO ACCOMMODATE AN INSERT. IT MUST BE RETURNED TO ITS ORIGINAL CONDITION BEFORE USE AS A SOLID FUEL BURNING FIREPLACE.

250-2061

Figure 12.2

- If the hearth extension is lower than the fireplace opening, the portion of the insert extending onto the hearth must be supported.
- Manufacturer designed adjustable support kit can be ordered from your dealer.

**NOTE: Refer to chimney liner manufacturer for recommendations on supporting the liner. Installation into fireplaces without a permit will void the listing.**

- The firebrick (refractory), glass doors, screen rails, screen mesh and log grates can be removed from a factory-built firebox in order to gain minimum insert opening requirements.
- Any smoke shelves, shields and baffles may be removed from a factory-built firebox if attached with mechanical fasteners.
- The metal floor of the factory-built firebox may be removed to facilitate the installation of the insert only when a 1 inch (25mm) airspace is provided between the insert and the floor of outer wrap.

The following is only one example as there are many different models of factory-built fireplaces.

**NOTE: This example is for reference only. Any modifications must not compromise the structural integrity or reduce the protection for combustible materials.**

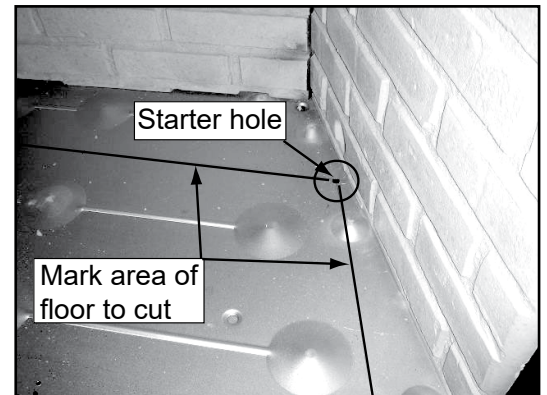


Figure 12.3

## CASTILE INSERT

Measure and mark the metal floor for cutting. With a drill, make a starter hole in each corner.



Figure 13.1

Using a saws-all, cut out the floor.

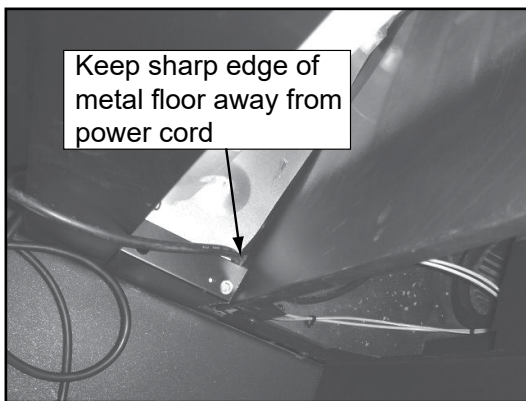


Figure 13.2.

Place the insert into the factory-built firebox. Ensure that the power cord can not be damaged by the sharp metal edge. You may need to cut out a notch to accommodate the cord.

## H. Installation into a Masonry Fireplace

All modifications that can be made to a Factory Built Fireplace can be made to a Masonry Fireplace.

In addition DO NOT remove any brick or mortar from the existing fireplace.



### WARNING

- Removing floor of fireplace must not weaken structure of firebox or reduce protection for combustible materials.
- Final approval of this installation type is contingent upon the appropriate local authority having jurisdiction.

## I. Prefabricated Metal Chimney

The chimney can be new or existing, masonry or prefabricated and must meet the following minimum requirements:

- Must be minimum 6 inch (152mm) inside diameter of, high temperature chimney listed to **UL 103 HT (2100 F) or ULC-S628**.
- Must use components required by the manufacturer for installation.
- Must maintain clearances required by the manufacturer for installation.
- Refer to manufacturers instructions for installation
- This insert is listed to **ASTM E 1509-12 Standard** and is approved for installation into listed factory-built zero clearance fireplaces listed to **UL 127** conforming to the following specifications and instructions:
- The original factory-built clearance fireplace chimney cap must be re-installed after installing the approved chimney liner meeting type **UL 103 HT requirements (2100°F) per UL 1777**.
- If the chimney is not listed as meeting HT requirements, or if the factory built fireplace was tested prior to 1998, a full height listed chimney liner must be installed from the appliance flue collar to the chimney top.
- The liner must be securely attached to the insert flue collar and the chimney top.
- The air flow of the factory-built zero-clearance fireplace system must not be altered. The flue liner top support attachment must not reduce the air flow for the existing air-cooled chimney system.
- No dilution air is allowed to enter the chimney.
  - a. Secure the fireplace damper in the open position. If this cannot be accomplished, it will be necessary to remove the damper
  - b. Seal damper area of chimney around chimney connector with a high temperature sealant or seal insert against the face of the fireplace.
  - c. Both methods must be removable and replaceable for cleaning and re-installation.



### WARNING



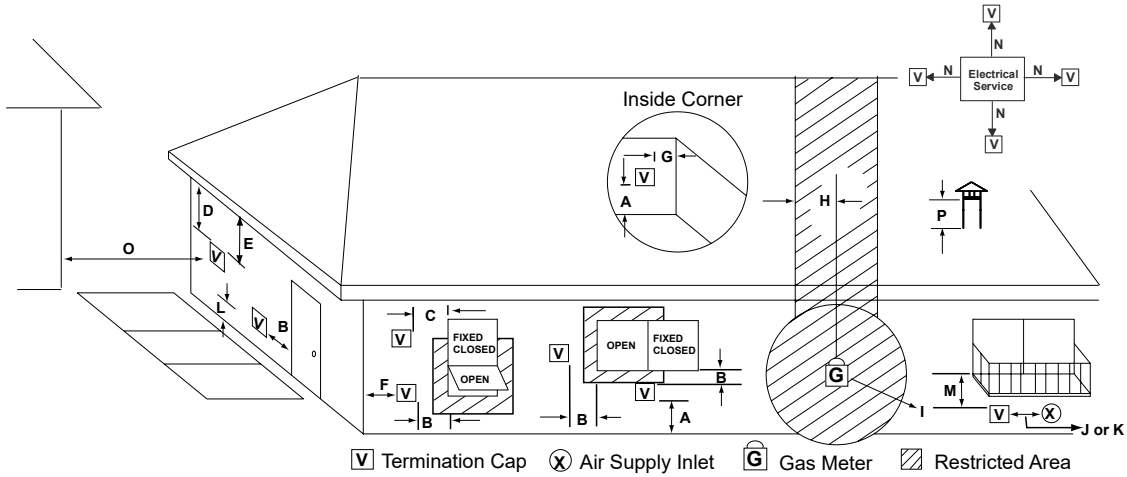
#### Risk of Fire!

Follow venting manufacturer's clearances and instructions when installing venting system.

**NOTICE:** In Canada when using a factory-built chimney it must be safety listed, **Type UL103 HT (2100°F) [1149°C] CLASS "A" or conforming to CAN/ULC-S629M, STANDARD FOR 650°C FACTORY-BUILT CHIMNEYS.**

# 4 Vent Information

## A. Venting Termination Minimum Requirements



All minimum clearances are listed with an Outside Air Kit (OAK) installed, unless otherwise noted in table below.

<b>A</b>	12 in.	Above Finish Grade (the grade surface must be a non-combustible material)
<b>B</b>	12 in. 48 in. no OAK	Open door or window: below or to the side
<b>B</b>	12 in.	Open door or window: above
<b>C</b>	6 in.	Permanently closed window: above, below or to the side
<b>D</b>	18 in. 36 in. no OAK	Vertical clearance to a ventilated soffit located above the terminal within a horizontal distance of 2 ft from the center-line of the terminal
<b>E</b>	12 in.	Clearance to unventilated soffit
<b>F</b>	12 in.	Clearance to outside corner
<b>G</b>	12 in.	Clearance to inside corner
<b>H</b>	36 in.	Above gas meter/regulator measured from horizontal center-line of regulator
<b>I</b>	36 in. USA 72 in. Canada	Clearance to service regulator vent outlet
<b>J</b>	12 in. 48 in. no OAK	Clearance to non-mechanical air supply inlet to the building or the combustions air inlet to any other appliance
<b>K</b>	10 ft horizontal 3 ft vertical	Clearance to mechanical air supply
<b>L</b>	7 ft.	Above paved sidewalk, paved driveway located on <b>public</b> property
<b>M</b>	12 in.	Under an open veranda, porch, deck or balcony
<b>N</b>	See Note below*	Electric service: above, below or to the side (location must not obstruct or interfere with access)
<b>O</b>	24 in.	Adjacent building, fences and protruding parts of the structure
<b>P</b>	12 in.	Clearance above roof line for vertical terminations

24 in.	Above grass, top of plants, wood or any other combustible
12 in. 36 in. no OAK	Clearance from any forced air intake of other appliance
12 in.	Clearance horizontally from combustible wall
15 in.	Vented directly through a wall, minimum length of horizontal pipe
6 in. horizontal 12 in. vertical	Minimum horizontal or vertical terminations must protrude from wall

**NOTICE:** Termination must exhaust above air inlet elevation.

- It is recommended that at least 60 inches (1.52m) of vertical pipe be installed when appliance is vented directly through a wall. This will create a natural draft, which will help prevent the possibility of smoke or odor venting into the home during a power outage.
- It will also keep exhaust from causing a nuisance or hazard by exposing people or shrubs to high temperatures.
- The safest and preferred venting method is to extend the vent vertically through the roof or above the roof.

**NOTICE: Do NOT Terminate Vent:**

- In any location that will allow flue gases or soot from entering or staining the building.
- In any location which could create a nuisance or hazard.
- In any enclosed or semi-enclosed area such as a carport, garage, attic, crawl space, under a sun deck or porch, narrow walkway.
- Closely fenced area, or any location that can build up a concentration of fumes such as a stairwell, covered breezeway, etc.

**\*NOTE:** Consult local building, fire officials or authorities having jurisdiction. Local codes or regulations may require different clearances.

**B. Avoiding Smoke and Odors  
Negative Pressure, Shut-Down and Electrical Power Failure**

To reduce the probability of back-drafting or burn-back in the pellet appliance during power failure or shut down conditions, it must be able to draft naturally without exhaust blower operation.

Negative pressure in the house will resist this natural draft if not accounted for in the pellet appliance installation.

Heat rises in the house and leaks out at upper levels. This air must be replaced with cold air from outdoors which flows into lower levels of the house.

Vents and chimneys into basements and lower levels of the house can become the conduit for air supply and reverse under these conditions.

**Outside Air**

An outside air kit is recommended in all installations. The Outside Air Kit must be ordered separately.

Per national building codes, consideration must be given to combustion air supply to all combustion appliances. Failure to supply adequate combustion air for all appliance demands may lead to back drafting of those and other appliances.

When the appliance is roof vented (strongly recommended):

- The air intake is best located on the exterior wall oriented towards the prevailing wind direction during the heating season.

When the appliance is side-wall vented:

- The air intake is best located on the same exterior wall as the exhaust vent outlet and located lower on the wall than the exhaust vent outlet.

The outside air supply kit can supply most of the demands of the pellet appliance, but consideration must be given to the total house demand.

House demand may consume the air needed for the appliance. It may be necessary to add additional ventilation to the space in which the pellet appliance is located.

Consult with your local HVAC professional to determine the ventilation demands for your house.


**Vent Configurations**

When installing a pellet appliance with a horizontal vent configuration the frequency of power outages should be considered:

- Power outages during operation will cause the appliance to immediately turn off and may create conditions where smoke will back draft into the house. In order to reduce the likelihood of smoke back drafting into the house during a power outage, Hearth and Home Technologies strongly suggests:
  - Installing the pellet venting with a minimum vertical run of 5 feet (1.52m).
  - Installing the outside air kit at least 4 feet (1.22m) below the vent termination.

To prevent soot damage to exterior walls of the house and to prevent re-entry of soot or ash into the house:

- Maintain specified clearances to windows, doors and air inlets, including air conditioners.
- Vents should not be placed below ventilated soffits. Run the vent above the roof.
- Avoid venting into alcove locations.
- Vents should not terminate under overhangs, decks or onto covered porches.
- Maintain minimum clearance of 12 inches (305mm) from the vent termination to the exterior wall. If you see deposits developing on the wall, you may need to extend this distance to accommodate your installation conditions.

 <span style="font-size: 1.2em; font-weight: bold; margin-left: 10px;">CAUTION</span>
<ul style="list-style-type: none"> <li>• DO NOT CONNECT THIS APPLIANCE TO A CHIMNEY FLUE SERVICING ANOTHER APPLIANCE.</li> <li>• DO NOT CONNECT TO ANY AIR DISTRIBUTION DUCT OR SYSTEM.</li> </ul>

<p><b>Hearth &amp; Home Technologies assumes no responsibility for, not does the warranty extend to, smoke damage caused by reverse drafting of pellet appliances under shut down or power failure conditions.</b></p>
--

### C. Negative Pressure



#### WARNING

##### Risk of Asphyxiation!

Negative pressure can cause spillage of combustion fumes and soot.

Negative pressure results from the imbalance of air available for the appliance to operate properly. It can be strongest in lower levels of the house.

##### Causes include:

- Exhaust fans (kitchen, bath, etc.)
- Range hoods
- Combustion air requirements for furnaces, water appliances and other combustion appliances
- Clothes dryers
- Location of return-air vents to furnace or air conditioning
- Imbalances of the HVAC air handling system
- Upper level air leaks such as:
  - Recessed lighting
  - Attic hatch
  - Duct leaks

##### To minimize the effects of negative air pressure:

- Install the outside air kit with the intake facing prevailing winds during the heating season
- Ensure adequate outdoor air for all combustion appliances and exhaust equipment
- Ensure furnace and air conditioning return vents are not located in the immediate vicinity of the appliance
- Avoid installing the appliance near doors, walkways or small isolated spaces
- Recessed lighting should be a “sealed can” design
- Attic hatches weather stripped or sealed
- Attic mounted duct work and air handler joints and seams taped or sealed.

### D. Draft

Draft is the pressure difference needed to vent an appliance successfully. When an appliance is drafting successfully, all combustion byproducts are exiting the home through the chimney.

Install through the warm airspace enclosed by the building envelope. This helps to produce more draft, especially during lighting and die-down of the fire.

##### Considerations for successful draft include:

- Preventing negative pressure
- Location of appliance and chimney

**NOTICE:** Hearth & Home Technologies assumes no responsibility for the improper performance of the chimney system caused by:

- Inadequate draft due to environmental conditions
- Down drafts
- Tight sealing construction of the structure
- Mechanical exhausting devices

### E. Chimney and Exhaust Connection

**NOTE:** The appliance exhaust outlet is designed to accommodate 3 inch venting. Use of 4 inch venting requires the use of a 3-to-4 inch exhaust vent increaser in addition to any other venting components needed, sold separately.

1. **Chimney & Connector:** Use 3 or 4 inch (76-102mm) diameter type “L” or “PL” venting system. It can be vented vertically or horizontally.
2. **Mobile Home:** Approved for all Listed pellet vent. A Quadra-Fire Outside Air Kit must be used with manufactured home installations.
3. **Install vent at clearances specified by the vent manufacturer.**
4. Seal exhaust venting system to the unit with High Temp 500°F RTV silicone sealant. Secure the venting system to the unit with at least (3) screws. All pellet vent pipe must be secured together either by means provided by the pipe manufacturer or by (3) screws at each joint.
5. **DO NOT INSTALL A FLUE DAMPER IN THE EXHAUST VENTING SYSTEM OF THIS APPLIANCE.**
6. **DO NOT CONNECT THIS APPLIANCE TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE.**

**NOTE:** Follow venting manufacturers recommendations for sealing pipe joints.





#### WARNING

USE ONLY RECOMMENDED VENTING COMPONENTS; OTHERWISE MAKESHIFT PARTS MAY RESULT IN PROPERTY DAMAGE, PERSONAL INJURY, OR DEATH.

### F. Equivalent Feet of Pipe

The table below can help you calculate the equivalent feet of pipe which is a method used to determine pellet vent size (Figure 17.1).


WARNING



Vent surfaces get HOT, can cause burns if touched. Non-combustible shielding or guards may be required.

### Example of 3 Elbow-Rear Vent Termination Calculation

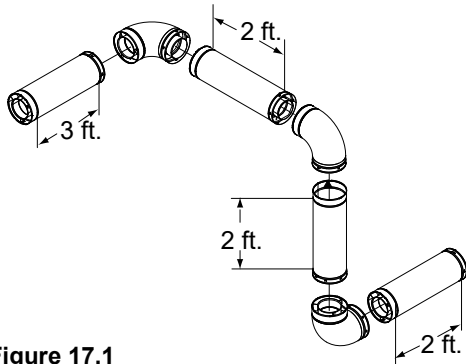


Figure 17.1

Pellet Venting Component	# of Elbows	Feet of Pipe	Multiplied By	Equivalent Feet	Components Equivalent Feet
90° Elbow or Tee	3		X	5	15
45° Elbow			X	3	
Horizontal Pipe		7	X	1	7
Vertical Pipe		2	X	0.5	1
Total Equivalent Feet					23

**NOTE:** This is a generic example and is not intended to represent any specific fuel type.

### G. Pipe Selection Chart

The chart will help you in determining proper venting size according to the equivalent feet of pipe calculated previously and the altitude above sea level of this installation (Figure 17.2).

1. Locate the calculated equivalent feet of pipe on the vertical left side of the chart.
2. Move to the right horizontally on the chart until you reach your altitude above sea level.
3. If you fall below the diagonal line, 3 or 4 inch (76 to 102mm) pipe may be used.
4. If it is anywhere above the diagonal line, a 4 inch (102mm) diameter pipe is required.

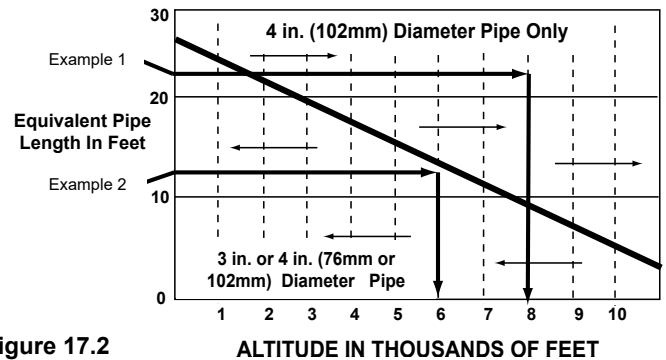




Figure 17.2

**NOTICE:** A 90° elbow is 5 times as restrictive to the flow of exhaust gases under positive pressure as 1 foot (305mm) of horizontal pipe. A foot of horizontal pipe is twice as restrictive as a foot of vertical pipe.


- **Example 1:** If the equivalent length of pipe is 23 feet (7m) with altitude of 8,000 feet (2438m) you must use 4 inch (102mm) diameter type “L” or “PL” vent.
- **Example 2:** If the equivalent length of pipe is 12 feet (3.7m) with altitude of 6,000 feet (1829m) you may use 3 or 4 inch (76 to 102mm) diameter type “L” or “PL” vent.



WARNING



**Risk of Fire!**

- Only LISTED venting components may be used.
- NO OTHER vent components may be used.
- Substitute or damaged vent components may impair safe operation.


WARNING



**Risk of Injury or Property Damage.**

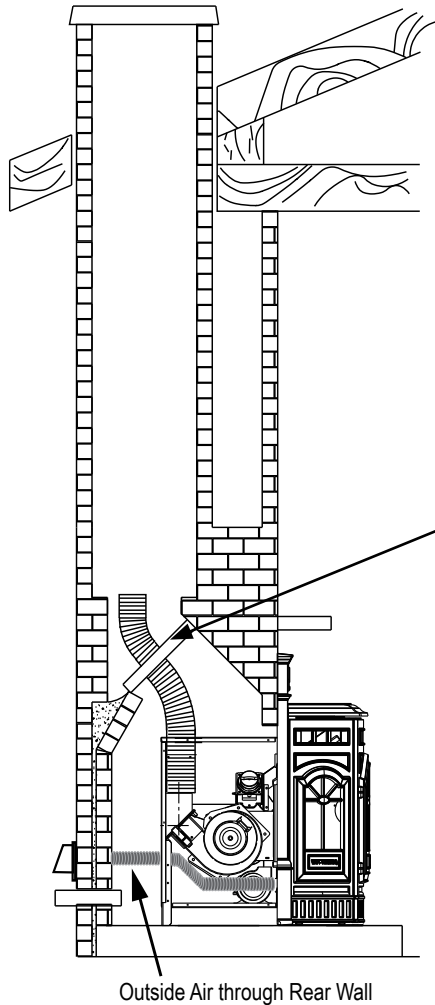
- Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage.
- Refer to the owner’s information manual provided with this appliance.
- For assistance or additional information consult a qualified installer, service agency or your dealer.

# 5 Venting Systems

## A. Direct Connect with Outside Air

## B. Direct Connect without Outside Air

**NOTE:** In Canada, only a full reline is allowed per **ULC S628-93, ORD ULC C1482-M1990.**



Outside Air through Rear Wall

**NOTE:**

- Use non-combustible material around exhaust vent pipe and seal all edges with non-flammable insulation such as fiberglass, mineral wool or ceramic material.
- DO NOT use high temperature caulking materials to seal any edge to prevent future serviceability.

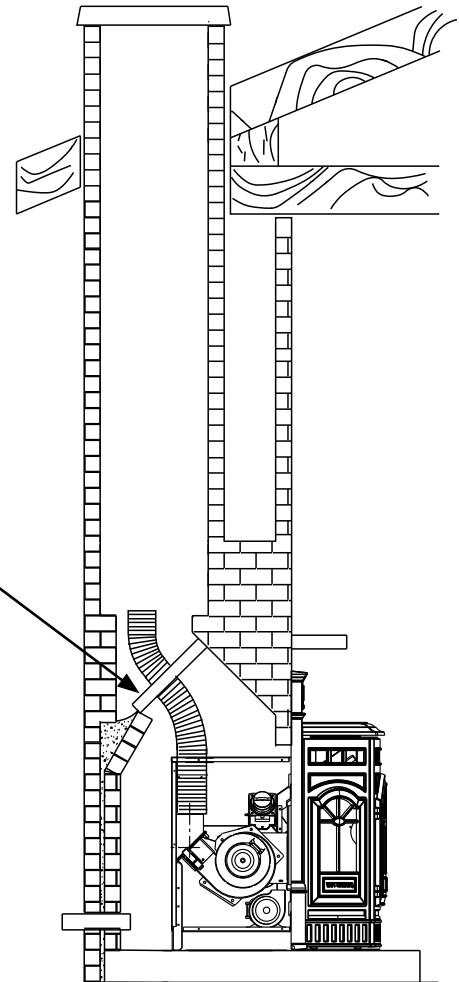


Figure 18.1

Figure 18.2

**NOTE:**

- Illustrations reflect typical installations and are FOR DESIGN PURPOSES ONLY.
- Illustrations/diagrams are not drawn to scale.
- Actual installation may vary due to individual design preference.

**CAUTION**

Never draw outside combustion air from:

- Wall, floor or ceiling cavity
- Enclosed space such as an attic or garage

**WARNING**


**Fire Risk.**  
 Inspection of Chimney:

- Masonry chimney must be in good condition.
- Meets minimum standard of **NFPA 211**
- Factory-built chimney must be a minimum 6 inch (152mm) **UL103 HT.**

**NOTE:** In Canada, where passage through a wall or partition of combustible construction is desired, the installation shall conform to **CAN/CSA-B365.**



**C. Full Reline With Outside Air - Horizontal**

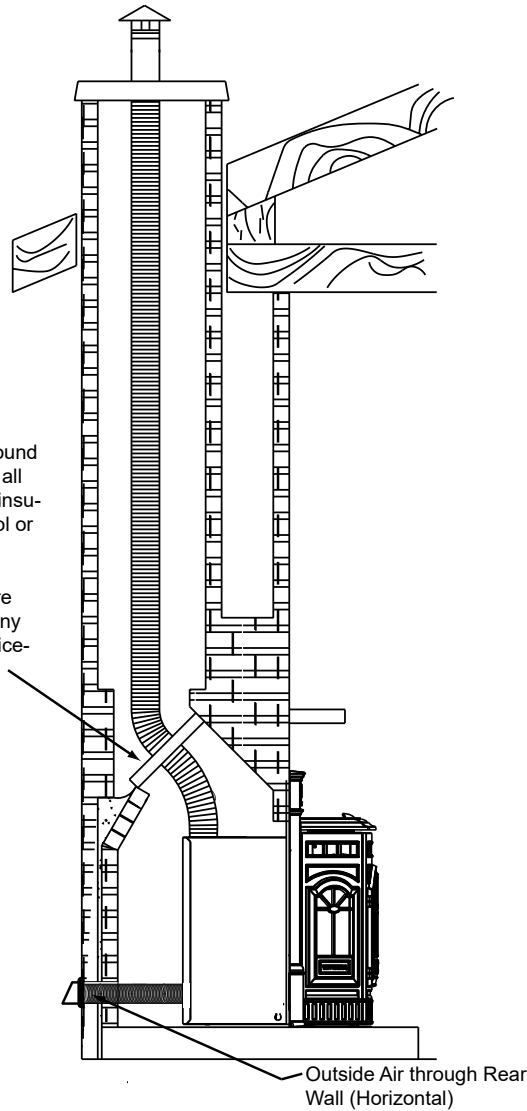
 <p><b>CAUTION</b></p>
<p>Never draw outside combustion air from:</p> <ul style="list-style-type: none"> <li>• Wall, floor or ceiling cavity</li> <li>• Enclosed space such as an attic or garage</li> </ul>

 <p><b>WARNING</b></p>
<p><b>Fire Risk.</b> Inspection of Chimney:</p> <ul style="list-style-type: none"> <li>• Masonry chimney must be in good condition.</li> <li>• Meets minimum standard of <b>NFPA 211</b></li> <li>• Factory-built chimney must be a minimum 6 inch (152mm) <b>UL103 HT.</b></li> </ul>



NOTE; Use metal plate around exhaust vent pipe and seal all edges with non-flammable insulation such as , mineral wool or ceramic.

Do not use high temperature caulking materials to seal any edge to prevent future serviceability.



**Figure 19.1**

**NOTE:** In Canada, where passage through a wall or partition of combustible construction is desired, the installation shall conform to **CAN/CSA-B365.**

**NOTE:**

- Illustrations reflect typical installations and are FOR DESIGN PURPOSES ONLY.
- Illustrations/diagrams are not drawn to scale.
- Actual installation may vary due to individual design preference.

**D. Full Reline With Outside Air - Vertical**

**NOTE:** Check clearances carefully for this type of installation to ensure adequate room for outside air venting.

**NOTE:** In Canada, only a full reline is allowed per **ULC S628-93, ORD ULC C1482-M1990.**



**CAUTION**

Check building codes prior to installation.

- Installation **MUST** comply with local, regional, state and national codes and regulations.
- Consult local building, fire officials or authorities having jurisdiction about restrictions, installation inspection, and permits.

**NOTE:** In Canada this fireplace insert must be installed with a continuous chimney liner extending from the fireplace insert to the top of the chimney. The chimney liner must conform to the Class 3 requirements of **CAN/ULC-S635, Standard for Lining Systems for Existing Masonry or Factory-Built Chimneys and Vents, or CAN/ULC-S640, Standard for Lining Systems for New Masonry Chimneys.**

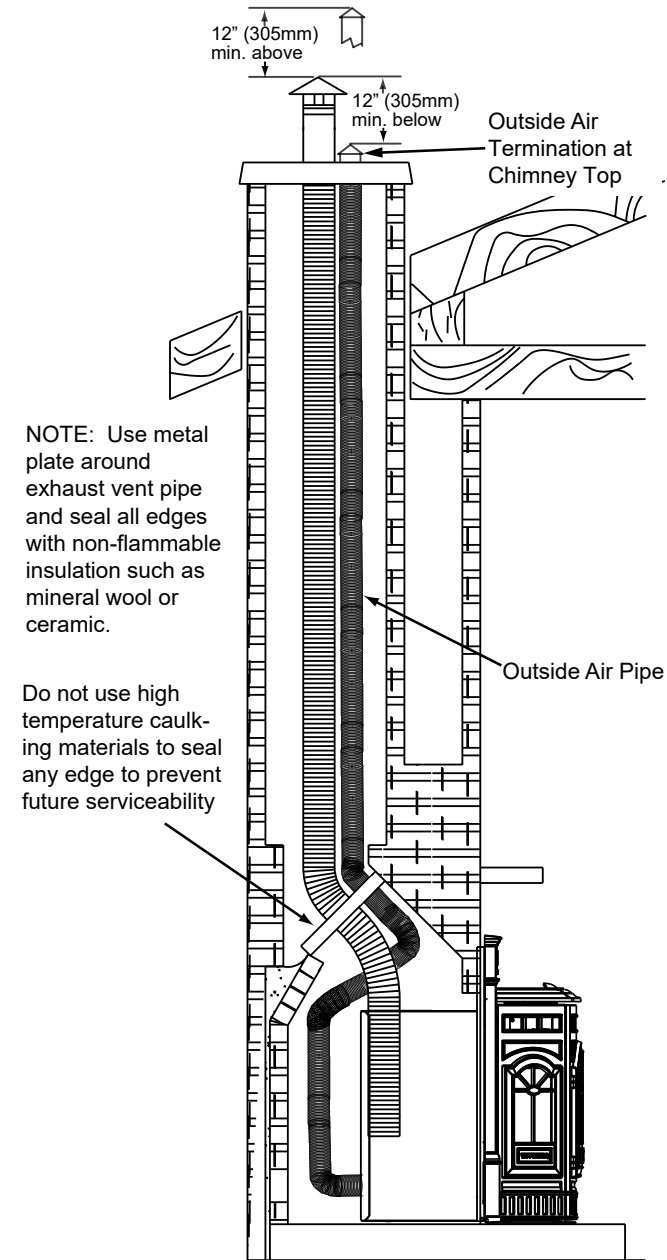


Figure 20.1

# 6 Appliance Set-Up

## A. Leveling System

The leveling bolts are located at the rear of the appliance. To access the bolts, remove the side access panels. Reach in and turn the bolt to the desired height to level the appliance (**Figures 21.1 and 21.2**).

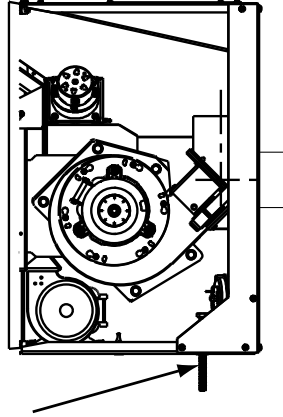


Figure 21.1 Leveling Bolt on each Side

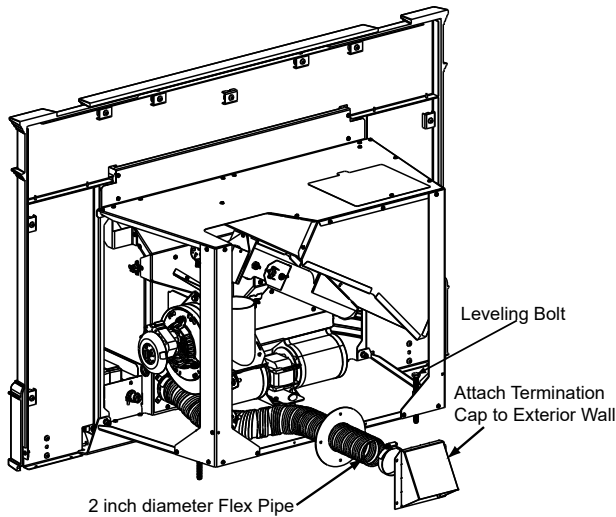


Figure 21.2

## B. Door Handle Removal

1. Open the door.
2. Using a 5/32 Allen wrench, loosen set screw by a couple of turns, but do not remove.
3. Push the pin completely out and remove the handle.
4. Re-install in reverse order.

## C. Door Removal

1. Remove the door handle and face.
2. The door can now be lifted off the hinges.
3. Re-install in reverse order.

## D. Outside Air Kit Instructions

1. Measure distance from floor to air vent opening in appliance and mark location on wall.
2. Use saw to cut opening in wall. Cut a 2-1/2 to 3 inch (64-76mm) opening on inside wall and a 3 to 3-1/2 inch (76-89mm) opening on outside of house.
3. Use hose clamp to secure flex pipe to collar assembly (**Figure 21.3**).
4. Slide trim ring over flex pipe and run pipe through wall.
5. Attach hose to outside termination cap with second hose clamp.
6. Secure termination cap to outside surface.
7. Secure trim ring to interior wall.



### CAUTION

Never draw outside combustion air from:

- Wall, floor or ceiling cavity
- Enclosed space such as an attic or garage

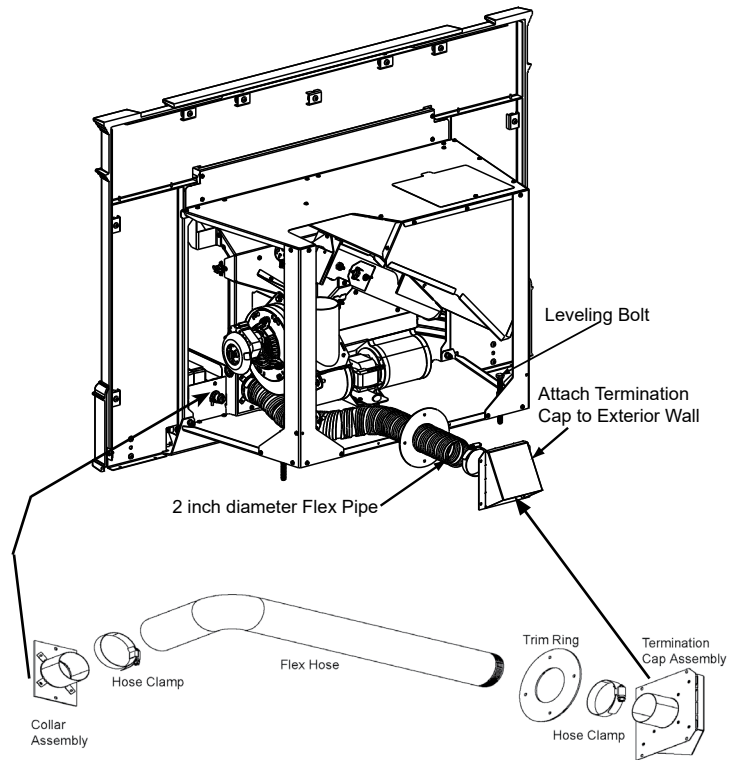


Figure 21.3

**E. Surround & Trim Set**

1. Lay surround face down on a flat protected surface to prevent scratching.
2. Using the Phillips head screwdriver attach the side surrounds to the top surround using 2 sheet metal screws provided with the kit on each side.
3. Assemble the trim with the two corner brackets provided.
4. Slide the assembled trim over the assembled surround set.
5. Remove the cast sides before attaching the surround and trim. Lift up the top to expose the thumb screws that secure the cast sides. Remove the thumb screw and top bracket and then remove the cast side.

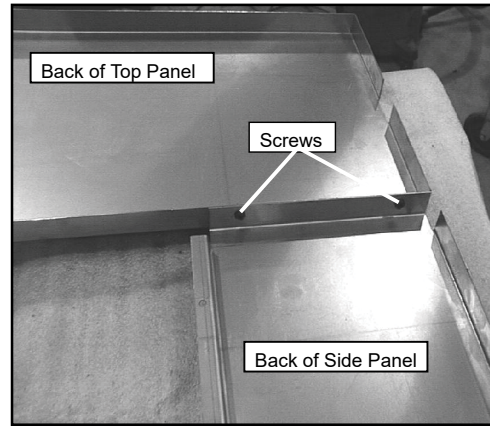


Figure 22.2

**NOTE:** The right cast side bracket has the hopper cut out switch attached. Remove the retainer from the right side and allow to hang down into the insert or disconnect the switch when removing side.

6. Install the power cord in the surround.
  - **If power enters the appliance on the right side:** Using the pliers, attach cord restraint 12 inches from the female end of the cord and then press into the right side panel (**Figure 22.1**).
  - **If power enters appliance on the left side:** The cord will have to be routed through the back of the insert. When routing the power cord, keep cord lying flat as possible, keeping the cord away from all exhaust surfaces and moving parts. After routing, install cord restraint and press into the left side panel.
7. Slide surround over the top of the insert into place. Surround attaches to bottom and top of insert sides with the supplies 1/4 inch screws.
8. Plug cord into inlet on junction box routing the wire.
9. Install plug into unused hole.

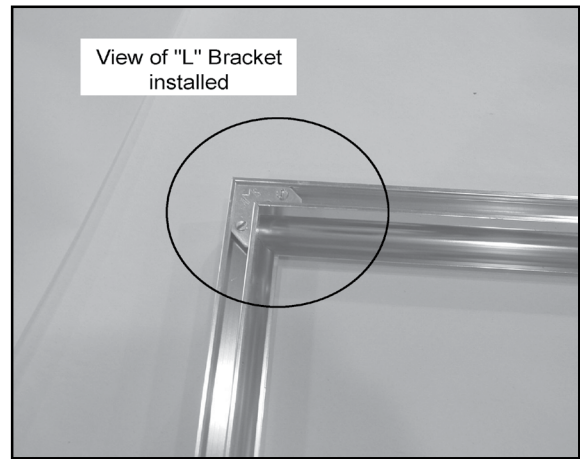


Figure 22.3

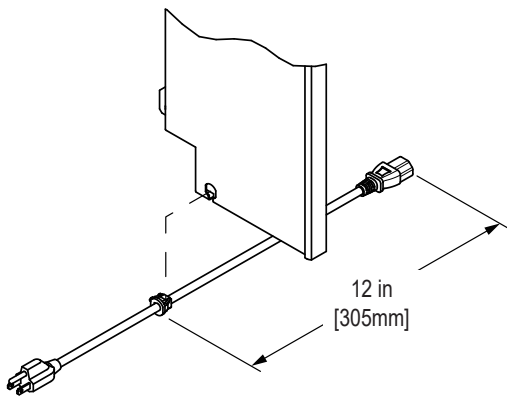


Figure 22.1

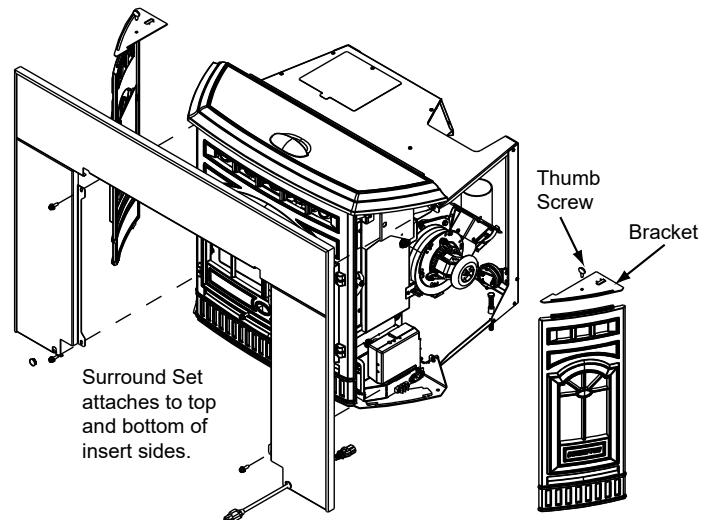
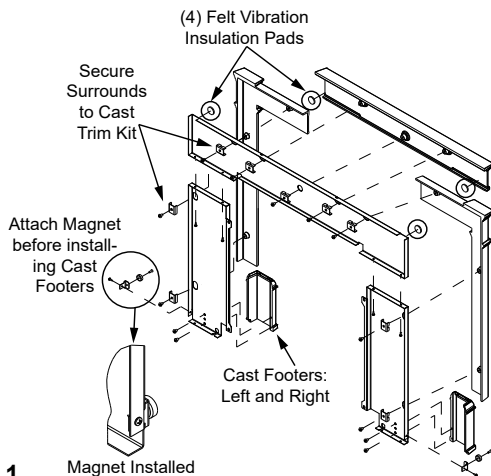


Figure 22.4

**F. Surround and Cast Trim Set**

1. Place the peel and stick round felt vibration insulation pads on the front side in each corner of the top metal piece and on the back side in each corner of the top cast piece (**Figure 23.1**).
2. Lay surround face down on a flat protected surface to prevent scratching.
3. Using the Phillips screwdriver attach the side surrounds to the top surround using 2 sheet metal screws provided with the kit on each side.
4. Assemble Cast Trim and attach to surround:
  - a. Place corresponding cast trim pieces (2 cast trim sides and 1 cast trim header) underneath the surround set, also face down. Align the holes in the metal pieces with the 5 bosses on the top cast piece and 2 bosses on each side piece (**Figure 23.1**).
  - b. Attach the magnets to the magnet brackets with one countersink screw each. Attach magnet and bracket to the metal surround sides with magnet facing the front as shown in **Figure 23.1**.
  - c. Place cast footers under metal sides aligning the top and bottom holes.
  - d. The 9 mounting clips are shipped in one long strip. Use your hands or pliers to break them apart.



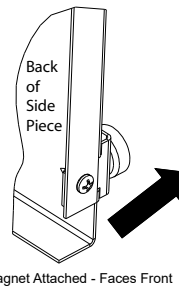
**Figure 23.1**

- e. Each clip has a clearance notch to allow room for the cast on the boss. Place the clips over the boss so that the notch is facing the outer edge of the surround (**Figure 23.3**).
- f. It is best to install all of the 1/4-20 screws only half way at first to allow for adjustments. After adjustment tighten the 2 screws in each footer first and then work your way around to the rest.

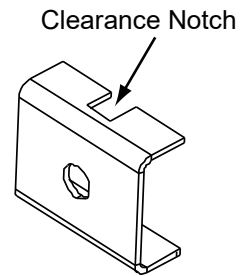
5. Remove the cast sides before attaching the surround and trim. Lift up the top to expose the thumb screws that secure the cast sides. Remove the thumb screw and top bracket and then remove the cast side.

**NOTE:** The right cast side bracket has the hopper cut out switch attached. Remove the retainer from the right side and allow to hang down into the insert or disconnect the switch when removing side.

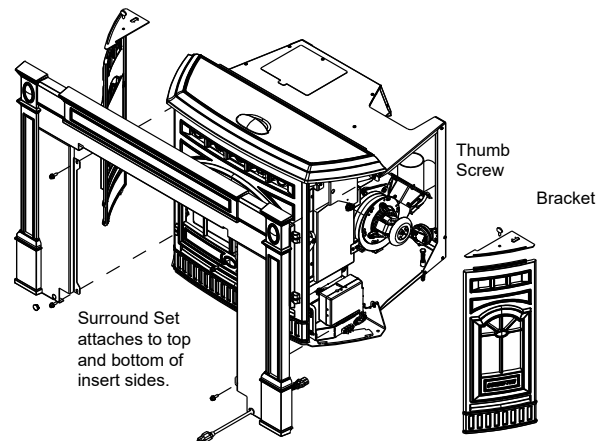
6. Install the power cord in the surround:
  - **If power enters the appliance on the right side:** Using the pliers, attach cord restraint 12 inches from the female end of the cord and then press into the right side panel.
  - **If power enters appliance on the left side:** The cord will have to be routed through the back of the insert. When routing the power cord, keep cord lying flat as possible, keeping the cord away from all exhaust surfaces and moving parts. After routing, install cord restraint and press into the left side panel.
7. Slide surround over the top of the insert into place. Surround attaches to bottom and top of insert sides with the supplies 1/4 inch screws.
8. Plug cord into inlet on junction box routing the wire.
9. Install plug into unused hole.



**Figure 23.2**



**Figure 23.3**




**Figure 23.4**

## G. Thermostat Installation

The kit comes with a programmable wall thermostat and 25' of thermostat wire. If you need to run more than 25' make sure you use a continuous strand of 18 to 22 gauge thermostat wire. For optimum performance your thermostat should be:

- Mounted on an inside wall, approximately 5' above the floor
- Do not locate where there is poor air circulation such as in a corner, alcove, behind doors, bookcase or other objects
- Located away from drafts, direct sunlight, above a lamp, television, radiator, a wall next to a window, or direct heat from the appliance
- Avoid damp environments as this can lead to corrosion that may shorten thermostat life
- If painting or construction work around, cover the thermostat completely or wait until work is complete before installation.



### CAUTION

**Shock hazard.**

- Do NOT remove grounding prong from plug.
- Plug directly into properly grounded 3 prong receptacle.
- Route cord away from appliance.
- Do NOT route cord under or in front of appliance.

1. Separate the body of the thermostat from the mounting plate by gently pulling the two pieces apart (**Figure 24.1**)

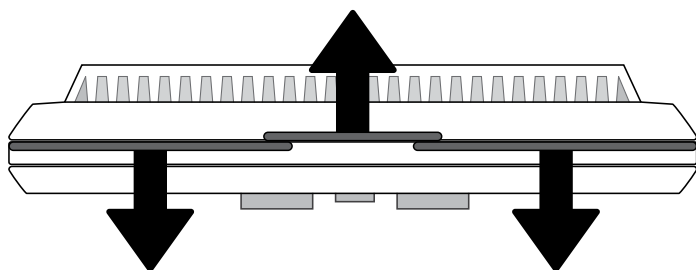


Figure 24.1

2. Use a drill with either a 3/16 drill bit for drywall or a 7/32 drill bit for plaster drill holes.
3. Using a hammer tap in wall anchors.
4. Route the wires through the opening in the base plate, and hold the base against the wall while aligning up to the holes. Attach base plate using a Phillips head screwdriver and two screws.
5. Connect your thermostat wire to the W and R terminals (**Figure 24.2**).

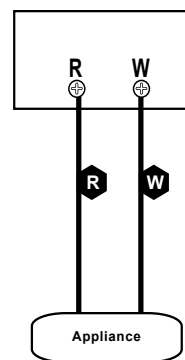


Figure 24.2

**NOTE:** Ensure bare wire ends are held ALL the way into the terminal block while the screws are being tightened.

6. There are two **AA ALKALINE ONLY** batteries already installed into the thermostat; to activate, remove black plastic tab that is located inside the battery compartment.

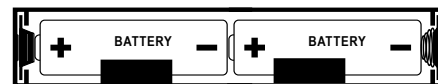


Figure 24.3

7. Snap the thermostat to the base plate.

### Connect thermostat wires to appliance:

There is a 4 screw terminal block located on the back lower left corner of the stove directly above the power cord inlet. The center 2 screws are for the thermostat wires (**Figure 24.4**).

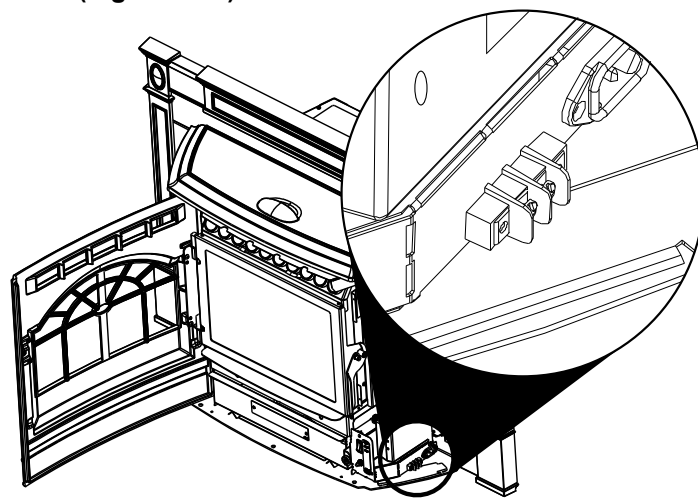


Figure 24.4

## H. Optional Log Set Placement Instructions

### Two Piece Log Set Installation

1. Open door to expose the firebox.
2. Install the left log first and then the right log (**Figure 25.1**).
3. Lean the logs against the cast iron brick in the back of the firebox.
4. Push the logs to the far left and far right against the sides of the firebox (**Figure 25.2**).
5. To clean the logs, use a vacuum cleaner and a soft brush attachment or a paint brush.



### CAUTION

Logs are FRAGILE. Use extreme care when handling or cleaning logs.

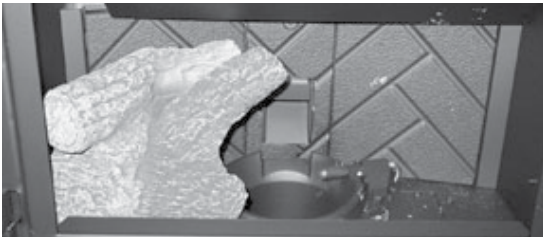


Figure 25.1

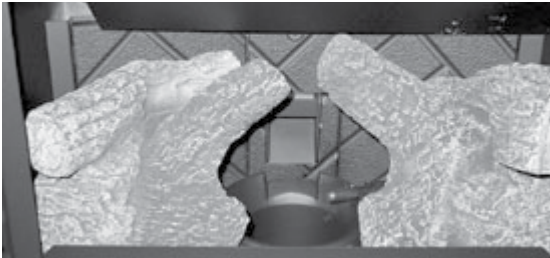


Figure 25.2


**NOTE:** Due to the abrasive nature of a pellet appliance fire, the logs are not covered under warranty. Any placement variation other than shown here can cause excessive heat and shall void the appliance warranty.


# 7 Mobile Home Installation


You must use a Quadra-Fire Outside Air Kit for installation in a mobile home.

1. An outside air inlet must be provided for the combustion air and must remain clear of leaves, debris, ice and/or snow. It must be unrestricted while the appliance is in use to prevent room air starvation which causes smoke spillage. Smoke spillage can also set off smoke alarms.
2. The combustion air duct system must be made of metal. It must permit zero clearance to combustible construction and prevent material from dropping into the inlet or into the area beneath the dwelling and contain a rodent screen.
3. The appliance must be secured to the mobile home structure by bolting it to the floor (using lag bolts). Use the same holes that secured the appliance to the shipping pallet.
4. The appliance must be grounded with #8 solid copper grounding wire or equivalent, terminated at each end with an NEC approved grounding device.
5. Refer to Clearances to Combustibles and floor protection requirements on page 7 & 8 for listings to combustibles and appropriate chimney systems.
6. Use silicone to create an effective vapor barrier at the location where the chimney or other component penetrates to the exterior of the structure.
7. Follow the chimney manufacturer's instructions when installing the vent system for use in a mobile home.
8. Installation shall be in accordance with the **Manufacturers Home & Safety Standard (HUD) CFR 3280, Part 24.**

**PART NUMBER: 811-0872**

 <p><b>CAUTION</b></p>
<p>Never draw outside combustion air from:</p> <ul style="list-style-type: none"> <li>• Wall, floor or ceiling cavity</li> <li>• Enclosed space such as an attic or garage</li> </ul>

 <p><b>WARNING</b></p>
<p><b>It is critical to have a working smoke detector installed in the home of appliance operation.</b></p> <ul style="list-style-type: none"> <li>• Smoke alarms that are properly installed and maintained play a vital role in reducing fire deaths and injuries. Having a working smoke alarm reduces the chance of fire related injuries.</li> </ul>

 <p><b>CAUTION</b></p>
<p>THE STRUCTURAL INTEGRITY OF THE MOBILE HOME FLOOR, WALL AND CEILING/ROOF MUST BE MAINTAINED</p> <p><b>Do NOT cut through:</b></p> <ul style="list-style-type: none"> <li>• Floor joist, wall, studs or ceiling trusses.</li> <li>• Any supporting material that would affect the structural integrity.</li> </ul> <p>This appliance is to be connected to a factory-built chimney conforming to <b>CAN/ULC-S629, Standard for 650°C Factory-Built Chimneys.</b></p> <p>For removal of the chimney for mobile home transportation, contact the proper transportation officials.</p>

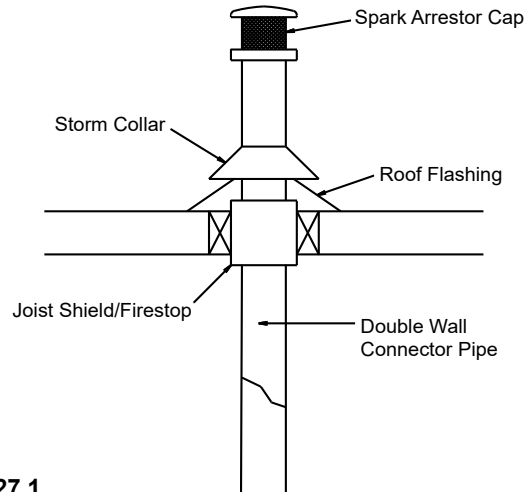



Figure 27.1

 <p><b>WARNING</b></p>
<p>Products of combustion generate carbon monoxide and different fuels generate different levels.</p> <p><b>Carbon monoxide:</b></p> <ul style="list-style-type: none"> <li>• Only use approved fuels in this appliance.</li> <li>• Always keep door shut during operation. Operating this appliance with doors open can allow CO to leak into the home.</li> </ul> <p>CO can kill you before you are aware it is in your home. At lower levels of exposure, CO causes mild effects that are often mistaken for the flu. These symptoms include headaches, dizziness, disorientation, nausea and fatigue. The effects of CO exposure can vary greatly from person to person depending on age, overall health and the concentration and length of exposure.</p>

 <p><b>WARNING</b></p>
<p><b>NEVER INSTALL IN A SLEEPING ROOM.</b></p>













B. Accessories



Castile Insert-C

Beginning Manufacturing Date: Feb 2011  
Ending Manufacturing Date: May 2019

IMPORTANT: THIS IS DATED INFORMATION. Parts must be ordered from a dealer or distributor. **Hearth and Home Technologies does not sell directly to consumers.** Provide model number and serial number when requesting service parts from your dealer or distributor.



Stocked at Depot

ITEM	DESCRIPTION	COMMENTS	PART NUMBER	
34	Exhaust_Combustion_Blower, 45 CFM		812-4400	Y
<b>OPTIONAL ACCESSORIES</b>				
	Adjustable Hearth Support - 12" x 50", 2-10" H		ADJSPT-12	
	Damper, 3 Inch - Tall Vertical Installs Only		PEL-DAMP3	Y
	Damper, 4 Inch - Tall Vertical Installs Only		PEL-DAMP4	
	Log Set		LOGS-30-OE	
	Log Rear, Left		7050-144	
	Log Rear, Right		7050-143	
	Outside Air Kit, Rear		811-0872	
	Channel, Air Intake		SRV413-7040	
	Cover, Outside Air Kit, Floor		SRV411-1071	
	Hose, Alum Flex, 2 Inch x 3 Ft	3 Ft	SRV200-0860	
	Outside Air Cap Assembly		SRV7001-044	
	Outside Air Collar Assembly		SRV7001-045	
	Trim Plate, Outside Air Kit		SRV412-7100	
	Pullrod Handle		PULLROD-HNDL	

Additional service part numbers appear on following page.

IMPORTANT: THIS IS DATED INFORMATION. Parts must be ordered from a dealer or distributor. **Hearth and Home Technologies does not sell directly to consumers.** Provide model number and serial number when requesting service parts from your dealer or distributor.



**Stocked  
at Depot**

ITEM	DESCRIPTION	COMMENTS	PART NUMBER	
	Surround Trim Assembly 43 X 31	Black	TRIMKIT-4331-BK	
		Nickel	TRIMKIT-4331-NL	
	Surround Trim Assembly 51 X 34	Black	TRIMKIT-5134-BK	
		Nickel	TRIMKIT-5134-NL	
	Surround, Basic, Large		SP-CSTLI5134	
	Component Pack		SRV7022-055	
	Surround, Basic, Standard		SP-CSTLI4331	
	Component Pack		SRV7022-055	
	Surround, Standard	Use With Cast Trim	SP-CSTLI4230-CM	
	Component Pack		SRV7022-054	
	Surround, Standard	Use With Cast Trim	SP-CSTLI4834-CM	
	Thermostat, Programmable		PROG-STAT	
	Trim Cast	Matte Black	811-0930	
		Mahogany	811-0960	
		Twilight	TR-CAST-TWL	
	Footer, Left	Matte Black	414-7090MBK	
		Mahogany	414-7090PMH	
		Twilight	414-7090TWL	
	Footer, Right	Matte Black	414-7100MBK	
		Mahogany	414-7100PMH	
		Twilight	414-7100TWL	
	Header	Matte Black	414-7110MBK	
		Mahogany	414-7110PMH	
		Twilight	414-7110TWL	
	Trim Leg, Left	Matte Black	414-7120MBK	
		Mahogany	414-7120PMH	
		Twilight	414-7120TWL	
	Trim Leg, Right	Matte Black	414-7130MBK	
		Mahogany	414-7130PMH	
		Twilight	414-7130TWL	

Beginning Manufacturing Date: Feb 2011  
Ending Manufacturing Date: May 2019

IMPORTANT: THIS IS DATED INFORMATION. Parts must be ordered from a dealer or distributor. **Hearth and Home Technologies does not sell directly to consumers.** Provide model number and serial number when requesting service parts from your dealer or distributor.



**Stocked  
at Depot**

ITEM	DESCRIPTION	COMMENTS	PART NUMBER	
<b>FASTENERS</b>				
	Avk Rivnut Repair Kit		RIVNUT-REPAIR	Y
	Bolt, Firepot, 1-1/4" Long	Qty: 25	225-0120/25	
	Bolt, Hex Head, 1/4-20 X 1	Pkg of 10	25221A/10	Y
	Bumper, Rubber	Pkg of 12	SRV224-0340/12	Y
	Leveling Bolt	Pkg of 25	220-0080/25	Y
	Nut, Capped, Push, 1/4	Pkg of 24	7000-157/24	Y
	Nut, Lock 1/4-20	Qty: 25	226-0090/25	Y
	Nut, Ser Flange Small 1/4-20	Pkg of 24	226-0130/24	Y
	Nut, Wing, 8-32	Pkg of 24	226-0160/24	Y
	Screw, 8-32 X 1/4	Qty: 40	225-0240/40	
	Screw Flat Head 1/4-20	Pkg of 24	7000-130/24	Y
	Screw, 1/4-20X3/8 Phillips Button Head	Pkg of 24	7000-401/24	Y
	Screw, Flat Head Philips 8-32X1/2	Pkg of 12	220-0490/12	Y
	Screw, Machine Screw 1/4-20X5/8	Pkg of 24	220-0440/24	Y
	Screw, Pan Head Philips 8-32 X 3/8	Pkg of 40	225-0500/40	Y
	Screw, Pan Head Philips Tc 8-32X1/2	Pkg of 25	220-0030/25	Y
	Screw, Pan Head Philips, 10/32 X 1/4	Pkg of 24	229-1230/24	Y
	Screw, Set 5/16-18 X 1/4	Qty: 25	225-0550/25	Y
	Screw, Sheet Metal #8 X 1/2 S-Grip	Pkg of 40	12460/40	Y
	Retaining Ring, 7mm	Pkg of 24	8331-004/24	Y





# QUADRA-FIRE®

NOTHING BURNS LIKE A QUAD

## CONTACT INFORMATION

Hearth & Home Technologies  
352 Mountain House Road  
Halifax, PA 17032  
Division of HNI INDUSTRIES

Please contact your Quadra-Fire dealer with any questions or concerns.  
For the number of your nearest Quadra-Fire dealer  
log onto [www.quadrafire.com](http://www.quadrafire.com)



## CAUTION



### DO NOT DISCARD THIS MANUAL

- Important operating and maintenance instructions included.
- Read, understand and follow these instructions for safe installation and operation.
- Leave this manual with party responsible for use and operation of this appliance.



**We recommend that you record the following pertinent information for your heating appliance.**

Date purchased/installed: \_\_\_\_\_

Serial Number: \_\_\_\_\_

Location on appliance: \_\_\_\_\_

Dealership purchased from: \_\_\_\_\_

Dealer Phone: 1(     )     -     \_\_\_\_\_

Notes:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

This product may be covered by one or more of the following patents: (United States) 5341794, 5263471, 6688302, 7216645, 7047962 or other U.S. and foreign patents pending.

  
**HEARTH & HOME**  
technologies™

# Owner's Manual

## Operation & Care

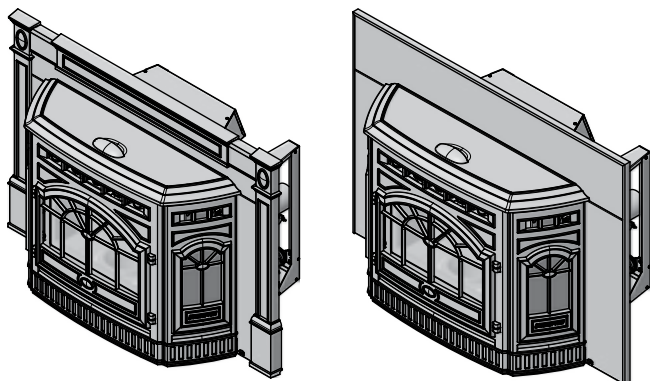
**INSTALLER:** Leave this manual with party responsible for use and operation.  
**OWNER:** Retain this manual for future reference.

Contact your dealer with questions on installation, operation, or service.

# QUADRA-FIRE®

## CASTILE PELLET INSERT APPLIANCE

**MODEL(S):**  
CASTILEI-MBK-C  
CASTILEI-PMH-C  
CASTILEI-TWL-C



### CAUTION

Check building codes prior to installation.

- Installation **MUST** comply with local, regional, state and national codes and regulations.
- Consult local building, fire officials or authorities having jurisdiction about restrictions, installation inspection, and permits.

Installation and service of this appliance should be performed by qualified personnel. Hearth & Home Technologies recommends HHT Factory Trained or NFI certified professionals.



### WARNING



If the information in these instructions is not followed exactly, a fire could result causing property damage, personal injury, or death.

- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- Do not over fire - If appliance or chimney connector glows, you are over firing. Over firing will void your warranty.
- Comply with all minimum clearances to combustibles as specified. Failure to comply may cause house fire.



### WARNING



#### HOT SURFACES!

Glass and other surfaces are hot during operation AND cool down.

Hot glass will cause burns.

- Do not touch glass until it is cooled
- NEVER allow children to touch glass
- Keep children away
- CAREFULLY SUPERVISE children in same room as fireplace.
- Alert children and adults to hazards of high temperatures
- High temperatures may ignite clothing or other flammable materials.
- Keep clothing, furniture, draperies and other flammable materials away.



### CAUTION

Tested and approved for wood pellets only. Burning of any other type of fuel voids your warranty.

**NOTE:** To obtain a French translation of this manual, please contact your dealer or visit [www.quadrafire.com](http://www.quadrafire.com)  
**REMARQUE :** Pour obtenir une traduction française de ce manuel, s'il vous plaît contacter votre revendeur ou visitez [www.quadrafire.com](http://www.quadrafire.com)

# Congratulations

and Welcome to the Quadra-Fire Family!

**NOTE:** Clearances may only be reduced by means approved by the regulatory authority having jurisdiction


## A. Sample of Serial Number / Safety Label

LOCATION: Riveted to appliance behind left side panel. Remove cast side and swing label forward.

Test Lab & Report No.

Model Number

Serial Number



**CAUTION:** HOT WHILE IN OPERATION DO NOT TOUCH, KEEP CHILDREN AND CLOTHING AWAY. CONTACT MAY CAUSE SKIN BURNS.  
**ATTENTION:** CHAUD LORS DE L'OPERATION. NE PAS TOUCHER. GARDEZ LES ENFANTS ET LES VÊTEMENTS LOIN DE L'ESPACE DÉSIGNÉ DE L'INSTALLATION. LE CONTACT PEUT CAUSER DES BRÛLURES À LA PEAU. GARDEZ LES MEUBLES ET LES MATÉRIAUX COMBUSTIBLES LOIN DE L'ESPACE DÉSIGNÉ DE L'APPAREIL. VOIR L'ÉTIQUETTE ET LES INSTRUCTIONS.

**Model Number**

Serial No. / N° de série

**HF**

**Serial Number**

BARCODE LABEL

Report / Rapport  
0061PN077S  
0061PM077E

**QUADRA-FIRE**

CASTILEI-C  
PELLET INSERT

CASTILEI-MBK-C \*PCASTILEI-MBK-C\*

CASTILEI-PMH-C \*PCASTILEI-PMH-C\*

CASTILEI-TWL-C \*PCASTILEI-TWL-C\*

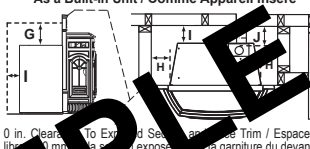
Listed Solid Fuel Room Heater/Pellet Type Insert. For use with wood pellets only. Also suitable for Mobile Home Installation. This appliance has been tested and listed for use in Manufactured Homes in accordance with OAR 814-23-9000 through 814-23-909. / Appareil de chauffage inséré de combustible solide de type de boulettes. "Pour Usage Avec Bois Solide et Champ de Mais égrené Seulement". Accepté dans l'installation dans les maisons mobiles. Cet appareil a été testé et enregistré pour l'usage dans les Maisons Mobiles en accord avec OAR 814-23-9000 jusqu'à 814-23-909.

**PREVENT HOUSE FIRES / PRÉVENTION DES FEUX DE MAISON**  
Install and use only in accordance with manufacturer's installation and operating instructions. CONTACT LOCAL BUILDING OR FIRE OFFICIALS ABOUT RESTRICTIONS AND INSTALLATION INSPECTIONS IN YOUR AREA. **WARNING: FOR MOBILE HOMES:** Do not install appliance in a sleeping room. An outside combustion air inlet must be provided. The structural integrity of the mobile home floor, ceiling and walls must be maintained. Refer to manufacturer's instructions and local codes for precautions required for passing chimney through a combustible wall or ceiling. Inspect and clean vent system frequently in accordance with manufacturer's instructions. DO NOT CONNECT THIS UNIT TO A CHIMNEY SERVING ANOTHER APPLIANCE. Use a 3 or 4 inch (76-102mm) diameter type "L" or "PL" venting system. Installez et utilisez en accord avec les instructions d'installation et d'opération du fabricant. CONTACT BÂTIMENT LOCAL OU POUR CONNAÎTRE LES RESTRICTIONS ET INSPECTIONS.

**INSTALLATION DANS VOTRE RÉGION. AVIS - Pour Les Maisons Mobiles:** Ne pas installer dans une chambre à coucher. Un espace extérieur de combustion d'air doit être installé et ne doit pas être obstrué lorsque l'appareil est en usage. La structure intégrée du plancher, du plafond et des murs de la maison mobile doit être maintenue intacte. Référez-vous aux instructions du fabricant et des codes locaux pour les précautions requises pour passer une cheminée à travers un mur ou un plafond combustibles, et les compensations maximales requises et nettoyez la cheminée fréquemment. Ne pas connecter cet appareil à une cheminée servant un autre appareil. Utilisez le système de ventilation de 3 or 4 inch (76-102mm) de diamètre de type "L" ou "PL". **Tested to:** ASTM E1509-04, UL 606, UL 607, UL 608, UL 609, UL 610, UL 611, UL 612, UL 613, UL 614, UL 615, UL 616, UL 617, UL 618, UL 619, UL 620, UL 621, UL 622, UL 623, UL 624, UL 625, UL 626, UL 627, UL 628, UL 629, UL 630, UL 631, UL 632, UL 633, UL 634, UL 635, UL 636, UL 637, UL 638, UL 639, UL 640, UL 641, UL 642, UL 643, UL 644, UL 645, UL 646, UL 647, UL 648, UL 649, UL 650, UL 651, UL 652, UL 653, UL 654, UL 655, UL 656, UL 657, UL 658, UL 659, UL 660, UL 661, UL 662, UL 663, UL 664, UL 665, UL 666, UL 667, UL 668, UL 669, UL 670, UL 671, UL 672, UL 673, UL 674, UL 675, UL 676, UL 677, UL 678, UL 679, UL 680, UL 681, UL 682, UL 683, UL 684, UL 685, UL 686, UL 687, UL 688, UL 689, UL 690, UL 691, UL 692, UL 693, UL 694, UL 695, UL 696, UL 697, UL 698, UL 699, UL 700, UL 701, UL 702, UL 703, UL 704, UL 705, UL 706, UL 707, UL 708, UL 709, UL 710, UL 711, UL 712, UL 713, UL 714, UL 715, UL 716, UL 717, UL 718, UL 719, UL 720, UL 721, UL 722, UL 723, UL 724, UL 725, UL 726, UL 727, UL 728, UL 729, UL 730, UL 731, UL 732, UL 733, UL 734, UL 735, UL 736, UL 737, UL 738, UL 739, UL 740, UL 741, UL 742, UL 743, UL 744, UL 745, UL 746, UL 747, UL 748, UL 749, UL 750, UL 751, UL 752, UL 753, UL 754, UL 755, UL 756, UL 757, UL 758, UL 759, UL 760, UL 761, UL 762, UL 763, UL 764, UL 765, UL 766, UL 767, UL 768, UL 769, UL 770, UL 771, UL 772, UL 773, UL 774, UL 775, UL 776, UL 777, UL 778, UL 779, UL 780, UL 781, UL 782, UL 783, UL 784, UL 785, UL 786, UL 787, UL 788, UL 789, UL 790, UL 791, UL 792, UL 793, UL 794, UL 795, UL 796, UL 797, UL 798, UL 799, UL 800.

**Pellet Burning Type, (UM) 84-HUD FOR USE ONLY WITH PELLETTIZED WOOD. DO NOT USE ANY OTHER TYPE OF FUEL.** OMNI-Test Laboratories, Inc. has determined that this appliance complies with Canadian Standards Association (CSA) Part 4.1 and Title 40 of the U.S. Code of Federal Regulations, Part 60, SubPart AAA, OMNI-Test Laboratories Accredited: The Canadian Council of Canada, the American National Standards Institute, and the U.S. Environmental Protection Agency. **Tested to:** ASTM #1509-04 et ULC S628-93 Room Heating, Pellet Burning Type, (UM) 84-HUD POUR USAGE AVEC LES BOULETTES DE BOIS. OMNI-Test Laboratories, Inc. a déterminé que cet appareil se conforme avec la norme de l'Association Canadienne de normalisation (CSA) B415.1 ainsi que le Titre 40 du Code Fédéral de Régulations des États-Unis, partie 60, sous-partie AAA. Accréditations OMNI-Test Laboratories : Le Conseil Canadien des Normes (CCN/SCC), l'Institut des Standards Nationaux Américain (ANSI) et l'Agence de Protection Environnementale (EPA). **Input Rating:** 30,600 BTU/HR. / **Puissance de Rendement :** 30 600 BTU/HR. **Electrical Rating:** 115 VAC, 60 Hz, Start 4.1 Amps, Run 1.1 Amps. Route power cord away from unit. Do not route cord under or in front of appliance. / **Puissance Électrique :** 115 VAC, 60 Hz, Début 4.1 Amps, Courir 1.1 Amps. Éloignez le fil électrique de l'appareil. Ne pas faire passer le fil électrique au dessus ou en dessous de l'appareil. **DANGER:** Risk of electrical shock. Disconnect power supply before servicing. Replace glass only with 5mm ceramic available from your dealer. To start, set thermostat above room temperature, the stove will light automatically. To shutdown, set thermostat to below room temperature. For further instruction refer to owner's manual. **KEEP VIEWING AND ASH REMOVAL DOORS TIGHTLY CLOSED DURING OPERATION / DANGER:** Il y a risque de décharge électrique. Déconnectez le fil électrique de la prise de contact avant le service. Remplacez la vitre seulement avec une vitre céramique de 5 mm disponible chez votre fournisseur. Pour allumer, monter la température du thermostat au dessus de la température de la pièce, le poêle s'allumera automatiquement. Pour éteindre, descendre la température du thermostat en dessous de la température de la pièce. Pour des instructions supplémentaires, référez-vous au manuel du propriétaire. GARDEZ LA PORTE D'OUVERTURE ET LA PORTE DES CENDRES FERMÉES HÉRMIQUEMENT DURANT L'OPÉRATION.

**MINIMUM CLEARANCES TO COMBUSTIBLE MATERIALS**  
ESPACES LIBRES MINIMUM DES MATÉRIAUX COMBUSTIBLES:  
As a Built-in Unit / Comme Appareil Inséré

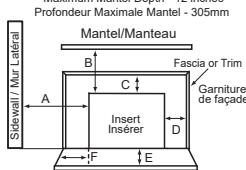


G	2 in. (51mm)	Top Vent / Des Conduits Du Haut
G	2.5 in. (64mm)	Rear Vent / Des Conduits Arrières
H	2 in. (51mm)	Side Wall / Mur De Côté
I	4 in. (102mm)	Back Wall to Insert / Mur Arrière du Insère
J	3 in. (76mm)	Back Wall to Flue Pipe / Mur Arrière Tuyau Rigide

\*When constructing floor protection for your pellet appliance, any parts or materials used, must be non-combustible. / Lors de la construction de protection de sol pour votre appareil à granules, toute pièces ou matériaux utilisés, doivent être incombustibles.

**Masonry or Zero Clearance**  
Déplacement de la maçonnerie ou Dégagement zéro

Maximum Mantel Depth - 12 inches  
Profondeur Maximale Mantel - 305mm



**Note:** "E" is from the front of the firebox opening.

**U.S. ENVIRONMENTAL PROTECTION AGENCY**  
Certified to comply with 2020 particulate standards at 1.10 g/hr EPA method 28R and ASTM 2779 using premium wood pellets.

This wood heater needs periodic inspection and repair for proper operation. Consult the owner's manual for further information. It is against federal regulations to operate this wood heater in a manner inconsistent with the operating instructions in the owner's manual.

Manufactured by: **HEARTH & HOME technologies**  
352 Mountain House Road, Halifax, PA 17032  
www.quadrafire.com

Made in U.S.A. of US and imported parts.  
États-Unis-d'Amérique par des pièces d'origine américaine et pièces importées.

JAN	FEB	MAR	APR	MAY	JUN
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
JUL	AUG	SEP	OCT	NOV	DEC
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2021 2022 2023					

**DO NOT REMOVE THIS LABEL / NE PAS ENLEVER L'ÉTIQUETTE**

7022-800E

Mfg Date

Mfg By



**Safety Alert Key:**

- **DANGER!** Indicates a hazardous situation which, if not avoided will result in death or serious injury.
- **WARNING!** Indicates a hazardous situation which, if not avoided could result in death or serious injury.
- **CAUTION!** Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
- **NOTICE:** Indicates practices which may cause damage to the appliance or to property.

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→ = Contains updated information

## B. Warranty Policy

### Hearth & Home Technologies LIMITED LIFETIME WARRANTY

Hearth & Home Technologies, on behalf of its hearth brands (“HHT”), extends the following warranty for HHT gas, wood, pellet and electric hearth appliances that are purchased from an HHT authorized dealer.

#### **WARRANTY COVERAGE:**

HHT warrants to the original owner of the HHT appliance at the site of installation, and to any transferee taking ownership of the appliance at the site of installation within two years following the date of original purchase, that the HHT appliance will be free from defects in materials and workmanship at the time of manufacture. After installation, if covered components manufactured by HHT are found to be defective in materials or workmanship during the applicable warranty period, HHT will, at its option, repair or replace the covered components. HHT, at its own discretion, may fully discharge all of its obligations under such warranties by replacing the product itself or refunding the verified purchase price of the product itself. The maximum amount recoverable under this warranty is limited to the purchase price of the product. This warranty is subject to conditions, exclusions and limitations as described below.

#### **WARRANTY PERIOD:**

Warranty coverage for consumers begins at the date of installation. In the case of new home construction, warranty coverage begins on the date of first occupancy of the dwelling or six months after the sale of the product by an independent, authorized HHT dealer/distributor, whichever occurs earlier. However, the warranty shall commence no later than 24 months following the date of product shipment from HHT, regardless of the installation or occupancy date. The warranty period for parts and labor for covered components is produced in the following table.

The term “Limited Lifetime” in the table below is defined as: 20 years from the beginning date of warranty coverage for gas appliances, and 10 years from the beginning date of warranty coverage for wood and pellet appliances. These time periods reflect the minimum expected useful lives of the designated components under normal operating conditions.

Warranty Period		HHT Manufactured Appliances and Venting					
Parts	Labor	Gas	Pellet	Wood	Electric	Venting	Components Covered
1 Year		X	X	X	X	X	All parts including handles, external enameled components and other material except as covered by Conditions, Exclusions, and Limitations listed
2 years			X	X			Igniters, Auger Motors, Electronic Components, and Glass
		X					Electrical components limited to modules, remotes/wall switches, valves, pilots, blowers, junction boxes, wire harnesses, transformers and lights (excluding light bulbs)
		X		X			Molded Refractory Panels, Glass Liners
3 years			X				Firepots, burnpots, mechanical feeders/auger assemblies
5 years	1 year	X					Vent Free Burners, Vent Free Logs
			X	X			Castings, Medallions and Baffles
6 years	3 years			X			Catalyst - Limitations Listed
7 years	3 years		X	X			Manifold tubes, HHT Chimney and Terminations
10 years	1 year	X					Burners, logs and refractory
Limited Lifetime	3 years	X	X	X			Firebox and heat exchanger, FlexBurn® System (engine, inner cover, access cover and fireback)
1 Year	None	X	X	X	X	X	All replacement parts beyond warranty period

See conditions, exclusions and limitations on the next page

## **WARRANTY CONDITIONS:**

- This warranty only covers HHT appliances that are purchased through an HHT authorized dealer or distributor. A list of HHT authorized dealers is available on the HHT branded websites.
- This warranty is only valid while the HHT appliance remains at the site of original installation.
- This warranty is only valid in the country in which the HHT authorized dealer or distributor that sold the appliance resides.
- Contact your installing dealer for warranty service. If the installing dealer or distributor is unable to provide necessary parts, contact the nearest HHT authorized dealer or supplier. Additional service fees may apply if you are seeking warranty service from a dealer other than the dealer from whom you originally purchased the product.
- Check with your dealer in advance for any costs to you when arranging a warranty call. Travel and shipping charges for parts are not covered by this warranty.
- Limited Catalyst Warranty
  - o For wood burning products containing a catalyst, the catalyst will be warranted for a six-year period to the original purchaser at the site of original installation. The purchaser must provide the name, address, and telephone number of the location where the product is installed, proof of original purchase date, date of failure, and any relevant information regarding the failure of the catalyst.

## **WARRANTY EXCLUSIONS:**

This warranty does not cover the following:

- Changes in surface finishes as a result of normal use. As a heating appliance, some changes in color of interior and exterior surface finishes may occur. This is not a flaw and is not covered under warranty.
- Damage to printed, plated, or enameled surfaces caused by fingerprints, accidents, misuse, scratches, melted items, or other external sources and residues left on the plated surfaces from the use of abrasive cleaners or polishes.
- Repair or replacement of parts that are subject to normal wear and tear during the warranty period are not covered. These parts include: paint, wood and pellet gaskets, firebricks, grates, flame guides, batteries and the discoloration of glass.
- Expansion, contraction, or movement of certain parts causing noise. These conditions are normal and complaints related to this noise are not covered by this warranty.
- Damages resulting from: (1) failure to install, operate, or maintain the appliance in accordance with the installation instructions, operating instructions, and listing agent identification label furnished with the appliance; (2) failure to install the appliance in accordance with local building codes; (3) shipping or improper handling; (4) improper operation, abuse, misuse, continued operation with damaged, corroded or failed components, accident, or improperly/incorrectly performed repairs (5) environmental conditions, inadequate ventilation, negative pressure, or drafting caused by tightly sealed constructions, insufficient make-up air supply, or handling devices such as exhaust fans or forced air furnaces or other such causes; (6) use of fuels other than those specified in the operation instructions; (7) installation or use of components not supplied with the appliance or any other components not expressly authorized and approved by HHT; (8) modification of the appliance not expressly authorized and approved by HHT in writing; and/or (9) interruptions or fluctuations of electrical power supply to the appliance.
- Non-HHT venting components, hearth connections or other accessories used in conjunction with the appliance.
- Any part of a pre-existing fireplace system in which an insert or a decorative gas appliance is installed.
- HHT's obligation under this warranty does not extend to the appliance's capability to heat the desired space. Information is provided to assist the consumer and the dealer in selecting the proper appliance for the application. Consideration must be given to the appliance location and configuration, environmental conditions, insulation and air tightness of the structure.

### **This warranty is void if:**

- The appliance has been over-fired, operated in atmospheres contaminated by chlorine, fluorine, or other damaging chemicals. Over-firing can be identified by, but not limited to, warped plates or tubes, deformation/warping of interior cast iron structure or components, rust colored cast iron, bubbling, cracking and discoloration of steel or enamel finishes.
- The appliance is subjected to prolonged periods of dampness or condensation.
- There is any damage to the appliance or other components due to water or weather damage which is the result of, but not limited to, improper chimney or venting installation.

## **LIMITATIONS OF LIABILITY**

- The owner's exclusive remedy and HHT's sole obligation under this warranty, under any other warranty, express or implied, or in contract, tort or otherwise, shall be limited to replacement, repair, or refund, as specified above. In no event will HHT be liable for any incidental or consequential damages caused by defects in the appliance. Some states do not allow exclusions or limitation of incidental or consequential damages, so these limitations may not apply to you. This warranty gives you specific rights; you may also have other rights, which vary from state to state. EXCEPT TO THE EXTENT PROVIDED BY LAW, HHT MAKES NO EXPRESS WARRANTIES OTHER THAN THE WARRANTY SPECIFIED HEREIN. THE DURATION OF ANY IMPLIED WARRANTY IS LIMITED TO DURATION OF THE EXPRESSED WARRANTY SPECIFIED ABOVE.

# 1 Listing and Code Approvals

## A. Appliance Safety Certification

<b>Model Numbers:</b>	CASTILEI-MBK-C, CASTILEI-PMH-C, & CASTILEI-TWL-C
<b>Laboratory:</b>	OMNI Test Laboratories, Inc.
<b>Report Number:</b>	061-S-77d-6.2
<b>Type:</b>	Solid Fuel Room Appliance/Pellet Fuel Burning Type Insert
<b>Standard:</b>	ASTM E1509-2004, ULC S628-93 Room Appliance Pellet Fuel Burning Type and (UM) 84-HUD, Mobile Home Approved.

## B. Appliance Emissions Certification

<b>Model Numbers:</b>	CASTILEI-MBK-C, CASTILEI-PMH-C, & CASTILEI-TWL-C
<b>Laboratory:</b>	OMNI Test Laboratories, Inc.
<b>Report Number:</b>	0061PM077E
<b>Standard:</b>	EPA method 28R, ASTM 2779 and ASTM E1509-2004
<b>Can be found at:</b> <a href="http://www.quadrafire.com/about-us/epa-certification">www.quadrafire.com/about-us/epa-certification</a>	

The Castile insert is Certified to comply with 2020 particulate emission standards.



This pellet insert needs periodic inspection and repair for proper operation. It is against federal regulations to operate this pellet insert in a manner inconsistent with operating instructions in this manual.

**NOTE:** This installation must conform with local codes. In the absence of local codes you must comply with the **ASTM E1509-2004, ULC S628-93, ULC/ORD-C-1482-M1990, (UM) 84-HUD.**

## C. BTU & Efficiency Specifications

<b>EPA Certification Number:</b>	Number: 175-19
<b>EPA Certified Emissions:</b>	1.1 grams per hour
<b>*LHV Tested Efficiency:</b>	70.4%
<b>**HHV Tested Efficiency:</b>	66.1%
<b>***EPA BTU Output:</b>	5,800 to 22,400 / hr.
<b>****BTU Input:</b>	9,300 to 30,600 / hr.
<b>Vent Size:</b>	3" or 4" Type "L" or "PL"
<b>Hopper Capacity:</b>	45 lbs.
<b>Fuel:</b>	Premium Wood Pellets
* Weighted average LHV (Low Heating Value) efficiency using data collected during EPA emissions tests in accordance with the requirements of CSA B415.1.	
** Weighted average HHV (High Heating Value) efficiency using data collected during EPA emissions tests in accordance with the requirements of CSA B415.1.	
*** A range of BTU outputs calculated using HHV efficiency and the burn rates from the EPA tests.	
**** Based on the maximum feed rate per hour multiplied by approximately 8600 BTU's which is the average BTU's from a pound of pellets.	



## D. Glass Specifications

This appliance is equipped with 5mm ceramic glass. Replace glass only with 5mm ceramic glass. Please contact your dealer for replacement glass.

## E. Electrical Rating

115 VAC, 60 Hz, Start 4.1 Amps, Run 1.1 Amps.

## F. Mobile Home Approved

- This appliance is approved for mobile home installations when not installed in a sleeping room and when an outside combustion air inlet is provided.
- The structural integrity of the mobile home floor, ceiling, and walls must be maintained.
- The appliance must be properly grounded to the frame of the mobile home and use only Listed pellet vent Class "L" or "PL" connector pipe.
- Outside Air Kit, part OAK-ACC must be installed in a mobile home installation.

## G. Sleeping Room

When installed in a sleeping room it is recommended that 3ft of vertical be installed prior to horizontally exiting the room and a smoke/CO alarm be installed in the bedroom. The size of the room must be at least 50ft<sup>3</sup> per 1,000 Btu/hr stove input, if the stove exceeds the room size, outside air must be installed.

## H. California - Prop65



### WARNING

This product and the fuels used to operate this product (wood), and the products of combustion of such fuels, can expose you to chemicals including carbon black, which is known to the State of California to cause cancer, and carbon monoxide, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to: [WWW.P65Warnings.ca.gov](http://WWW.P65Warnings.ca.gov)



### WARNING



#### Fire Risk.

Hearth & Home Technologies disclaims any responsibility for, and the warranty will be voided by, the following actions:

- Installation and use of any damaged appliance.
- Modification of the appliance.
- Installation other than as instructed by Hearth & Home Technologies.
- Installation and/or use of any component part not approved by Hearth & Home Technologies.
- Operating appliance without fully assembling all components.
- Operating appliance without legs attached (if supplied with appliance).
- Do NOT Over fire - If appliance or chimney connector glows, you are over firing.

Any such action that may cause a fire hazard.

Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage.

For assistance or additional information, consult a qualified installer, service agency or your dealer.

**NOTE:** Hearth & Home Technologies, manufacturer of this appliance, reserves the right to alter its products, their specifications and/or price without notice.

## 2 Operating Instructions



### WARNING



#### Fire Risk.

- Do not operate appliance before reading and understanding operating instructions.
- Failure to operate appliance properly may cause a house fire.

Visit [www.quadrafire.com/shopping-tools/videos](http://www.quadrafire.com/shopping-tools/videos) to view product and use & care videos.

### A. Fire Safety

To provide reasonable fire safety, the following should be given serious consideration:

- Install at least one smoke detector and CO monitor on each floor of your home.
- Locate detectors away from the heating appliance and close to the sleeping areas.
- Follow the detector's manufacturer's placement and installation instructions and maintain regularly.
- Conveniently locate a Class A fire extinguisher to contend with small fires.
- In the event of a hopper fire:
  - Evacuate the house immediately.
  - Notify fire department.

### B. Non-Combustible Materials

Material which will not ignite and burn, composed of any combination of the following:

- Steel
- Plaster
- Brick
- Iron
- Concrete
- Tile
- Glass
- Slate

Materials reported as passing **ASTM E 136, Standard Test Method for Behavior of Metals, in a Vertical Tube Furnace of 750° C.**

### C. Combustible Materials

Material made of/or surfaced with any of the following materials:

- Wood
- Compressed Paper
- Plant Fibers
- Plastic
- Plywood/OSB
- Sheet Rock (drywall)

Any material that can ignite and burn: flame proofed or not, plastered or non-plastered.

### D. Fuel Material and Fuel Storage

Pellet fuel quality can greatly fluctuate. This appliance has been designed to burn a wide variety of fuels, giving you the choice to use the fuel that is most economical in your region.

Hearth & Home Technologies strongly recommends only using Pellet Fuel Institute (PFI) certified fuel.

#### Fuel Material

- Made from sawdust or wood by-products
- Depending on the source material it may have a high or low ash content.

#### Higher Ash Content Material

- Hardwoods with a high mineral content
- Fuel that contains bark
- Standard grade pellets and high ash pellets

#### Lower Ash Content Material

- Softwoods
- Fuels with low mineral content
- Premium grade pellets

#### Clinkers

Minerals and other non-combustible materials such as sand will turn into a hard, glass-like substance called a clinker when heated in the fire pot.

Trees from different areas will vary in mineral content. That is why some fuels produce more clinkers than others.



### CAUTION

**Do not burn fuel that contains an additive; (such as soybean oil).**

- May cause hopper fires
  - Damage to product may result
- Read the ingredients list on the package.

## **Moisture**

Always burn dry fuel. Burning fuel with high moisture content takes heat from the fuel and tends to cool the appliance, robbing heat from your home. Damp pellet fuel can clog the feed system.

## **Size**

- Pellets are either 1/4 inch or 5/16 inch (6-8mm) in diameter.
- Length should be no more than 1-1/2 inches (38mm).
- Pellet lengths can vary from lot to lot from the same manufacturer.
- Due to length variations, the flame height (feed rate) may need adjusting occasionally.

## **Performance**

- Higher ash content requires the ash drawer to be emptied more frequently.
- Hardwoods require more air to burn properly.
- Premium wood pellets produce the highest heat output.
- Burning pellets longer than 1-1/2 inches (38mm) can cause an inconsistent fuel feed rate and/or missed ignitions.

## **Changing to Different Fuel Type**

- Empty the hopper of the previous fuel.
- Thoroughly vacuum hopper before filling with the new fuel.

The burn rate, BTU content and heat output will all vary depending on the fuel selected.



## **CAUTION**

Tested and approved for wood pellets only. Burning of any other type of fuel voids your warranty.

## **Storage**

- Wood pellets should be left in their original sealed bag until using to prevent moisture absorption.

Do not store any pellet fuel within the clearance requirements or in an area that would hinder routine cleaning and maintenance.

## **E. Before Your First Fire**

1. First, make sure your appliance has been properly installed and that all safety requirements have been met. Pay particular attention to the fire protection, venting and thermostat installation instructions.
2. Double check that the ash drawer and firebox are empty!
3. Check the position of the thermocouple, located above the fire pot, and make sure that it protrudes approximately 3/4 inch (19mm) into the fire pot.
4. Close the front door.

**IMPORTANT DETAIL: The tip of the thermocouple must be in contact with the inside end of the thermocouple cover or missed ignitions can occur.**

## **F. Filling the Hopper**

Open the hopper lid by lifting the handle. Fill the hopper with fuel. Close the hopper lid. The unit will not feed with the hopper lid open and the fire will go out.

## G. General Operating Information

1. **Thermostat Calls For Heat:** The appliance is like most modern furnaces; when the thermostat calls for heat, your appliance will automatically light and deliver heat. When the room is up to temperature and the thermostat is satisfied, the red call light will shut off and the appliance will shut down. The red call light is located behind the right access panel.
2. **Heat Output Controls:** This appliance is equipped with a heat output control switch that has three settings or burn rates; low, medium and high (**Figure 10.1**). The appliance will turn on and off as the thermostat demands. When the thermostat calls for heat, the appliance will always start up on High. After burning approximately 4 minutes, the appliance will then burn at the rate at which it was originally set. If the appliance is set at one of the lower settings, it will run quieter but takes longer to heat up an area than if it were set at a higher burn rate. Regardless of the burn rate, when the area is warm enough to satisfy the thermostat, the appliance will shut off.

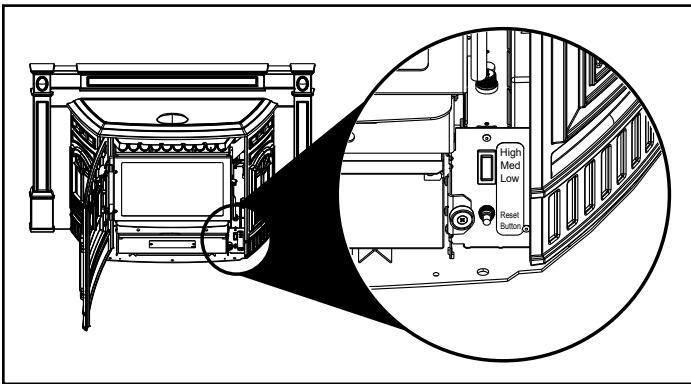






Figure 10.1

 <b>WARNING</b>	
	<p><b>Fire Hazard.</b> Keep combustible materials, gasoline and other flammable vapors and liquids clear of appliance.</p> <ul style="list-style-type: none"><li>• Do NOT store flammable materials in the appliance's vicinity.</li><li>• NEVER use gasoline, GASOLINE-TYPE lantern fuel, kerosene, charcoal lighter fluid, or similar liquids to start or "freshen up" a fire in this appliance. Keep all such liquids well away from the appliance while it is in use.</li><li>• DO NOT BURN GARBAGE OR FLAMMABLE FLUIDS SUCH AS GASOLINE, NAPHTHA OR ENGINE OIL.</li><li>• DO NOT USE CHEMICALS OF FLUIDS TO START THE FIRE.</li><li>• Combustible materials may ignite.</li></ul>

## H. Starting Your First Fire

1. A thermostat is required for proper operation of this appliance. At this time, fill the hopper with pellets, set the thermostat to its lowest setting. Plug the power cord into nearby outlet.
2. The exhaust blower will stay on for approximately 18 minutes even though the thermostat is not calling for heat. This is normal.
3. Locate the heat output control switch on the lower right side of the firebox behind decorative front door. Set to the HIGH setting and then adjust the thermostat to its highest setting. The red call light will be on which is located on the top of the junction box behind the right access panel. This indicates the thermostat is calling for heat (**Figure 10.1**).
4. The fuel feed system and the igniter should now be on.
5. For your first fire it will be necessary to press the reset button once per minute until pellets start to drop into the fire pot, then press button 1 more time. This will fill the feed system and allow the appliance to begin dropping pellets. The appliance will continue to run as long as the thermostat is calling for heat.
6. Once the appliance has ignited, let it burn for approximately 15 minutes, then set the thermostat to the desired room temperature. Adjust the heat output control switch to the desired setting.

 <b>WARNING</b>	
	<p><b>Fire Risk</b> Do NOT operate appliance:</p> <ul style="list-style-type: none"><li>• With appliance door open.</li><li>• Fire pot floor open.</li><li>• Cleaning slide plates open.</li></ul> <p>Do NOT store fuel:</p> <ul style="list-style-type: none"><li>• Closer than required clearances to combustibles to appliance</li><li>• Within space required for loading or ash removal.</li></ul>

## I. Fire Characteristics

A properly adjusted fire with the heat output control button set on "HIGH" has a short active flame pattern that extends out of the fire pot approximately 4 inches (102mm). If the fire has tall flames with black tails and seems somewhat lazy, the feed rate will need to be reduced. If the fire is not 4 inches (102mm) tall, increase the feed rate. A medium and low setting will give a shorter flame. The flame will rise and fall somewhat. This is normal.

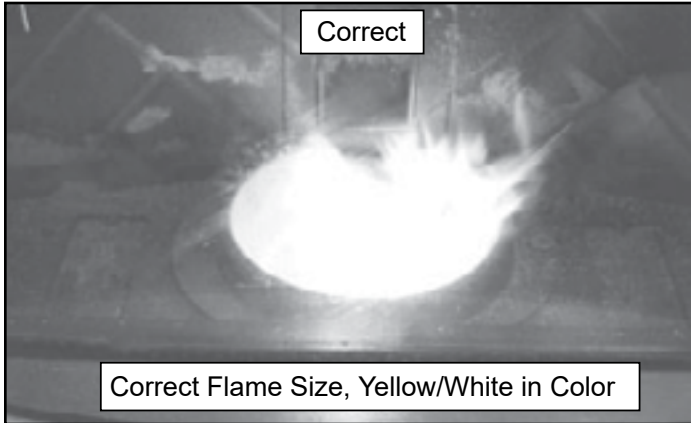


Figure 11.1

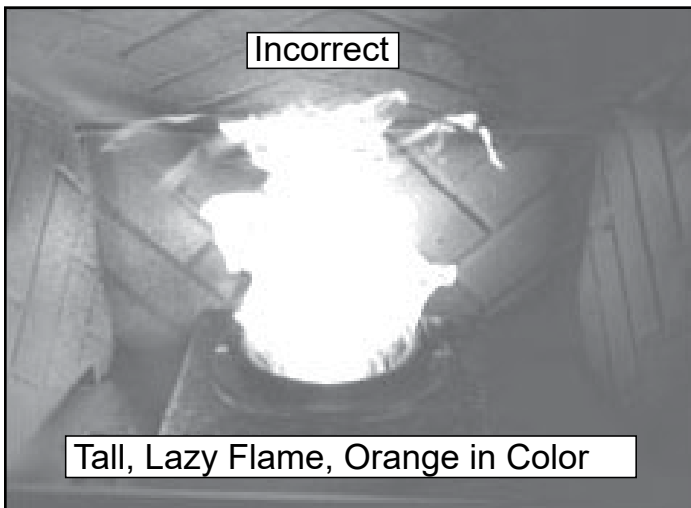




Figure 11.2

## J. Feed Rate Adjustment Instructions

The feed adjustment control rod is factory set, and should be adequate for most fuels. The control rod will slide by only loosening the wing screw.

However, if the flame height is too high or too low, you will need to adjust the feed rate. Wait until the appliance has been burning for 15 minutes before making your adjustments and allow 15 minutes for feed adjustment to take effect. Make adjustments in approximately 1/2 inch increments.

1. Loosen the wing screw (**Figure 11.3**).
2. Adjust the fuel adjustment control rod towards to the right and up to increase the feed rate and flame height or to the left and down to decrease the feed rate and flame height.
3. Re-tighten the wing screw.

 <b>WARNING</b>	
	<b>Fire Risk.</b>
	<ul style="list-style-type: none"><li>• High ask fuels, or lack of maintenance, can cause the fire pot to fill with ash and clinker. If the fire pot fills to the top, immediately shut down the appliance and clean.</li><li>• Failure to do so could result in smoking, sooting and possible hoper fires.</li></ul>

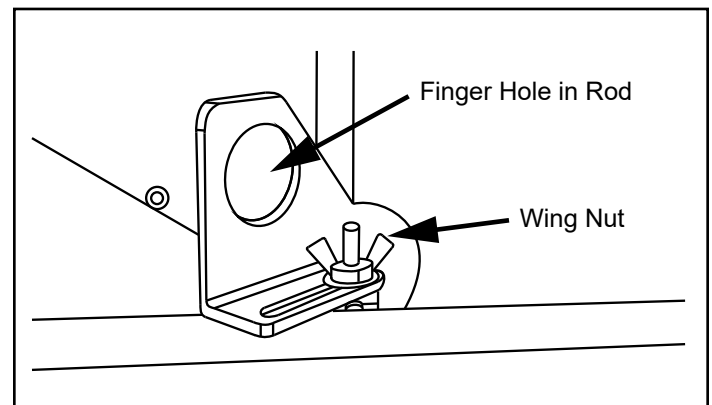





Figure 11.3

## K. Ignition Cycles

1. During each ignition cycle, it is normal to see some smoke in the firebox. The smoke will stop once the fire starts.
2. The convection blower will automatically turn on after your appliance has reached the set temperature. This blower transfers heat from your appliance into the room, and will continue to run after the thermostat has stopped calling for heat until the appliance has cooled down.
3. Occasionally the appliance may run out of fuel and shut itself down. When this happens, the red call light will be on (**Figure 10.1 on page 10**). To restart it, fill the hopper and press the reset button. When you press the reset button the red call light will go out. Release the button and the light will come back on. You should see a fire shortly. If not, follow **Starting Your First Fire** instructions on [page 10](#).

 <b>WARNING</b>	
	<b>Fire Risk</b> Do NOT operate appliance:
	<ul style="list-style-type: none"><li>• With appliance door open.</li><li>• Fire pot floor open.</li><li>• Cleaning slide plates open.</li></ul>
Do NOT store fuel:	
<ul style="list-style-type: none"><li>• Closer than required clearances to combustibles to appliance</li><li>• Within space required for loading or ash removal.</li></ul>	

 <b>CAUTION</b>	
HOT WHILE IN OPERATION. KEEP CHILDREN, CLOTHING AND FURNITURE AWAY. CONTACT MAY CAUSE SKIN BURNS.	

## L. Insert Removal

In the case that service or inspection is required the appliance may need to be removed from the wall.

1. Appliance must be unplugged before removal of appliance is possible. Unplug the appliance from its power source.
2. Remove insert surround from appliance, to ease the process of removal.
3. Non-clip the exhaust transition from the exhaust outlet in the back of the appliance. This is what connects the venting to the appliance. Removal of the clips will allow you to remove the appliance from the wall without damaging or adjusting the venting.
4. Slide appliance from the wall and rotate either direction as needed.

## M. Restarting the Appliance

### Restart Process

1. When the unit has run out of fuel, add pellet fuel to the hopper.
2. Dump the ashes and clinkers built up in the fire pot by pulling the ash dump removal handle out several times. Make sure clinkers have dropped into the ash pan then return the handle to fully closed position.
3. Press the reset button; the appliance will then begin its startup sequence.



### Restarting After a Power Failure



1. For an electrical disruption the appliance will start on its own without need for priming - providing the control system is asking for heat.
2. The appliance will always go through a normal shutdown sequence before restarting.

## N. Clear Space

<b>NOTICE:</b> Clearances may only be reduced by means approved by the regulatory authority having jurisdiction.
--

**Mantel:** Avoid placing candles and other heat-sensitive objects on mantel or hearth. Heat may damage these objects.

 <b>WARNING</b>	
	<b>Fire Risk.</b> Do NOT place combustible objects in front of the appliance. High temperatures may ignite clothing, furniture or draperies. Maintain a minimum clearance of 3 feet (914mm) in front of appliance.

 <b>WARNING</b>	
	<b>Fire Risk.</b> Keep combustible materials, gasoline and other flammable vapors and liquids clear of appliance.
	<ul style="list-style-type: none"><li>• Do NOT store flammable materials in the appliance's vicinity.</li><li>• DO NOT USE GASOLINE, LANTERN FUEL, KEROSENE, CHARCOAL LIGHTER FLUID OR SIMILAR LIQUIDS TO START OR "FRESHEN UP" A FIRE IN THIS APPLIANCE.</li><li>• DO NOT BURN GARBAGE OR FLAMMABLE FLUIDS SUCH AS GASOLINE, NAPHTHA OR ENGINE OIL.</li><li>• DO NOT USE CHEMICALS OR FLUIDS TO START THE FIRE.</li><li>• Keep all such liquids well away from the appliance while it is in use.</li><li>• Combustible materials may ignite.</li></ul>

## O. Thermostat Controls

### TEMPERATURE (HEAT / OFF) SWITCH:

Set this switch to Heat to control your appliance. The off position will disable the appliance.

### SET (MULTI- FUNCTION) SLIDE SWITCH:

This provides easy access to common settings, and should always remain in RUN unless items are being adjusted.

**NOTE:** When thermostat is set to “Manual” non-programmable mode, all positions of the SET slide switch will act like RUN.

### UP / DOWN BUTTONS:

The up and down buttons are used to control the set temperature, or adjust any other on-screen items. An item flashing, is the item currently being adjusted.

### HOLD BUTTON:

This button activates and deactivates the manual Temperature Hold feature, which maintains a fixed set temperature indefinitely without following a program routine.

### COPY BUTTON:

This is used to copy temperature program items from one day to the next. Also used to access the menu setup.

### NEXT BUTTON:

This is used when setting items such as software options, and temperature programs when they are flashing on the screen. Pressing the next button will cycle through which item is flashing.

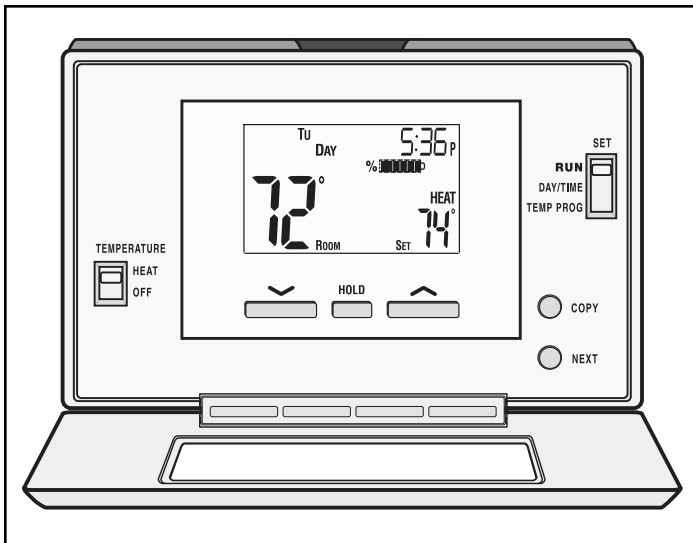


Figure 13.1

## P. Thermostat Setup Options

Setup options for how the thermostat will function are performed using a menu on the display screen.

### TO ACCESS THE SETUP MENU:

Move the System Mode Switch into the OFF position, and then hold down the COPY button for approximately 5 seconds until the screen changes. The menu will always start with item #01, and is advanced to each following item by a single press of the next button. The options for each item are changed using the Up or Down buttons.

### ITEM #01 (CLK = CLOCK FORMAT):

- 12Hr, default: This displays the clock times using standard AM and PM values.
- 24Hr: This displays the clock times using the military-time format (example 22:00 hours, without using AM or PM).

### ITEM #02 (TMP = TEMPERATURE SCALE):

- F, default: Shows all temperature values in Fahrenheit.
- C: Shows all temperature values Celsius.

### ITEM #03 (PROGRAMMING STYLE):

- 7 Day, default: This style uses a separate program routine for each of the 7 days in the week.
- 5/2 Day: This style uses a weekday program routine for Monday, Tuesday, Wednesday, Thursday, Friday, and a separate weekend program routine for Saturday and Sunday.
- Manual Non-Programmable: In this setting, there are no program routines for the thermostat to follow and the temperature control will be set only by the UP and DOWN buttons on the front panel.

### ITEM #04 (PERD = EVENT OR PERIOD QUANTITY):

- 4P, default: Thermostat uses four Events per day (called morn, day, eve, and nite).
- 2P: The thermostat uses two Events per day (called day and nite).

**NOTE:** Event or Period Quantity feature is not accessible during Manual Non-Programmable mode.

### ITEM #07 (DLAY = DELAY TIME):

- 5, default: Thermostat waits 5 minutes before turning the system back on after it was last run. This internal delay prevents the appliance from turning on too quickly after shutting down. The 5 minute setting is fine for most applications.
- 2: Same operation as above but reduced to 2 minutes between state changes.

**NOTE:** This delay does not happen when the thermostat is manually turned up and down.

### ITEM #08 (TEMPERATURE DIFFERENTIAL):

- The thermostat works by turning your heating system on and off whenever the room temperature varies from the desired set-point temperature.
- Use the UP/DOWN buttons to change the number value between 1 and 9. Generally your system should cycle on about 3 to 6 times per hour. A smaller differential number makes the system cycle more frequently, so the room temperature is more precise and constant. A larger differential number will make the system remain on for a longer duration each time and decreases the number of cycles per hour.
- Default is set to 4.

## Q. Thermostat Operation Instructions

### SET DAY AND TIME:

Place the Set switch into the DAY/TIME position. With the day flashing press UP or DOWN to set the day or the week. Press NEXT and the clock time will start flashing. Use UP or DOWN to set the time; verify the AM/PM indicator is correct. Return the Set switch to RUN position when finished.

### HEATING:

Basic operation of the thermostat can be obtained with the SET switch in the RUN position. The temperature can be adjusted using the UP and DOWN buttons. When the thermostat is first powered on, it will follow a default temperature routine that is preset from the factory (**Table 14.1**).

Event	Time	Temperature
MORN	6:00 AM	70°F (21°C)
DAY	8:00 AM	62°F (17°C)
EVE	6:00 PM	70°F (21°C)
NITE	10:00 PM	62°F (17°C)

Table 14.1

### LCD DISPLAY BACK LIGHT:

The display screen is lighted to assist viewing at nighttime, or in locations with low light levels. Press any button on the front panel to activate the approximate 10 second back light.

### TEMPERATURE OVERRIDE:

While thermostat is in RUN mode, the set temperature can be temporarily changed by pressing UP or DOWN. The temporarily changed set temperature will return to the programmed value stored in memory when start time of the next upcoming scheduled event is reached (MORN, DAY, EVE, OR NITE). While the temporary changed set temperature is in effect, the word OVERRIDE will be shown on the display screen. To cancel, move TEMPERATURE switch to OFF and back to HEAT again.

### TEMPERATURE HOLD:

Temperature hold is used for maintaining a fixed set temperature; once a hold is initiated, the thermostat will maintain the set temperature indefinitely. To enter a HOLD state, press the HOLD button one time and the word HOLD will appear on the display. To cancel, press the HOLD button once again.

## STATIC NOTICE

Thermostat is protected against normal static electric discharges, however to minimize the risk of damaging the thermostat in extremely dry weather, please touch a grounded metal object before touching the thermostat.

## R. Thermostat Temperature Programs

The thermostat by default has 4 separate program events they are: MORN, DAY, EVE, and NITE. Each event ends at the start time of the following event.

**NOTE:** If the thermostat is set for 2 events a day instead of 4, the thermostat will only use the DAY and NITE events.

### SET TEMPERATURE PROGRAMS:

1. Move Temperature switch to HEAT.
2. Move SET switch to TEMP PROG position.
3. Starting with Monday, use the UP or DOWN buttons to adjust the start time and set temperature for the MORN event, and then press NEXT button to advance.
4. Adjust the start time and set temperature of the DAY event then press NEXT button.
5. Continue in this same manner to adjust the start time and set temperatures for the EVE and NITE events for Monday.

**NOTE:** When the last event is finished for each day or group of days, the thermostat will advance forward into the next day or group of days.

6. Use steps 3 through 5 to set up the events for the rest of the week or group of days.
7. Return the SET switch back to RUN.



## **COPY PROGRAM FEATURE:**

Using similar instructions as set temperature programs the COPY button will allow a whole day of set program events to be copied to another day.

1. Move Temperature switch to HEAT as well as move SET switch to TEMP PROG position.
2. Starting with Monday, use the UP or DOWN buttons to adjust the start time and set temperature for the MORN, DAY, EVE, and NITE events. Press the COPY button and then press the NEXT button to advance to Tuesday.
3. With Tuesday displayed press COPY button. As all programs events from Monday will be copied to Tuesday (this will advance automatically to the next day; Wednesday, as the word COPY will appear on the screen for one second).
4. Continue in this pressing COPY button to set desired days with original setting.

**NOTE:** The word COPY will not appear on the display for Monday, but will display each day afterwards for approximately one second and the day of the week will automatically advance forward to the next day.

## **S. Thermostat Other Features**

**NOTE:** All other features need to be completed in a timely manner as the thermostat will time out after 10 seconds.

### **TEMPERATURE CALIBRATION:**

The internal temperature sensor in this thermostat is accurately calibrated at the factory, and in most cases alterations to this setting should not be needed. The temperature calibration feature allows you to manually offset the measured temperature by as much as plus or minus 5°F (3°C) from its original value. If several thermostats are used in the same house, this feature can be used to synchronize this thermostat to the others.

#### **Change the temperature calibration:**

1. Move TEMPERATURE switch to OFF.
2. Move SET switch to RUN.
3. Press and hold both UP and DOWN buttons together for at least 5 seconds; the words SET and CAL will appear on the display along with a single flashing temperature digit.
4. Use the UP or DOWN buttons to change the number of degrees desired for adjustment; 0° is the default value and also means no correction will be applied.
5. Press the NEXT button to accept the setting.

## **KEYPAD LOCKOUT:**

There is the option to lock the front panel buttons to prevent unauthorized tampering of your thermostat settings.

### **To Lock the Keypad:**

1. Move TEMPERATURE switch to HEAT.
2. Move SET switch to RUN.
3. Perform a single press of each button in the following sequence:
  - NEXT, NEXT, NEXT, HOLD

A padlock will appear on the display screen.

### **To Unlock the Keypad:**

1. Move TEMPERATURE switch to HEAT.
2. Move SET switch to RUN.
3. Perform a single press of each button in the following sequence:
  - NEXT, NEXT, NEXT, HOLD

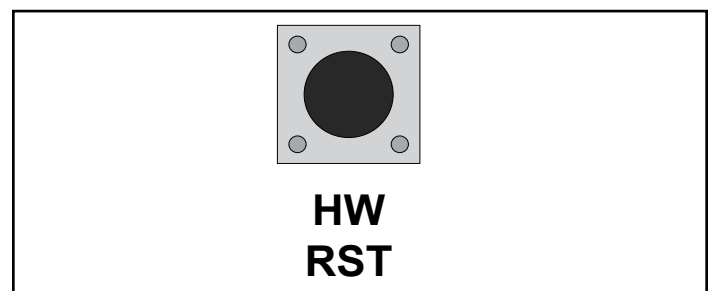
A padlock will no longer be present on the display screen.

## **HARDWARE RESET:**

The hardware reset button; labeled HW RST, is a small round push button that is located in the middle of the circuit board, just below the battery holder (**Figure 15.1**). Pressing this button will:

- Cause the LCD display screen to become fully populated
- Thermostat to perform an internal system check of its components

If the thermostat appears to be acting in an erratic manner, pressing the HW RST button may remedy this behavior. The temperature programs are not erased when a hardware reset is performed, however the clock will have to be changed to match the current day and time.



**Figure 15.1**

## **SOFTWARE RESET:**

Software reset is used to erase ALL temperature events, and to return all user-adjustable software settings back to their original factory default settings.

### **To Perform a Software Rest:**

1. Verify the thermostat's keypad is not locked.
2. Move TEMPERATURE switch to OFF.
3. Press and hold the UP, DOWN, and NEXT buttons all at the same time for at least 5 seconds. When the LCD display screen will become fully populated let go of all buttons at that point the screen will return to normal.

The clock will have to be changed to match the current day and time.

## T. Thermostat Battery Replacement

This thermostat is powered by two “AA” Alkaline batteries. The batteries should be replaced AT LEAST once per year to ensure reliable operation or sooner if the LO BATT appears on the display screen. The batteries are located on the back of the thermostat’s circuit board. The front portion of the thermostat can be removed from the back half by using the tabs on the top edge of the thermostat housing (Figure 16.1).

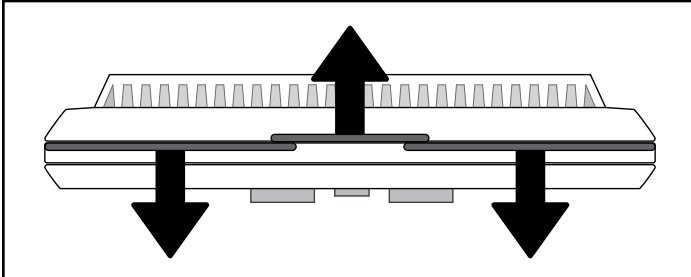


Figure 16.1

When installing new batteries, it is recommended using only brand new “AA” size alkaline batteries. Please verify the polarity markings shown in the battery compartment before adding batteries to the compartment. When finished, line up the front of the thermostat to the base, and firmly press together to securely latch the front and back halves together properly.

### BATTERY GRAPHIC:

Anytime time the batteries are physically present in the thermostat, there will be a visual indicator showing the life of the battery. This will appear on the display screen (Figures 16.2 and Figure 16.3).



Figure 16.2 - Full battery icon



Figure 16.3 - Low battery icon

## CONNECT THERMOSTAT WIRES TO APPLIANCE:

There is a 4 screw terminal block located on the back lower left corner of the stove directly above the power cord inlet. The center 2 screws are for the thermostat wires (Figure 16.4).

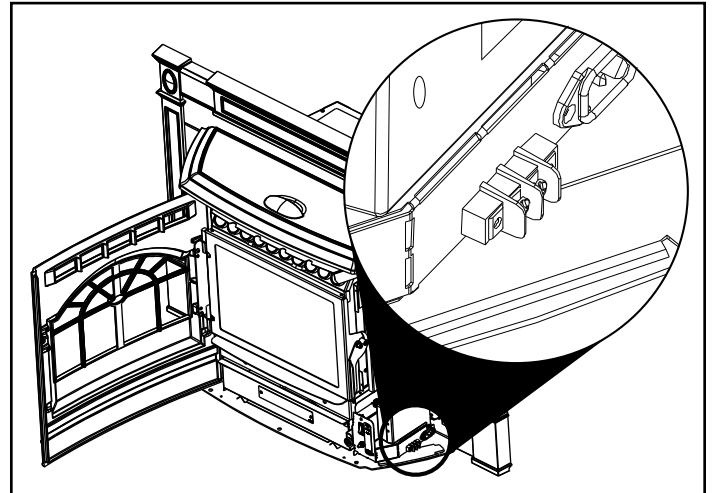


Figure 16.4



### CAUTION



#### Shock hazard.

- Do NOT remove grounding prong from plug.
- Plug directly into properly grounded 3 prong receptacle.
- Route cord away from appliance.
- Do NOT route cord under or in front of appliance.

## U. Frequently Asked Questions

### What causes my glass to become dirty?

If the glass has white ash build up it is normal and the glass should be cleaned. If it is a black soot build up airflow through the unit may be restricted. The most often cause is overdue maintenance and cleaning; see **Maintaining and Servicing** section on [page 18](#) and/or make adjustments to the feed rate adjustment control (reference **Feed Rate Adjustment Instructions** on [page 11](#)).

### How can I get more heat out of the appliance?

The most often cause of diminished heat output is overdue maintenance and cleaning; see **Maintaining and Servicing** section on [page 18](#).

### What should I do if I smell smoke or there is ash/soot coming from the appliance?

While there will always be some smoke smell from wood burning appliances (including pellet) you should investigate all venting to make sure it is sealed properly. Follow venting manufacturers recommendations for sealing pipe joints.

In addition most homes are built very tight today and with exhaust systems can create negative pressure in the home. See **Negative Pressure** on [page 16](#) in the [installation manual](#). For ash or soot check the above and the exhaust blower housing and seals.

### Why would my appliance run fine last winter but not start this fall?

It is possible that the stove was not properly prepared for the non-burn season; see **Troubleshooting Guide** starting on [page 23](#).

### Is there a place to lubricate the blowers to quiet them down?

No. The most often cause of noisy blowers is from the impellers becoming dirty over time; see **Maintenance and Service** section on [page 18](#).

### What is the metal object with the bend in it that came inside the plastic bag?

It is a clean-out tool used to help clean the fire pot and remove any jams in the rare event they occur in the feed tube.

### Why is there a black residue building up on the outside of my home?

Wind can cause this to happen. If the appliance is operating correctly very little soot should ever exit the termination cap. Check to be sure the venting is installed per the [installation manual](#) and local codes.

### Do I need an outside air kit?

Outside air is required for mobile home installs and in some jurisdictions. Refer to **Listing & Code Approvals** on [page 6](#), **Mobile Home Installation** on [page 27](#) in the [installation manual](#) and **Appliance Set-up** on [page 21](#) in the [installation manual](#). Also refer to local building codes.

### I am seeing sparks coming out of my pipe (termination cap) outside is this safe?

This is normal. As long as clearances to combustibles were followed this is safe.

### I have no power to anything. Does this unit have a circuit breaker or fuse or a reset button?

This unit has one fuse on the control board and a resettable snap disc mounted to the feed tube. If the appliance overheats then the snap disc can be reset; if the fuse is blown the control board must be replaced.

### Where is the serial # located on my unit?

The serial number is riveted to appliance behind left side panel; remove the cast side and swing label forward.

### No pellets are dropping in my fire pot.

See troubleshooting guide.

**Contact your dealer for additional information regarding operation and troubleshooting.  
Visit [www.quadrafire.com](http://www.quadrafire.com) to locate a dealer.**

# 3 Maintenance and Service

When properly maintained, your fireplace will give you many years of trouble-free service. Contact your dealer to answer question regarding proper operation, troubleshooting and service for your appliance. Visit [www.quadrafire.com/owner-resources](http://www.quadrafire.com/owner-resources) to view basic troubleshooting, FAQs, use & care videos. We recommend annual service by a qualified service technician.

## A. Proper Shutdown Procedure

Turn off the thermostat.


This pellet insert has a manufacturer-set minimum low burn rate that must not be altered. It is against federal regulations to alter this setting or otherwise operate this pellet insert in a manner inconsistent with operating instructions in this manual.


**Follow the detailed instructions found in this section for each step listed in the chart below.**

## B. Quick Reference Maintenance Chart

Cleaning or Inspection	Frequency		Daily	Weekly	Every 2 Weeks	Monthly	Yearly
Ash Pan - Burning Wood Pellets	Every 5 bags of fuel	OR		X			
Ash Pan - Burning Alternate Fuels	Every 1 bag of fuel	OR	X				
Ash Removal from Firebox	More frequently depending on the fuel type or ash build-up	OR		X			
Blower, Combustion (Exhaust)	More frequently depending on the fuel type	OR					X
Blower, Convection	More frequently depending on the operating environment	OR					X
Door Latch Inspection	Prior to heating season	OR				X	
Firebox - Prepare for Non-Burn Season	At end of heating season	OR					X
Fire pot - Burning Softwood Pellets	Every 5 bags	OR		X			
Fire pot - Burning Hardwood Pellets	Every 3 bags	OR		X			
Fire pot - Burning Alternate Fuels	Every 1 bag	OR	X				
Glass	When clear view of fire pot becomes obscured	OR		X			
Heat Exchanger & Drop Tube	Every 1 ton of fuel	OR			X		
Hopper	Every 1 ton of fuel or when changing fuel types	OR				X	
Venting System	More frequently depending on the fuel type	OR					X

**NOTICE:** These are recommendations. Clean more frequently if you encounter heavy build-up of ash at the recommended interval or you see soot coming from the vent. Not properly cleaning your appliance on a regular basis will void your warranty.


**CAUTION**



**Shock and Smoke Hazard**

- Turn down thermostat, let appliance completely cool and exhaust blower must be off. Now you can unplug appliance before servicing.
- Smoke spillage into room can occur if appliance is not cool before unplugging.
- Risk of shock if appliance not unplugged before servicing appliance.

## C. General Maintenance and Cleaning

### 1. Types of Fuel

The type of fuel you are burning will dictate how often you have to clean your fire pot.

If the fuel you are burning has a high dirt or ash content, it may be necessary to clean the fire pot more than once a day.

Dirty fuel will cause clinkers to form in the fire pot (**Figure 19.1**). A clinker is formed when dirt, ash or a non-burnable substance is heated to 2000°F (1093°C) and becomes glass-like. See **High Ash Fuel Content Maintenance** on [page 22](#) in this section for more details on fuels with high ash content.

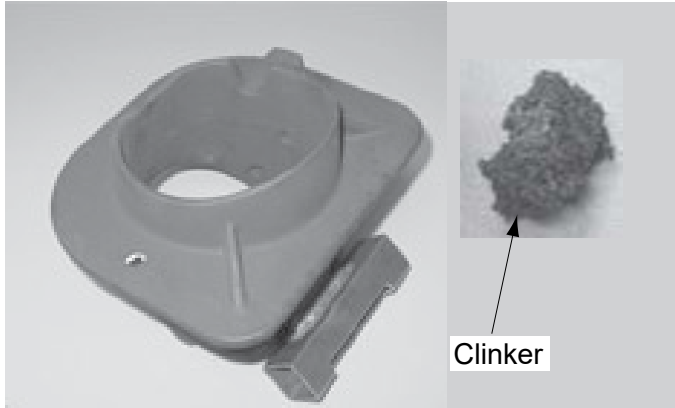




Figure 19.1

### 2. Cleaning Fire pot with Cleaning Rod & Fire pot Clean-Out Tool

- **Frequency:** Daily or more often as needed
- **By:** Homeowner
  - a. The appliance must be in complete shutdown and cool and the exhaust blower off.

**NOTE:** If you are just cleaning the fire pot, there is no need to unplug the insert.

- b. Pull fire pot cleaning rod OUT and IN a couple of times to help shake debris loose.
  - If rod is hard to pull, it may be necessary to use your fire pot clean-out tool to chip away material that has built up on the bottom plate of the fire pot and to push out any clinkers. Larger clinkers may have to be removed from the top of the fire pot.
- c. The fire pot floor plate must be fully closed when finished (**Figure 19.2**).

 <b>WARNING</b>	
	<b>Fire Risk.</b>
	NEVER pull fire pot cleaning rods or cleaning slide plates when appliance is operating. Hot pellets may fall into ash pan and may start a fire or have mis-starts due to lack of vacuum.

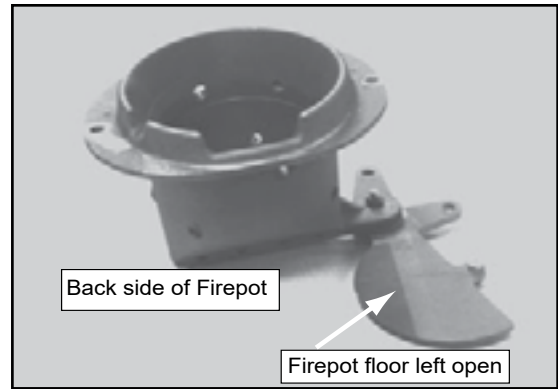


Figure 19.2



### 3. Ash Removal from Firebox

- **Frequency:** Weekly or more frequently depending on ash build-up
- **By:** Homeowner
  - a. There must not be any hot ashes in the firebox during cleaning so allow the appliance to completely cool. Frequent cleaning of the ash in the firebox will help slow down the build-up of ash in the exhaust blower and vent system.
  - b. Plug in your appliance, if unplugged, and turn the thermostat on and immediately shut it off to start the exhaust blower on its cycle time. It will pull fly ash out the exhaust instead of into the room.
  - c. Open door. There are 2 cleaning slide plates to the left and right of the fire pot with finger holes. Pull both slide plates out and sweep the remaining ash from the firebox into the 2 open holes. A paint brush works well for this. Close slide plates.
  - d. This ash is deposited in the same ash drawer as the fire pot debris. The ash drawer should be emptied every time you clean the firebox. Remember to place the ash and debris into a metal or non-combustible container.
  - e. The 2 cleaning slide plates must be fully closed when cleaning is complete.

### 4. Cleaning Ash Drawer

- **Frequency:** Weekly or every 5 bags of fuel
- **By:** Homeowner

Locate the ash drawer underneath the fire pot and slide the ash drawer straight out. Empty into a non-combustible container and re-install ash drawer.


 <b>WARNING</b>	
	<b>Fire Risk.</b>
	The cleaning slide plates must be fully CLOSED when appliance is operating. Hot pellets may fall into ash pan and start a fire.


## 5. Disposal of Ashes

- **Frequency:** As needed
- **By:** Homeowner

Ashes should be placed in a metal container with a tight-fitting lid. The closed container of ashes should be placed on a non-combustible floor or on the ground, well away from all combustible materials, pending final disposal.

If the ashes are disposed of by burial in soil or otherwise locally dispersed, they should be retained in the closed container until all cinders have been thoroughly cooled.

**WARNING**



**Disposal of Ashes.**

- Ashes should be placed in metal container with tight fitting lid.
- Ashes should be retained in closed container until all cinders have thoroughly cooled.

## 6. Cleaning Heat Exchanger Chambers

- **Frequency:** Weekly or every 1 ton of fuel
- **By:** Homeowner

The amount of ash buildup in the firebox will be a good guide to determine how often you should clean the heat exchangers.

- Allow the appliance to completely cool down before pulling the cleaning rods. Turn the thermostat on and then immediately off to start the exhaust blower on its cycle time. It will pull fly ash out the exhaust instead of into the room.
- Locate the 2 exposed rods directly underneath the heat exchanger tubes (**Figure 20.1**).
- To clean, pull the rods straight out until it stops, approximately 8 inches (203mm). Slide the rods OUT and IN a couple of times.

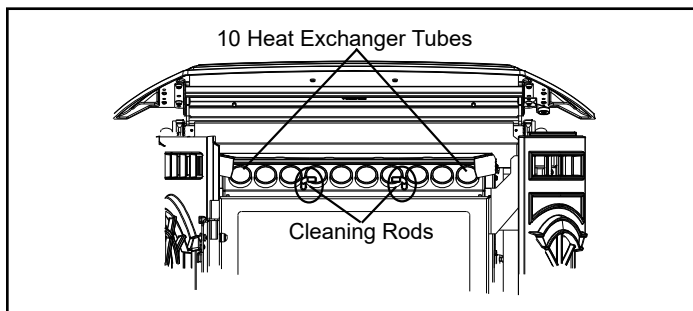




Figure 20.1

**WARNING**



Heat exchanger cleaning rods may be warm to the touch. For safety purposes wear gloves.

Do not pull heat exchanger cleaning rods while appliance is operating.

Push cleaning rods IN when done, DO NOT leave cleaning rods OUT. Injury can occur.

## 7. Cleaning Beneath Heat Exchanger

- **Frequency:** Monthly or every 1 ton of fuel
- **By:** Homeowner
  - Be sure the appliance is allowed to cool, has been unplugged and the exhaust blower is off.
  - A more thorough cleaning is needed to remove the excess ash that is left behind from the use of the cleaning rods for the heat exchanger tubes.
  - The ash will be resting on the back of the baffle. This will require removing the baffle. Please refer to **Baffle** replacement on [page 26](#) for a detailed explanation of removing the baffle.

**NOTE:** Hearth & Home Technologies recommends to use a heavy duty vacuum cleaners specifically designed for solid fuel appliance cleaning.

## 8. Cleaning the Exhaust Path

- **Frequency:** Every 25 bags or monthly or more frequently depending on ash build-up.
- **By:** Homeowner
  - Appliance must be completely cool.
  - Open cast hinge face. Remove baffle and right brick and thoroughly vacuum the area and continue throughout the rest of the firebox.
  - Replace right brick and baffle and close cast hinge face.

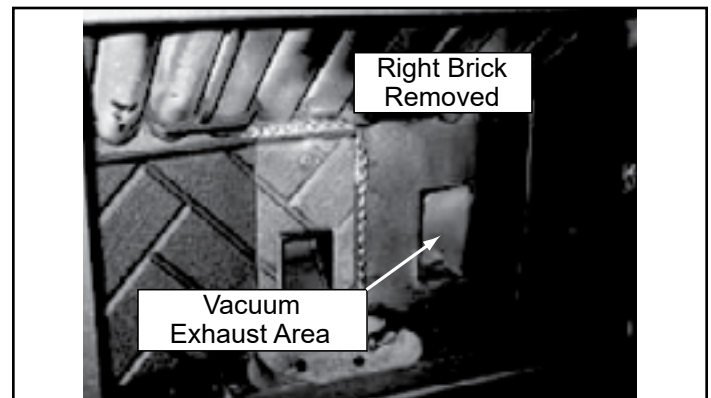


Figure 20.2

## 9. Cleaning the Hopper

- **Frequency:** Monthly or every 1 ton of fuel
- **By:** Homeowner

After burning approximately 1 ton of fuel you will need to clean the hopper to prevent sawdust build-up. A combination of sawdust and pellets on the auger reduces the amount of fuel supply to the fire pot. This can result in nuisance shutdowns and mis-starts.

- The appliance must be in complete shutdown. Allow the appliance to completely cool down.
- Empty the hopper of any remaining pellets.
- Vacuum the hopper and feed tube.

10. **Soot and Fly Ash: Formation & Need for Removal in Exhaust Venting System.**


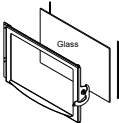
- **Frequency:** Yearly or more frequently depending on ash build-up
- **By:** Qualified Service Technician/Homeowner


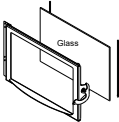
The products of combustion will contain small particles of fly-ash. The fly-ash will collect in the exhaust venting system and restrict the flow of the flue gases. Incomplete combustion, such as occurs during startup, shutdown, or incorrect operation of the room appliance will lead to some soot formation which will collect in the exhaust venting system. The exhaust venting system should be inspected at least once every year to determine if cleaning is necessary.

The venting system may need to be cleaned at least once a year or more often depending upon the quality of your fuel or if there is a lot of horizontal pipe sections. Ash will build up more quickly in the horizontal sections.

11. **Cleaning the Glass**

- **Frequency:** When clear view of the fire pot is obscure
  - **By:** Homeowner
- a. Appliance must be completely cool before cleaning glass.
  - b. Use a damp paper towel or any non-abrasive glass cleaner. Wipe off with dry towel.

 <b>CAUTION</b>	
	<p>Handle glass assembly with care.</p> <p><b>When cleaning glass:</b></p> <ul style="list-style-type: none"><li>• Avoid striking, scratching or slamming glass.</li><li>• Do NOT clean glass when hot.</li><li>• Do NOT use abrasive cleaners.</li><li>• Use a hard water deposit glass cleaner on white film.</li><li>• Refer to maintenance instructions.</li></ul>

 <b>WARNING</b>	
	<p>Handle glass with care.</p> <ul style="list-style-type: none"><li>• Inspect the gasket to ensure it is undamaged.</li><li>• Do NOT strike, slam or scratch glass.</li><li>• Do NOT operate appliance with glass assembly removed.</li></ul>

12. **Door Latch Inspection**

- **Frequency:** Prior to heating season
- **By:** Homeowner

The door latch is non-adjustable but the gasket between the glass and firebox should be inspected periodically to make sure there is a good seal.

13. **Cleaning Exhaust Blower - Requires No Lubrication**

- **Frequency:** Yearly or as needed
- **By:** Quality Service Technician/Homeowner



Remove left & right brick. The exhaust blower is behind the right brick (**Figure 20.2** on [page 20](#)). Vacuum this area thoroughly. See **Brick** replacement on [page 26](#) for removing bricks. Re-install bricks when done.

14. **Cleaning Convection Blower - Requires No Lubrication**

- **Frequency:** Yearly or as needed
- **By:** Qualified Service Technician
- **Task:** Contact your local dealer.

15. **Preparing Firebox for Non-Burn Season**

- **Frequency:** At the end of the heating season
  - **By:** Homeowner
- a. Be sure the appliance is allowed to cool, has been unplugged and the exhaust blower is off.
  - b. Remove all ash from the firebox and vacuum thoroughly.
  - c. Paint all exposed steel, including cast-iron.
    - Use the Touch-Up paint supplied with the appliance; or,
    - Purchase paint from your local dealer.
    - Must use a high-temperature paint made specifically for heating appliances.

 <b>WARNING</b>	
	<p><b>Fire Risk</b></p> <ul style="list-style-type: none"><li>• High ash fuels, or lack of maintenance, can cause the fire pot to overfill. Follow proper shutdown procedure if ash build up exceeds half way point.</li><li>• Failure to do so could result in smoking, sooting and possible hopper fires.</li></ul>

## D. Soot or Creosote Fire Awareness

The chimney should be inspected periodically during the heating season to determine if a creosote build-up has occurred. If a significant layer of creosote has accumulated (1/8 inch [3mm] or more) it should be removed to reduce the risk of chimney fire.

Check daily for creosote build-up until experience shows how often you need to clean to be safe. Be aware that the hotter the fire the less creosote is deposited, and weekly cleaning may be necessary in the mild weather even though monthly cleaning may be enough in the coldest months. Contact your local municipal or provincial fire authority for information on how to handle a chimney fire.

**In the event of a soot or creosote fire, close the firebox door, exit the building immediately and contact the proper fire authorities.**

**DO NOT under any circumstances re-enter the building.**

## E. High Ash Fuel Content Maintenance

- **Frequency:** When the ash build-up exceeds more than half way up the fire pot.
- **By:** Homeowner

Poor quality pellet fuel, or lack of maintenance, can create conditions that make the fire pot fill quickly with ashes and clinkers.

This condition makes the appliance susceptible to overfilling the fire pot with pellets which may result in smoking, sooting and possible hopper fires. **Figure 22.1** shows an example where the fire pot overfills, pellets back up into the feed tube and ash has accumulated in the firebox.

An inefficient and non-economical method of burning of fuel caused by poor quality pellet fuel is shown in **Figure 22.2**.

The correct flame size when good quality, premium pellet fuel is burned is shown in **Figure 22.3**.

If the ash buildup exceeds the half way point in the fire pot IMMEDIATE ATTENTION AND CLEANING IS REQUIRED.

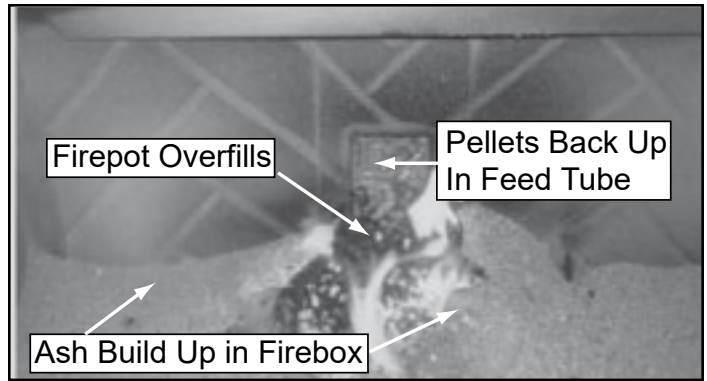


Figure 22.1

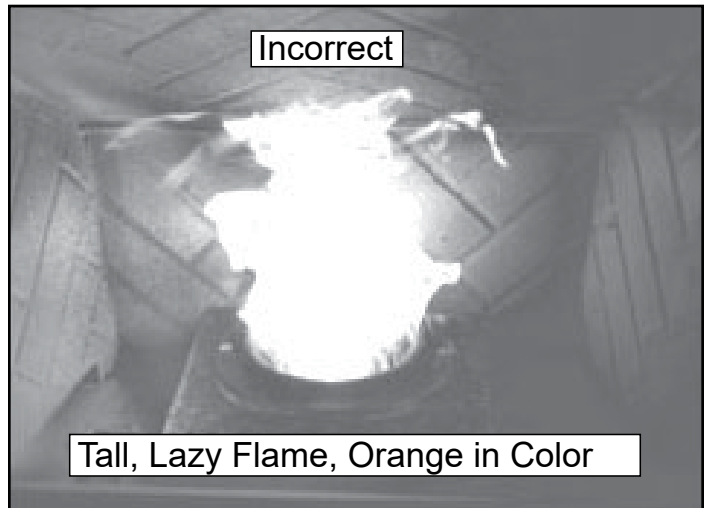


Figure 22.2

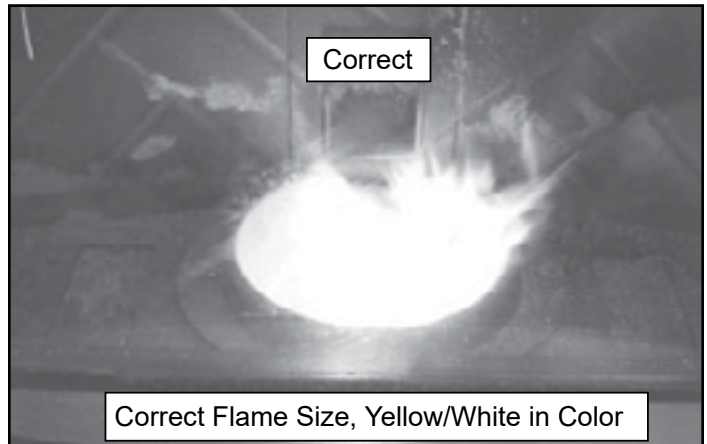


Figure 22.3



# 4 Troubleshooting Guide

With proper installation, operation, and maintenance your appliance will provide years of trouble-free service. If you do experience a problem, this troubleshooting guide will assist a qualified service person in the diagnosis of a problem and the corrective action to be taken. This troubleshooting guide can only be used by a qualified service technician.

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
Plug in appliance - No response.	No current to outlet. 7 amp fuse defective. #3 snap disc tripped or defective. Control box defective.	Check circuit breaker at service panel. Replace fuse. Reset or replace snap disc. Replace control box.
Call light on. No fire. No fuel in fire pot.	Out of fuel. #2 snap disc may be defective. Vacuum switch not closing, no vacuum.  Control box defective.	Check hopper. Fill with fuel. Replace snap disc. Check exhaust blower is plugged in and operating. Check vacuum switch is plugged in. Check vacuum hose is in good condition, clear and connected at both ends. Check thermocouple is in good condition and plugged in properly. Make sure venting system is clean. Make sure front door is closed. Replace control box.
Call light on. No fire. Partially burned fuel in fire pot.	Fire pot clean-out plate not closed.  Fire pot is dirty (missed ignition).	Check that fire pot clean-out plate is fully closed. Clean fire pot. Make sure there is no clinker in the fire pot. See <a href="#">page 19</a> . Clinkers may have to be broken up with fire pot clean-out tool or other means.
Call light on. No fire. Unburned pellets in fire pot.	Fire pot clean-out plate not closed.  Fire pot is dirty.  The ignition hole between the igniter bracket and fire pot is blocked.  Igniter not working.  Control box defective.	Check that fire pot clean-out plate is fully closed. Clean fire pot. Make sure there is not a clinker in the fire pot. Clinkers may have to be pushed out of fire pot with fire pot clean-out tool or other means. Scrape with solid piece of wire. Remove ash drawer to see if igniter is glowing red on start-up. Check igniter wires for good connection. Replace igniter using 1/4 inch (6mm) male / female spade connectors. Replace control box.
Slow or smoky start-up.	Fire pot clean-out plate not closed. Fire pot is dirty.  Excessive amount of fuel at start-up.  Dirty exhaust and/or venting system.	Check that fire pot clean-out is fully closed. Clean fire pot. Make sure there is not a clinker in the fire pot. Clinkers may have to be pushed out of fire pot with fire pot clean-out tool or other means. Reduce feed rate using feed rate adjustment control rod located inside hopper. Check for ash build up in appliance, including behind rear panels, firebox, heat exchanger, exhaust blower and venting.
No call light. Appliance does not begin start sequence.	Thermostat not set to a high enough temperature. Snap Disc #3 tripped. No power. Fuse blown. Connections at thermostat and/or appliance not making proper contact. Defective thermostat or thermostat wiring.  Control box defective.	Adjust thermostat above room temperature. Reset snap disc. Connect to power. Replace fuse. Check connections at thermostat and appliance. Replace thermostat or wiring. <b>NOTE:</b> To test thermostat and wiring, use a jumper wire at the thermostat block on the appliance to by-pass thermostat and wiring. Replace control box.

Table 23.1

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
Feed system fails to start.	<p>Out of fuel. #2 snap disc may be defective.</p> <p>Vacuum switch not closing. No vacuum.</p> <p>Feed system jammed or blocked.</p> <p>Feed spring not turning with feed motor.</p> <p>Feed motor defective or not plugged in.</p>	<p>Check hopper, fill with fuel. Replace snap disc. Firebox door must be closed securely.</p> <p>Check exhaust blower is plugged in and operating. Check vacuum switch is plugged in. Check vacuum hose is in good condition, clear and connected at both ends. Check thermocouple is in good condition and plugged in properly. Make sure venting system is clean. <b>NOTE:</b> High winds blowing into the venting system can pressurize the firebox causing loss of vacuum. Empty hopper of fuel. Use a wet/dry vacuum cleaner to remove remaining fuel, from hopper, including feed tube. Check feed chute for obstructions. Loosen 2 screws and jiggle feed assembly. Check that set screw is tight on feed spring shaft at end of feed motor. Check connections on feed motor, replace if defective.</p>
Appliance fails to shut off.	Call light on.	<p>Turn thermostat off. If call light does not go out, disconnect thermostat wires from appliance. If call light does go out, thermostat or wires are defective.</p>
Convection blower fails to start	<p>#1 snap disc defective.</p> <p>Blower not plugged in.</p> <p>Blower is defective.</p> <p>Control box is defective.</p>	<p>Replace snap disc.</p> <p>Check that blower is plugged into wire harness.</p> <p>Replace blower.</p> <p>Replace control box.</p>
Exhaust blower fails to start or does not shut off.	<p>Blower not plugged in.</p> <p>Blower is clogged with ash.</p> <p>Blower is defective.</p> <p>Control box is defective.</p>	<p>Check that blower is plugged into wire harness.</p> <p>Clean exhaust system.</p> <p>Replace blower.</p> <p>Replace control box</p>
Large, lazy flame, orange color. Black ash on glass.	<p>Dirty appliance. Poor fuel quality, high ash content.</p> <p>Fire pot clean-out plate not completely closed.</p> <p>Excessive amount of fuel.</p>	<p>Clean appliance, including fire pot, heat exchangers and venting system. Remove stainless steel baffle from firebox to clean ash from on top of baffle. Clean behind rear brick panels. Change fuel brand to premium.</p> <p>Check that fire pot clean-out plate is fully closed.</p> <p>Reduce feed rate using feed rate adjustment control rod located inside hopper.</p>
Nuisance shutdowns.	<p>Low flame.</p> <p>Sawdust buildup in hopper.</p> <p>Feed motor is reversing.</p> <p>Defective thermocouple.</p> <p>Defective control box.</p> <p>Fire pot more than 1/2 full.</p>	<p>Increase feed by opening feed rate adjustment control rod located inside hopper.</p> <p>Clean hopper, see <a href="#">page 20</a>.</p> <p>Check for good connections between feed motor and wire harness.</p> <p>Replace thermocouple. Replace control box. See <b>High Ash Fuel Content Management</b> on <a href="#">page 22</a> for detailed instructions.</p>
Appliance calls for heat. Call light illuminates. Exhaust blower starts. No feed or igniter.	<p>Thermocouple is defective or not properly plugged in.</p> <p>Defective control box</p>	<p>Check connections on thermocouple or replace if defective. A flashing yellow light on the control box indicates a problem with the thermocouple.</p> <p>Replace control box.</p>
Hopper lid not closed all the way	Switch or magnet is out of adjustment (auger will not function)	Close the lid. If that doesn't work, adjust or replace the switch or magnet

**Table 24.1**

# 5 Service Parts Replacement

## A. Blowers

### 1. Combustion (Exhaust) Blower

**PART NUMBER: 812-4400**

- If you have adequate clearance you will not have to remove the panel set and disconnect flue, if not then you will have to remove the panel set and disconnect the flue.
- Pull appliance out onto the hearth.
- Remove right cast side.
- Disconnect the white and blue wires from the blower.
- Remove blower mounting screws (not housing bolts), **Figure 25.1**, from blower housing and remove blower. The replacement blower is shipped with a housing. If you do not need the housing, discard it. If you do need to replace the housing you will also need to replace the gasket. See Service Parts List for the part number.
- Re-install in reverse order.

### 2. Convection Blower

**PART NUMBER: 812-4900**

- The blower is located at the bottom rear of the insert. If an outside air kit is also installed, you will first need to remove the outside air flange by removing the 2 screws using a Phillips head screwdriver. You do not need to remove the flex pipe from the flange.
- If you have adequate clearance you will not have to remove the panel set and disconnect flue, if not then you will have to remove the panel set and disconnect the flue.
- Pull appliance out onto the hearth.
- Remove left cast side.
- Disconnect the wires from the blower. The wires coming from the wiring harness are purple & white and the wires from the blower are black.
- The blower is held in place with a wing screw.
- Re-install in reverse order.

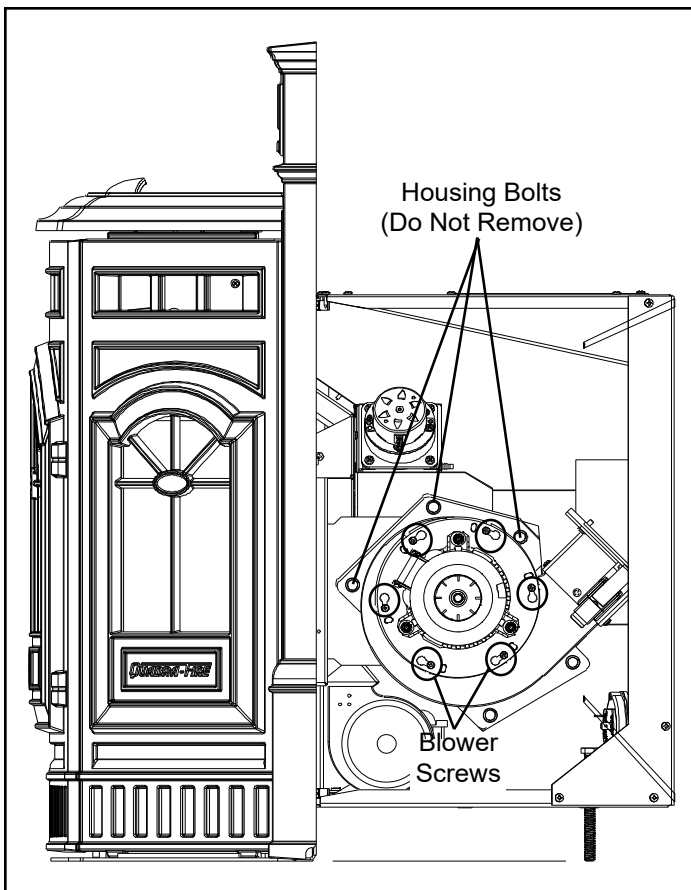
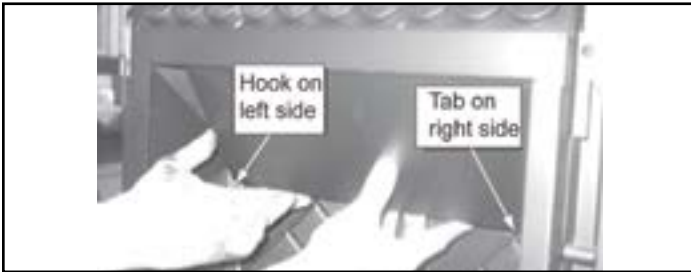


Figure 25.1

## B. Baffle

**PART NUMBER:** 7001-034

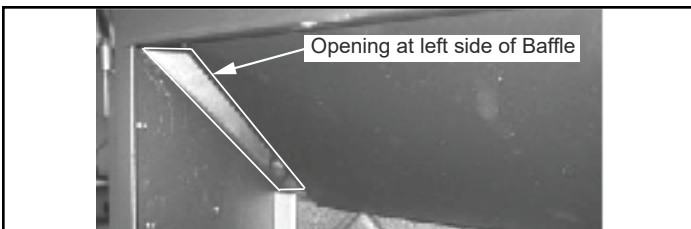
1. Follow **Section A. Proper Shutdown Procedures** on [page 18](#).
2. The top baffle has a hook on the bottom left side that rests on the top lip of the cast brick. There is a tab on the bottom right side that hooks into the side bracket. Remove the top baffle by first pulling the baffle forward until back edge drops down. Then slide baffle back until the front edge clears the shelf that it had been resting on (**Figure 26.1**, **Figure 26.2** and **Figure 26.3**).
3. Reinstall new baffle.



**Figure 26.1**



**Figure 26.2**



**Figure 26.3**

## C. Bricks

**PART NUMBERS:**

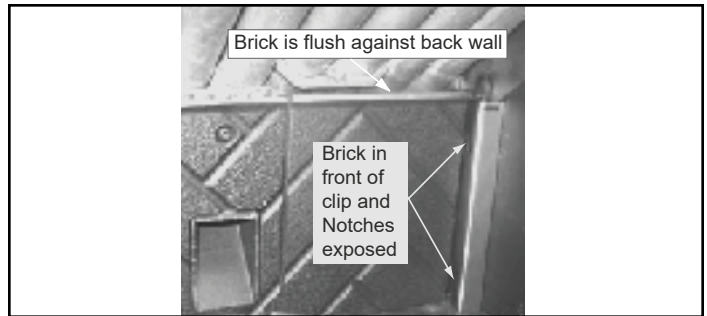
**LEFT OR RIGHT BRICK:** SRV414-0270

**CENTER:** SRV414-0260

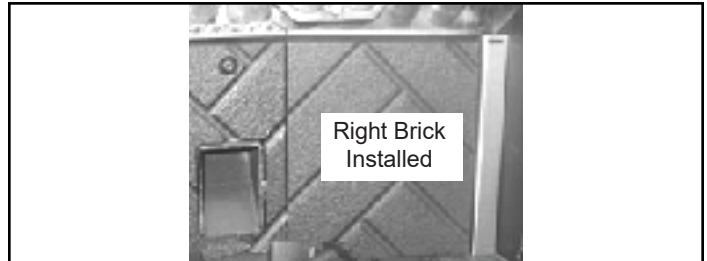
The baffle must be removed before any brick removal.

**Left or right side brick:**

1. Remove the right brick by holding top lip of the brick and lifting up.
2. Repeat for left brick.
3. Reinstall bricks in reverse order ensuring that the bricks are flush against the back wall of the firebox (**Figure 26.4** and **26.5**).



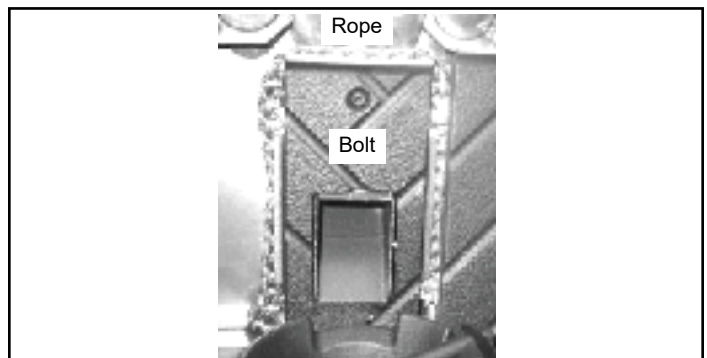
**Figure 26.4**



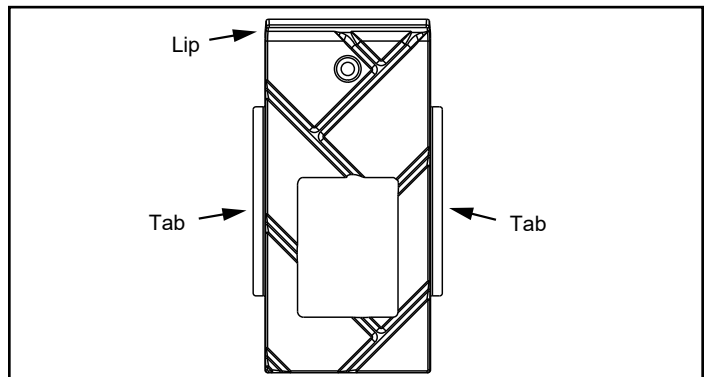
**Figure 26.5**

**Center brick:**

1. Follow [Steps 1 & 2](#) from **Removal of left or right side brick** to remove left and right brick.
2. Use an 5/32 Allen wrench to remove bolt out of center brick and set aside; remove and discard brick.
3. Validate rope is still in place; rope is wrapped around drop tube and ends are secure with rope tape.
4. Add new center brick and taking care not to cross thread the bolt; reinstall brick (**Figure 26.6**).
5. Repeat [Step 4](#) from **Removal of left or right side brick**.
6. Reinstall baffle (**Reference Section C. Baffle Replacement**).



**Figure 26.6**



**Figure 26.7**

## D. Igniter

**PART NUMBER:** SRV7000-462

1. Shut down the appliance by turning down the thermostat and let the appliance completely cool down. After the appliance has cooled down, unplug it and remove the ash drawer.
2. The wire leads to the igniter are connected to the wire harness with 1/4 inch (6mm) male / female spade connectors. These wires will pull forward approximately 4 to 5 inches (102mm to 127mm) through the grommet at the back of the ash drawer chamber. Disconnect the spade connections and remove the igniter from the chamber. Loosen the thumb screw and slide igniter out (**Figure 27.1**).
3. Install new igniter into the chamber and tighten the thumb screw. Re-connect the wires to the 2 leads with the spade connectors.
4. Push excess wire leads back through the grommet, one wire at a time, to take-up the 4 to 5 inches (102mm to 107mm) previously pulled out. This will keep the wires out of the way of the ash drawer. Double check that the igniter wires are clear of any movement, i.e. ash drawer, fire pot cleaning rod, cleaning slide plates, etc.
5. Re-install the ash drawer and then re-install the side panel and re-connect the power.

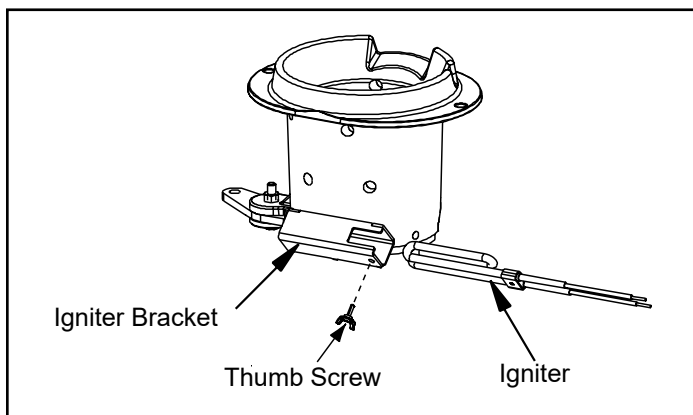


Figure 27.1

**CAUTION**

**Shock Risk.**

- Do NOT remove grounding prong from plug.
- Plug directly into properly grounded 3 prong receptacle.
- Route cord away from appliance.
- Do NOT route cord under or in front of appliance.

## E. Glass

**PART NUMBER:** SRV7021-032

1. Open the face and remove door from the appliance by lifting door off of hinge pin and lay on a flat surface face down.
2. Using a screwdriver, tap the bottom of the rope retainer rod to push it up out of the hole. The top end of the rod will slide up. Swing the rod toward you from the bottom and remove the rod. Repeat for other side.
3. Remove old glass and replace with new glass.
4. Slide the retainer rod into the top hole first, and then line up the bottom crimped end with the hole in the door. The crimped end must be parallel with the glass in order to insert it into place (**Figure 27.2**).

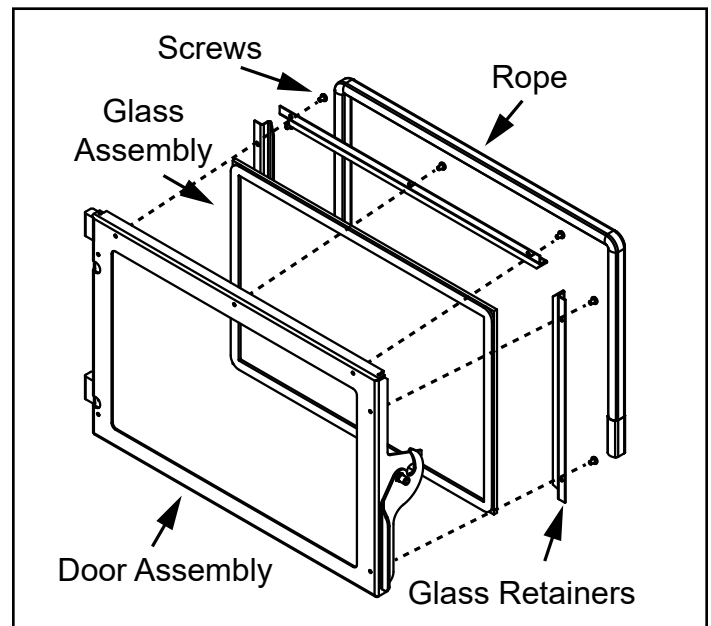


Figure 27.2

**WARNING**

- Glass is 5mm thick high temperature heat-resistant ceramic glass.
- DO NOT REPLACE with any other material.
- Alternate material may shatter and cause injury.

# 6 reference Materials

## A. Component Functions

### 1. Control Box

- a. The control box is located on lower right side of appliance, on top of the junction box.
- b. There is a light located inside of the control box. The internal light will turn green when the appliance has reached a temperature of 200°F (93°C) in the fire pot. and will turn red when it reaches 600°F (315°C).
- c. There is also an internal blue light located in the upper left corner of the control box. When you plug in the appliance the blue light will automatically start blinking 6 blinks every 10 seconds for 60 seconds (depending upon setting) and then will stop.

**NOTE:** Do NOT open the control box. This will void the warranty. If you need to plug in or remove the control box you must first unplug the appliance.

2. **Convection Blower:** The convection blower is mounted at the bottom rear of the appliance. There are 2 impellers, one on each side of the motor. The convection blower pushes air through the heat exchange system into the room.
3. **Exhaust Blower:** The exhaust blower is mounted on the right side of the appliance behind the right side panel. The exhaust blower is designed to pull the exhaust from the appliance and push it out through the venting system.
4. **Feed System:** The feed system is located behind the firebox and can be removed as an entire assembly. The assembly includes the feed motor, mounting bracket, bearing and feed spring (auger). The hollow feed spring (auger) pulls pellets up the feed tube from the hopper area and drops them down the feed chute into the fire pot at a set rate. The feed motor starts and stops every 7 seconds.
5. **Fire pot:** The fire pot is made of high quality ductile iron and has a cleaning pull-out rod. The floor of the fire pot opens for cleaning when you pull out the rod. Be sure that the floor returns to a completely closed position or your appliance will not operate properly.
6. **Fuse:** The fuse is located on the side of the junction box near the red call light. The fuse will blow should a short occur and shut off power to the appliance.
7. **Heat Exchangers:** The heat exchangers transfer heat from the exhaust system into convection air. There are 2 clean out rods located under the heat exchangers.



**When describing the location of a component, it is always AS YOU FACE THE FRONT OF THE APPLIANCE.**

8. **Heat Output Switch:** The heat output switch is located on the lower right side of firebox, behind the front access door and above the reset button. The function of the heat output switch is to regulate the burn rates; low, medium and high settings.
9. **Hopper Switch:** The hopper switch is located in the upper right hand corner, outside of the hopper. This switch is designed to shut down the feed motor whenever the hopper lid is opened.
10. **Igniter:** The igniter is mounted on the base of the fire pot. Combustion air travels over the red hot igniter creating super heated air that ignites the pellets.
11. **Junction Box And Wiring Harness:** The junction box is located on the lower right side of the appliance, behind the left front access door. The junction box and wiring harness are replaced as one component.
12. **Power Supply:** The power outlet is located on the lower right side of the appliance on the front of the junction box. Check the wall receptacle for 120 volt, 60 Hz (standard current). Make sure the outlet is grounded and has the correct polarity. A good surge protector is recommended. When operating with a generator you need a least 600 watts of power, or with an inverter at least 800 watts of power available for the appliance during the start cycle.
13. **Red Call Light:** The red call light is on the top of the junction box by the fuse. The function of the red call light is to indicate that the thermostat is calling for heat.
14. **Reset Button:** The reset button is located on the lower right side of firebox in behind the access door and below the heat output control switch. The function of the switch is to momentarily open the thermostat circuit, which restarts the system.
15. **Thermocouple:** The thermocouple is located on top of the fire pot inside the thermocouple cover (ceramic protection tube). The thermocouple sends a millivolt signal to the control box indicating the preset temperatures of the green and red lights have been obtained.
16. **Thermostat:** The appliance is designed to run on a 5 volt DC thermostat. The heat anticipator, if present, should be set on the lowest setting available.

17. **Snap Disc #1 (Convection Blower) 110°F:** Snap disc #1 is located on the right side of the firebox. There are 2 purple wires connected to it. This snap disc turns the convection blower on and off as needed. Power is always present at snap disc #1 if the appliance is powered up.
18. **Snap Disc #2 (Fuel Delivery Interrupt) 250°F:** Snap disc #2 is located on the back side of the feed drop tube. There is 1 orange wire and 1 black wire connected to it. This snap disc will turn off the feed system, which will turn off the appliance if an over fire condition should occur or if the convection blower should fail to operate. If this occurs the snap disc will automatically reset itself.
19. **Snap Disc #3 (Burn Back Protector) 250°F:** Snap disc #3 is mounted on the back of the auger tube in the center of the appliance and has a reset button. To access it remove the right side panel. If the fire tries to burn back into the feed system or push exhaust up the feed tube, this snap disc will shut the entire system off. This disc must be manually reset. Power is always present at snap disc #3 if the appliance is powered up.
20. **Vacuum Switch:** The vacuum switch is located on the lower right side of the appliance behind left access panel. This switch turns the feed system on when vacuum is present in the firebox. The vacuum switch is a safety device to shut off the feed motor if the exhaust or the heat exchanger system is dirty or plugged or if the firebox door is open.
21. **Wiring Schematic: See Figure 29.1 below**
- The power outlet is located on the right rear of the appliance beneath the heat output switch and reset button.

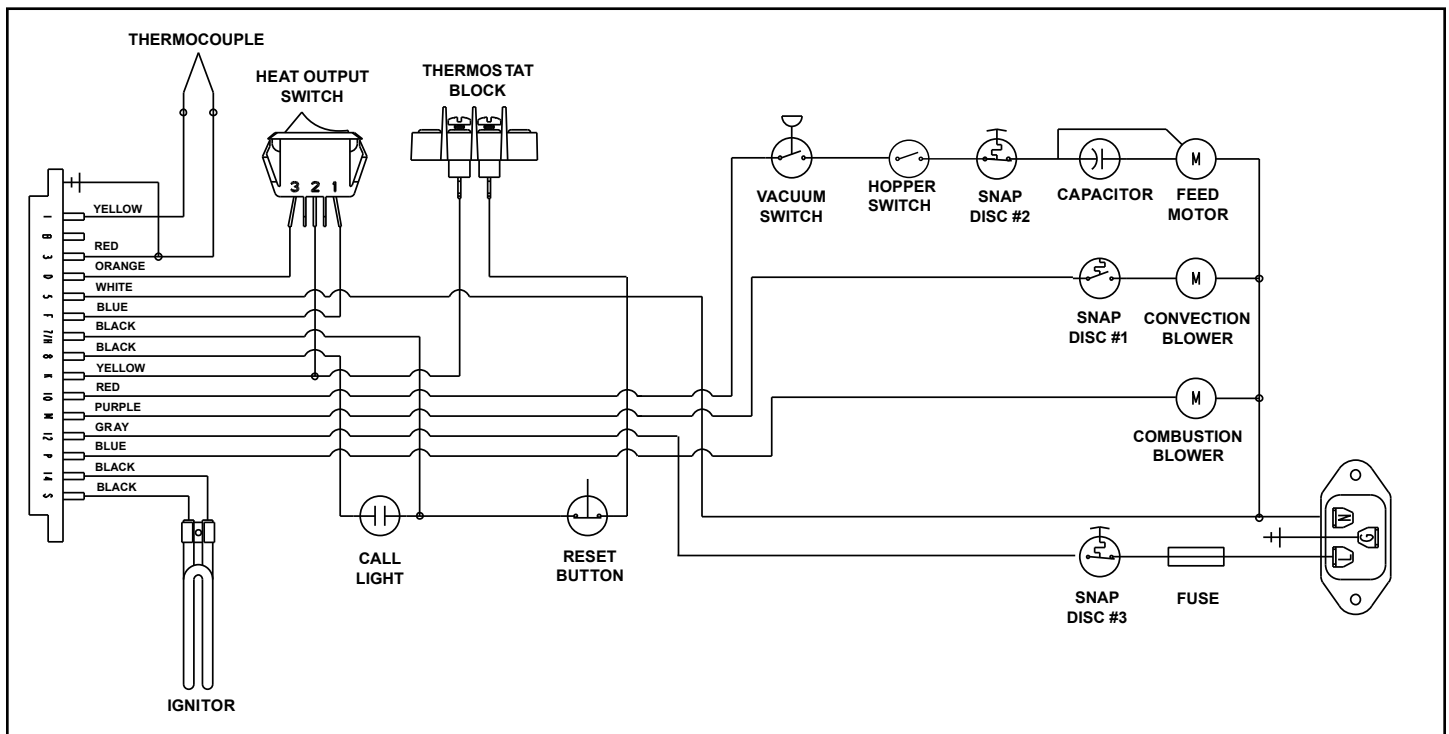


Figure 29.1

## B. Component Locations

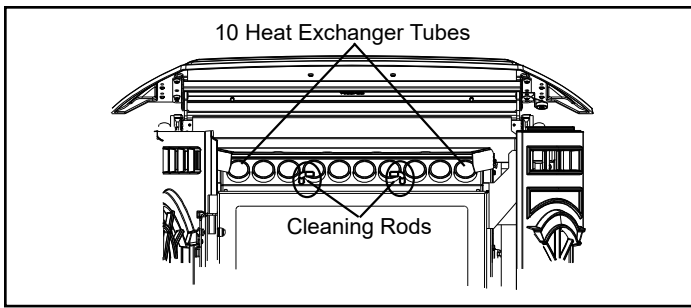


Figure 30.1 - Cleaning Rods & Heat Exchanger Tubes

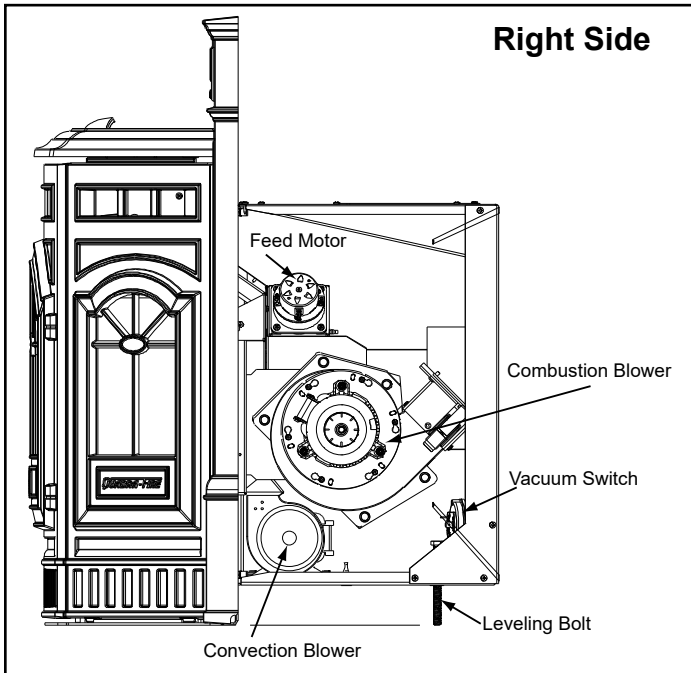


Figure 30.2

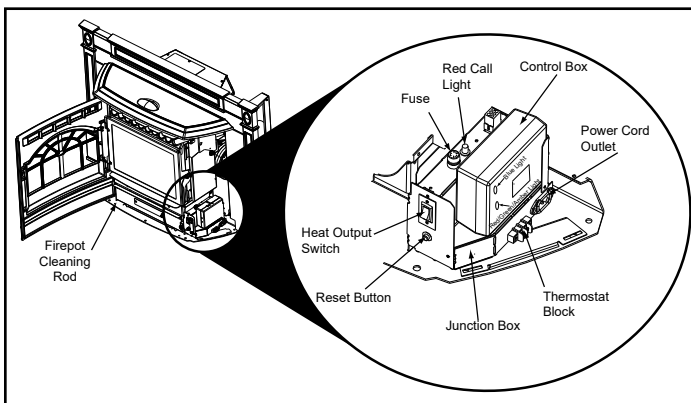


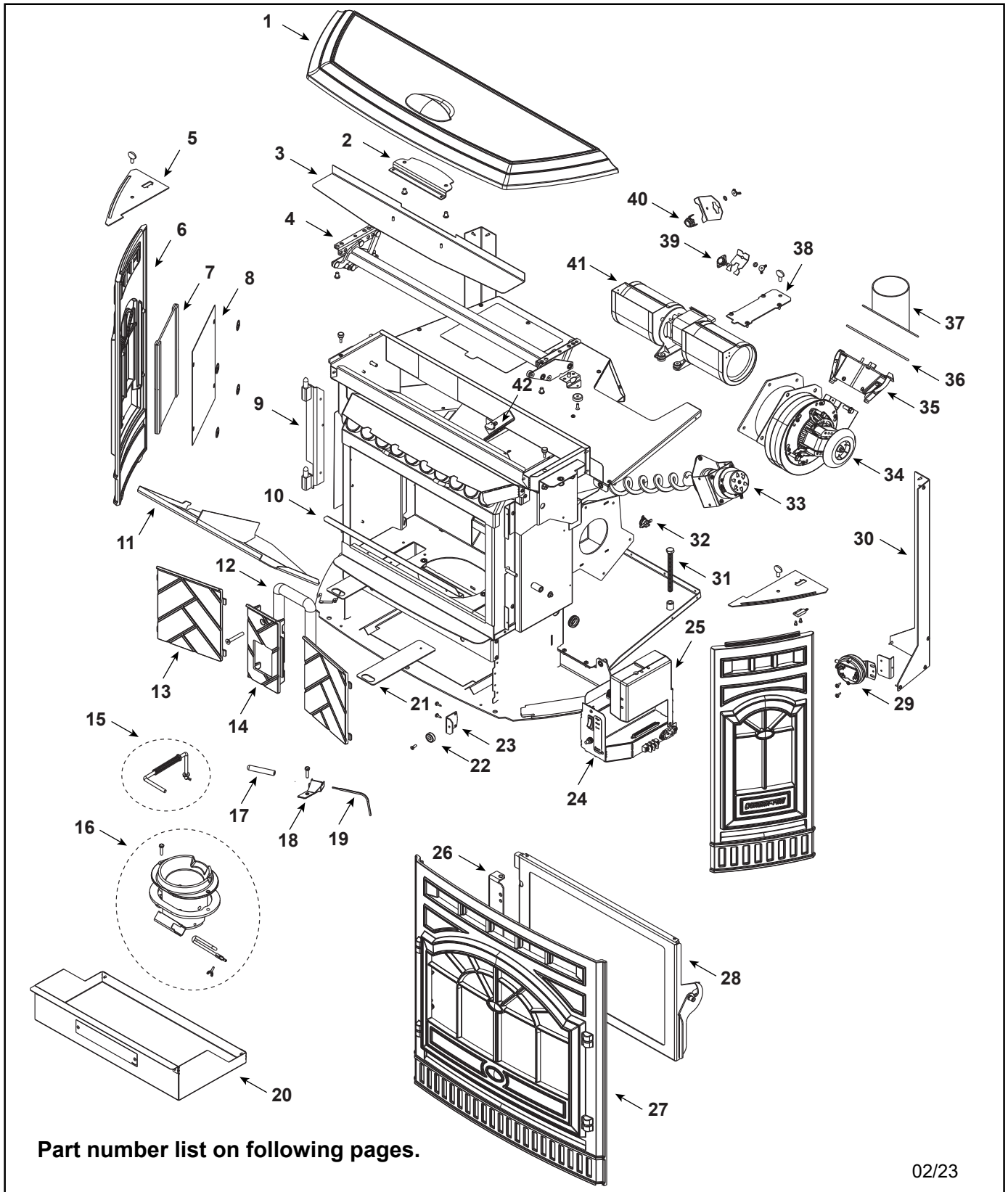
Figure 30.3







CASTILEI-MBK-C, CASTILEI-PMH-C, CASTILEI-TWL-C



Part number list on following pages.

02/23

Beginning Manufacturing Date: Feb 2011  
Ending Manufacturing Date: May 2019

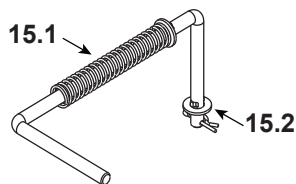
IMPORTANT: THIS IS DATED INFORMATION. Parts must be ordered from a dealer or distributor. **Hearth and Home Technologies does not sell directly to consumers.** Provide model number and serial number when requesting service parts from your dealer or distributor.



**Stocked  
at Depot**

ITEM	DESCRIPTION	COMMENTS	PART NUMBER	
1	Top Cast	Matte Black	7022-129BK	
		Mahogany	7022-129PMH	
		Twilight	7022-129TWL	
2	Handle Cover Plate		SRV7022-144	
3	Heat Shield, Top		SRV7022-143	
4	Hinge Assembly, Top		SRV7036-006	
	Hopper Switch		SRV7000-375	Y
	Wire Harness, Hopper Switch		SRV414-1220	Y
5	Side Cast Hook		SRV7022-132	
	Thumb Screw, 1/4-20 x 1/2	Pkg of 10	7000-617/10	Y
6	Side	Matte Black	414-0050BK	
		Mahogany	SRV414-0050PMH	
		Twilight	SRV414-0050TWL	
7	Glass Assembly, Side, 1 Piece - 5-7/8 in. W x 9 in. H	Interchangeable	SRV414-5380	Y
	Gasket, Channel 1/8 x 1-1/4	10 Ft.	7000-377/10	Y
8	Backer, Side Window	Interchangeable	SRV414-0280	
9	Door Hinge Assembly		SRV7022-012	Y
	Hinge, Door, Male		SRV450-2810	
10	Deflector, Bottom Airwash		SRV413-0680	
11	Baffle Assembly		SRV7001-034	Y
12	Door Rope, 7/8"	8 Ft	842-2350	Y
13	Brick, Left / Right, Cast		SRV414-0270	
14	Brick, Center, Cast		SRV414-0260	

### Firepot Pull Rod Assembly



15	Firepot Pull Rod Assembly		SRV414-5270	Y
15.1	Spring, Firepot		200-2050	
15.2	Washer, 5/16 Sae	Pkg of 10	7000-579/10	Y
		Pkg of 50	3-30-0205-50	Y

Additional service part numbers appear on following page.

Beginning Manufacturing Date: Feb 2011  
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**Stocked at Depot**

ITEM	DESCRIPTION	COMMENTS	PART NUMBER	
<b>Firepot and Associated Parts</b>				
16	Firepot Assembly		SRV414-5200	Y
16.1	Bolt, Hex Head, 1/4-20 X 1	Pkg of 10	25221A/10	Y
16.2	Gasket, Firepot		SRV240-0930	Y
16.3	Heating Element Assembly 18" (Loop Igniter)	Pkg of 1	SRV7000-462	Y
		Pkg of 10	SRV7000-462/10	Y
16.4	Wing Thumb Screw 8-32 x 1/2	Pkg of 24	7000-223/24	Y
	Bushing, Firepot		410-8320	Y
	Floor, Firepot		414-0290	Y
	Nut, Lock 1/4-20	Pkg of 25	226-0090/25	Y
	Bolt, Firepot, 1-1/4" Long	Pkg of 25	225-0120/25	Y
17	Thermocouple Cover		812-1322	Y
		Pkg of 10	812-4920	Y
18	Thermocouple Clamp		SRV7001-203	Y
	Bolt, Hex Head, 1/4-20 X 1	Pkg of 10	25221A/10	Y
19	Thermocouple		812-4470	Y
20	Ash Pan Assembly		SRV414-6240	
21	Plate, Ash Cleanout		SRV7001-186	
22	Magnet Round		SRV7000-140	Y
23	Bracket, Magnet		SRV414-0930	
24	Wire Harness		SRV414-1040	Y
	Fuse, 7 Amp, Junction Box	Pkg of 10	812-0380/10	Y
25	Control Board 3 Speed		SRV7000-704	Y
	Fuse, 8 Amp, Control Box	Pkg of 10	812-3780/10	Y
26	Face Hinge		SRV7022-138	
27	Face	Matte Black	414-0040BK	
		Mahogany	SRV414-0040PMH	
		Twilight	SRV414-0040TWL	

Additional service part numbers appear on following page.

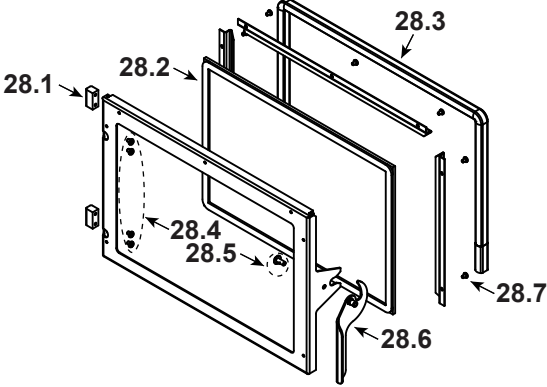
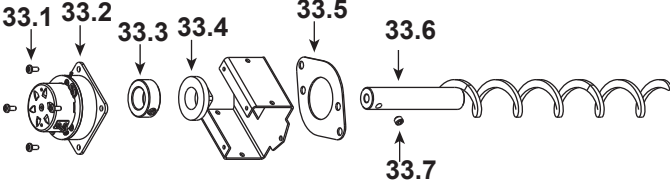
Beginning Manufacturing Date: Feb 2011

Ending Manufacturing Date: May 2019

IMPORTANT: THIS IS DATED INFORMATION. Parts must be ordered from a dealer or distributor. **Hearth and Home Technologies does not sell directly to consumers.** Provide model number and serial number when requesting service parts from your dealer or distributor.



**Stocked at Depot**

ITEM	DESCRIPTION	COMMENTS	PART NUMBER	
<p><b>#28 Door Assembly</b></p> 				
28	Door Assembly		SRV7021-031	
28.1	Hinge, Female		SRV450-2910	Y
28.2	Glass Assembly		SRV7021-032	Y
28.3	3/4 Inch Rope Gasket	50 Ft	SRV240-0051M	
		100 Ft	832-1520	
28.4	Screw, Pan Head Philips, 10/32 X 1/4	Pkg of 24	229-1230/24	Y
28.5	Screw, Machine Screw 1/4-20X5/8	Pkg of 24	220-0440/24	Y
28.6	Door Latch Assembly		SRV7021-006	
28.7	Screw, Pan Head Philips 8-32X1/4	Pkg of 40	225-0240/40	Y
29	Vacuum Switch		SRV7000-531	Y
	Hose, Vacuum, 5/32 Id	3 Ft	SRV240-0450	Y
	Hose, Barb Assembly		SRV229-0920	
30	Corner Post		SRV7022-104	
31	Bolt, GRD 2 Tap 3/8 x 4		223-0140	
32	Snap Disc, F110F-20 ( #1 )		SRV230-1220	Y
<p><b>#33 Feed Assembly</b></p> 				
33	Feed Assembly		812-4760	Y
33.1	Screw, 8-32 x 3/8 PH,TF	Pkg of 40	225-0500/40	Y
33.2	Feed Motor		812-4421	Y
33.3	Collar, Set, 7/8		229-0520	
33.4	Feed Bearing		SRV7000-598	Y
33.5	Gasket, Feed Motor		SRV240-0731	Y
33.6	Feed Spring Assembly (Only)		SRV7001-046	Y
33.7	Set Screw 5/16-18 x 1/4	Pkg of 25	225-0550/25	Y

Additional service part numbers appear on following page.

Beginning Manufacturing Date: Feb 2011

Ending Manufacturing Date: May 2019

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**Stocked  
at Depot**

ITEM	DESCRIPTION	COMMENTS	PART NUMBER	
34	Exhaust Combustion Blower, 45 CFM		812-4400	Y
	Gasket, Exhaust Combustion Blower (between...)	...Housing & Stove	SRV240-0812	Y
		...Housing & Motor	812-4710	Y
35	Exhaust Transition Assembly		SRV414-5100	
	Latch, Draw		229-0230	
36	Gasket, Flue Adapter		SRV7036-180	Y
37	Exhaust Adapter Assembly		SRV414-5850	
38	Blower Retainer		SRV7058-148	
39	Snap Disc, L250F-95 ( #2 )		SRV7000-268	Y
40	Snap Disc, Manual Reset, L250F ( #3 )		SRV230-1290	Y
41	Convection Blower, 150 CFM		812-4900	Y
42	Feed Adjustment Plate		SRV7022-119	
	Brick Hangers (Left & Right)	1 Set	SRV8787-013	
	Component Pack Assembly (Includes Firepot Cleanout Tool, Touch-Up Paint, Power Cord, Thermostat Wire Harness, Owners Manual, Warranty Card, "How-To" Dvd	Matte Black	SRV7022-031	
		Twilight	SRV7022-032	
		Mahogany	SRV7022-033	
	Cleanout Tool		SRV414-1140	Y
	Paint Touch-Up	Matte Black	3-42-19905	
		Twilight	0001285	
		Mahogany	1-00-0014	
	Power Cord		3-20-51578	Y
	Harness, Thermostat Wire		SRV230-0810	
	Reset Button Assembly		SRV7000-040	
OPTIONAL ACCESSORIES				
	Adjustable Hearth Support - 12" x 50", 2-10" H		ADJSPT-12	
	Damper, 3 Inch - Tall Vertical Installs Only		PEL-DAMP3	Y
	Damper, 4 Inch - Tall Vertical Installs Only		PEL-DAMP4	
	Log Set		LOGS-30-OE	
	Log Rear, Left		7050-144	
	Log Rear, Right		7050-143	
	Outside Air Kit, Rear		811-0872	
	Channel, Air Intake		SRV413-7040	
	Cover, Outside Air Kit, Floor		SRV411-1071	
	Hose, Alum Flex, 2 Inch x 3 Ft	3 Ft	SRV200-0860	
	Outside Air Cap Assembly		SRV7001-044	
	Outside Air Collar Assembly		SRV7001-045	
	Trim Plate, Outside Air Kit		SRV412-7100	
	Pullrod Handle		PULLROD-HNDL	

Additional service part numbers appear on following page.

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**Stocked at Depot**

ITEM	DESCRIPTION	COMMENTS	PART NUMBER	
	Surround Trim Assembly 43 X 31	Black	TRIMKIT-4331-BK	
		Nickel	TRIMKIT-4331-NL	
	Surround Trim Assembly 51 X 34	Black	TRIMKIT-5134-BK	
		Nickel	TRIMKIT-5134-NL	
	Surround, Basic, Large		SP-CSTLI5134	
	Component Pack		SRV7022-055	
	Surround, Basic, Standard		SP-CSTLI4331	
	Component Pack		SRV7022-055	
	Surround, Standard	Use With Cast Trim	SP-CSTLI4230-CM	
	Component Pack		SRV7022-054	
	Surround, Standard	Use With Cast Trim	SP-CSTLI4834-CM	
	Thermostat, Programmable		PROG-STAT	
	Trim Cast	Matte Black	811-0930	
		Mahogany	811-0960	
		Twilight	TR-CAST-TWL	
	Footer, Left	Matte Black	414-7090MBK	
		Mahogany	414-7090PMH	
		Twilight	414-7090TWL	
	Footer, Right	Matte Black	414-7100MBK	
		Mahogany	414-7100PMH	
		Twilight	414-7100TWL	
	Header	Matte Black	414-7110MBK	
		Mahogany	414-7110PMH	
		Twilight	414-7110TWL	
	Trim Leg, Left	Matte Black	414-7120MBK	
		Mahogany	414-7120PMH	
		Twilight	414-7120TWL	
	Trim Leg, Right	Matte Black	414-7130MBK	
		Mahogany	414-7130PMH	
		Twilight	414-7130TWL	

Additional service part numbers appear on following page.



Beginning Manufacturing Date: Feb 2011  
Ending Manufacturing Date: May 2019

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**Stocked  
at Depot**

ITEM	DESCRIPTION	COMMENTS	PART NUMBER	
<b>FASTENERS</b>				
	Avk Rivnut Repair Kit		RIVNUT-REPAIR	Y
	Bolt, Firepot, 1-1/4" Long	Qty: 25	225-0120/25	
	Bolt, Hex Head, 1/4-20 X 1	Pkg of 10	25221A/10	Y
	Bumper, Rubber	Pkg of 12	SRV224-0340/12	Y
	Leveling Bolt	Pkg of 25	220-0080/25	Y
	Nut, Capped, Push, 1/4	Pkg of 24	7000-157/24	Y
	Nut, Lock 1/4-20	Qty: 25	226-0090/25	Y
	Nut, Ser Flange Small 1/4-20	Pkg of 24	226-0130/24	Y
	Nut, Wing, 8-32	Pkg of 24	226-0160/24	Y
	Push Retainer, 5/16	Pkg of 100	3-31-94807-100	Y
	Screw, 8-32 X 1/4	Qty: 40	225-0240/40	
	Screw Flat Head 1/4-20	Pkg of 24	7000-130/24	Y
	Screw, 1/4-20X3/8 Phillips Button Head	Pkg of 24	7000-401/24	Y
	Screw, Flat Head Philips 8-32X1/2	Pkg of 12	220-0490/12	Y
	Screw, Machine Screw 1/4-20X5/8	Pkg of 24	220-0440/24	Y
	Screw, Pan Head Philips 8-32 X 3/8	Pkg of 40	225-0500/40	Y
	Screw, Pan Head Philips Tc 8-32X1/2	Pkg of 25	220-0030/25	Y
	Screw, Pan Head Philips, 10/32 X 1/4	Pkg of 24	229-1230/24	Y
	Screw, Set 5/16-18 X 1/4	Qty: 25	225-0550/25	Y
	Screw, Sheet Metal #8 X 1/2 S-Grip	Pkg of 40	12460/40	Y
	Thumb Screw, 1/4-20 X 1/2	Pkg of 10	7000-617/10	Y
	Washer, 1/4 Sae	Pkg of 24	28758/24	Y
	Washer, 5/16 Sae	Pkg of 10	7000-579/10	Y
		Pkg of 50	3-30-0205-50	Y
	Wing Thumb Screw 8-32X1/2	Pkg of 24	7000-223/24	Y

# QUADRA-FIRE®

NOTHING BURNS LIKE A QUAD

## CONTACT INFORMATION

Hearth & Home Technologies  
352 Mountain House Road  
Halifax, PA 17032  
Division of HNI INDUSTRIES

Please contact your Quadra-Fire dealer with any questions or concerns.  
For the number of your nearest Quadra-Fire dealer  
log onto [www.quadrafire.com](http://www.quadrafire.com)



## CAUTION



### DO NOT DISCARD THIS MANUAL

- Important operating and maintenance instructions included.
- Read, understand and follow these instructions for safe installation and operation.
- Leave this manual with party responsible for use and operation of this appliance.



### We recommend that you record the following pertinent information for your heating appliance.

Date purchased/installed: \_\_\_\_\_

Serial Number: \_\_\_\_\_

Location on appliance: \_\_\_\_\_

Dealership purchased from: \_\_\_\_\_

Dealer Phone: 1(     )     -     \_\_\_\_\_

Notes:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

This product may be covered by one or more of the following patents: (United States) 5341794, 5263471, 6688302, 7216645, 7047962 or other U.S. and foreign patents pending.



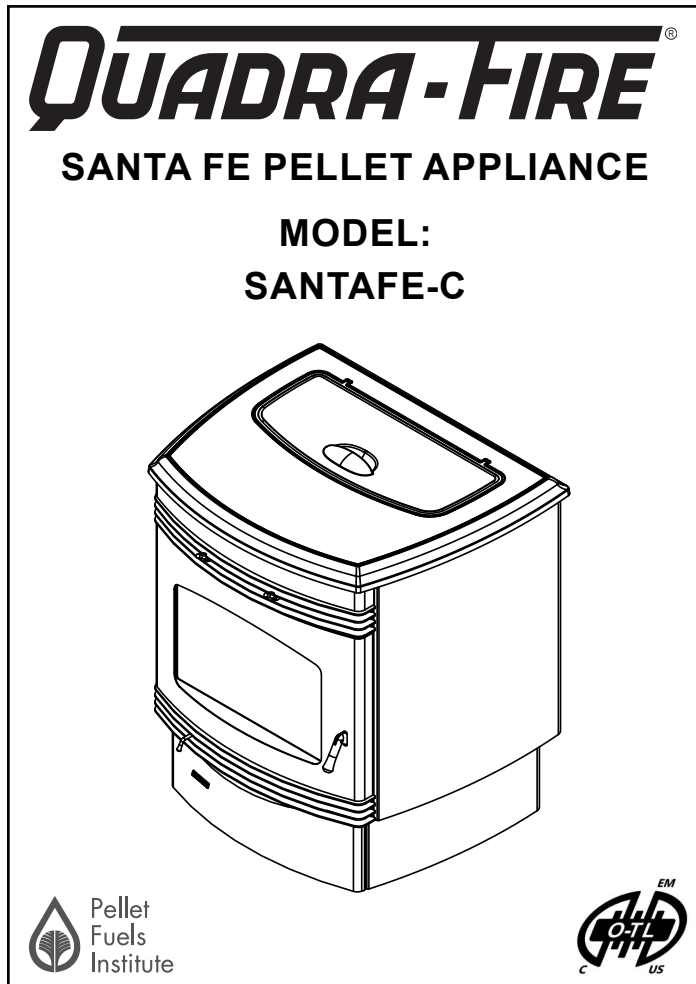
HEARTH & HOME  
technologies™

# Installation Manual

## Installation & Appliance Set-Up

**INSTALLER:** Leave this manual with party responsible for use and operation.  
**OWNER:** Retain this manual for future reference.

**NOTICE: DO NOT DISCARD THIS MANUAL**



### WARNING



If the information in these instructions is not followed exactly, a fire could result causing property damage, personal injury, or death.

- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- Do not over fire - If appliance or chimney connector glows, you are over firing. Over firing will void your warranty.
- Comply with all minimum clearances to combustibles as specified. Failure to comply may cause house fire.



### WARNING



#### HOT SURFACES!

Glass and other surfaces are hot during operation AND cool down. Hot glass will cause burns.

- Do not touch glass until it is cooled
- NEVER allow children to touch glass
- Keep children away
- CAREFULLY SUPERVISE children in same room as fireplace.
- Alert children and adults to hazards of high temperatures
- High temperatures may ignite clothing or other flammable materials.
- Keep clothing, furniture, draperies and other flammable materials away.



### CAUTION

Check building codes prior to installation.

- Installation MUST comply with local, regional, state and national codes and regulations.
- Consult local building, fire officials or authorities having jurisdiction about restrictions, installation inspection, and permits.



### CAUTION

Tested and approved for wood pellets only. Burning of any other type of fuel voids your warranty.

Installation and service of this appliance should be performed by qualified personnel. Hearth & Home Technologies recommends HHT Factory Trained or NFI certified professionals.



**NOTE:** To obtain a French translation of this manual, please contact your dealer or visit [www.quadrafire.com](http://www.quadrafire.com)

**REMARQUE :** Pour obtenir une traduction française de ce manuel, s'il vous plaît contacter votre revendeur ou visitez [www.quadrafire.com](http://www.quadrafire.com)



### Safety Alert Key:

- **DANGER!** Indicates a hazardous situation which, if not avoided will result in death or serious injury.
- **WARNING!** Indicates a hazardous situation which, if not avoided could result in death or serious injury.
- **CAUTION!** Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
- **NOTICE:** Indicates practices which may cause damage to the appliance or to property.

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→ = Contains updated information

# 1 Important Safety Information

## A. Appliance Certification

<b>Model</b>	Santa Fe Pellet Appliance
<b>Laboratory</b>	OMNI Test Laboratories, Inc.
<b>Report No.</b>	061-S-77d-6.2
<b>Type</b>	Solid Fuel Room Appliance/Pellet Fuel Burning Type
<b>Standard</b>	ASTM E1509-04, ULC S627-00 and ULC/ORD-C1482-M1990 Room Appliance Pellet Fuel Burning type and (UM) 84-HUD, Mobile Home Approved.

## B. BTU & Efficiency Specifications

<b>Emissions Report Number:</b>	0061PM077E
<b>EPA Certification #:</b>	175-19
<b>EPA Certified Emissions:</b>	1.1 grams per hour
<b>*LHV Tested Efficiency:</b>	70.4%
<b>**HHV Tested Efficiency:</b>	66.1%
<b>***EPA BTU Output:</b>	5,800 to 22,400 / hr.
<b>****BTU Input:</b>	9,400 to 30,600 / hr.
<b>Vent Size:</b>	3 or 4 "L" or "PL", or 6 inches
<b>Hopper Capacity:</b>	52 lbs
<b>Fuel</b>	Premium Wood Pellets
* Weighted average LHV efficiency using data collected during EPA emissions test.	
**Weighted average HHV efficiency using data collected during EPA emissions test.	
***A range of BTU outputs based on HHV and the burn rates from the low and high EPA tests.	
****Maximum BTU input based on the high burn section of the EPA emissions test.	

The Santa Fe is Certified to comply with 2020 particulate emission standards.



**NOTICE:** This installation must conform with local codes. In the absence of local codes you must comply with the **ASTM E1509-04, ULC S627-00, (UM) 84-HUD and ULC/ORD-C-1482-M1990.**

This pellet appliance needs periodic inspection and repair for proper operation. It is against federal regulations to operate this pellet appliance in a manner inconsistent with operating instructions in this manual.

### C. Glass Specifications

This appliance is equipped with 5mm ceramic glass. Replace glass only with 5mm ceramic glass. Please contact your dealer for replacement glass.

### D. Electrical Rating

115 VAC, 60 Hz, Start 4.1 Amps, Run 1.1 Amps

### E. Mobile Home Approved

- This appliance is approved for mobile home installations when not installed in a sleeping room and when an outside combustion air inlet is provided.
- The structural integrity of the mobile home floor, ceiling, and walls must be maintained.
- The appliance must be properly grounded to the frame of the mobile home and use only Listed pellet vent Class "L" or "PL" connector pipe.
- Outside Air Kit, part OAK-ACC must be installed in a mobile home installation.

### F. Non-Combustible Materials

Material which will not ignite and burn, composed of any combination of the following:

- Steel
- Plaster
- Brick
- Iron
- Concrete
- Tile
- Glass
- Slate

Materials reported as passing **ASTM E 136, Standard Test Method for Behavior of Metals, in a Vertical Tube Furnace of 750° C.**

### G. Combustible Materials

Material made of/or surfaced with any of the following materials:


- Wood
- Compressed Paper
- Plant Fibers
- Plastic
- Plywood/OSB
- Sheet Rock (drywall)



Any material that can ignite and burn: flame proofed or not, plastered or non-plastered.

### H. Sleeping Room

When installed in a sleeping room it is recommended that 3ft of vertical be installed prior to horizontally exiting the room and a smoke/CO alarm be installed in the bedroom. The size of the room must be at least 50ft<sup>3</sup> per 1,000 Btu/hr stove input, if the stove exceeds the room size, out air must be installed.

### I. California - Prop65

 <b>WARNING</b>
This product and the fuels used to operate this product (wood), and the products of combustion of such fuels, can expose you to chemicals including carbon black, which is known to the State of California to cause cancer, and carbon monoxide, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to: <a href="http://WWW.P65Warnings.ca.gov">WWW.P65Warnings.ca.gov</a>

 <b>WARNING</b>
 <b>Fire Risk.</b> Hearth & Home Technologies disclaims any responsibility for, and the warranty will be voided by, the following actions: <ul style="list-style-type: none"><li>• Installation and use of any damaged appliance.</li><li>• Modification of the appliance.</li><li>• Installation other than as instructed by Hearth &amp; Home Technologies.</li><li>• Installation and/or use of any component part not approved by Hearth &amp; Home Technologies.</li><li>• Operating appliance without fully assembling all components.</li><li>• Operating appliance without legs attached (if supplied with appliance).</li><li>• <u>Do NOT Over fire</u> - If appliance or chimney connector glows, you are over firing.</li></ul> Any such action that may cause a fire hazard.

Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage.

For assistance or additional information, consult a qualified installer, service agency or your dealer.

<b>NOTE:</b> Hearth & Home Technologies, manufacturer of this appliance, reserves the right to alter its products, their specifications and/or price without notice.
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# 2 Getting Started

## A. Design, Installation & Location Considerations

### 1. Appliance Location

**NOTICE:** Check building codes prior to installation.

- Installation MUST comply with local, regional, state and national codes and regulations.
- Consult insurance carrier, local building inspector, fire officials or authorities having jurisdiction over restrictions, installation inspection and permits.

It is a good idea to plan your installation on paper, using exact measurements for clearances and floor protection, before actually beginning the installation. Location of the appliance and chimney will affect performance.

Consideration must be given to:

- Safety, convenience, traffic flow
- Placement of the chimney and chimney connector and to minimize the use of chimney offsets.
- Place the appliance where there will be a clear passage for a Listed chimney through the ceiling and roof (vertical) or through exterior wall (horizontal).
- Installing the required outside air kit will affect the location of the vent termination.

When locating vent and venting termination, the ideal location is to vent above roof line when possible. This minimizes the affects of wind loading.

Since pellet exhaust can contain ash, soot or sparks, you must consider the location of:

- Windows
- Air Intakes
- Air Conditioner
- Overhang, soffits, porch roofs, adjacent walls
- Landscaping, vegetation
- Horizontal or vertical vent termination

### 2. Floor Support

The supporting floor under the appliance must be able to handle the weight of the appliance, fuel load and the weight of the chimney.

Ensure that your floor will support these weights prior to installation. Add sufficient additional support to meet this weight requirement prior to installation. The weight of the appliance is 190 lbs.



## WARNING

### Risk of Fire.

Damaged parts could impair safe operation. Do NOT install damaged, incomplete or substitute components.

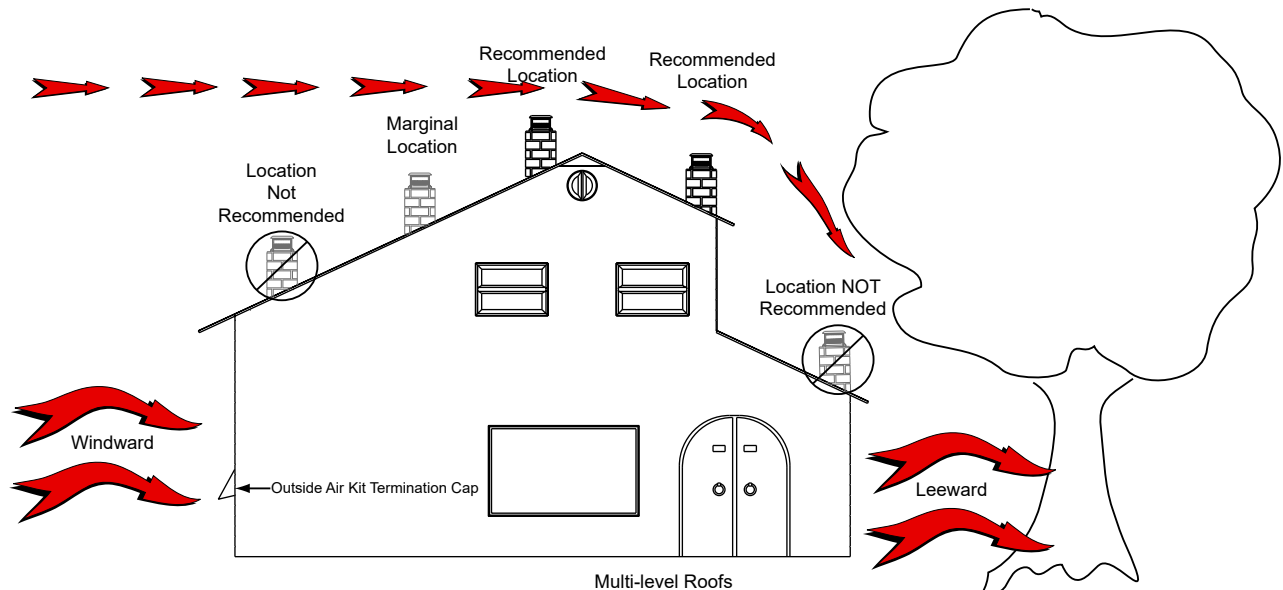


Figure 5.1

## B. Thermostat Wall Control Location

The thermostat wall control's location will have some effect on the appliance's operation.

- Maximum wire length from appliance is 100 feet (30.48m) with continuous non-spliced wire. Recommended 20 gauge wire, solid copper .
- When located close to the appliance, it may require a slightly higher temperature setting to keep the rest of the house comfortable.
- When located in an adjacent room or on a different floor level, you will notice higher temperatures near the appliance.



## C. Tools And Supplies Needed

Tools and building supplies normally required for installation, unless installing into an existing masonry fireplace:

- Reciprocating Saw
- Channel Locks
- Hammer
- Phillips Screwdriver
- Tape Measure
- Plumb Line
- 1/4" Self-Tapping Screws
- Framing Material
- Hi-temp Caulking Material
- Gloves
- Safety Glasses
- Framing Square
- Electric Drill & Bits (1/4")
- Level

### May also need:

- Vent Support Straps
- Venting Paint

	<b>WARNING</b>
	<b>Risk of Fire!</b> <ul style="list-style-type: none"><li>• Damaged parts could impair safe operation.</li><li>• Do NOT install damaged, incomplete or substitute components.</li></ul>

	<b>WARNING</b>
	<b>Hearth &amp; Home Technologies disclaims any responsibility for, and the warranty will be voided by, the following actions:</b> <ul style="list-style-type: none"><li>• Installation and use of any damaged appliance.</li><li>• Modification of the appliance.</li><li>• Installation other than as instructed by Hearth &amp; Home Technologies.</li><li>• Installation and/or use of any component part not approved by Hearth &amp; Home Technologies.</li><li>• Operating appliance without fully assembling all components.</li><li>• Operating appliance without legs attached (if supplied with appliance).</li><li>• <u>Do NOT Over fire</u></li></ul> <b>Or any such action that may cause a fire hazard.</b>

## D. Inspect Appliance and Components

- Open the appliance and remove all the parts and articles packed inside the Component Pack. Inspect all the parts and glass for shipping damage.
- Report to your dealer any parts damaged in shipment.
- All labels have been removed from the glass door.
- Plated surfaces have been wiped clean with a soft cloth, if applicable.
- Read all the instructions before starting the installation. Follow these instructions carefully during the installation to ensure maximum safety and benefit.
- Follow pipe manufacturer instructions for installation and air clearance requirements.



## E. Install Checklist

### ATTENTION INSTALLER: Follow this Standard Work Checklist

This standard work checklist is to be used by the installer in conjunction with, not instead of, the instructions contained in this installation manual.

Customer: \_\_\_\_\_  
 Date Installed: \_\_\_\_\_  
 Lot/Address: \_\_\_\_\_  
 Location of Appliance: \_\_\_\_\_  
 Installer: \_\_\_\_\_  
 Dealer/Distributor Phone Number: \_\_\_\_\_  
 Serial Number: \_\_\_\_\_  
 Model Name: \_\_\_\_\_



**WARNING! Risk of Fire or Explosion! Failure to install appliance to these instructions can lead to a fire or explosion.**

#### Appliance Install

Verified clearance to combustibles.  
 Appliance is leveled and connector is secured to appliance.  
 Hearth extension size/height decided.  
 Outside air kit installed.  
 Floor protection requirements have been met.  
 If appliance is connected to a masonry chimney, it should be cleaned and inspected by a professional. If installed to a factory built metal chimney, the chimney must be installed according to the manufacturer's instructions and clearances.

YES


IF NO, WHY?

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#### Venting/Chimney

Chimney configuration complies with diagrams.  
 Chimney installed, locked and secured in place with proper clearance.  
 Chimney meets recommended height requirements (5 feet minimum vertical).  
 Roof flashing installed and sealed.  
 Terminations installed and sealed.



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#### Electrical

120 VAC unswitched power provided to the appliance.  
 Check outlet with multi-meter for proper polarity and voltage (115-120 VAC).  
 Record voltage reading: \_\_\_\_\_



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#### Clearances

Verified all clearances meet installation manual requirements.  
 Mantels and wall projections comply with installation manual requirements.  
 Floor protection and heart extensions installed per manual requirements.



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#### Appliance Setup

All protective materials removed.  
 All labels have been removed from the door.  
 All packaging materials are removed from inside/under appliance.  
 Manual bag and all of its contents are removed from inside/under the appliance and given to the party responsible for use and operation.  
 Started appliance and verified that all motors and blowers operate as they should.  
 Checked draft using a Manometer. Record readings: \_\_\_\_\_  
 Checked vacuum using a Manometer. Record readings: \_\_\_\_\_



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#### **Hearth & Home Technologies recommends the following:**

Photographing the installation and copying this checklist for your file.  
 That this checklist remain visible at all times on the appliance until the installation is complete.

**Comments:** Further description of the issues, who is responsible (Installer/Builder/Other Trades, etc.) and corrective action needed:  
 Comments communicated to party responsible \_\_\_\_\_ by \_\_\_\_\_ on \_\_\_\_\_  
 (Builder/Gen. Contractor) (Installer) (Date)

# 3 Dimensions and Clearances

## A. Appliance Dimensions

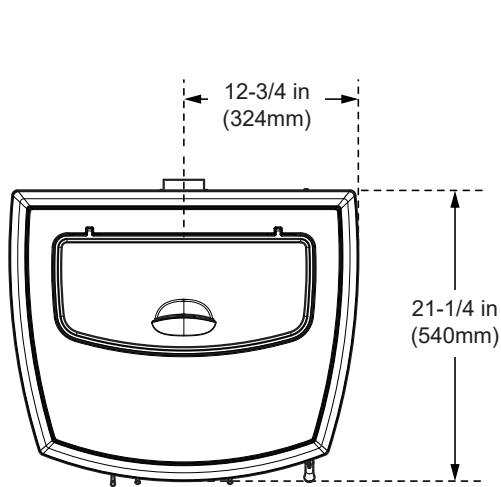


Figure 8.1 - Top View

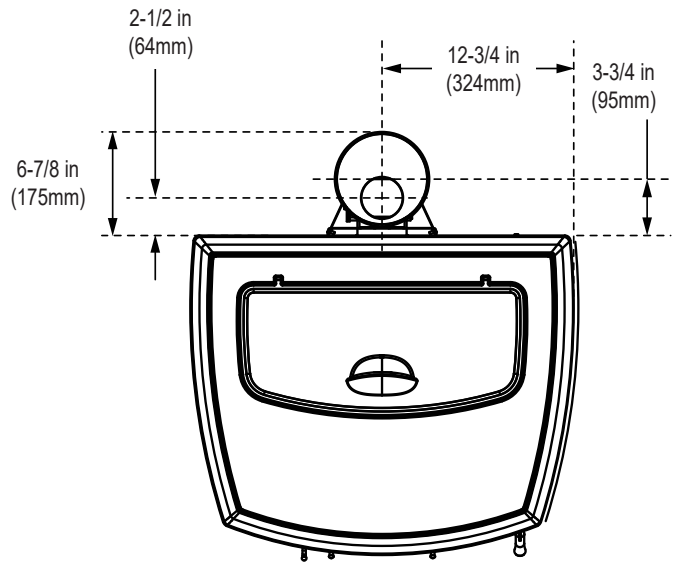


Figure 8.3 - Top View with Top Vent Adapter (TPVNT-2) and Offset Adapter (812-3570).

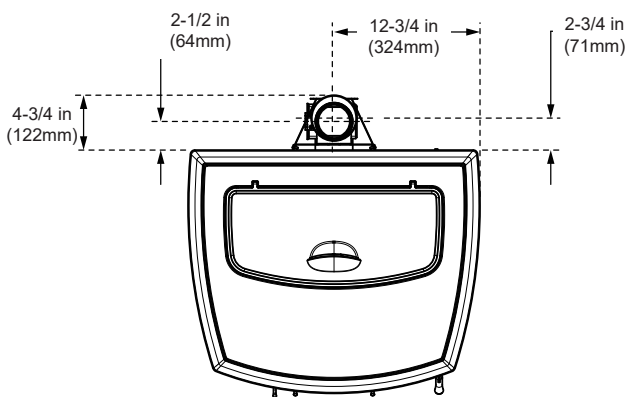


Figure 8.2 - Top View with Top Vent Adapter (TPVNT-2) and Offset Adapter (811-0720).

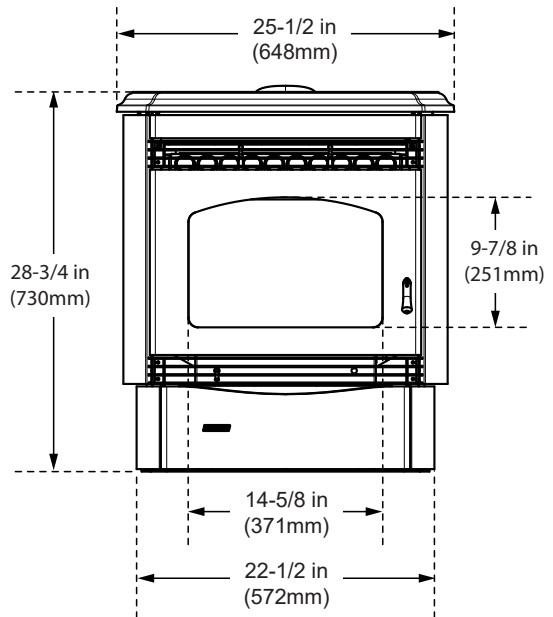


Figure 8.4 - Front View

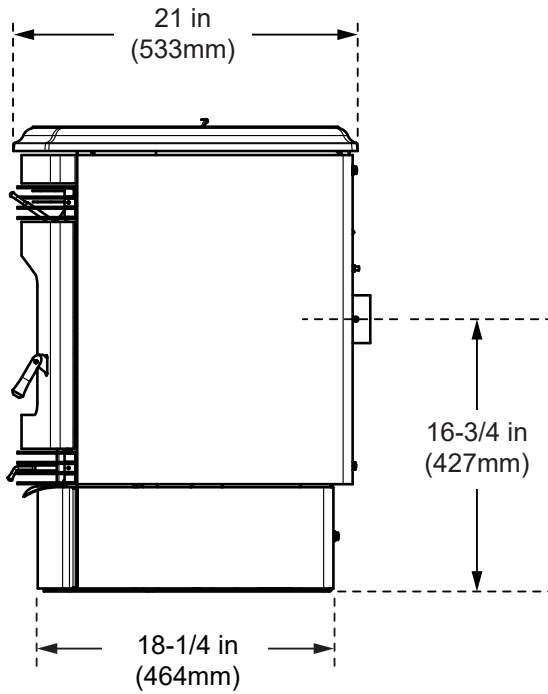


Figure 9.1 -Side View

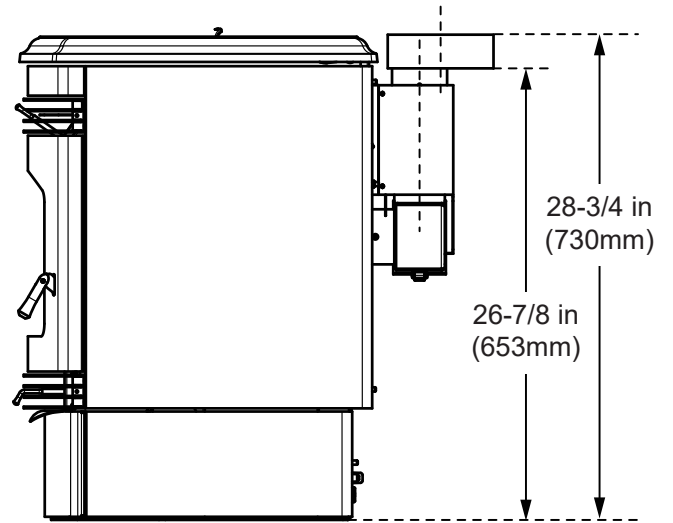


Figure 9.3 - Side View with Top Vent Adapter (TPVNT-2) and Offset Adapter (812-3570).

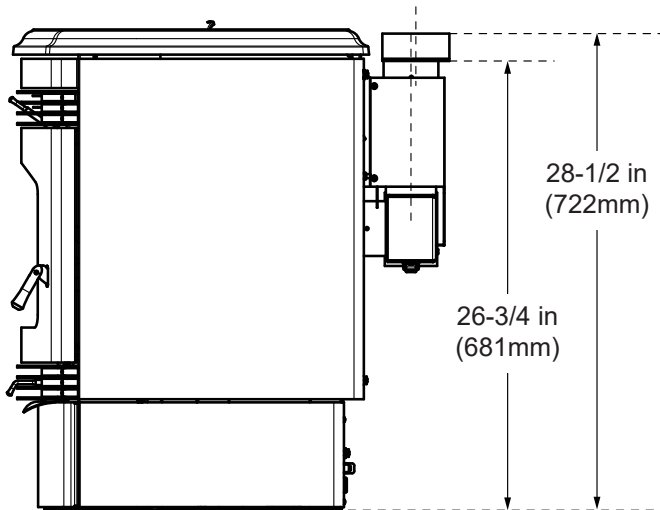


Figure 9.2 - Side View with Top Vent Adapter (TPVNT-2) and Offset Adapter (811-0720).

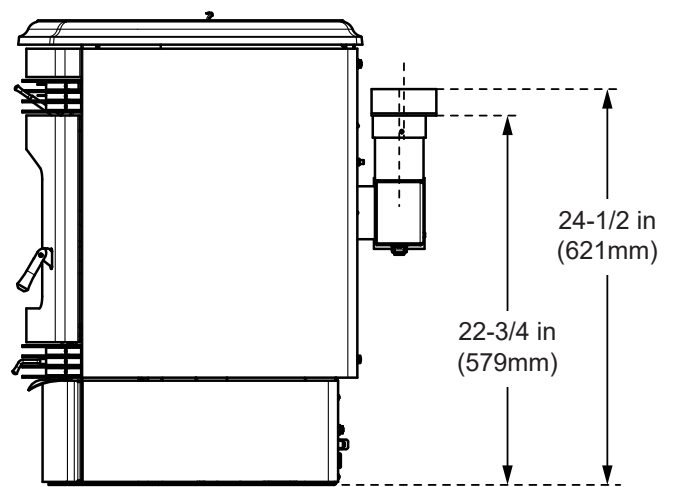
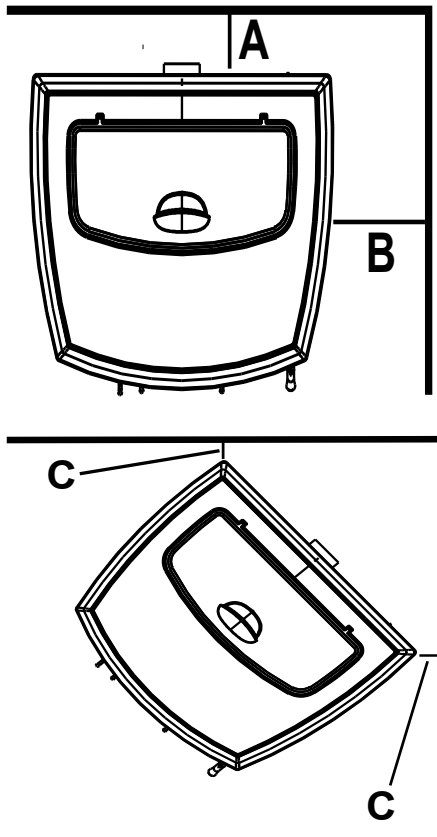
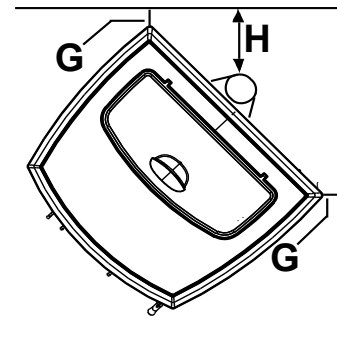
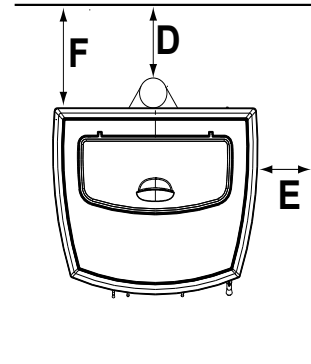


Figure 9.4 - Side View with Top Vent Adapter (TPVNT-6) and Offset Adapter (811-0720).

**B. Clearances to Combustibles (UL and ULC)**



**Installations with:**  
 TPVNT-2 Top Vent Adapter w/Heat Shield & Clean-out  
 TPVNT-6 Top Vent Adapter with Clean-out  
 812-3570 (3" to 6") Offset Adapter  
 811-0720 (3" to 4") Offset Adapter



Horizontal Through the Wall		Inches	Millimeters
<b>A</b>	Back Wall to Appliance	2	51
<b>B</b>	Side Wall to Appliance	6	152

Corner Installation		Inches	Millimeters
<b>C</b>	Walls to Appliance	2	51

**Table 10.1**

**NOTE:**

- Illustrations reflect typical installations and are FOR DESIGN PURPOSES ONLY.
- Illustrations/diagrams are not drawn to scale.
- Actual installation may vary due to individual design preference.

Vertical Installation		Inches	Millimeters
<b>D</b>	Back Wall to Flue Pipe	3	76
<b>E</b>	Side Wall to Appliance	6	152
<b>F</b>	Back Wall to Appliance	7	178

Corner Installation		Inches	Millimeters
<b>G</b>	Side Wall to Appliance Corner	2	51
<b>H</b>	Side Wall to Flue Pipe	3	76

**Table 10.2**

## C. Hearth Pad Requirements (UL and ULC)



### CAUTION

Hearth and Home Technologies does not recommend adhesive based vinyl flooring due to thermal expansion. Floating-style flooring (LVP - luxury vinyl plank or LVT - luxury vinyl tile) can be used, but it will reach temperatures up to 110 °F in a room with ambient temperature of 70 °F. Consult flooring specifications to ensure compatibility.

When using LVP/LVT flooring, HHT Recommends pellet stove and inserts have 29 inches of alternative flooring in front of the stove or insert before using LVP/LVT (luxury vinyl plank/tile flooring). Whether the stove or insert sits flush on the floor or is elevated on a raised hearth, 29 inches of alternative flooring is required in front of the stove or insert.

For all other flooring, continue to follow clearance to combustible requirements in the installation manual.

**NOTICE:** Clearances that do not meet the minimum guidelines could result in damage or buckling to the vinyl flooring and is done at the installer's risk.

**EMBER PROTECTION:** It is necessary to install a Type I floor protector.

Floor protector must be non-combustible material, extending beneath appliance with a minimum of 6 inches (152mm) in front of glass and 6 inches (152mm) to both sides of the fuel loading door. Open the door and measure 6 inches (152mm) from the side edge of the opening in the face of the appliance. \*See exception.

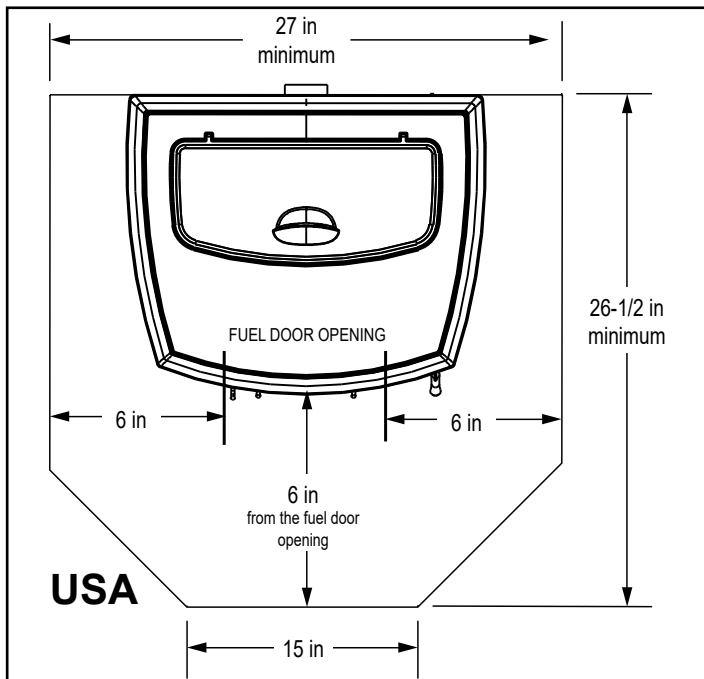


Figure 11.1

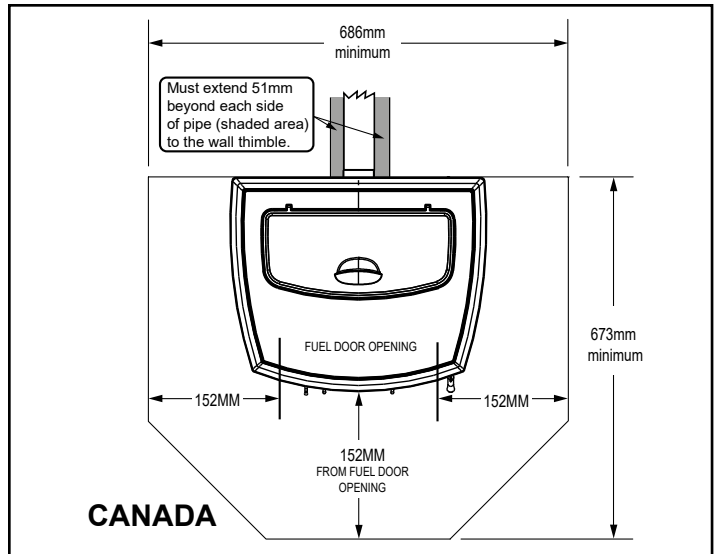


Figure 11.2

**USA INSTALLATIONS:** A non-combustible floor protection is recommended extending beneath the flue pipe when installed with horizontal venting or under the Top Vent Adapter with vertical installation.

**CANADA INSTALLATIONS:** A non-combustible floor protection extending beneath the flue pipe is **required** with horizontal venting or under the Top Vent Adapter with vertical installation.



### WARNING



#### Fire Risk

Comply with all minimum clearances to combustibles as specified.

Failure to comply may cause house fire.

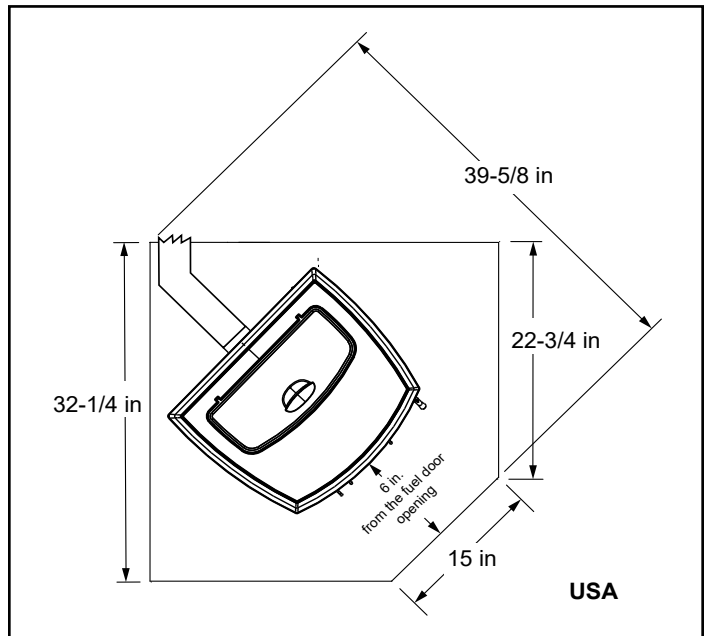


Figure 11.3

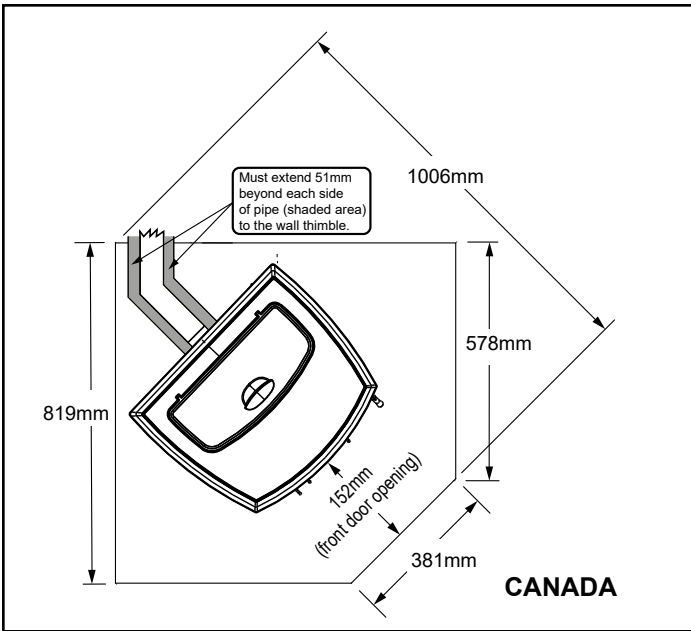


Figure 12.1

**D. Alcove**

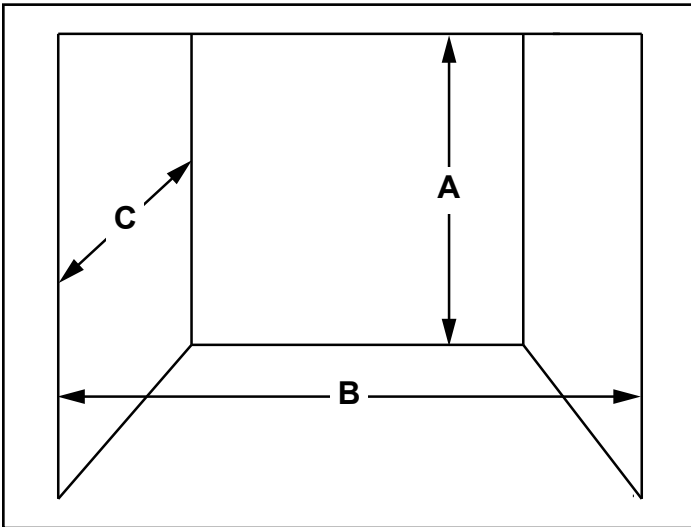


Figure 12.2

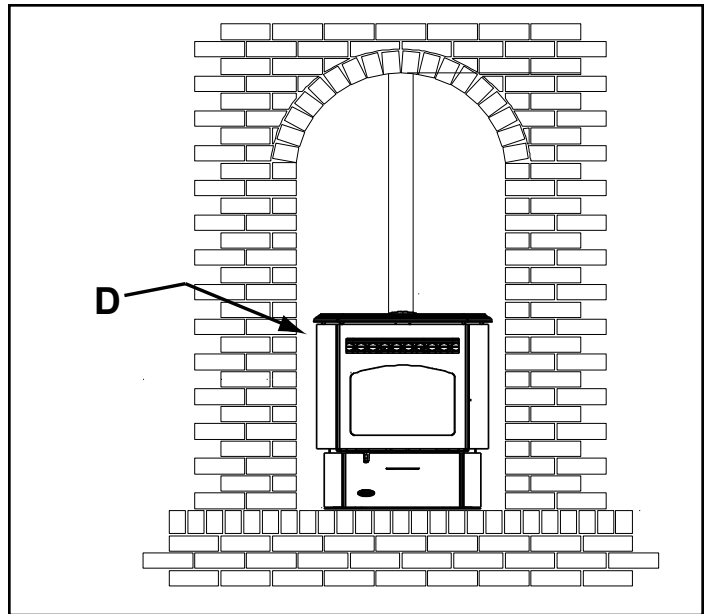


Figure 12.3

		Minimum*		Maximum	
		Inches	Millimeters	Inches	Millimeters
<b>A</b>	Height	43	1092	n/a	n/a
<b>B</b>	Width	38	965	n/a	n/a
<b>C</b>	Depth	n/a	n/a	36	914
<b>D</b>	To Side Wall	6	152	n/a	n/a

**Table 12.1** - \*All minimums listed are to a combustible surface.

**NOTE:**

- Illustrations reflect typical installations and are FOR DESIGN PURPOSES ONLY.
- Illustrations/diagrams are not drawn to scale.
- Actual installation may vary due to individual design preference.

# 4 Vent Information

## A. Venting Termination Minimum Requirements

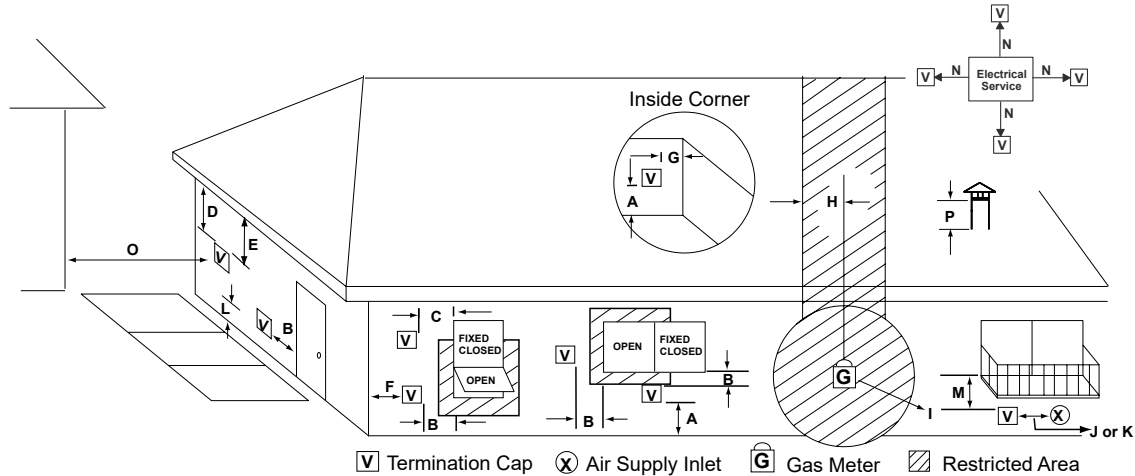


Figure 13.1

All minimum clearances are listed with an Outside Air Kit (OAK) installed, unless otherwise noted in table below.

A	12 in.	Above Finish Grade (the grade surface must be a non-combustible material)	24 in.	Above grass, top of plants, wood or any other combustible
B	12 in. 48 in. no OAK	Open door or window: below or to the side	12 in. 36 in. no OAK	Clearance from any forced air intake of other appliance
B	12 in.	Open door or window: above	12 in.	Clearance horizontally from combustible wall
C	6 in.	Permanently closed window: above, below or to the side	15 in.	Vented directly through a wall, minimum length of horizontal pipe
D	18 in. 36 in. no OAK	Vertical clearance to a ventilated soffit located above the terminal within a horizontal distance of 2 ft from the center-line of the terminal	6 in. horizontal 12 in. vertical	Minimum horizontal or vertical terminations must protrude from wall
E	12 in.	Clearance to unventilated soffit	<p><b>NOTICE:</b> Termination must exhaust above air inlet elevation.</p> <ul style="list-style-type: none"> <li>It is recommended that at least 60 inches (1.52m) of vertical pipe be installed when appliance is vented directly through a wall. This will create a natural draft, which will help prevent the possibility of smoke or odor venting into the home during a power outage.</li> <li>It will also keep exhaust from causing a nuisance or hazard by exposing people or shrubs to high temperatures.</li> <li>The safest and preferred venting method is to extend the vent vertically through the roof or above the roof.</li> </ul>	
F	12 in.	Clearance to outside corner		
G	12 in.	Clearance to inside corner		
H	36 in.	Above gas meter/regulator measured from horizontal center-line of regulator		
I	36 in. USA 72 in. Canada	Clearance to service regulator vent outlet		
J	12 in. 48 in. no OAK	Clearance to non-mechanical air supply inlet to the building or the combustions air inlet to any other appliance		
K	10 ft horizontal 3 ft vertical	Clearance to mechanical air supply		
L	7 ft.	Above paved sidewalk, paved driveway located on <b>public</b> property		
M	12 in.	Under an open veranda, porch, deck or balcony		
N	See Note below*	Electric service: above, below or to the side (location must not obstruct or interfere with access)		
O	24 in.	Adjacent building, fences and protruding parts of the structure	<p><b>NOTICE: Do NOT Terminate Vent:</b></p> <ul style="list-style-type: none"> <li>In any location that will allow flue gases or soot from entering or staining the building.</li> <li>In any location which could create a nuisance or hazard.</li> <li>In any enclosed or semi-enclosed area such as a carport, garage, attic, crawl space, under a sun deck or porch, narrow walkway.</li> <li>Closely fenced area, or any location that can build up a concentration of fumes such as a stairwell, covered breezeway, etc.</li> </ul>	
P	12 in.	Clearance above roof line for vertical terminations		

\*NOTE: Consult local building, fire officials or authorities having jurisdiction. Local codes or regulations may require different clearances.

Table 13.1

## B. Avoiding Smoke and Odors

### Negative Pressure, Shut-Down and Electrical Power Failure

To reduce the probability of back-drafting or burn-back in the pellet appliance during power failure or shut down conditions, it must be able to draft naturally without exhaust blower operation.

Negative pressure in the house will resist this natural draft if not accounted for in the pellet appliance installation.

Heat rises in the house and leaks out at upper levels. This air must be replaced with cold air from outdoors which flows into lower levels of the house.

Vents and chimneys into basements and lower levels of the house can become the conduit for air supply and reverse under these conditions.

### Outside Air

An outside air kit (811-0872) is recommended in all installations must be ordered separately.

Per national building codes, consideration must be given to combustion air supply to all combustion appliances. Failure to supply adequate combustion air for all appliance demands may lead to back-drafting of those and other appliances.

When the appliance is roof vented (strongly recommended):

The air intake is best located on the exterior wall oriented towards the prevailing wind direction during the heating season.

When the appliance is side-wall vented:

The air intake is best located on the same exterior wall as the exhaust vent outlet and located lower on the wall than the exhaust vent outlet.

The outside air supply kit can supply most of the demands of the pellet appliance, but consideration must be given to the total house demand.

House demand may consume the air needed for the appliance. It may be necessary to add additional ventilation to the space in which the pellet appliance is located.

Consult with your local HVAC professional to determine the ventilation demands for your house.

## Vent Configurations

When installing a pellet appliance with a horizontal vent configuration the frequency of power outages should be considered:

- Power outages during operation will cause the appliance to immediately turn off and may create conditions where smoke will back draft into the house. In order to reduce the likelihood of smoke back drafting into the house during a power outage, Hearth and Home Technologies strongly suggests:
  - Installing the pellet venting with a minimum vertical run of 5 feet (1.52m).
  - Installing the outside air kit at least 4 feet (1.22m) below the vent termination.

To prevent soot damage to exterior walls of the house and to prevent re-entry of soot or ash into the house:

- Maintain specified clearances to windows, doors and air inlets, including air conditioners.
- Vents should not be placed below ventilated soffits. Run the vent above the roof.
- Avoid venting into alcove locations.
- Vents should not terminate under overhangs, decks or onto covered porches.
- Maintain minimum clearance of 12 inches (305mm) from the vent termination to the exterior wall. If you see deposits developing on the wall, you may need to extend this distance to accommodate your installation conditions.



### CAUTION

- DO NOT CONNECT THIS APPLIANCE TO A CHIMNEY FLUE SERVICING ANOTHER APPLIANCE.
- DO NOT CONNECT TO ANY AIR DISTRIBUTION DUCT OR SYSTEM.



## C. Negative Pressure



### WARNING

#### Risk of Asphyxiation!

Negative pressure can cause spillage of combustion fumes and soot

Negative pressure results from the imbalance of air available for the appliance to operate properly. It can be strongest in lower levels of the house.

#### Causes include:

- Exhaust fans (kitchen, bath, etc.)
- Range hoods
- Combustion air requirements for furnaces, water appliances and other combustion appliances
- Clothes dryers
- Location of return-air vents to furnace or air conditioning
- Imbalances of the HVAC air handling system
- Upper level air leaks such as:
  - Recessed lighting
  - Attic hatch
  - Duct leaks

#### To minimize the effects of negative air pressure:

- Install the outside air kit with the intake facing prevailing winds during the heating season
- Ensure adequate outdoor air for all combustion appliances and exhaust equipment
- Ensure furnace and air conditioning return vents are not located in the immediate vicinity of the appliance
- Avoid installing the appliance near doors, walkways or small isolated spaces
- Recessed lighting should be a “sealed can” design
- Attic hatches weather stripped or sealed
- Attic mounted duct work and air handler joints and seams taped or sealed

## D. Draft

Draft is the pressure difference needed to vent an appliance successfully. When an appliance is drafting successfully, all combustion byproducts are exiting the home through the chimney.

Install through the warm airspace enclosed by the building envelope. This helps to produce more draft, especially during lighting and die-down of the fire.

Considerations for successful draft include:

- Preventing negative pressure
- Location of appliance and chimney

**NOTICE:** Hearth & Home Technologies assumes no responsibility for the improper performance of the chimney system caused by:

- Inadequate draft due to environmental conditions
- Down drafts
- Tight sealing construction of the structure
- Mechanical exhausting devices

## E. Chimney and Exhaust Connection

1. **Chimney & Connector:** Use 3 or 4 inch (76-102mm) diameter type “L” or “PL” venting system. It can be vented vertically or horizontally.

**NOTE:** The appliance exhaust outlet is designed to accommodate 3 inch venting. Use of 4 inch venting requires the use of a 3-to-4 inch exhaust vent increaser in addition to any other venting components needed, sold separately.

2. **Mobile Home:** Approved for all Listed pellet vent. If using the 3 inch (76mm) vertical Top Vent Adapter Kit or the 3 to 6 inch (76-152mm) Top Vent Offset Adapter, use Listed double wall flue connector. A Quadra-Fire Outside Air Kit must be used with manufactured home installations.
3. **Residential:** The 3 inch (76mm) vertical Top Vent Adapter Kit and the 3 to 6 inch (76 to 152mm) Top Vent Offset Adapter are tested to use 24 gauge single wall flue connector or Listed double wall flue connector to Class A Listed metal chimneys, or masonry chimneys meeting International Residential Code standards for solid fuel appliances.
4. **INSTALL VENT AT CLEARANCES SPECIFIED BY THE VENT MANUFACTURER.**
5. Seal exhaust venting system to the unit with High Temp 500°F RTV silicone sealant. Secure the venting system to the unit with at least (3) screws. All pellet vent pipe must be secured together either by means provided by the pipe manufacturer or by (3) screws at each joint.
6. **DO NOT INSTALL A FLUE DAMPER IN THE EXHAUST VENTING SYSTEM OF THIS Appliance.**
7. **DO NOT CONNECT THIS Appliance TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE.**

**NOTE:** Follow venting manufacturers recommendations for sealing pipe joints.



### WARNING

USE ONLY RECOMMENDED VENTING COMPONENTS; OTHERWISE MAKESHIFT PARTS MAY RESULT IN PROPERTY DAMAGE, PERSONAL INJURY, OR DEATH.

## F. Equivalent Feet of Pipe

The table below can help you calculate the equivalent feet of pipe which is a method used to determine pellet vent size (Figure 16.1).

### WARNING

Vent surfaces get HOT, can cause burns if touched. Non-combustible shielding or guards may be required.

### Example of 3 Elbow-Rear Vent Termination Calculation

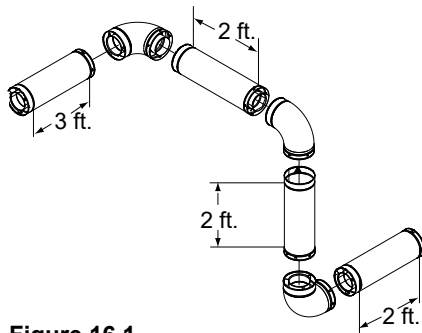


Figure 16.1

Pellet Venting Component	# of Elbows	Feet of Pipe	Multiplied By	Equivalent Feet	Components Equivalent Feet
90° Elbow or Tee	3		X	5	15
45° Elbow			X	3	
Horizontal Pipe		7	X	1	7
Vertical Pipe		2	X	0.5	1
Total Equivalent Feet					23

Table 16.1

**NOTE:** This is a generic example and is not intended to represent any specific fuel type.

## G. Pipe Selection Chart

The chart will help you in determining proper venting size according to the equivalent feet of pipe calculated previously and the altitude above sea level of this installation (Figure 16.2).

1. Locate the calculated equivalent feet of pipe on the vertical left side of the chart.
2. Move to the right horizontally on the chart until you reach your altitude above sea level.
3. If you fall below the diagonal line, 3 or 4 inch (76 to 102mm) pipe may be used.
4. If it is anywhere above the diagonal line, a 4 inch (102mm) diameter pipe is required.

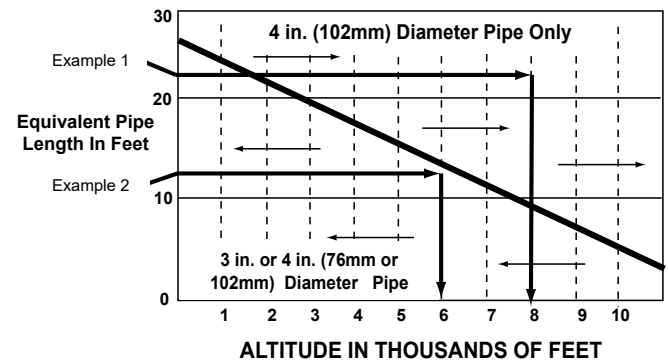


Table 16.2

**Example 1:** If the equivalent length of pipe is 23 feet (7m) with altitude of 8,000 feet (2438m) you must use 4 inch (102mm) diameter type "L" or "PL" vent.

**Example 2:** If the equivalent length of pipe is 12 feet (3.7m) with altitude of 6,000 feet (1829m) you may use 3 or 4 inch (76 to 102mm) diameter type "L" or "PL" vent.

**NOTICE:**

- A 90° elbow is 5 times as restrictive to the flow of exhaust gases under positive pressure as 1 foot (305mm) of horizontal pipe.
- A foot of horizontal pipe is twice as restrictive as a foot of vertical pipe.

### WARNING

**Risk of Fire!**

- Only LISTED venting components may be used.
- NO OTHER vent components may be used.
- Substitute or damaged vent components may impair safe operation.

### WARNING

**Risk of Injury or Property Damage.**

- Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage.
- Refer to the owner's information manual provided with this appliance.
- For assistance or additional information consult a qualified installer, service agency or your dealer.

# 5 Venting Systems

## A. Through The Wall

Horizontal termination cap must be a minimum of 6 inches. (152mm) from the wall. Approved for mobile home installations. Must use 3 or 4 inch (76-102mm) "L" or "PL" Listed pellet venting or Listed double wall pipe and a Quadra-Fire Outside Air Kit in mobile homes.

**NOTE:** In Canada, where passage through a wall or partition of combustible construction is desired, the installation shall conform to CAN/CSA-B365

**NOTICE:** Please note that while the minimum clearance for the termination cap is 6 inches (152mm) there is the possibility of soot build-up around the termination area. If this occurs we suggest to move the termination further away from the house to prevent it.

**CAUTION**

We strongly recommend that you **DO NOT DOWNWARD VENT**. The following may occur:

- The appliance will not vent properly
- Smoke spillage in the house
- Excessive sooting

## Straight Out

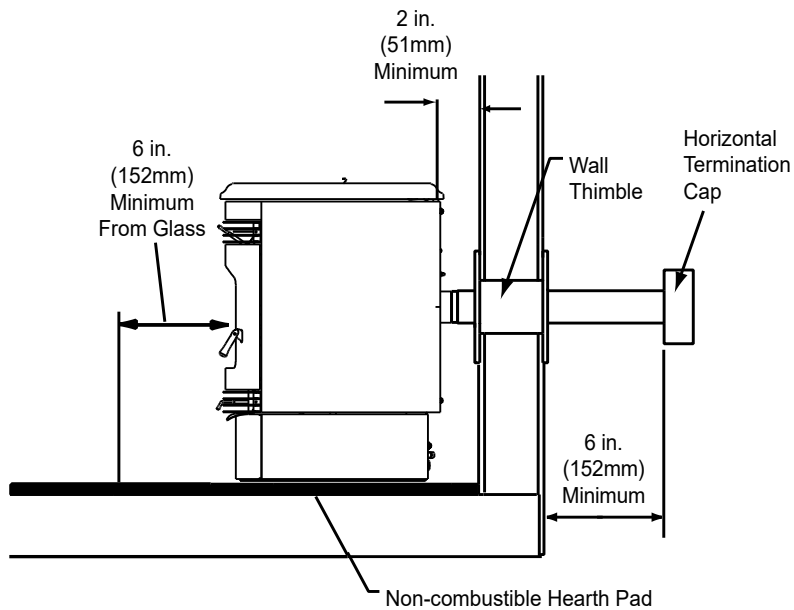


Figure 17.1

## 45 Degree

Illustration shows venting going in both directions. Choose which one is best for your installation.

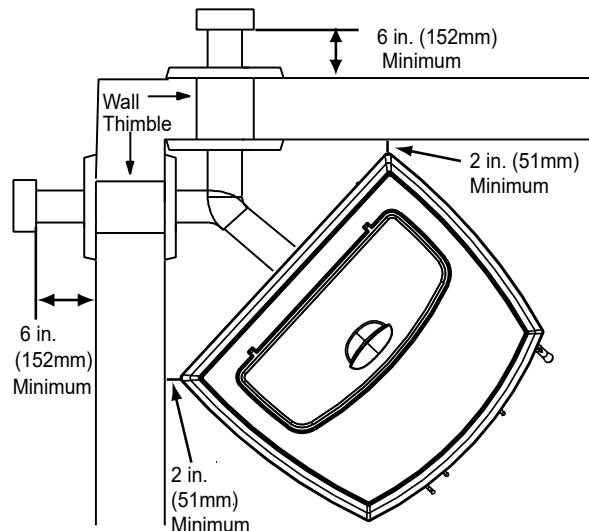


Figure 17.2

## B. Vertical into Existing Class A Chimney

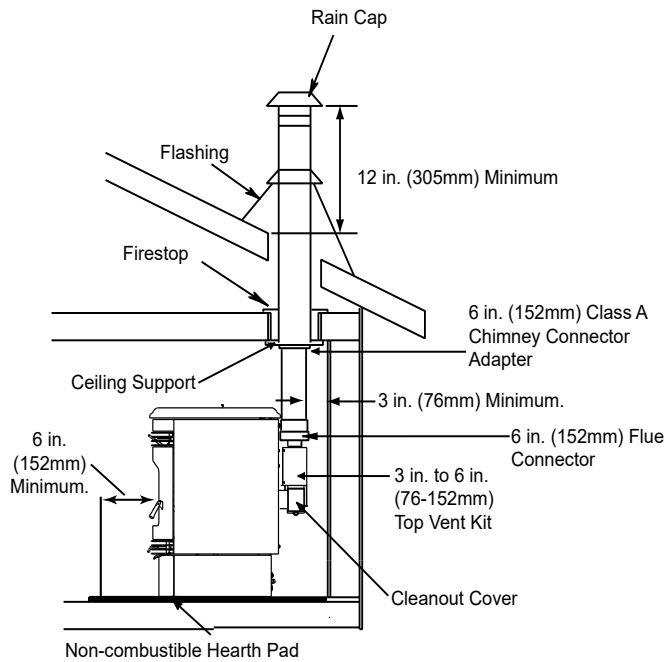


Figure 18.1

All three installations are approved for mobile home installations. Must use 3 or 4 inch (76 to 102mm) "L" or "PL" Listed pellet venting or Listed double wall pipe and Quadra-Fire Outside Air Kit in mobile homes. Single wall pipe is approved for residential installations only.

**\*NOTE:** Clearance to combustibles are for standard pellet pipe. If pellet pipe manufacturer allows reduced clearances to their pipe, reduced clearances are allowed.

**NOTE:** A chimney connector shall not pass through an attic or roof space, closet or similar concealed space, or a floor or ceiling.

## C. Through The Wall & Vertical - Exterior

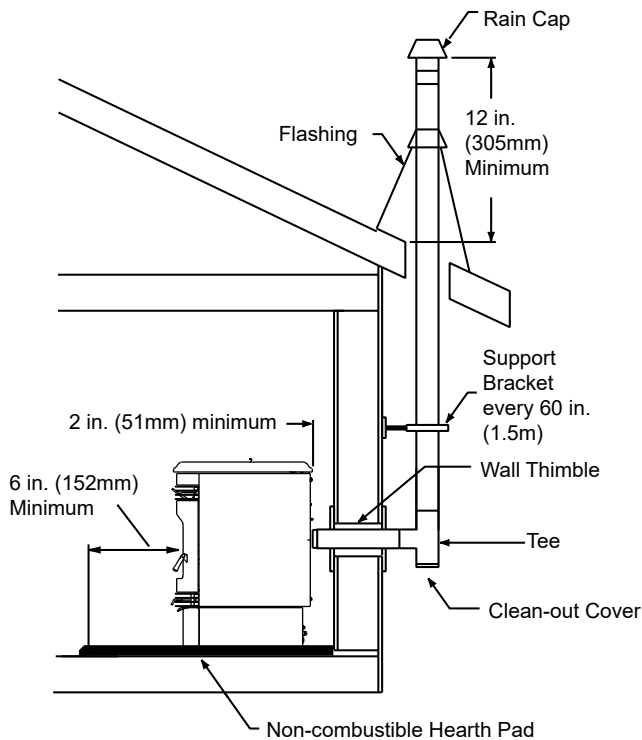


Figure 18.2

## D. Vertical - Interior - Typical Installation

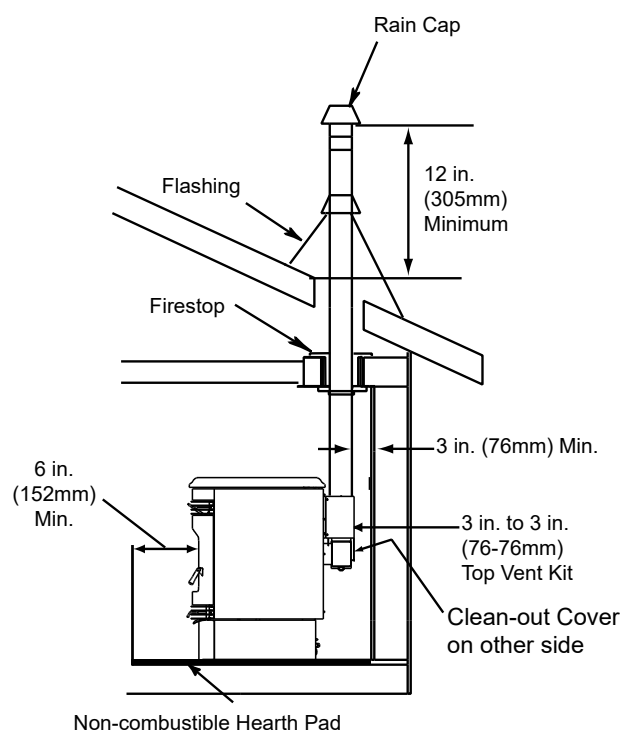


Figure 18.3

→ E. Interior - Rear Vent

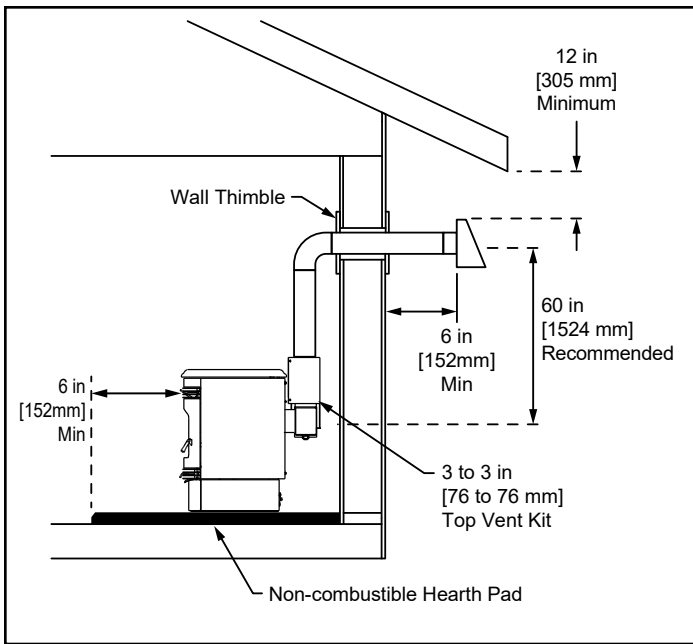


Figure 19.1

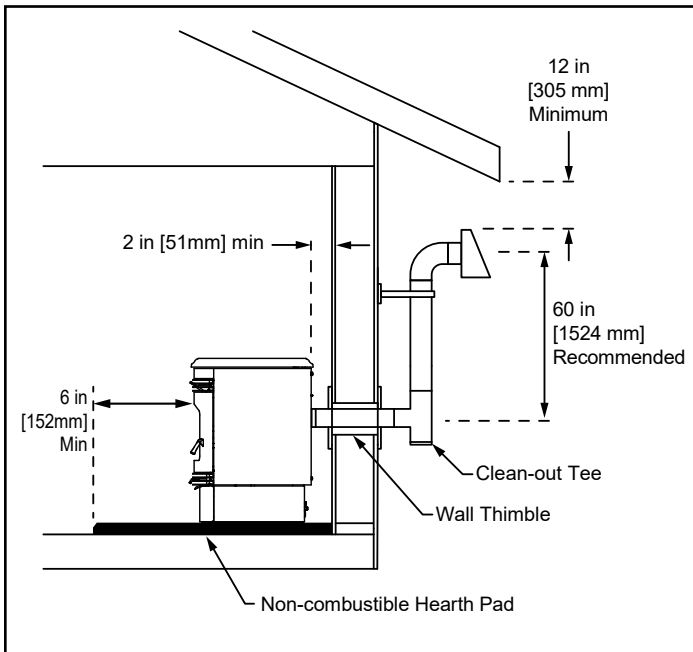



Figure 19.2


WARNING

**Fire Risk**  
 Inspection of Chimney:

- Masonry chimney must be in good condition.
- Meets minimum standard of NFPA 211
- Factory-built chimney must be a minimum 6 inch (152mm) UL103 HT.

E. Masonry

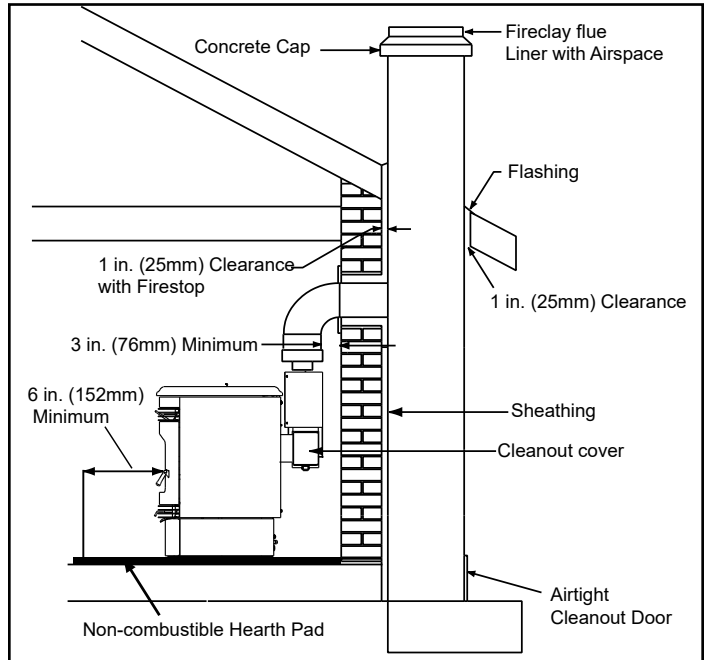


Figure 19.3

F. Alternate Masonry

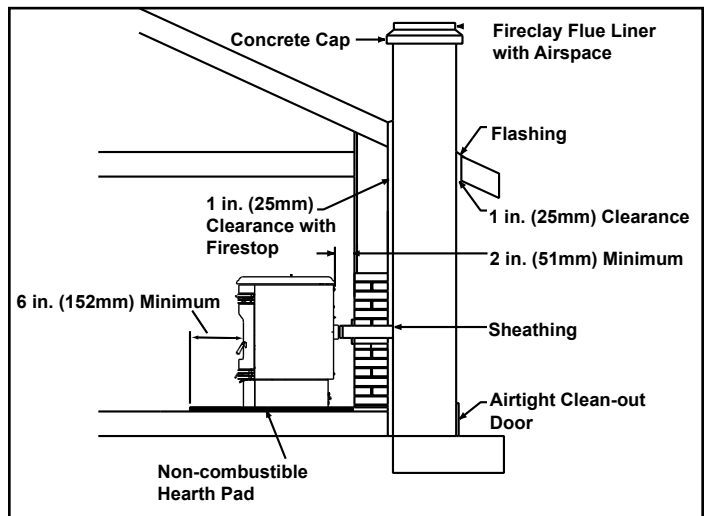


Figure 19.4

# 6 Appliance Set-Up

## A. Outside Air Kit Instructions



### CAUTION

**Never draw outside combustion air from:**

- Wall, floor or ceiling cavity
- Enclosed space such as an attic or garage

**Parts Included in Kit:** 1 piece of 2 inch x 3 foot flex hose, 2 hose clamps, 1 air intake channel1 collar assembly, 1 termination cap assembly, 1 trim ring, 12 screws. (Discard air channel it is not need for this appliance).

**Tools Needed:** Phillips head screwdriver; wire cutters; hole saw or jig saw.

1. Measure distance from floor to air vent opening in appliance and mark location on wall. Use a saw to cut opening in wall. Cut a 2-1/2 to 3 inch (64-76mm) opening on inside wall and a 3 to 3-1/2 inch (76-89mm) opening on outside of house.
2. Remove cover plate and then install the collar assembly.
3. Use hose clamp to secure flex pipe to collar assembly.
4. Slide trim ring over flex pipe and run pipe through wall.
5. Attach hose to outside termination cap with second hose clamp.
6. Secure termination cap to outside surface.
7. Secure trim ring to interior wall.

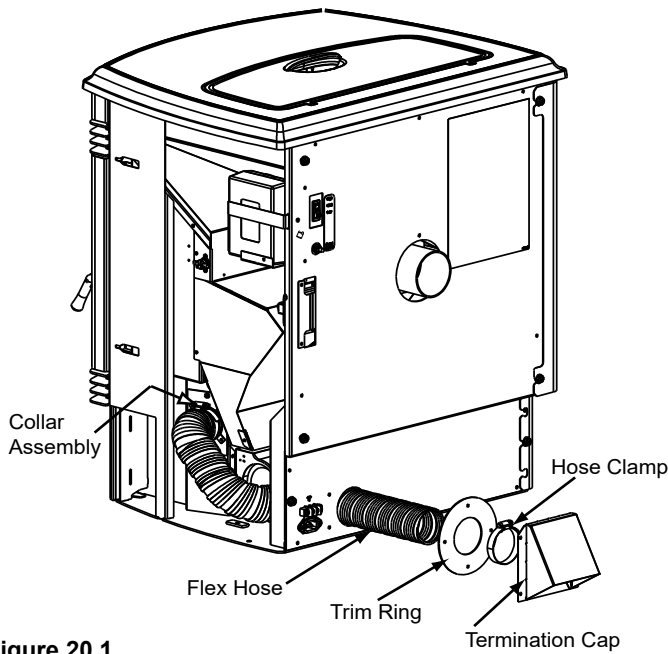


Figure 20.1

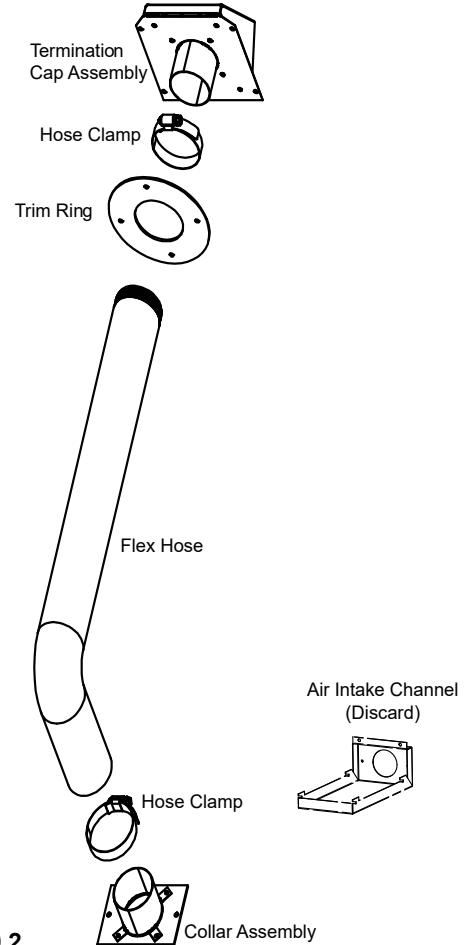


Figure 20.2

## B. Top Vent Adapter Installation

### 3 to 3 inch Top Vent Adapter 3 to 6 inch Top Vent Offset Adapter

#### Installing the Top Vent Adapter

1. Put a layer of high temperature silicone on the 3 inch (76mm) exhaust outlet. **Do not put silicone inside of pipe (Figure 21.1).**
2. Slide the top vent adapter onto the rear exhaust outlet and adjust the assembly to a vertical position (Figure 21.1).
3. Drill 4 holes with #26 drill bit (provided) into the back of the appliance using the outer shield as a pattern (make sure the assembly is vertical) (Figure 21.2).
4. Install the 4 mounting screws.
5. Drill 2 holes with #26 drill bit through the rear exhaust outlet using the 2 holes already in the short horizontal pipe in the top vent adapter as a guide. Install the 2 screws (Figure 21.1).
6. Install the vent pipe into the top vent adapter.
7. To clean the top vent adapter open the clean-out cover (Figure 21.2).

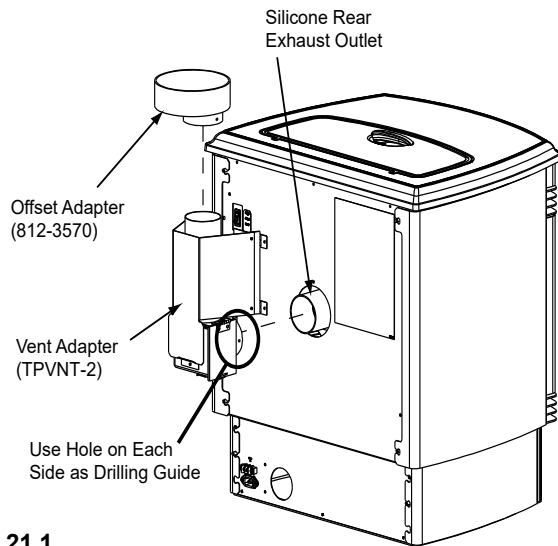


Figure 21.1

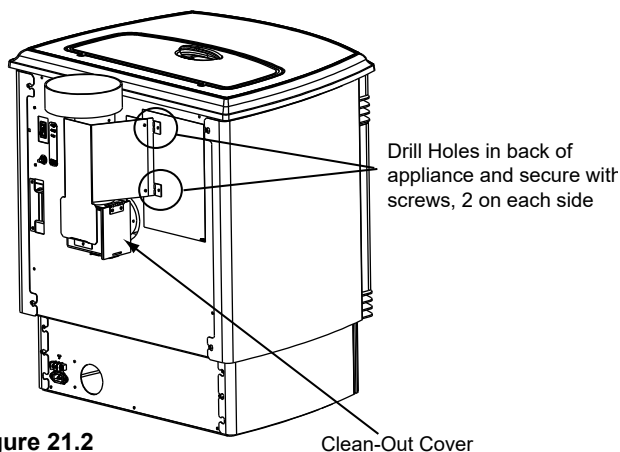


Figure 21.2

## C. Rear Vent & Rear Vent to Top Vent Adapter Installation

1. Put a layer of high temperature silicone on the 3 inch (76mm) exhaust outlet. **Do not put silicone inside of pipe (Figure 21.1).**
2. Slide the adapter onto the rear exhaust outlet and adjust the assembly to the appropriate position.
3. Install the vent pipe into the adapter.

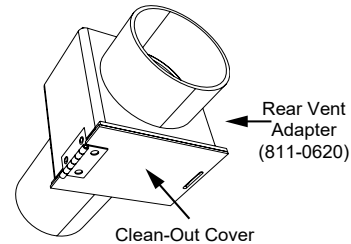


Figure 21.3 - Rear Vent Adapter

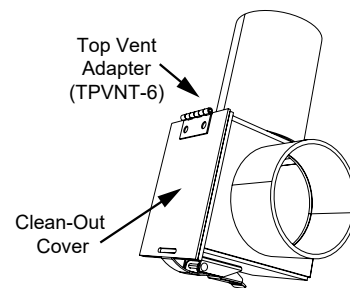


Figure 21.4 - Rear to Top Vent Adapter - 90°

## D. Thermostat Installation and Operation

The kit comes with a programmable wall thermostat and 25' of thermostat wire. If you need to run more than 25' make sure you use a continuous strand of 18 to 22 gauge thermostat wire. For optimum performance your thermostat should be:

- Mounted on an inside wall, approximately 5' above the floor
- Do not locate where there is poor air circulation such as in a corner, alcove, behind doors, bookcase or other objects
- Located away from drafts, direct sunlight, above a lamp, television, radiator, a wall next to a window, or direct heat from the appliance
- Avoid damp environments as this can lead to corrosion that may shorten thermostat life
- If painting or construction work around, cover the thermostat completely or wait until work is complete before installation.



### CAUTION

#### Shock hazard.



- Do NOT remove grounding prong from plug.
- Plug directly into properly grounded three prong receptacle.
- Route cord away from appliance.
- Do NOT route cord under or in front of appliance.

1. Separate the body of the thermostat from the mounting plate by gently pulling the two pieces apart (Figure 22.1)

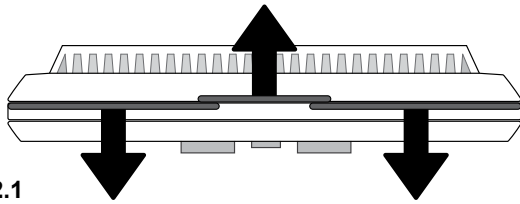


Figure 22.1

2. Use a drill with either a 3/16 drill bit for drywall or a 7/32 drill bit for plaster drill holes.
3. Using a hammer tap in wall anchors.
4. Route the wires through the opening in the base plate, and hold the base against the wall while aligning up to the holes. Attach base plate using a Phillips head screwdriver and two screws.
5. Connect your thermostat wire to the W and R terminals (Figure 22.2).

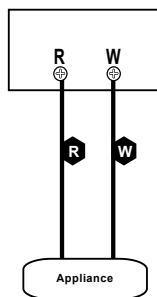


Figure 22.2

**NOTE:** Ensure bare wire ends are held ALL the way into the terminal block while the screws are being tightened.

6. There are two **AA ALKALINE ONLY** batteries already installed into the thermostat; to activate, remove black plastic tab that is located inside the battery compartment.

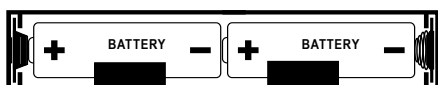


Figure 22.3

7. Snap the thermostat to the base plate.

There is a 4 screw terminal block located on the back lower left corner of the appliance directly above the power cord inlet. The center 2 screws are for the thermostat wires (see Figure 22.4).

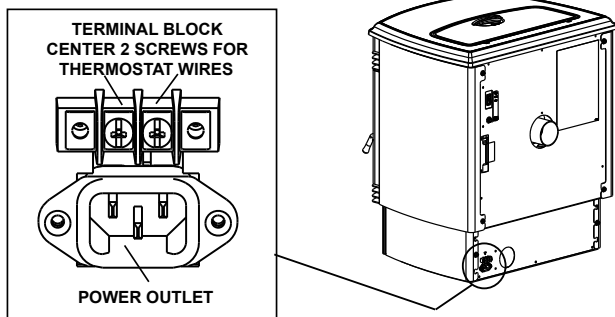


Figure 22.4

## E. Optional Log Set Placement Instructions

### 2 Piece Log Set Installation

1. Open door to expose the firebox.
2. Install the left log first and then the right log (Figure 22.5).
3. Lean the logs against the cast iron brick in the back of the firebox.
4. Push the logs to the far left and far right against the sides of the firebox (Figure 22.6).
5. To clean the logs, use a vacuum and a soft brush attachment or a paint brush.



### CAUTION

Logs are **FRAGILE**. Use extreme care when handling or cleaning logs.

**NOTE:** Due to the abrasive nature of a pellet appliance fire, the logs are not covered under warranty. Any placement variation other than shown here can cause excessive heat and shall void the appliance warranty.



Figure 22.5

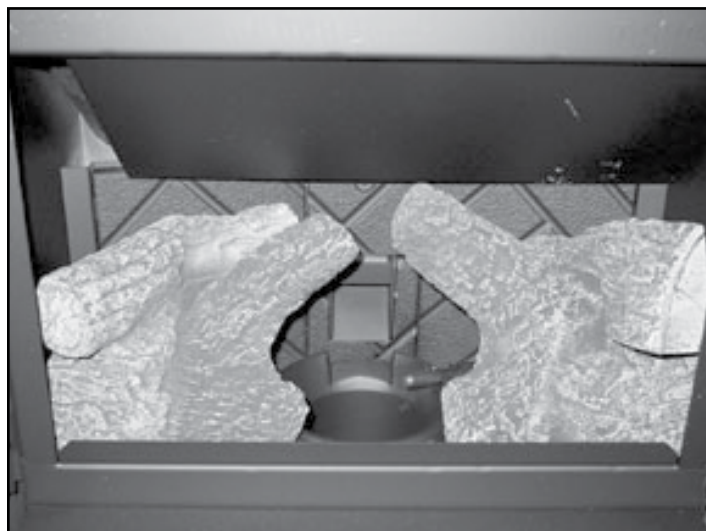


Figure 22.6




# 7 Mobile Home Installation

You must use a Quadra-Fire Outside Air Kit for installation in a mobile home.

1. An outside air inlet must be provided for the combustion air and must remain clear of leaves, debris, ice and/or snow. It must be unrestricted while the appliance is in use to prevent room air starvation which causes smoke spillage. Smoke spillage can also set off smoke alarms.
2. The combustion air duct system must be made of metal. It must permit zero clearance to combustible construction and prevent material from dropping into the inlet or into the area beneath the dwelling and contain a rodent screen.
3. The appliance must be secured to the mobile home structure by bolting it to the floor (using lag bolts). Use the same holes that secured the appliance to the shipping pallet.
4. The appliance must be grounded with #8 solid copper grounding wire or equivalent, terminated at each end with an NEC approved grounding device.
5. Refer to Clearances to Combustibles and floor protection requirements on **page 8** for listings to combustibles and appropriate chimney systems.
6. Use silicone to create an effective vapor barrier at the location where the chimney or other component penetrates to the exterior of the structure.
7. Follow the chimney manufacturer's instructions when installing the vent system for use in a mobile home.
8. Installation shall be in accordance with the Manufacturers Home & Safety Standard (HUD) CFR 3280, Part 24.

**PART NUMBER: 811-0872**

 <b>CAUTION</b>
<p>THE STRUCTURAL INTEGRITY OF THE MOBILE HOME FLOOR, WALL AND CEILING/ROOF MUST BE MAINTAINED</p> <p><b>Do NOT cut through:</b></p> <ul style="list-style-type: none"><li>• Floor joist, wall, studs or ceiling trusses.</li><li>• Any supporting material that would affect the structural integrity.</li></ul> <p>This appliance is to be connected to a factory-built chimney conforming to CAN/ULC-S629, Standard for 650°C Factory-Built Chimneys.</p> <p>For removal of the chimney for mobile home transportation, contact the proper transportation officials.</p>

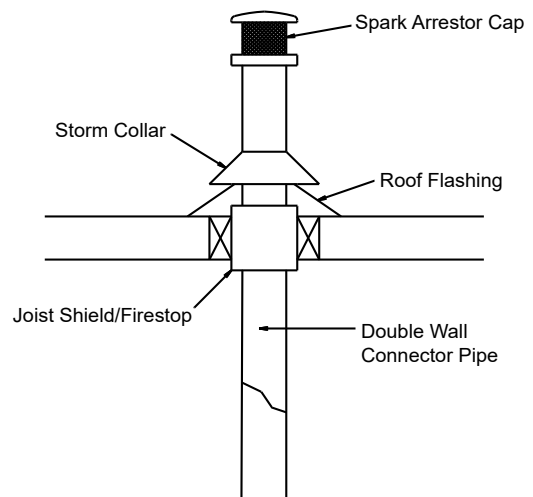





Figure 23.1

 <b>WARNING</b>
<p>Products of combustion generate carbon monoxide and different fuels generate different levels. Carbon monoxide</p> <ul style="list-style-type: none"><li>• Only use approved fuels in this appliance.</li><li>• Always keep door shut during operation. Operating this appliance with doors open can allow CO to leak into the home.</li></ul> <p>CO can kill you before you are aware it is in your home. At lower levels of exposure, CO causes mild effects that are often mistaken for the flu. These symptoms include headaches, dizziness, disorientation, nausea and fatigue. The effects of CO exposure can vary greatly from person to person depending on age, overall health and the concentration and length of exposure.</p>

 <b>CAUTION</b>
<p>Never draw outside combustion air from:</p> <ul style="list-style-type: none"><li>• Wall, floor or ceiling cavity</li><li>• Enclosed space such as an attic or garage</li></ul>

 <b>WARNING</b>
<p><b>It is critical to have a working smoke detector installed in the home of appliance operation.</b></p> <ul style="list-style-type: none"><li>• Smoke alarms that are properly installed and maintained play a vital role in reducing fire deaths and injuries. Having a working smoke alarm reduces the chance of fire related injuries..</li></ul>

 <b>WARNING</b>
<p><b>NEVER INSTALL IN A SLEEPING ROOM.</b></p>





## B. Accessories List

**QUADRA-FIRE** Service Parts

**SANTAFE-C**

Beginning Manufacturing Date: April 2019  
Ending Manufacturing Date: Active

IMPORTANT: THIS IS DATED INFORMATION. Parts must be ordered from a dealer or distributor. **Hearth and Home Technologies does not sell directly to consumers.** Provide model number and serial number when requesting service parts from your dealer or distributor.



**Stocked  
at Depot**

ITEM	DESCRIPTION	COMMENTS	PART NUMBER	
	Thermostat, Programmable		PROG-STAT	
<b>ACCESSORIES</b>				
	Log Set		LOGS-30-OE	Y
	Log, Left		7050-144	
	Log, Right		7050-143	
	Louvre Grille Assembly - Complete Set	Black Nickel	GRL-SFI-NB	
		Nickel	GRL-SFI-NL	
	Grill Bar (Scraper)	Black Nickel	7019-191	
		Nickel	SRV7019-164	
	Upper Grill Assembly	Black Nickel	7019-189	
		Nickel	SRV7019-162	
	Lower Grill Assembly	Black Nickel	7019-190	
		Nickel	SRV7019-163	
	Collar, Offset, Top Vent	3" to 6"	812-3570	
	Outside Air Kit, Rear		811-0872	
	Channel, Air Intake		SRV413-7040	
	Cover, Outside Air Kit, Floor		SRV411-1071	
	Hose, Alum Flex, 2 Inch x 3 Ft	3 Ft	SRV200-0860	
	Outside Air Cap Assembly		SRV7001-044	
	Outside Air Collar Assembly		SRV7001-045	
	Trim Plate, Outside Air Kit		SRV412-7100	
	Pull Rod Handle		PULLROD-HNDL	
	Smart-Batt II, Battery Operated	<b>No longer available</b>	SMARTBATT-B	
	Smart-Stat II, receiver Requires 110 VAC		SMART-STAT-HHT	
	Top Vent Adapter		TPVNT-2	
	Vent Adapter, 3-4"		811-0720	
	Vent Adapter, 90, Cleanout		TPVNT-6	
	Gasket Clean Out Top Flue		SRV411-1130	
	Vent Adapter, Rear		811-0620	
	Damper, 3 inch		PEL-DAMP3	Y
	Damper, 4 inch		PEL-DAMP4	

IMPORTANT: THIS IS DATED INFORMATION. Parts must be ordered from a dealer or distributor. **Hearth and Home Technologies does not sell directly to consumers.** Provide model number and serial number when requesting service parts from your dealer or distributor.



**Stocked  
at Depot**

ITEM	DESCRIPTION	COMMENTS	PART NUMBER	
<b>FASTENERS</b>				
	Avk Rivnut Repair Kit - 1/4-20 & 3/8-16 Rivnut Tools		RIVNUT-REPAIR	Y
	Blower Magnet	Pkg of 10	7019-188/10	Y
	Bolt, Firepot, 1-1/4" Long	Qty: 25	225-0120/25	
	Bolt, Hex Head, 1/4-20 X 1	Pkg of 10	25221A/10	Y
	Bumper, Rubber	Pkg of 12	SRV224-0340/12	Y
	Magnet Round		SRV7000-140	Y
	Nut, Lock 1/4-20	Qty: 25	226-0090/25	Y
	Nut, Ser Flange Small 1/4-20	Pkg of 24	226-0130/24	Y
	Pin 3/16 x 1/2		7000-229	
	Rivet, Iron, 1/4 X 1-1/4	Pkg of 25	229-0090/25	
	Screw, 8-32 X 1/4	Qty: 40	225-0240/40	
	Screw, Hwh 1/4-20 X 3/4 Ns	Pkg of 25	220-0080/25	Y
	Screw Flat Head Screw 1/4-20	Pkg of 24	7000-130/24	Y
	Screw, Flat Head Philips 8-32X1/2	Pkg of 12	220-0490/12	Y
	Screw, Flat Head Philips 8-32 X 1/2	Pkg of 10	832-0860	Y
	Screw, Machine Screw 1/4-20 X 5/8	Pkg of 24	220-0440/24	Y
	Screw, Pan Head Philips 8-32 X 3/4	Pkg of 24	229-1100/24	Y
	Screw, Pan Head Philips 8-32 X 3/8	Pkg of 40	225-0500/40	Y
	Screw, Pan Head Philips Tc 8-32X1/2	Pkg of 25	220-0030/25	Y
	Screw, Pan Head Philips, 10/32 x 1/4	Pkg of 24	229-1230/24	Y
	Screw, Flat Head Philips 8-32X1/2	Pkg of 12	220-0490/12	Y
	Screw, Set 5/16-18 X 1/4	Qty: 25	225-0550/25	Y
	Screw, Sheet Metal #8 X 1/2 S-Grip	Pkg of 40	12460/40	Y
	Screw, Wing Thumb, 8-32 x 1/2	Pkg of 24	7000-223/24	Y
	Screw, 5/16 - 18 x 1-1/2	Pkg of 24	7000-101/24	Y
	Washer, 1/4 Sae	Pkg of 24	28758/24	Y
	Washer, 5/16 Sae	Pkg of 10	7000-579/10	Y
		Pkg of 50	3-30-0205-50	Y

# QUADRA-FIRE®

NOTHING BURNS LIKE A QUAD

## CONTACT INFORMATION

Hearth & Home Technologies  
352 Mountain House Road  
Halifax, PA 17032  
Division of HNI INDUSTRIES

Please contact your Quadra-Fire dealer with any questions or concerns.  
For the number of your nearest Quadra-Fire dealer  
log onto [www.quadrafire.com](http://www.quadrafire.com)



## CAUTION



### DO NOT DISCARD THIS MANUAL

- Important operating and maintenance instructions included.
- Read, understand and follow these instructions for safe installation and operation.
- Leave this manual with party responsible for use and operation of this appliance.



**We recommend that you record the following pertinent information for your heating appliance.**

Date purchased/installed: \_\_\_\_\_

Serial Number: \_\_\_\_\_

Location on appliance: \_\_\_\_\_

Dealership purchased from: \_\_\_\_\_

Dealer Phone: 1(     )     -     \_\_\_\_\_

Notes:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

This product may be covered by one or more of the following patents: (United States) 5341794, 5263471, 6688302, 7216645, 7047962 or other U.S. and foreign patents pending.



HEARTH & HOME  
technologies™

# Owner's Manual

## Operation & Care

**INSTALLER:** Leave this manual with party responsible for use and operation.  
**OWNER:** Retain this manual for future reference.

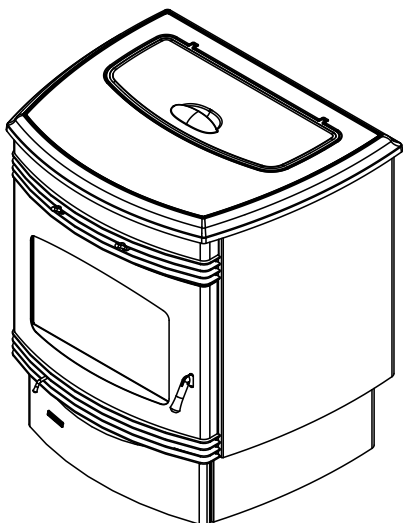
Contact your dealer with questions on installation, operation, or service.

**NOTICE: DO NOT DISCARD THIS MANUAL**

# QUADRA-FIRE®

## SANTA FE PELLET APPLIANCE

**MODEL NUMBER:  
SANTAFE-C**



### CAUTION

Check building codes prior to installation.

- Installation **MUST** comply with local, regional, state and national codes and regulations.
- Consult local building, fire officials or authorities having jurisdiction about restrictions, installation inspection, and permits.

Installation and service of this appliance should be performed by qualified personnel. Hearth & Home Technologies recommends HHT Factory Trained or NFI certified professionals.



### WARNING



If the information in these instructions is not followed exactly, a fire could result causing property damage, personal injury, or death.

- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
  - Do not over fire - If appliance or chimney connector glows, you are over firing. Over firing will void your warranty.
  - Comply with all minimum clearances to combustibles as specified.
- Failure to comply may cause house fire.

### WARNING



#### **HOT SURFACES!**

Glass and other surfaces are hot during operation AND cool down. Hot glass will cause burns.

- Do not touch glass until it is cooled
- **NEVER** allow children to touch glass
- Keep children away
- **CAREFULLY SUPERVISE** children in same room as fireplace.
- Alert children and adults to hazards of high temperatures
- **High temperatures may ignite clothing or other flammable materials.**
- Keep clothing, furniture, draperies and other flammable materials away.

### CAUTION

Tested and approved for wood pellets only. Burning of any other type of fuel voids your warranty.

**NOTE:** To obtain a French translation of this manual, please contact your dealer or visit [www.quadrafire.com](http://www.quadrafire.com)

**REMARQUE :** Pour obtenir une traduction française de ce manuel, s'il vous plaît contacter votre revendeur ou visitez [www.quadrafire.com](http://www.quadrafire.com)

# Congratulations

**and Welcome to the Quadra-Fire Family!**

**NOTE:** Clearances may only be reduced by means approved by the regulatory authority having jurisdiction.

## A. Sample of Serial Number / Safety Label

LOCATION: Back of Appliance

**CAUTION: HOT WHILE IN OPERATION DO NOT TOUCH. KEEP CHILDREN, CLOTHING AND FURNITURE AWAY. CONTACT MAY CAUSE SKIN BURNS. SEE NAMEPLATE AND INSTRUCTIONS. Operate this unit with fuel hopper lid closed. Failure to do so may result in emissions products' combustion from the hopper under certain conditions. Maintain hopper seal in good condition. Do not over fill the hopper.**

**ATTENTION: CHAUD LORS DE L'OPERATION. NE PAS TOUCHER. GARDEZ LES ENFANTS ET LES VETEMENTS LOIN DE L'ESPACE DESIGNÉ DE L'INSTALLATION. LE CONTACT PEUT CAUSER DES BRÛLURES À LA PEAU. VOIR L'ÉTIQUETTE ET LES INSTRUCTIONS. Opérez cet appareil avec le couvercle de la trémie fermé. Le défaut de ne pas suivre les instructions peut résulter, sous certaines conditions, en une combustion des émissions des produits venant de la trémie. Ne pas remplir la trémie trop pleine.**

Serial No. / N° de série

US

Barcode Label

**Test Lab & Report No.**

Report / Rapport  
061-S-77d-6.2  
0061FM07ZE

**QUADRA-FIRE**

**SANTAFE-C**

**Serial No.**

**Model Number**

Listed Solid Fuel Room Heater/Pellet Type. Also suitable for Mobile Home Installation. This appliance has been tested and listed for use in Manufactured Homes in accordance with OAR 814-23-9000 through 814-23-9039. / Appareil de chauffage de combustible solide/le type de boulettes. Accepté dans l'installation dans les maisons mobiles. Cet appareil a été testé et enregistré pour l'usage dans les Maisons Mobiles en accord avec OAR 814-23-9000 jusqu'à 814-23-9039.

**Tested to:** ASTM E1509-04 and UL-627-00 Room Heating Pellet Burning Type, (UM) 84-HUD FOR USE ONLY WITH PELLETTIZED WOOD OR SHELLLED FIELD CORN FUEL. DO NOT USE ANY OTHER TYPE OF FUEL. OMNI-Test Laboratories, Inc. has determined that this appliance complies with Canadian Standards Association (CSA) B415.1 and Title 40 of the U.S. Code of Federal Regulations, Part 60, SubPart AAA. OMNI-Test Laboratories Accredited: The Standards Council of Canada, the American National Standards Institute, and the U.S. Environmental Protection Agency. / **Testé à:** ASTM E1509-04 et UL-627-00 Room Heating, Pellet Burning Type, (UM) 84-HUD POUR USAGE AVEC LES BOULETTES DE BOIS OU DE COMBUSTIBLE DE MAIS ECOSSE DES CHAMPS. N'utiliser aucun autre genre de combustible. OMNI-Test Laboratories, Inc. a déterminé que cet appareil se conforme avec la norme de l'Association Canadienne de normalisation (CSA) B415.1 ainsi que le Titre 40 du Code Fédéral de Régulations des États-Unis, partie 60, sous-partie AAA. Accréditations OMNI-Test Laboratories: Le Conseil Canadien des Normes (CONCNSC), l'Institut des Standards Nationaux Américain (ANSI) et l'Agence de Protection Environnemental (EPA). **Input Rating:** 30,600 Btu/s/hr. / **Puissance de Rendement:** 30,600 Btu/s/hr. **Electrical Rating:** 115 VAC, 60 Hz, Start 4.1 Amps, Run 1.1 AMPS. Route power cord away from unit. Do not route cord under or in front of appliance. Do not obstruct the space beneath the heater. / **Puissance Electrique:** 115 VAC, 60 Hz, Début 4.1 Amps, Courir 1.1 Amps. Eloignez le fil électrique de l'appareil. Ne pas faire passer le fil électrique au dessus ou en dessous de l'appareil. Ne pas bloquer l'espace au dessous de l'appareil. **DANGER:** Risk of electrical shock. Disconnect power supply before servicing. Replace glass only with 5mm ceramic available from your dealer. To start, set thermostat above room temperature, the stove will light automatically. To shutdown, set thermostat to below room temperature. For further instruction refer to owner's manual. **KEEP VIEWING AND ASH REMOVAL DOORS TIGHTLY CLOSED DURING OPERATION. / DANGER:** Il y a risque de décharge électrique. Déconnectez le fil électrique de la prise de contact avant le service. Remplacez le vitre seulement avec une vitre céramique de 5 mm disponible chez votre fournisseur. Pour allumer, monter la température du thermostat au dessus de la température de la pièce, le poêle s'allumera automatiquement. Pour éteindre, descendre la température du thermostat en dessous de la température de la pièce. Pour des instructions supplémentaires, référez vous au manuel du propriétaire. **GARDEZ LA PORTE D'OUVERTURE ET LA PORTE DES CENDRES FERMÉES HERMETIQUEMENT DURANT L'OPERATION.**

**PREVENT HOUSE FIRES / PRÉVENTION DES FEUX DE MAISON**

Install and use only in accordance with manufacturer's installation and operating instructions. CONTACT LOCAL BUILDING OR FIRE OFFICIALS ABOUT RESTRICTIONS AND INSPECTION IN YOUR AREA. / Installez et utilisez en accord avec les instructions d'installation et d'opération du fabricant. CONTACTEZ LE BUREAU DE LA COORDINATION OÙ LE BUREAU DES INCENDIES AU SUJET DES RESTRICTIONS ET DES INSPECTIONS D'INSTALLATION DANS VOTRE VOISINAGE. Ne pas obstruer l'espace au dessous de l'appareil. **WARNING - FOR MOBILE HOMES:** Do not install appliance in a sleeping room. An outside combustion air inlet must be provided. The structural integrity of the mobile home, floor, ceiling and walls must be maintained. Refer to manufacturer's instructions and local codes for precautions required for passing chimney through a ceiling, wall or ceiling. Insulation and clean air ducts must be frequently in accordance with manufacturer's instructions. **AVIS - POUR LES MAISONS MOBILES:** Ne pas installer dans une chambre à coucher. Un tuyau extérieur de combustion doit être installé et ne doit pas être obstrué lorsque l'appareil est en usage. La structure intégrale du plancher, du plafond et des murs doit être maintenue. Référez vous aux instructions du fabricant et des codes locaux pour les précautions requises pour passer une cheminée à travers un plancher, un mur ou un plafond. Les conduits d'air propres doivent être maintenus fréquemment. **DO NOT CONNECT THIS UNIT TO A CHIMNEY SERVING ANOTHER APPLIANCE.** Use a 3" or 4" diameter type "P" PLASTIC chimney system. **PAS CONNECTER CET APPAREIL À UNE CHEMINÉE SERVANT UN AUTRE APPAREIL.** Utilisez système de ventilation "L" ou "P" diamètre 76mm ou 102mm. **NE CONNECTER CE SYSTÈME À UNE CHEMINÉE SERVANT UN AUTRE APPAREIL. / ATTENTION:** OUVERTURES DE COMBUSTION AIR NE SONT PAS À ÊTRE OBSTRUÉE.

MINIMUM CLEARANCES TO COMBUSTIBLE MATERIALS / ESPACES LIBRES MINIMUM DES MATÉRIAUX COMBUSTIBLES:	
<p>A: CORNER INSTALLATION DU COIN: C: VERTEICAL ADAPTER KIT (PART 811-8860) INSTALLATION: D: VERTICAL ADAPTER KIT (PART 811-8860) POUR INSTALLATION VERTICALE: E: Pipe to Back Wall / Un Tuyau Mur Arrière F: Side Wall / Mur De Côté</p>	<p>2'15mm 6'152mm 2'15mm 3'076mm 6'1152mm 7'1176mm</p>
<p>G: Side Wall / Mur De Côté H: Pipe to Side Wall / Un Tuyau Mur De Côté I: ALCOVE INSTALLATION / INSTALLATION DE L'ALCÔVE: Min. Alcove Height / Une hauteur minimum de l'alcove Min. Alcove Side Wall / Une hauteur minimum mur de côté de l'alcove Min. Alcove Width / Une largeur minimum mur de côté de l'alcove Max. Alcove Depth / La profondeur maximum de l'alcove</p>	<p>2'15mm 3'076mm 43" / 1092mm 6'1152mm 38" / 965mm 36" / 914mm</p>

**NOTE 1:** In residential installation, when using Parts 811-0860, (3" - 3" Top Vent Adapter) and 812-3570 (3" - 6" Offset Adapter), 24 gauge 6" single wall flue connector may be used. / **REMARQUE 1:** Dans les installations résidentielles, lorsque les pièces 811-0860, (dessus de l'adaptateur de ventilation 3" - 3") et 812-3570 (le ressort de l'adaptateur 3" - 6"), un tuyau connecteur de 6" pour mur simple de calibre 24 peut être utilisé.

**NOTE 2:** In manufactured home installation, when using Part 811-0860, (3" - 3" Top Vent Adapter) and 812-3570 (3" - 6" Offset Adapter), use listed double wall flue connector. An Outside Air Kit (Part 811-6872), must be used with manufactured home installation. / **REMARQUE 2:** Pour l'installation dans les maisons préfabriquées, lorsque les pièces 811-0860, (dessus de l'adaptateur de ventilation 3" - 3") et 812-3570 (le ressort de l'adaptateur 3" - 6"), utilisez un tuyau connecteur enregistré pour mur double. Un assemblage d'air extérieur (pièce 811-6872), doit être utilisé pour l'installation dans les maisons préfabriquées.

H: FLOOR PROTECTION / PROTECTION DU SOL:  
G: 6 in. (152MM)  
H: 2 in. (51MM)  
I: 6 in. (152mm)

The non-combustible floor protector must be 1/2" (13mm) minimum thickness, "X" value = 0.49, Type II thermal protection R = 1.0 or greater. / Le protecteur de plancher doit être d'un minimum de 1/2" (13mm) d'épaisseur, "X" value = 0.49, Type II thermique R = 1.0 ou une plus grande de matériel incombustible ou équivalent.

\*Non-combustible floor protection must extend 2 inches (51mm) beneath the flue pipe when installed with horizontal venting or under the Top Vent Adapter with vertical installation. **RECOMMENDED IN USA; REQUIRED IN CANADA.** / Un protecteur incombustible de plancher doit s'étendre 2 inches (51mm) sous le conduit de cheminée pour une installation de ventilation horizontale ou sous un adaptateur de ventilation de dessus pour une installation verticale. **ÉTATS-UNIS-RECOMMANDÉ; CANADA - REQUIRENT.**

Manufactured by / Fabriqué par:  
**HEARTH & HOME TECHNOLOGIES**  
352 Mountain House Road  
Halifax, PA 17032  
www.quadrafire.com

**U.S. ENVIRONMENTAL PROTECTION AGENCY**  
Certified to comply with 2020 particulate emission standards at 1.1 g/hr EPA method 289 and ASTM 2779 using premium wood pellets.

This wood heater needs periodic inspection and repair for proper operation. Consult the owner's manual for further information. It is against federal regulations to operate this wood heater if a major component is missing or inoperative. Consult the owner's manual for more information.

**Mfg. Date**

2022	2023	2024	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
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**DO NOT REMOVE THIS LABEL / NE PAS ENLEVER L'ÉTIQUETTE**

7050-800D





**Safety Alert Key:**

- **DANGER!** Indicates a hazardous situation which, if not avoided will result in death or serious injury.
- **WARNING!** Indicates a hazardous situation which, if not avoided could result in death or serious injury.
- **CAUTION!** Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
- **NOTICE:** Indicates practices which may cause damage to the appliance or to property.

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→ = Contains updated information

## B. Warranty Policy

### Hearth & Home Technologies LLC LIMITED LIFETIME WARRANTY

Hearth & Home Technologies LLC (“HHT”) extends the following warranty for HHT gas, wood, pellet and electric hearth appliances (each a “Product” and collectively, the “Product(s)”) and certain component parts set forth in the table below (“Component Part(s)”) that are purchased from a HHT authorized dealer or distributor.

#### **WARRANTY COVERAGE:**

HHT warrants that the Products and their Component Parts will be free from defects in materials and workmanship for the applicable period of Warranty coverage set forth in the table below (“Warranty Period”). If a Product or Component Parts are found to be defective in materials or workmanship during the applicable Warranty Period, HHT will, at its option, repair the applicable Component Part(s), replace the applicable Component Part(s), or refund the purchase price of the applicable Product(s). The maximum amount recoverable under this Warranty is limited to the purchase price of the Product. This Warranty is transferable from the original purchaser to subsequent owners, but the Warranty Period will not be extended in duration or expanded in coverage for any such transfer. This Warranty is subject to conditions, exclusions, and limitations as described below.

#### **WARRANTY PERIOD:**

Warranty coverage begins at the date of installation. In the case of new home constructions, Warranty coverage begins on the date of first occupancy of the dwelling or six months after the sale of the Product(s) by an independent, authorized HHT dealer or distributor, whichever occurs earlier. However, the Warranty coverage shall commence no later than 24 months following the date of Product shipment from HHT, regardless of the installation or occupancy date.

The term “Lifetime” in the table below is defined as: 20 years from the beginning date of warranty coverage for gas appliances, 10 years from the beginning date of warranty coverage for wood and pellet appliances, and 5 years from the beginning of warranty coverage for standalone gas log sets. These time periods reflect the minimum expected useful lives of the designated Component Parts under normal operating conditions.

Warranty Period		HHT Manufactured Appliances and Venting					
Component Parts	Labor	Gas	Pellet	Wood	Electric	Venting	Component Parts Covered by this Warranty
1 Year		X	X	X		X	All parts including handles, external enameled components and other material except as covered by Warranty Conditions, Warranty Exclusions, and Warranty Limitations listed
2 Years					X		All parts except as covered by Warranty Conditions, Warranty Exclusions, and Warranty Limitations listed
2 years			X	X			Igniters, Auger Motors, Electronic Components, and Glass
		X					Electrical components limited to modules, remotes/wall switches, valves, pilots, blowers, junction boxes, wire harnesses, transformers and lights (excluding light bulbs)
		X		X			Molded Refractory Panels, Glass Liners
3 years			X				Firepots, burnpots, mechanical feeders/auger assemblies
5 years		X					Burners and logs for standalone gas log sets (Vented and Vent Free gas log sets not sold as components of the fireplace or stove)
5 years	1 year	X					Vent Free Burners and Vent Free Log components of HHT manufactured fireplaces or stoves
			X	X			Castings, Medallions and Baffles
6 years	3 years			X			Catalysts
7 years	3 years		X	X			Manifold tubes, HHT Chimney and Terminations
10 years	1 year	X					Burners, logs and refractory components of HHT manufactured fireplaces or stoves
Limited Lifetime	3 years	X	X	X			Firebox and heat exchanger, FlexBurn® System (engine, inner cover, access cover and fireback)
1 Year	None	X	X	X	X	X	All purchased replacement parts

## **WARRANTY CONDITIONS:**

- Because HHT cannot control the quality of any Products sold by unauthorized sellers, this Warranty only covers Products that are purchased through an HHT authorized dealer or distributor unless otherwise prohibited by law; a list of HHT authorized dealers is available on the HHT branded websites.
- This Warranty is only valid while the applicable Product remains at the site of original installation.
- This Warranty is only valid in the country in which the HHT authorized dealer or distributor that sold the applicable Product is authorized to sell applicable Product.
- Contact your installing distributor or dealer for Warranty service. If the installing dealer or distributor is unable to provide necessary parts, contact the nearest HHT authorized dealer or supplier. Additional service fees may apply if you are seeking Warranty service from a dealer other than the dealer from whom you originally purchased the applicable Product.
- No HHT consumer should bear cost of warranty service or costs incurred while servicing warranty claims (i.e., travel, gas, or mileage) when the service is performed within the terms of this Warranty. Check with your dealer or distributor in advance for any costs to you when arranging a warranty call. Travel and shipping charges for parts are not covered by this Warranty.

## **WARRANTY EXCLUSIONS:**

This Warranty does not cover the following:

- Changes in surface finishes as a result of normal use. As a heating appliance, some changes in color of interior and exterior surface finishes may occur. This is not a flaw and is not covered under the Warranty.
- Damage to printed, plated, or enameled surfaces caused by fingerprints, accidents, misuse, scratches, melted items or other external sources and residues left on the plated surfaces from the use of abrasive cleaners or polishes.
- Repair or replacement of parts that are subject to normal wear and tear during the Warranty Period are not covered. These parts include: paint, wood and pellet gaskets, firebricks, grates, flame guides, batteries and the discoloration of glass.
- Minor expansion, contraction, or movement of certain parts causing noise. These conditions are normal and complaints related to this noise are not covered by this Warranty.
- Damages resulting from: (1) failure to install, operate, or maintain the applicable Product in accordance with the installation instructions, operating instructions, and listing agent identification label furnished with the applicable Product; (2) failure to install the applicable Product in accordance with local building codes; (3) shipping or improper handling; (4) improper operation, abuse, misuse, continued operation with damaged, corroded or failed components, accident, or improperly/incorrectly performed repairs; (5) environmental conditions, inadequate ventilation, negative pressure, or drafting caused by tightly sealed constructions, insufficient make-up air supply, or handling devices such as exhaust fans or forced air furnaces or other such causes; (6) use of fuels other than those specified in the operation instructions; (7) installation or use of components not supplied with the applicable Product or any other components not expressly authorized and approved by HHT; (8) modification of the appliance not expressly authorized and approved by HHT in writing; and/or (9) interruptions or fluctuations of electrical power supply to the applicable Product.
- Non-HHT venting components, hearth connections or other accessories used in conjunction with the applicable Product.
- Any part of a pre-existing fireplace system in which an insert or a decorative gas applicable Product is installed.
- HHT's obligation under this Warranty does not extend to the Product's capability to heat the desired space. Information is provided to assist the consumer and the dealer in selecting the proper Product for the application. Consideration must be given to the Product location and configuration, environmental conditions, insulation and air tightness of the structure.

### **This warranty is void if:**

- The applicable Product has been over-fired, operated in atmospheres contaminated by chlorine, fluorine, or other damaging chemicals. Over-firing can be identified by, but not limited to, warped plates or tubes, deformation/warping of interior cast iron structure or components, rust colored cast iron, bubbling, cracking and discoloration of steel or enamel finishes.
- The applicable Product is subjected to prolonged periods of dampness or condensation.
- There is any damage to the applicable Product due to water or weather damage which is the result of, but not limited to, improper chimney or venting installation.

## **LIMITATIONS OF REMEDIES AND LIABILITY:**

- **EXCEPT TO THE EXTENT PROVIDED BY LAW, HHT MAKES NO EXPRESS WARRANTIES OTHER THAN THE WARRANTY SPECIFIED HEREIN. The owner's exclusive remedy and HHT's sole obligation under this Warranty or in contract, tort or otherwise, shall be limited to replacement of the Component Part(s), repair of the Component Part(s), or refund of the original purchase price of the applicable Product(s), as specified above; provided, however, that (i) if HHT is unable to provide replacement of the Component Part(s) and repair of the Component Part(s) is not commercially practicable or cannot be timely made, or (ii) the customer is willing to accept a refund of the purchase price of the applicable Product(s), HHT may discharge all such obligations by refunding the purchase price of the applicable Product. In no event will HHT be liable for any incidental or consequential damages caused by defects in the applicable Product. Some States do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This Warranty gives you specific legal rights and you may also have other rights which vary from State to State. THE DURATION OF ANY IMPLIED WARRANTY IS LIMITED TO DURATION OF THE EXPRESSED WARRANTY SPECIFIED ABOVE FOR THE APPLICABLE PRODUCT. Some States do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.**

# 1 Listing and Code Approvals

## A. Appliance Safety Certification

<b>Model Number:</b>	SANTAFE-C
<b>Laboratory</b>	OMNI Test Laboratories, Inc.
<b>Report Number:</b>	061-S-77d-6.2
<b>Type:</b>	Solid Fuel Room Appliance/Pellet Fuel Burning Type
<b>Standard:</b>	ASTM E1509-04, ULC S627-00 and ORD-C1482-M1990 Room Appliance Pellet Fuel Burning type and (UM) 84-HUD, Mobile Home Approved.

## B. Appliance Emissions Certification

<b>Model Number:</b>	SANTAFE-C
<b>Laboratory</b>	OMNI Test Laboratories, Inc.
<b>Report Number:</b>	0061PM077E
<b>Standard:</b>	EPA method 28R, ASTM 2779 and ASTM E1509-04
<b>Can be found at:</b> <a href="http://www.quadrafire.com/about-us/epa-certification">www.quadrafire.com/about-us/epa-certification</a>	

The SANTAFE-C is Certified to comply with 2020 particulate emission standards.



This pellet appliance needs periodic inspection and repair for proper operation. It is against federal regulations to operate this pellet appliance in a manner inconsistent with operating instructions in this manual.

**NOTICE:** This installation must conform with local codes. In the absence of local codes you must comply with the **ASTM E1509-04, ULC S627-00, and (UM) 84-HUD.**

## C. BTU & Efficiency Specifications

<b>EPA Certification Number:</b>	Number: 175-19
<b>EPA Certified Emissions:</b>	1.1 grams per hour
<b>*LHV Tested Efficiency:</b>	70.4%
<b>**HHV Tested Efficiency:</b>	66.1%
<b>***EPA BTU Output:</b>	5,800 to 22,400 / hr.
<b>****BTU Input:</b>	9,300 to 30,600 / hr.
<b>Vent Size:</b>	3" or 4" Type "L" or "PL"
<b>Hopper Capacity:</b>	52 lbs.
<b>Fuel</b>	Premium Wood Pellets
* Weighted average LHV (Low Heating Value) efficiency using data collected during EPA emissions tests in accordance with the requirements of CSA B415.1.	
** Weighted average HHV (High Heating Value) efficiency using data collected during EPA emissions tests in accordance with the requirements of CSA B415.1.	
*** A range of BTU outputs calculated using HHV efficiency and the burn rates from the EPA tests.	
**** Based on the maximum feed rate per hour multiplied by approximately 8600 BTU's which is the average BTU's from a pound of pellets.	

## D. Glass Specifications

This appliance is equipped with 5mm ceramic glass. Replace glass only with 5mm ceramic glass. Please contact your dealer for replacement glass.

## E. Electrical Rating

115 VAC, 60 Hz, Start 4.1 Amps, Run 1.1 Amps

## F. Mobile Home Approved

- This appliance is approved for mobile home installations when not installed in a sleeping room and when an outside combustion air inlet is provided.
- The structural integrity of the mobile home floor, ceiling, and walls must be maintained.
- The appliance must be properly grounded to the frame of the mobile home and use only Listed pellet vent Class "L" or "PL" connector pipe.
- Outside Air Kit, part OAK-ACC must be installed in a mobile home installation.

## G. Sleeping Room

When installed in a sleeping room it is recommended that 3ft of vertical be installed prior to horizontally exiting the room and a smoke/CO alarm be installed in the bedroom. The size of the room must be at least 50ft<sup>3</sup> per 1,000 Btu/hr stove input, if the stove exceeds the room size, outside air must be installed.

## H. California - Prop65

### WARNING

This product and the fuels used to operate this product (wood), and the products of combustion of such fuels, can expose you to chemicals including carbon black, which is known to the State of California to cause cancer, and carbon monoxide, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to: [WWW.P65Warnings.ca.gov](http://WWW.P65Warnings.ca.gov)



### WARNING



#### Fire Risk.

Hearth & Home Technologies disclaims any responsibility for, and the warranty will be voided by, the following actions:

- Installation and use of any damaged appliance.
- Modification of the appliance.
- Installation other than as instructed by Hearth & Home Technologies.
- Installation and/or use of any component part not approved by Hearth & Home Technologies.
- Operating appliance without fully assembling all components.
- Operating appliance without legs attached (if supplied with appliance).
- Do NOT Over fire - If appliance or chimney connector glows, you are over firing.




Any such action that may cause a fire hazard.

Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage.

For assistance or additional information, consult a qualified installer, service agency or your dealer.

**NOTE:** Hearth & Home Technologies, manufacturer of this appliance, reserves the right to alter its products, their specifications and/or price without notice.

## 2 Operating Instructions

 <b>WARNING</b>	
	<b>Fire Risk.</b>
	<ul style="list-style-type: none"><li>• Do not operate appliance before reading and understanding operating instructions.</li><li>• Failure to operate appliance properly may cause a house fire.</li></ul>

Visit [www.quadrafire.com/shopping-tools/videos](http://www.quadrafire.com/shopping-tools/videos) to view product and use & care videos.

### A. Fire Safety

To provide reasonable fire safety, the following should be given serious consideration:

- Install at least one smoke detector and CO monitor on each floor of your home.
- Locate detectors away from the heating appliance and close to the sleeping areas.
- Follow the detector's manufacturer's placement and installation instructions and maintain regularly.
- Conveniently locate a Class A fire extinguisher to contend with small fires.
- In the event of a hopper fire:
  - Evacuate the house immediately.
  - Notify fire department.

### B. Non-Combustible Materials

Material which will not ignite and burn, composed of any combination of the following:

- Steel
- Plaster
- Brick
- Iron
- Concrete
- Tile
- Glass
- Slate

Materials reported as passing **ASTM E 136, Standard Test Method for Behavior of Metals, in a Vertical Tube Furnace of 750° C.**

### C. Combustible Materials

Material made of/or surfaced with any of the following materials:

- Wood
- Compressed Paper
- Plant Fibers
- Plastic
- Plywood/OSB
- Sheet Rock (drywall)

Any material that can ignite and burn: flame proofed or not, plastered or non-plastered.

### D. Fuel Material and Fuel Storage

Pellet fuel quality can greatly fluctuate. This appliance has been designed to burn a wide variety of fuels, giving you the choice to use the fuel that is most economical in your region.

Hearth & Home Technologies strongly recommends only using Pellet Fuel Institute (PFI) certified fuel.

#### Fuel Material


- Made from sawdust or wood by-products
- Depending on the source material it may have a high or low ash content.

#### Higher Ash Content Material

- Hardwoods with a high mineral content
- Fuel that contains bark
- Standard grade pellets, high ash pellets

#### Lower Ash Content Material

- Softwoods
- Fuels with low mineral content
- Premium grade pellets

 <b>CAUTION</b>	
<b>Do not burn fuel that contains an additive; (such as soybean oil).</b>	
<ul style="list-style-type: none"><li>• May cause hopper fires</li><li>• Damage to product may result</li></ul>	
Read the ingredients list on the package.	

## **Clinkers**

Minerals and other non-combustible materials such as sand will turn into a hard, glass-like substance called a clinker when heated in the fire pot.

Trees from different areas will vary in mineral content. That is why some fuels produce more clinkers than others.

## **Moisture**

Always burn dry fuel. Burning fuel with high moisture content takes heat from the fuel and tends to cool the appliance, robbing heat from your home. Damp pellet fuel can clog the feed system.

## **Size**

- Pellets are either 1/4 inch or 5/16 inch (6-8mm) in diameter
- Length should be no more than 1-1/2 inches (38mm)
- Pellet lengths can vary from lot to lot from the same manufacturer
- Due to length variations, the flame height may need adjusting occasionally; see **Feed Rate Adjustment Instructions** on [page 11](#).

## **Performance**

- Higher ash content requires the ash drawer to be emptied more frequently
- Hardwoods require more air to burn properly
- Premium wood pellets produce the highest heat output.
- Burning pellets longer than 1-1/2 inches (38mm) can cause an inconsistent fuel feed rate and/or missed ignitions.

We recommend that you buy fuel in multi-ton lots whenever possible. However, we do recommend trying various brands before purchasing multi-ton lots to ensure your satisfaction.

## **Changing to Different Fuel Type**



### **CAUTION**

Tested and approved for wood pellets ONLY. Burning of any other type of fuel voids your warranty.

- Empty the hopper of the previous fuel
- Thoroughly vacuum hopper before filling with the new fuel

The burn rate, BTU content and heat output will all vary depending on the fuel selected.

## **Storage**

- Wood pellets should be left in their original sealed bag until using to prevent moisture absorption.
- This will also prevent rodents from becoming a problem.
- Do not store any pellet fuel within the clearance requirements or in an area that would hinder routine cleaning and maintenance.

## **E. Before Your First Fire**

1. First, make sure your appliance has been properly installed and that all safety requirements have been met. Pay particular attention to the fire protection, venting and thermostat installation instructions.
2. Double check that the ash drawer and firebox are empty!
3. Close the front door.

### **IMPORTANT DETAIL:**

The tip of the thermocouple must be in contact with the inside end of the thermocouple cover or missed ignitions can occur.

## **F. Filling the Hopper**

Open the hopper lid by lifting the handle. Fill the hopper with fuel. Close the hopper lid. The appliance will not feed with the hopper lid open.

## G. General Operating Information

### 1. Thermostat Calls For Heat

The appliance is like most modern furnaces; when the thermostat calls for heat, your appliance will automatically light and deliver heat. When the room is up to temperature and the thermostat is satisfied, the red call light will go off and the appliance will shut down.

### 2. Heat Output Controls

This appliance is equipped with a heat output control switch that has three settings or burn rates; low, medium and high. The appliance will turn on and off as the thermostat demands. When the thermostat calls for heat, the appliance will start up at the burn rate for which it is set. If the appliance is set at one of the lower settings, it will run quieter but take longer to heat up an area than if it were set at a higher burn rate. Regardless of the burn rate, when the area is warm enough to satisfy the thermostat, the appliance will shut off (**Figure 10.1**).

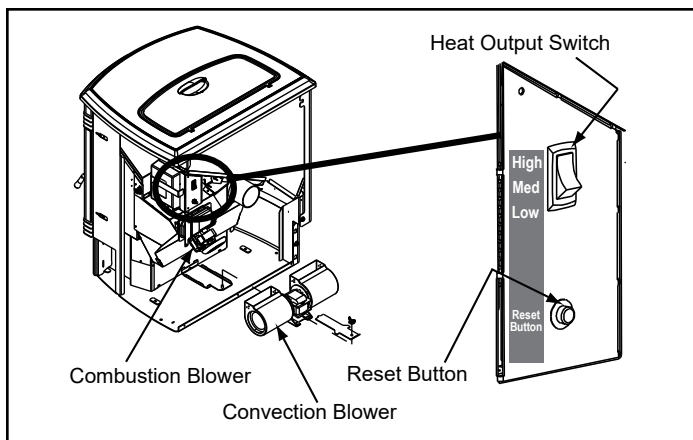


Figure 10.1



## WARNING



### Fire Hazard.

Keep combustible materials, gasoline and other flammable vapors and liquids clear of appliance.

- Do NOT store flammable materials in the appliance's vicinity.
- NEVER use gasoline, GASOLINE-TYPE lantern fuel, kerosene, charcoal lighter fluid, or similar liquids to start or "freshen up" a fire in this appliance. Keep all such liquids well away from the appliance while it is in use.
- DO NOT BURN GARBAGE OR FLAMMABLE FLUIDS SUCH AS GASOLINE, NAPHTHA OR ENGINE OIL.
- DO NOT USE CHEMICALS OF FLUIDS TO START THE FIRE.
- Combustible materials may ignite.

## H. Starting Your First Fire

1. A thermostat is required for proper operation of this appliance. At this time, fill the hopper with pellets, set the thermostat to its lowest setting. Plug the power cord into nearby outlet.
2. The exhaust blower will stay on for approximately 18 minutes even though the thermostat is not calling for heat. This is normal.
3. Locate the heat output control switch mounted on the back of the appliance in the upper right corner (**Figure 10.1**). Turn it to the "high" setting by pushing the top of the control switch in and then adjust the thermostat to its highest setting. Remove the right side panel and the red call light located to the left of the control box will be on (**Figure 10.2**). This indicates the thermostat is calling for heat.
4. The fuel feed system and the igniter should now be on.
5. For your first fire it will be necessary to press the reset button once approximately 2 minutes after start up and again in 5 minutes. This will fill the feed system and allow the appliance to begin dropping pellets. The appliance will continue to run as long as the thermostat is calling for heat.
6. Once the appliance has ignited, let it burn for approximately 15 minutes, then set the thermostat to the desired room temperature. Adjust the heat output control switch to the desired setting.



## WARNING



### Fire Risk

Do NOT operate appliance:

- With appliance door open.
- Fire pot floor open.
- Cleaning slide plates open.

Do NOT store fuel:

- Closer than required clearances to combustibles to appliance
- Within space required for loading or ash removal.

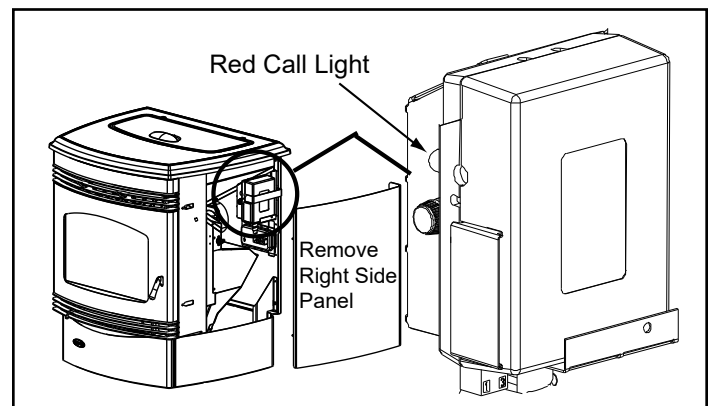


Figure 10.2



## I. Fire Characteristics

A properly adjusted fire with the heat output control switch set on "HIGH" has a short active flame pattern that extends out of the fire pot approximately 4 inches (102mm). If the fire has tall flames with black tails and seems somewhat lazy, the feed rate will need to be reduced. This is done by sliding the fuel adjustment control rod down, which will reduce the feed. If the fire is not 4 inches (102mm) tall, slide the fuel adjustment control rod up to increase the feed. A medium and low setting will give a shorter flame. The flame will rise and fall somewhat. This is normal.

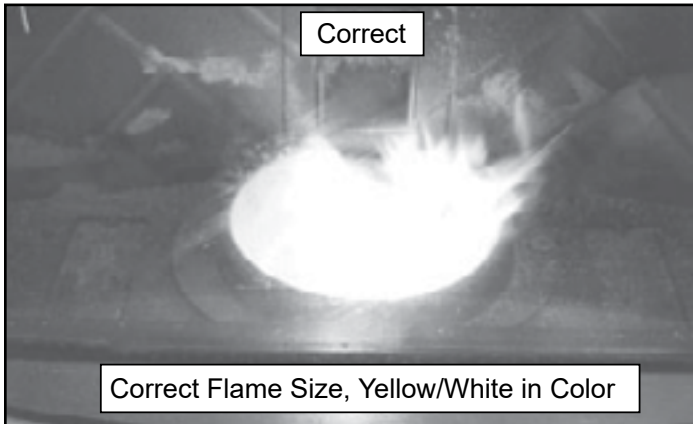


Figure 11.1

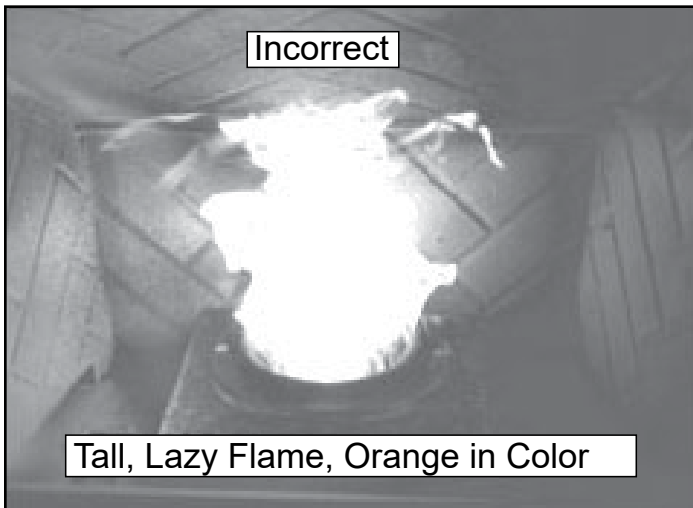




Figure 11.2

## J. Feed Rate Adjustment Instructions

The feed adjustment control rod is factory set, and should be adequate for most fuels. However, if the flame height is too high or too low, you will need to adjust the feed rate. Wait until the appliance has been burning for 15 minutes before making your adjustments and allow 15 minutes for feed adjustment to take effect.

1. Loosen the wing screw.
2. Adjust the feed adjustment control rod upward to increase the feed rate and flame height or down, to decrease the feed rate and flame height.
3. Re-tighten the wing screw.

 <b>WARNING</b>	
	<b>Fire Risk.</b>
	<ul style="list-style-type: none"><li>• High ask fuels, or lack of maintenance, can cause the fire pot to fill with ash and clinker. If the fire pot fills to the top, immediately shut down the appliance and clean.</li><li>• Failure to do so could result in smoking, sooting and possible hoper fires.</li></ul>

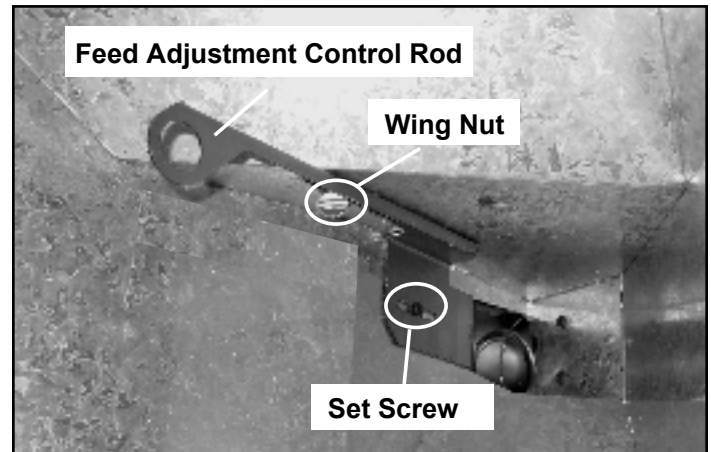





Figure 11.3

## K. Ignition Cycles

1. At the beginning of each ignition cycle, it is normal to see some smoke in the firebox. The smoke will stop once the fire starts.
2. The convection blower will automatically turn on after your appliance has been burning for approximately 10 minutes. This blower transfers heat from your appliance into the room, and will continue to run after the thermostat has stopped calling for heat until the appliance has cooled down.
3. Occasionally the appliance may run out of fuel and shut itself down. When this happens, the red call light will be on (**Figure 10.2 on page 10**). To restart it, fill the hopper and press the reset button (**Figure 10.1 on page 10**). When you press the reset button the red call light will go out. Release the button and the light will come back on. You should see a fire shortly. If not, follow **Starting Your First Fire** on [page 10](#).

 <b>WARNING</b>	
	<b>Fire Risk</b> <u>Do NOT operate appliance:</u>
	<ul style="list-style-type: none"><li>• With appliance door open.</li><li>• Fire pot floor open.</li><li>• Cleaning slide plates open.</li></ul> <u>Do NOT store fuel:</u> <ul style="list-style-type: none"><li>• Closer than required clearances to combustibles to appliance</li><li>• Within space required for loading or ash removal.</li></ul>

 <b>CAUTION</b>	
<b>HOT WHILE IN OPERATION. KEEP CHILDREN, CLOTHING AND FURNITURE AWAY. CONTACT MAY CAUSE SKIN BURNS.</b>	

## L. Restarting the Appliance

### Restart Process

1. When the unit has run out of fuel, add pellet fuel to the hopper.
2. Dump the ashes and clinkers built up in the fire pot by pulling the ash dump removal handle out several times. Make sure clinkers have dropped into the ash pan then return the handle to fully closed position.
3. Press the reset button
4. The appliance will then begin its startup sequence.

### Restarting After a Power Failure



1. For an electrical disruption, the appliance will start on its own - providing the thermostat is asking for heat.



## M. Clear Space

**NOTICE:** Clearances may only be reduced by means approved by the regulatory authority having jurisdiction.

### Mantel:

Avoid placing candles and other heat-sensitive objects on mantel or hearth. Heat may damage these objects.

 <b>WARNING</b>	
	<b>Fire Risk.</b> Do NOT place combustible objects in front of the appliance. High temperatures may ignite clothing, furniture or draperies. Maintain a minimum clearance of 3 feet (914mm) in front of appliance.

 <b>WARNING</b>	
	<b>Fire Risk.</b> Keep combustible materials, gasoline and other flammable vapors and liquids clear of appliance.
	<ul style="list-style-type: none"><li>• Do NOT store flammable materials in the appliance's vicinity.</li><li>• <b>DO NOT USE GASOLINE, LANTERN FUEL, KEROSENE, CHARCOAL LIGHTER FLUID OR SIMILAR LIQUIDS TO START OR "FRESHEN UP" A FIRE IN THIS Appliance.</b></li><li>• <b>DO NOT BURN GARBAGE OR FLAMMABLE FLUIDS SUCH AS GASOLINE, NAPHTHA OR ENGINE OIL.</b></li><li>• <b>DO NOT USE CHEMICALS OR FLUIDS TO START THE FIRE.</b></li><li>• Keep all such liquids well away from the appliance while it is in use.</li><li>• Combustible materials may ignite.</li></ul>

## N. Thermostat Controls

### TEMPERATURE (HEAT / OFF) SWITCH:

Set this switch to HEAT to control your appliance. The off position will disable the appliance.

### SET (MULTI- FUNCTION) SLIDE SWITCH:

This provides easy access to common settings, and should always remain in RUN unless items are being adjusted.

**NOTE:** When thermostat is set to "Manual" non-programmable mode, all positions of the SET slide switch will act like RUN.

### UP / DOWN BUTTONS:

The UP and DOWN buttons are used to control the set temperature, or adjust any other on-screen items. An item flashing, is the item currently being adjusted.

### HOLD BUTTON:

This button activates and deactivates the manual Temperature HOLD feature, which maintains a fixed set temperature indefinitely without following a program routine.

### COPY BUTTON:

This is used to copy temperature program items from one day to the next. Also used to access the menu setup.

### NEXT BUTTON:

This is used when setting items such as software options, and temperature programs when they are flashing on the screen. Pressing the NEXT button will cycle through which item is flashing.

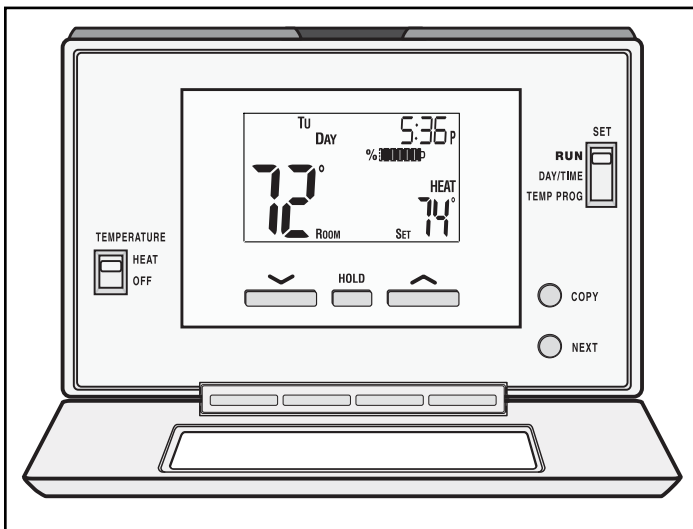


Figure 13.1

## O. Thermostat Setup Options

Setup options for how the thermostat will function are performed using a menu on the display screen.

### TO ACCESS THE SETUP MENU:

Move the TEMPERATURE switch into the OFF position, and then hold down the COPY button for approximately 5 seconds until the screen changes. The menu will always start with item #01, and is advanced to each following item by a single press of the NEXT button. The options for each item are changed using the UP or DOWN buttons.

### ITEM #01 (CLK = CLOCK FORMAT):

- 12Hr, default: This displays the clock times using standard AM and PM values.
- 24Hr: This displays the clock times using the military-time format (example 22:00 hours, without using AM or PM).

### ITEM #02 (TMP = TEMPERATURE SCALE):

- F, default: Shows all temperature values in Fahrenheit.
- C: Shows all temperature values Celsius.

### ITEM #03 (PROGRAMMING STYLE):

- 7 Day, default: This style uses a separate program routine for each of the 7 days in the week.
- 5/2 Day: This style uses a weekday program routine for Monday, Tuesday, Wednesday, Thursday, Friday, and a separate weekend program routine for Saturday and Sunday.
- Manual Non-Programmable: In this setting, there are no program routines for the thermostat to follow and the temperature control will be set only by the UP and DOWN buttons on the front panel.

### ITEM #04 (PERD = EVENT OR PERIOD QUANTITY):

- 4P, default: Thermostat uses four Events per day (called MORN, DAY, EVE, and NITE).
- 2P: The thermostat uses two Events per day (called DAY and NITE).

**NOTE:** Event or Period Quantity feature is not accessible during Manual Non-Programmable mode.

### ITEM #07 (DLAY = DELAY TIME):

- 5, default: Thermostat waits 5 minutes before turning the system back on after it was last run. This internal delay prevents the appliance from turning on too quickly after shutting down. The 5 minute setting is fine for most applications.
- 2: Same operation as above but reduced to 2 minutes between state changes.

**NOTE:** There is no delay available when the thermostat is manually turned up and down.

### ITEM #08 (TEMPERATURE DIFFERENTIAL):

- The thermostat works by turning your heating system on and off whenever the room temperature varies from the desired set-point temperature.
- Use the UP/DOWN buttons to change the number value between 1 and 9. Generally your system should cycle on about 3 to 6 times per hour. A smaller differential number makes the system cycle more frequently, so the room temperature is more precise and constant. A larger differential number will make the system remain on for a longer duration each time and decreases the number of cycles per hour.
- Default is set to 4.

### P. Thermostat Operation Instructions

#### SET DAY AND TIME:

Place the SET switch into the DAY/TIME position. With the day flashing press UP or DOWN to set the day or the week. Press NEXT and the clock time will start flashing. Use UP or DOWN to set the time; verify the AM/PM indicator is correct. Return the SET switch to RUN position when finished.

#### HEATING:

Basic operation of the thermostat can be obtained with the SET switch in the RUN position. The temperature can be adjusted using the UP and DOWN buttons. When the thermostat is first powered on, it will follow a default temperature routine that is preset from the factory (Table 14.1).

Event	Time	Temperature
MORN	6:00 AM	70°F (21°C)
DAY	8:00 AM	62°F (17°C)
EVE	6:00 PM	70°F (21°C)
NITE	10:00 PM	62°F (17°C)

Table 14.1

#### LCD DISPLAY BACK LIGHT:

The display screen is lighted to assist viewing at nighttime, or in locations with low light levels. Press any button on the front panel to activate the approximate 10 second back light.

#### TEMPERATURE OVERRIDE:

While thermostat is in RUN mode, the set temperature can be temporarily changed by pressing UP or DOWN. The temporarily changed set temperature will return to the programmed value stored in memory when start time of the next upcoming scheduled event is reached (MORN, DAY, EVE, OR NITE). While the temporary changed set temperature is in effect, the word OVERRIDE will be shown on the display screen. To cancel, move TEMPERATURE switch to OFF and back to HEAT again.

### TEMPERATURE HOLD:

Temperature hold is used for maintaining a fixed set temperature; once a HOLD is initiated, the thermostat will maintain the set temperature indefinitely. To enter a HOLD state, press the HOLD button one time and the word HOLD will appear on the display. To cancel, press the HOLD button once again.

### STATIC NOTICE

Thermostat is protected against normal static electric discharges, however to minimize the risk of damaging the thermostat in extremely dry weather, please touch a grounded metal object before touching the thermostat.

### Q. Thermostat Temperature Programs

The thermostat by default has 4 separate program events they are: MORN, DAY, EVE, and NITE. Each event ends at the start time of the following event.

**NOTE:** If the thermostat is set for 2 events a day instead of 4, the thermostat will only use the DAY and NITE events.

#### SET TEMPERATURE PROGRAMS:

1. Move TEMPERATURE switch to HEAT.
2. Move SET switch to TEMP PROG position.
3. Starting with Monday, use the UP or DOWN buttons to adjust the start time and set temperature for the MORN event, and then press NEXT button to advance.
4. Adjust the start time and set temperature of the DAY event then press NEXT button.
5. Continue in this same manner to adjust the start time and set temperatures for the EVE and NITE events for Monday.

**NOTE:** When the last event is finished for each day or group of days, the thermostat will advance forward into the next day or group of days.

6. Use steps 3 through 5 to set up the events for the rest of the week or group of days.
7. Return the SET switch back to RUN.

## COPY PROGRAM FEATURE:

Using similar instructions as **SET TEMPERATURE PROGRAMS** the COPY button will allow a whole day of set program events to be copied to another day.

1. Move TEMPERATURE switch to HEAT as well as move SET switch to TEMP PROG position.
2. Starting with Monday, use the UP or DOWN buttons to adjust the start time and set temperature for the MORN, DAY, EVE, and NITE events. Press the COPY button and then press the NEXT button to advance to Tuesday.
3. With Tuesday displayed press COPY button. As all programs events from Monday will be copied to Tuesday (this will advance automatically to the next day; Wednesday, as the word COPY will appear on the screen for one second).
4. Continue in this pressing COPY button to set desired days with original setting.

**NOTE:** The word COPY will not appear on the display for Monday, but will display each day afterwards for approximately one second and the day of the week will automatically advance forward to the next day.

## R. Thermostat Other Features

**NOTE:** All other features need to be completed in a timely manner as the thermostat will time out after 10 seconds.

### TEMPERATURE CALIBRATION:

The internal temperature sensor in this thermostat is accurately calibrated at the factory, and in most cases alterations to this setting should not be needed. The temperature calibration feature allows you to manually offset the measured temperature by as much as plus or minus 5°F (3°C) from its original value. If several thermostats are used in the same house, this feature can be used to synchronize this thermostat to the others.

#### Change the temperature calibration:

1. Move TEMPERATURE switch to OFF.
2. Move SET switch to RUN.
3. Press and hold both UP and DOWN buttons together for at least 5 seconds; the words SET and CAL will appear on the display along with a single flashing temperature digit.
4. Use the UP or DOWN buttons to change the number of degrees desired for adjustment; 0° is the default value and also means no correction will be applied.
5. Press the NEXT button to accept the setting.

## KEYPAD LOCKOUT:

There is the option to lock the front panel buttons to prevent unauthorized tampering of your thermostat settings.

#### To Lock the Keypad:

1. Move TEMPERATURE switch to HEAT.
2. Move SET switch to RUN.
3. Perform a single press of each button in the following sequence:
  - NEXT, NEXT, NEXT, HOLD

A padlock will appear on the display screen.

#### To Unlock the Keypad:

1. Move TEMPERATURE switch to HEAT.
2. Move SET switch to RUN.
3. Perform a single press of each button in the following sequence:
  - NEXT, NEXT, NEXT, HOLD

A padlock will no longer be present on the display screen.

## HARDWARE RESET:

The hardware reset button; labeled HW RST, is a small round push button that is located in the middle of the circuit board, just below the battery holder (**Figure 15.1**). Pressing this button will:

- Cause the LCD display screen to become fully populated
- Thermostat to perform an internal system check of its components

If the thermostat appears to be acting in an erratic manner, pressing the HW RST button may remedy this behavior. The temperature programs are not erased when a hardware reset is performed, however the clock will have to be changed to match the current day and time.

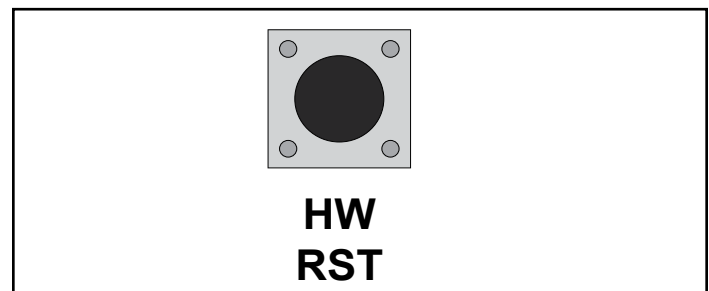


Figure 15.1

## SOFTWARE RESET:

Software reset is used to erase ALL temperature events, and to return all user-adjustable software settings back to their original factory default settings.

To Perform a Software Rest:

1. Verify the thermostat's keypad is not locked.
2. Move TEMPERATURE switch to OFF.
3. Press and hold the UP, DOWN, and NEXT buttons all at the same time for at least 5 seconds. When the LCD display screen will become fully populated let go of all buttons at that point the screen will return to normal.

The clock will have to be changed to match the current day and time.

## S. Thermostat Battery Replacement

This thermostat is powered by two “AA” Alkaline batteries. The batteries should be replaced AT LEAST once per year to ensure reliable operation or sooner if the LO BATT appears on the display screen. The batteries are located on the back of the thermostat’s circuit board. The front portion of the thermostat can be removed from the back half by using the tabs on the top edge of the thermostat housing (Figure 16.1).

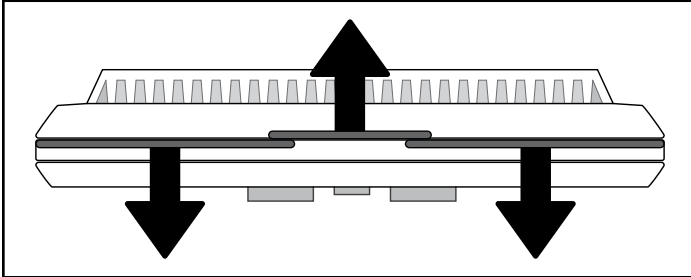


Figure 16.1

When installing new batteries, it is recommended using only brand new “AA” size alkaline batteries. Please verify the polarity markings shown in the battery compartment before adding batteries to the compartment. When finished, line up the front of the thermostat to the base, and firmly press together to securely latch the front and back halves together properly.

### BATTERY GRAPHIC:

Anytime time the batteries are physically present in the thermostat, there will be a visual indicator showing the life of the battery. This will appear on the display screen (Figures 16.2 and Figure 16.3).



Figure 16.2 - Full battery icon



Figure 16.3 - Low battery icon

## CONNECT THERMOSTAT WIRES TO APPLIANCE:

There is a 4 screw terminal block located on the back lower left corner of the stove directly above the power cord inlet. The center 2 screws are for the thermostat wires (Figure 16.4).

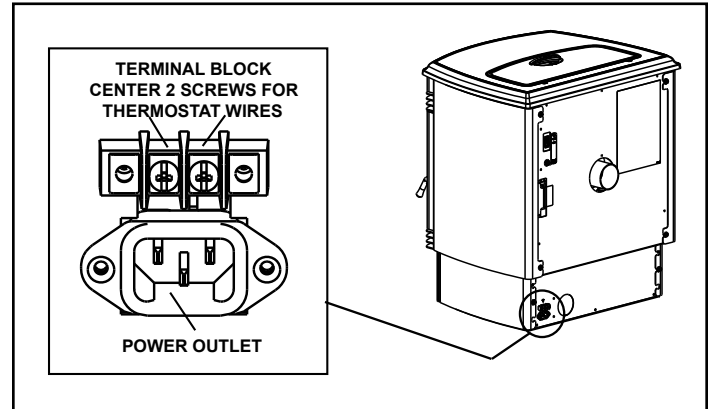


Figure 16.4



### CAUTION



#### Shock hazard.

- Do NOT remove grounding prong from plug.
- Plug directly into properly grounded 3 prong receptacle.
- Route cord away from appliance.
- Do NOT route cord under or in front of appliance.

## T. Frequently Asked Questions

### What causes my glass to become dirty?

If the glass has white ash build up it is normal and the glass should be cleaned. If it is a black soot build up airflow through the unit may be restricted. The most often cause is overdue maintenance and cleaning. See **Maintaining and Service** on [page 18](#) and/or make adjustments to the trim control.

### How can I get more heat out of the appliance?

The most often cause of diminished heat output is overdue maintenance and cleaning. See **Maintaining and Service** on [page 18](#).

### What should I do if I smell smoke or there is ash/soot coming from the appliance?

Seal exhaust venting system to the unit with High Temp silicone. Secure the venting system to the unit with at least (3) screws. All pellet vent pipe must be secured together either by means provided by the pipe manufacturer or by (3) screws at each joint.

In addition most homes are built very tight today and with exhaust systems can create negative pressure in the home. See **Negative Pressure** on [page 15](#) of the [installation manual](#). For ash or soot check the above and the exhaust blower housing and seals.

### Why would my appliance run fine last winter but not start this fall?

It is possible that the stove was not properly prepared for the Non-burn season; see **Troubleshooting Guide** starting on [page 23](#).

### Is there a place to lubricate the blowers to quiet them down?

No. The most often cause of noisy blowers is from the impellers becoming dirty over time. See maintenance and service section for maintaining and servicing.

### What is the metal object with the bend in it that came inside the plastic bag?

It is a clean-out tool used to help clean the fire pot and remove any jams in the rare event they occur in the feed tube.

### Why is there a black residue building up on the outside of my home?

Wind can cause this to happen. If the appliance is operating correctly very little soot should ever exit the termination cap. Check to be sure the venting is installed per the owner's manual and local codes.

### Do I need an outside air kit?

Outside air is required for mobile home installs and in some jurisdictions. Refer to **Listing & Code Approvals** on [page 6](#), **Mobile Home Installation** on [page 23](#) of the [installation manual](#) and **Appliance Set-up** on [page 20](#) of the [installation manual](#). Also refer to local building codes.

### I am seeing sparks coming out of my pipe (termination cap) outside is this safe?

This is normal. As long as clearances to combustibles were followed this is safe.

### I have no power to anything. Does this unit have a circuit breaker or fuse or a reset button?

This appliance has one fuse on the control board and a resettable snap disc mounted to the feed tube. If the appliance overheats then the snap disc can be reset; if the fuse is blown the control board must be replaced.

### Where is the serial # located on my unit?

The serial number is located on the back of the stove.

### No pellets are dropping in my fire pot.

See **Troubleshooting Guide** starting on [page 23](#).

Contact your dealer for additional information regarding operation and troubleshooting.  
Visit [www.quadrafire.com](http://www.quadrafire.com) to locate a dealer.


# 3 Maintenance and Service


When properly maintained, your fireplace will give you many years of trouble-free service. Contact your dealer to answer question regarding proper operation, troubleshooting and service for your appliance. Visit [www.quadrafire.com/owner-resources](http://www.quadrafire.com/owner-resources) to view basic troubleshooting, FAQs, use & care videos. We recommend annual service by a qualified service technician.

## A. Proper Shutdown Procedure

Turn off the thermostat.

This pellet appliance has a manufacturer-set minimum low burn rate that must not be altered. It is against federal regulations to alter this setting or otherwise operate this pellet appliance in a manner inconsistent with operating instructions in this manual.


**CAUTION**



**Shock and Smoke Hazard**

- Turn down thermostat, let appliance completely cool and exhaust blower must be off. Now you can unplug appliance before servicing.
- Smoke spillage into room can occur if appliance is not cool before unplugging.
- Risk of shock if appliance not unplugged before servicing appliance.

*Follow the detailed instructions found in this section for each step listed in the chart below.*

## B. Quick Reference Maintenance Chart

Cleaning or Inspection	Frequency		Daily	Weekly	Every 2 Weeks	Monthly	Yearly
Ash Pan - Burning Wood Pellets	Every 5 bags of fuel	OR		X			
Ash Pan - Burning Alternate Fuels	Every 1 bag of fuel	OR	X				
Ash Removal from Firebox	More frequently depending on the fuel type or ash build-up	OR		X			
Blower, Combustion (Exhaust)	More frequently depending on the fuel type	OR					X
Blower, Convection	More frequently depending on the operating environment	OR					X
Door Latch Inspection	Prior to heating season	OR				X	
Firebox - Prepare for Non-Burn Season	At end of heating season	OR					X
Fire pot - Burning Softwood Pellets	Every 5 bags	OR		X			
Fire pot - Burning Hardwood Pellets	Every 3 bags	OR		X			
Fire pot - Burning Alternate Fuels	Every 1 bag	OR	X				
Glass	When clear view of fire pot becomes obscured	OR		X			
Heat Exchanger & Drop Tube	Every 1 ton of fuel	OR			X		
Hopper	Every 1 ton of fuel or when changing fuel types	OR				X	
Venting System	More frequently depending on the fuel type	OR					X

**Table 18.1**

**NOTICE:** These are recommendations. Clean more frequently if you encounter heavy build-up of ash at the recommended interval or you see soot coming from the vent. Not properly cleaning your appliance on a regular basis will void your warranty.



## C. General Maintenance and Cleaning

### 1. Types of Fuel

The type of fuel you are burning will dictate how often you have to clean your fire pot.

If the fuel you are burning has a high dirt or ash content, it may be necessary to clean the fire pot more than once a day.

Dirty fuel will cause clinkers to form in the fire pot (**Figure 19.1**). A clinker is formed when dirt, ash or a non-burnable substance is heated to 2000°F (1093°C) and becomes glass-like. **High Ash Content Maintenance** on [page 22](#) in this section for more details on fuels with high ash content.

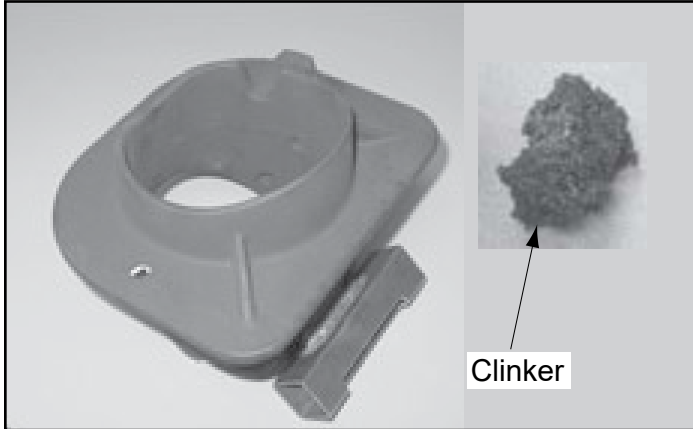


Figure 19.1

### 2. Cleaning Fire pot with Cleaning Rod & Fire pot Scraper

- **Frequency:** Daily or more often as needed
- **By:** Homeowner
  - a. The appliance must be in complete shutdown and cool and the exhaust blower off.

**NOTE:** If you are just cleaning the fire pot, there is no need to unplug the appliance.

- b. Pull fire pot cleaning rod OUT a couple of times to help shake debris loose. If rod is hard to pull, it may be necessary to use your fire pot clean-out tool to chip away material that has built up on the bottom plate of the fire pot and to push out any clinkers. Larger clinkers may have to be removed from the top of the fire pot.
- c. The fire pot floor plate must be fully closed when finished (**Figure 19.2**).



#### WARNING



##### Fire Risk

- NEVER pull fire pot cleaning rod or cleaning slide plates out when appliance is operating.
- The cleaning slide plates must be fully CLOSED when appliance is operating.
- Hot pellets may fall into ash pan and start a fire or mis-starts due to lack of vacuum.

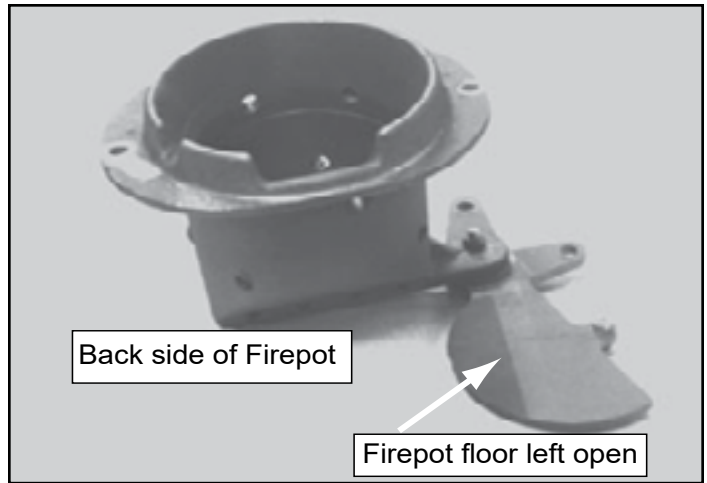


Figure 19.2

### 3. Ash Removal from Firebox

- **Frequency:** Every 5 bags or weekly or more frequently depending on ash build-up.
- **By:** Homeowner
  - a. There must not be any hot ashes in the firebox during cleaning so allow the appliance to completely cool. Frequent cleaning of the ash in the firebox will help slow down the build-up of ash in the exhaust blower and vent system.
  - b. Plug in your appliance, if unplugged, and turn the thermostat on and immediately shut it off to start the exhaust blower on its cycle time. It will pull fly ash out the exhaust instead of into the room.
  - c. Open door. There are 2 cleaning slide plates to the left and right of the fire pot with finger holes. Pull both slide plates out and sweep the remaining ash from the firebox into the 2 open holes. A paint brush works well for this. Close slide plates.
  - d. This ash is deposited in the same ash drawer as the fire pot debris. The ash drawer should be emptied every time you clean the firebox. Remember to place the ash and debris into a metal or non-combustible container.
  - e. The 2 cleaning slide plates must be fully closed when cleaning is complete. See **Disposal of Ashes** on [page 20](#).

### 4. Cleaning Ash Pan

- **Frequency:** Weekly or every 5 bags of fuel
- **By:** Homeowner

Locate the ash pan underneath the fire pot. Open the bottom ash door and slide the ash pan straight out. Empty into a non-combustible container and re-install ash pan (**Disposal of Ashes** on [page 20](#)).



#### WARNING



##### Fire Risk


- The cleaning slide plates must be fully CLOSED when appliance is operating. Hot pellets may fall into ash pan and start a fire.


## 5. Disposal of Ashes

- **Frequency:** As needed
- **By:** Homeowner

Ashes should be placed in a steel container with a tight-fitting lid. The container of ashes should be moved outdoors immediately and placed on a non-combustible floor or on the ground, well away from all combustible materials, pending final disposal.

If the ashes are disposed of by burial in soil or otherwise locally dispersed, they should be retained in the closed container until all cinders have thoroughly cooled. Other waste shall not be placed in this container.

**WARNING**



**Disposal of Ashes**

- Ashes should be placed in metal container with tight fitting lid.
- Ashes should be retained in closed container until all cinders have thoroughly cooled.

## 6. Cleaning Heat Exchanger Chambers & Drop Tube

- **Frequency:** Monthly or every 1 ton of fuel
- **By:** Homeowner

The amount of ash buildup in the fire pot will be a good guide to determine how often you should clean the heat exchangers.

- Allow the appliance to completely cool down before pulling the cleaning rods. Turn the thermostat on and then immediately off to start the exhaust blower on its cycle time. It will pull fly ash out the exhaust instead of into the room.
- Locate the 2 exposed rods directly underneath the heat exchanger tubes (**Figure 20.1**).
- To clean, pull the rods straight out until it stops, approximately 8 inches (203mm). Slide the rods OUT and IN a couple of times.

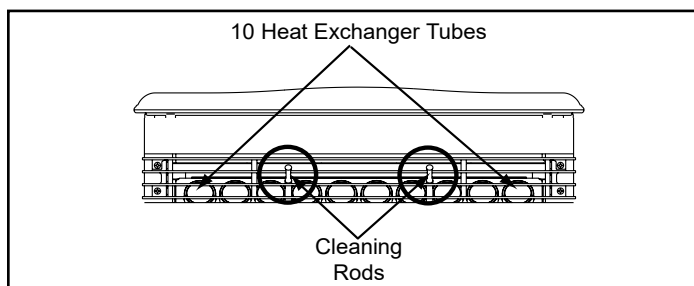




Figure 20.1


**WARNING**



Heat exchanger cleaning rods may be warm to the touch. For safety purposes wear gloves.

Do not pull heat exchanger cleaning rods while appliance is operating.

Push cleaning rods IN when done, DO NOT leave cleaning rods OUT. Injury can occur.



## 7. Cleaning Beneath Heat Exchanger

- **Frequency:** Monthly or after burning 1 ton of fuel
- **By:** Homeowner
  - Appliance is completely cooled, has been unplugged and the exhaust blower is off.
  - A more thorough cleaning is needed to remove the excess ash that is left behind from the use of the cleaning rods for the heat exchanger tubes.
  - The ash will be resting on the back of the baffle. This will require removing the baffle. Refer to **Baffle** on [page 27](#).

**NOTE:** Hearth & Home Technologies recommends to use a heavy duty vacuum cleaners specifically designed for solid fuel appliance cleaning.

## 8. Cleaning the Exhaust Path

- **Frequency:** Every 25 bags or monthly or more frequently depending on ash build-up.
- **By:** Homeowner
  - Appliance is completely cooled, has been unplugged and the exhaust blower is off.
  - Open face, remove baffle and right brick and thoroughly vacuum the area and continue throughout the rest of the firebox (**Figure 20.2**).
  - Replace right brick and baffle and close face.

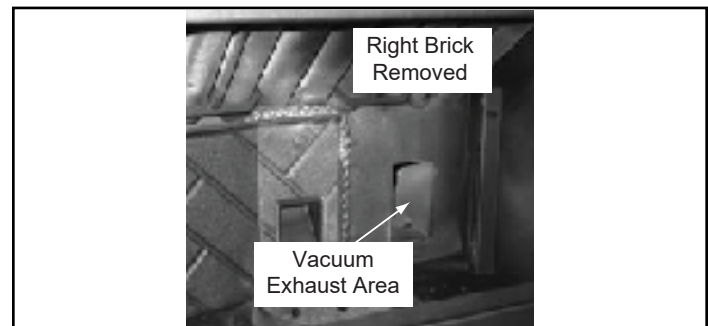


Figure 20.2

## 9. Cleaning the Hopper

- **Frequency:** Monthly or after burning 50 bags of fuel or when changing fuel type
- **By:** Homeowner

After burning approximately 1 ton of fuel you will need to clean the hopper to prevent sawdust build-up.

A combination of sawdust and pellets on the auger reduces the amount of fuel supply to the fire pot. This can result in nuisance shutdowns and mis-starts.

- Appliance is completely cooled, has been unplugged and the exhaust blower is off.
- Empty the hopper of any remaining pellets.
- Vacuum the hopper and feed tube.

## 10. Soot and Fly Ash: Formation & Need for Removal in Exhaust Venting System.

- **Frequency:** Yearly or more frequently depending on ash build-up.

- **By:** Qualified Service Technician/Homeowner

Be sure the appliance is allowed to cool, has been unplugged and the exhaust blower is off.

The products of combustion will contain small particles of fly ash. The fly ash will collect in the exhaust venting system and restrict the flow of the flue gases.

At start-up if there is incomplete combustion, or if there is a shutdown or incorrect operation of the appliance it will lead to some soot formation. This will collect in the exhaust venting system.

The venting (chimney) system may need to be cleaned at least once a year or more often depending upon the quality of your fuel or if there is a lot of horizontal pipe sections. Ash will build up more quickly in the horizontal sections.

## 11. Cleaning the Glass

- **Frequency:** When clear view of the fire pot becomes obscure
- **By:** Homeowner
  - a. Appliance must be completely cool before cleaning glass.
  - b. Vacuum fly ash from glass and door rope.
  - c. Use a damp paper towel or any non-abrasive glass cleaner. Wipe off with dry towel.

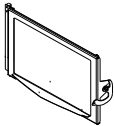


### CAUTION

Handle glass assembly with care.

#### When cleaning glass:

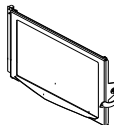
- Avoid striking, scratching or slamming glass.
- Do NOT clean glass when hot.
- Do NOT use abrasive cleaners.
- Refer to maintenance instructions.



### WARNING

Handle glass with care.

- Inspect the gasket to ensure it is undamaged.
- Do NOT strike, slam or scratch glass.
- Do NOT operate appliance with glass assembly removed.



## 12. Door Latch Inspection

- **Frequency:** Prior to heating season
- **By:** Homeowner

The door latch is non-adjustable but the gasket between the glass and firebox should be inspected periodically to make sure there is a good seal.

## 13. Cleaning Exhaust Blower - Requires No Lubrication

- **Frequency:** Yearly or as needed
- **By:** Qualified Service Technician
- **Task:** Contact your local dealer

## 14. Cleaning Convection Blower - Requires No Lubrication

- **Frequency:** Yearly or as needed
- **By:** Qualified Service Technician
- **Task:** Contact your local dealer.

## 15. Cleaning the Top Vent Adapter

- a. The appliance must be in complete shutdown and the exhaust blower should be off. Allow the appliance to completely cool down.
- b. Open the clean out cover (**Figure 21.1**).
- c. Sweep out any ash build-up.

**NOTE:** There are heavy duty vacuum cleaners specifically designed for solid fuel appliance cleaning.

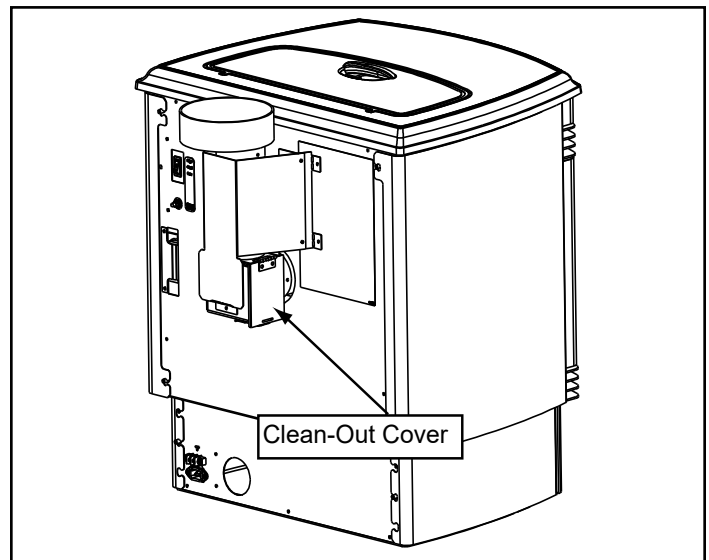


Figure 21.1

## 16. Preparing Firebox for Non-Burn Season

- **Frequency:** Yearly at the end of the heating season
- **By:** Homeowner
  - a. Be sure the appliance is allowed to cool, has been unplugged and the exhaust blower is off.
  - b. Remove all ash from the firebox and vacuum thoroughly.
  - c. Paint all exposed steel, including cast-iron.
    - Use the Touch-Up paint supplied with the appliance; or;
    - Purchase paint from your local dealer.
    - Must use a high-temperature paint made specifically for heating appliances.

## D. Soot or Creosote Fire Awareness

The chimney should be inspected periodically during the heating season to determine if a creosote build-up has occurred. If a significant layer of creosote has accumulated (1/8 inch [3mm] or more) it should be removed to reduce the risk of chimney fire.

Check daily for creosote build-up until experience shows how often you need to clean to be safe. Be aware that the hotter the fire the less creosote is deposited, and weekly cleaning may be necessary in the mild weather even though monthly cleaning may be enough in the coldest months. Contact your local municipal or provincial fire authority for information on how to handle a chimney fire.

**In the event of a soot or creosote fire, close the firebox door, exit the building immediately and contact the proper fire authorities.**

**DO NOT under any circumstances re-enter the building.**

## E. High Ash Fuel Content Maintenance

- **Frequency:** As needed
- **By:** Homeowner

Poor quality pellet fuel, or lack of maintenance, can create conditions that make the fire pot fill quickly with ashes and clinkers.

This condition makes the appliance susceptible to overfilling the fire pot with pellets which may result in smoking, sooting and possible hopper fires. **Figure 22.1** shows an example where the fire pot overfills, pellets back up into the feed tube and ash has accumulated in the firebox.

An inefficient and non-economical method of burning of fuel caused by poor quality pellet fuel is shown in **Figure 22.2**.

The correct flame size when good quality, premium pellet fuel is burned is shown in **Figure 22.3**.

If the ash buildup exceeds the half way point in the fire pot **IMMEDIATE ATTENTION AND CLEANING IS REQUIRED.**

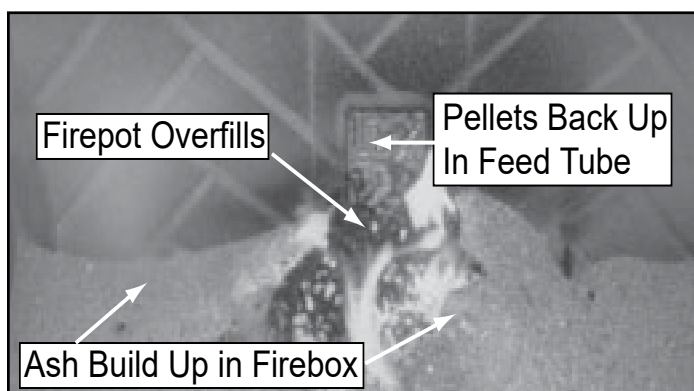


Figure 22.1

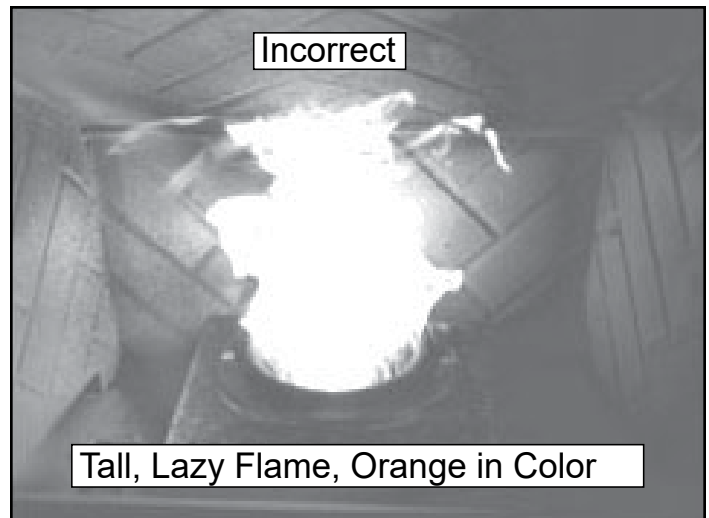


Figure 22.2

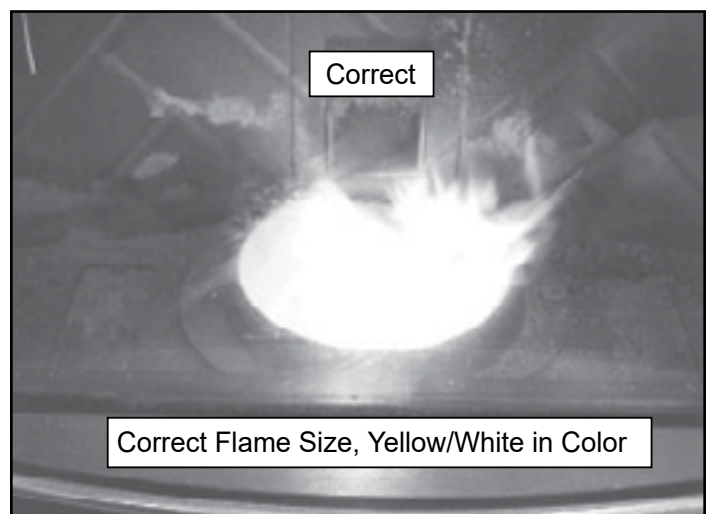


Figure 22.3

# 4 Troubleshooting Guide

With proper installation, operation, and maintenance your appliance will provide years of trouble-free service. If you do experience a problem, this troubleshooting guide will assist a qualified service person in the diagnosis of a problem and the corrective action to be taken. This troubleshooting guide can only be used by a qualified service technician.

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
Plug in appliance - No response.	No current to outlet. 7 amp fuse defective. #3 snap disc tripped or defective. Control box defective.	Check circuit breaker at service panel. Replace fuse. Reset or replace snap disc. Replace control box.
Call light on. No fire. No fuel in fire pot.	Out of fuel. #2 snap disc may be defective. Vacuum switch not closing, no vacuum.  Control box defective.	Check hopper. Fill with fuel. Replace snap disc. Check exhaust blower is plugged in and operating. Check vacuum switch is plugged in. Check vacuum hose is in good condition, clear and connected at both ends. Check thermocouple is in good condition and plugged in properly. Make sure venting system is clean. Make sure front door is closed.  Replace control box.
Call light on. No fire. Partially burned fuel in fire pot.	Fire pot clean-out plate not closed.  Fire pot is dirty (missed ignition).	Check that fire pot clean-out plate is fully closed. Clean fire pot. Make sure there is no clinker in the fire pot. See <b>Cleaning Fire pot with Cleaning Rod &amp; Fire pot Scraper</b> on <a href="#">page 19</a> . Clinkers may have to be broken up with fire pot clean-out tool or other means.
Call light on. No fire. Unburned pellets in fire pot.	Fire pot clean-out plate not closed. Fire pot is dirty.  The ignition hole between the igniter bracket and fire pot is blocked.  Igniter not working.  Control box defective.	Check that fire pot clean-out plate is fully closed. Clean fire pot. Make sure there is not a clinker in the fire pot. Clinkers may have to be pushed out of fire pot with fire pot clean-out tool or other means. Scrape with solid piece of wire. Remove ash drawer to see if igniter is glowing red on start-up. Check igniter wires for good connection. Replace igniter using 1/4 inch (6mm) male / female spade connectors. Replace control box.
Slow or smoky start-up.	Fire pot clean-out plate not closed. Fire pot is dirty.  Excessive amount of fuel at start-up.  Dirty exhaust and/or venting system.	Check that fire pot clean-out is fully closed. Clean fire pot. Make sure there is not a clinker in the fire pot. Clinkers may have to be pushed out of fire pot with fire pot clean-out tool or other means. Reduce feed rate using feed rate adjustment control rod located inside hopper. Check for ash build up in appliance, including behind rear panels, firebox, heat exchanger, exhaust blower and venting.
No call light. Appliance does not begin start sequence.	Thermostat not set to a high enough temperature. Snap Disc #3 tripped. No power. Fuse blown. Connections at thermostat and/or appliance not making proper contact. Defective thermostat or thermostat wiring.  Control box defective.	Adjust thermostat above room temperature. Reset snap disc. Connect to power. Replace fuse. Check connections at thermostat and appliance. Replace thermostat or wiring. <b>NOTE:</b> To test thermostat and wiring, use a jumper wire at the thermostat block on the appliance to by-pass thermostat and wiring. Replace control box.

Table 23.1

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
Feed system fails to start.	Out of fuel. #2 snap disc may be defective. Vacuum switch not closing. No vacuum.  Feed system jammed or blocked.  Feed spring not turning with feed motor.  Feed motor defective or not plugged in.	Check hopper, fill with fuel. Replace snap disc. Firebox door must be closed securely. Check exhaust blower is plugged in and operating. Check vacuum switch is plugged in. Check vacuum hose is in good condition, clear and connected at both ends. Check thermocouple is in good condition and plugged in properly. Make sure venting system is clean. <b>NOTE:</b> High winds blowing into the venting system can pressurize the firebox causing loss of vacuum. Empty hopper of fuel. Use a wet/dry vacuum cleaner to remove remaining fuel, from hopper, including feed tube. Check feed chute for obstructions. Loosen 2 screws and jiggle feed assembly. Check that set screw is tight on feed spring shaft at end of feed motor. Check connections on feed motor, replace if defective.
Appliance fails to shut off.	Call light on.	Turn thermostat off. If call light does not go out, disconnect thermostat wires from appliance. If call light does go out, thermostat or wires are defective.
Convection blower fails to start	#1 snap disc defective. Blower not plugged in. Blower is defective. Control box is defective.	Replace snap disc. Check that blower is plugged into wire harness. Replace blower. Replace control box.
Exhaust blower fails to start or does not shut off.	Blower not plugged in. Blower is clogged with ash. Blower is defective. Control box is defective.	Check that blower is plugged into wire harness. Clean exhaust system. Replace blower. Replace control box
Large, lazy flame, orange color. Black ash on glass.	Dirty appliance. Poor fuel quality, high ash content.  Fire pot clean-out plate not completely closed. Excessive amount of fuel.	Clean appliance, including fire pot, heat exchangers and venting system. Remove stainless steel baffle from firebox to clean ash from on top of baffle. Clean behind rear brick panels. Change fuel brand to premium.  Check that fire pot clean-out plate is fully closed. Reduce feed rate using feed rate adjustment control rod located inside hopper.
Nuisance shutdowns.	Low flame.  Sawdust buildup in hopper. Feed motor is reversing. Defective thermocouple. Defective control box. Fire pot more than 1/2 full.	Increase feed by opening feed rate adjustment control rod located inside hopper. Clean hopper, see <a href="#">page 20</a> . Check for good connections between feed motor and wire harness. Replace thermocouple. Replace control box. See <b>High Ash Fuel Content Management</b> on <a href="#">page 22</a>
Appliance calls for heat. Call light illuminates. Exhaust blower starts. No feed or igniter.	Thermocouple is defective or not properly plugged in.  Defective control box	Check connections on thermocouple or replace if defective. A flashing yellow light on the control box indicates a problem with the thermocouple. Replace control box.
Hopper lid not closed all the way	Switch or magnet is out of adjustment (auger will not function)	Close the lid. If that doesn't work, adjust or replace the switch or magnet

**Table 24.1**

# 5 Service Parts Replacement

## A. Blowers

### 1. Convection Blower - PART NUMBER: 812-4900

- Turn down the thermostat, let appliance completely cool and then unplug appliance before servicing.
- The Convection Blower is located on the floor at the rear of the appliance.
- Remove the right upper and lower side curtains by loosening 7/16" nut in the back and lift off of the appliance. When re-installing flex curtain to re-attach (**Figure 25.1**).
- Cut the tie wire holding the wires together and then disconnect the white and purple wires.
- Remove wing-nut and hold-down bracket and then remove blower.
- Re-install in reverse order.
- Attach new tie wire to hold wires together.

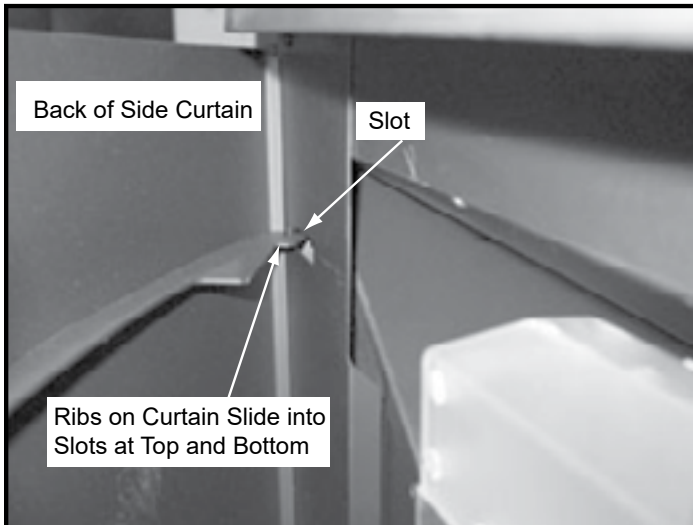


Figure 25.1

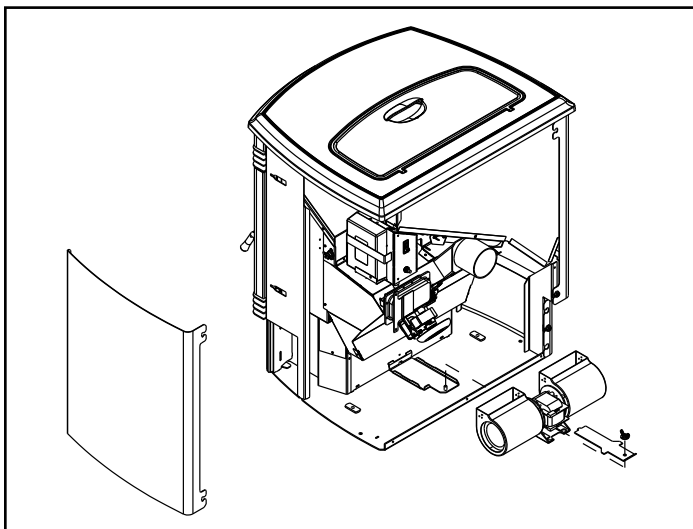


Figure 25.2

### 2. Combustion Blower - PART NUMBER: 812-4400

- Turn down the thermostat, let appliance completely cool and then unplug appliance before servicing.
- Remove both upper and lower side curtains (**Figure 25.1**). Remove the upper and lower rear curtains (**Figure 25.3**).
- Disconnect the white and blue wires from the exhaust blower.
- There is a removable plate on the exhaust blower. Using a 1/4" socket or short standard screwdriver loosen the 6 screws in the keyhole shaped holes and rotate the plate (**Figure 25.4**).
- Remove the exhaust blower and gasket.
- Re-install in reverse order.

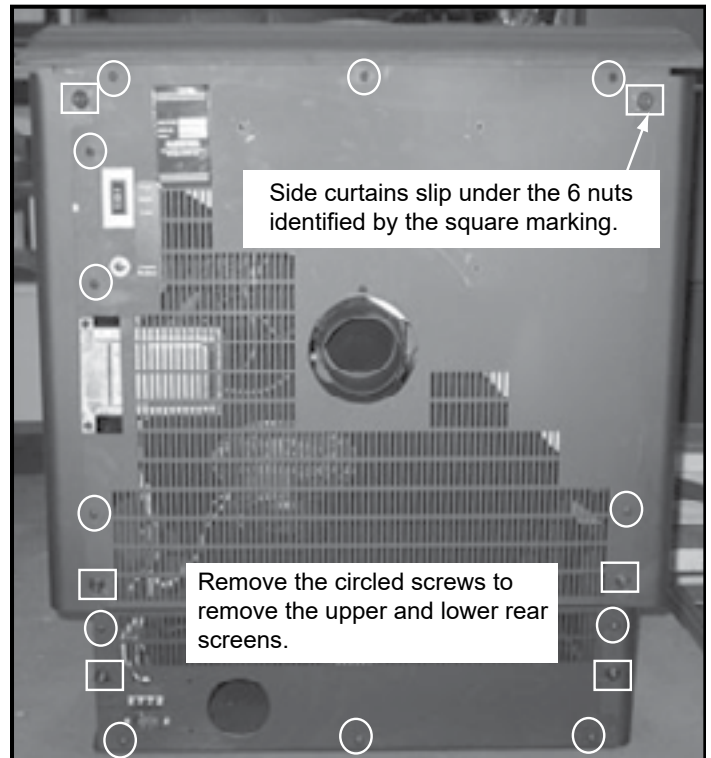


Figure 25.3

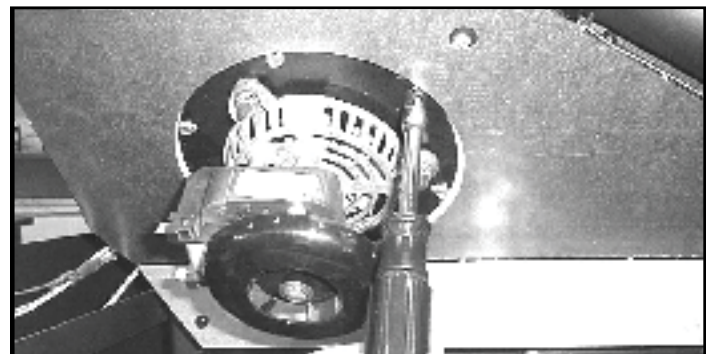


Figure 25.4

## B. Snap Disc #2 - Part Number: SRV7000-268

**NOTE:** Combustion Blower Gasket is also required. Sold separately under Part Number SRV240-0812.

1. Turn down thermostat, let appliance cool completely if running. Then unplug appliance before servicing. Disconnect appliance from venting at the rear of appliance.
2. Remove both upper and lower side curtains by removing the six 7/16" nuts on the rear of the appliance.
3. Disconnect the vacuum hose and wires from the vacuum switch. Disconnect the blue and white wires from the combustion blower. Remove control box retainer clip. Remove two screws that hold the junction box. Set aside carefully. Disconnect hopper switch.
4. Remove cast top from appliance. Two fasteners are located outside the hopper on each side. The other two are located in the hopper along the back (**Figure 26.1**). Remove the rear screen of the appliance (be sure the vent is disconnected) by removing the seven screws. Lift slightly upwards as to not damage the hopper switch and set aside.
5. Remove lower screw by removing five screws. Lay flat on ground.
6. Remove convection cover by removing the two screws at the bottom (one each side) and slide to the left, then set aside.
7. Remove the five 7/16" bolts holding the combustion blower housing to the exhaust plenum. Discard gasket. (Clean blower impeller and plenum if needed).
8. Disconnect wires from snap disc #2 (**Figure 26.3**).
9. Loosen wing nut to relieve the pressure on snap disc from the bracket. The shaded area of the snap disc is inserted into a hole in the feed tube

**NOTE:** You may need pliers to start the wing nut (**Figure 26.4**).

10. When bracket is loose enough, rotate the bracket counterclockwise and away from feed tube (**Figure 26.5**).
11. Reach behind bracket and remove old snap disc. Install new snap disc and rotate back to original position ensuring the snap disc is inserted in the hole in the feed tube. Tighten the wing nut and re-attach the wires to the new snap disc.
12. Re-install in reverse order. Be sure to use new gasket when installing combustion blower housing.

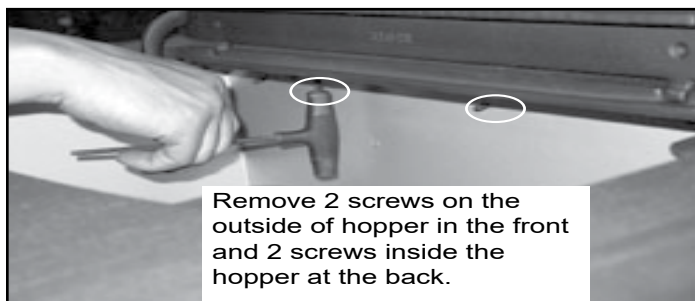


Figure 26.1

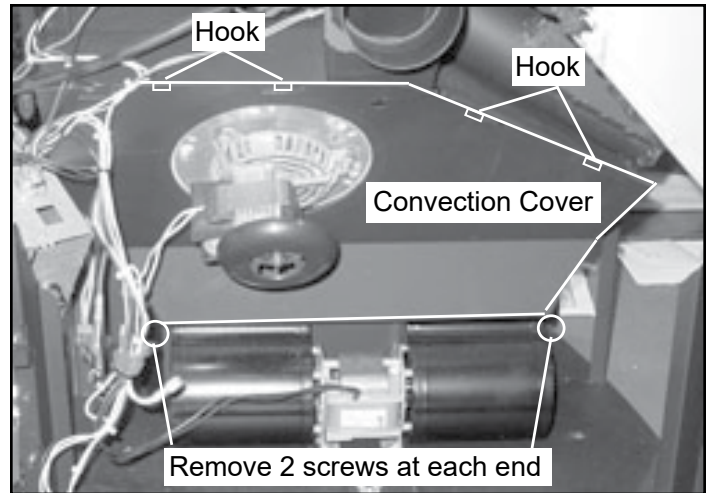


Figure 26.2

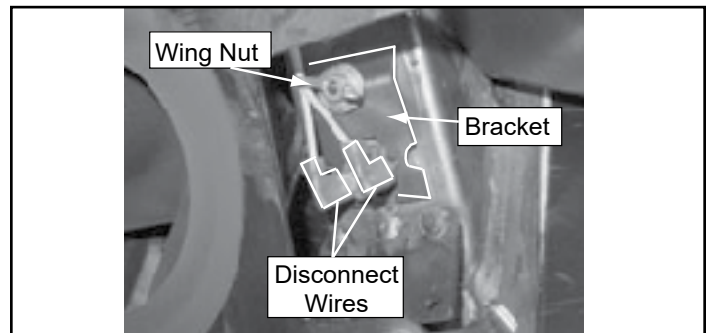


Figure 26.3

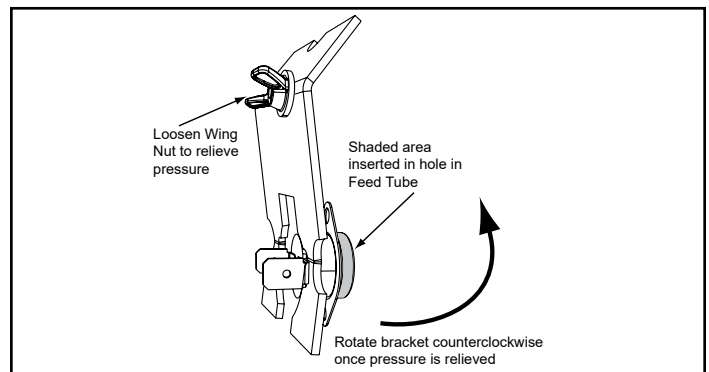


Figure 26.4

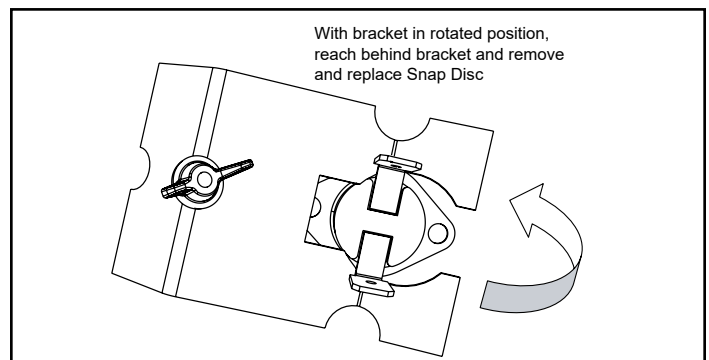


Figure 26.5



### C. Baffle - PART NUMBER: 7001-034

1. Follow **Proper Shutdown Procedures** on [page 18](#).
2. The top baffle has a hook on the bottom left side that rests on the top lip of the cast brick. There is a tab on the bottom right side that hooks into the side bracket. Remove the top baffle by first pulling the baffle forward until back edge drops down. Then slide baffle back until the front edge clears the shelf that it had been resting on (**Figure 27.1, Figure 27.2 and Figure 27.3**).
3. Reinstall new baffle.

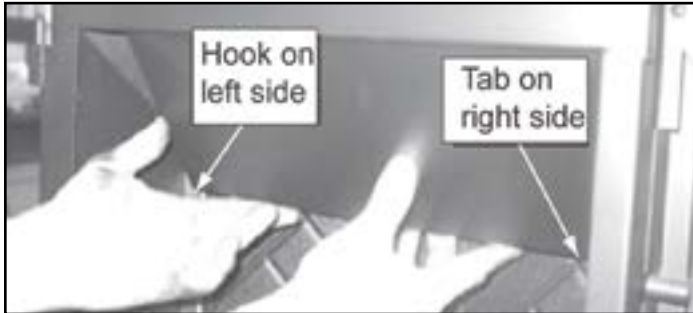


Figure 27.1



Figure 27.2

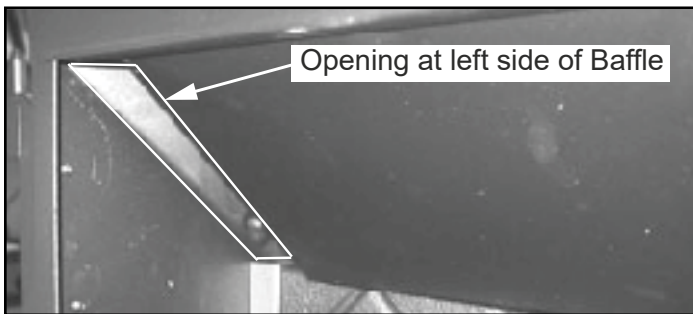


Figure 27.3

### D. Brick - PART NUMBERS:

**LEFT OR RIGHT BRICK:** SRV414-0270

**CENTER:** SRV414-0260

The baffle must be removed before any brick removal.

#### Removal of left or right side brick:

1. Remove the right brick by holding top lip of the brick and lifting up.
2. Repeat for left brick.
3. Reinstall bricks in reverse order ensuring that the bricks are flush against the back wall of the firebox (**Figure 27.4 and Figure 27.5**).

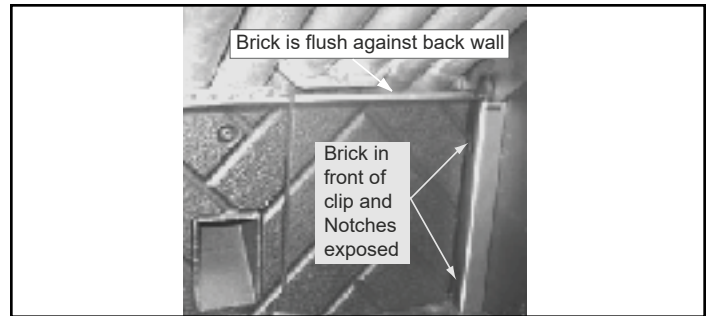


Figure 27.4

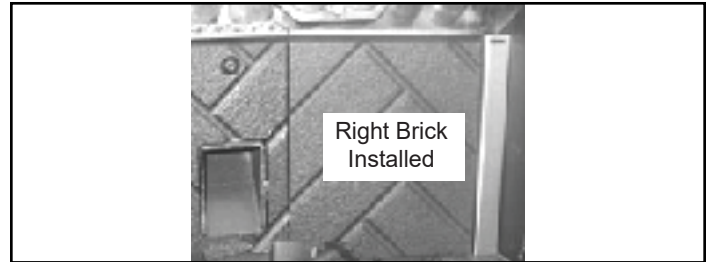


Figure 27.5

#### Removal of center brick:

1. Follow Steps 1 & 2 from **Removal of left or right side brick** to remove left and right brick.
2. Use an 5/32 Allen wrench to remove bolt out of center brick and set aside; remove and discard brick.
3. Validate rope is still in place; rope is wrapped around drop tube and ends are secure with rope tape.
4. Add new center brick and taking care not to cross thread the bolt; reinstall brick (**Figure 27.6**).
5. Repeat Step 4 from **Removal of left or right side brick**.
6. Reinstall baffle (See **Baffle** on [page 27](#)).

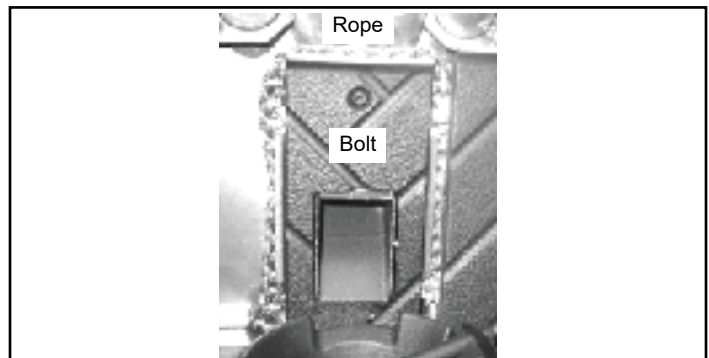


Figure 27.6

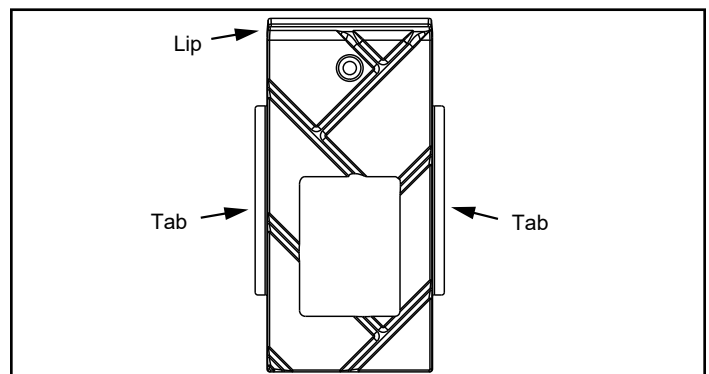


Figure 27.7

## E. Igniter - PART NUMBER: SRV7000-462

1. Shut down the appliance by turning down the thermostat and let the appliance completely cool down. After the appliance has cooled down, unplug it and remove the ash drawer.
2. Remove side panel.
3. The wire leads to the igniter are connected to the wire harness with 1/4 inch male / female spade connectors. Disconnect the spade connections. Loosen thumb screw and slide igniter out and remove the igniter from the chamber.
4. Install new igniter into the chamber and tighten thumb screw. Re-connect the wires to the 2 leads with the spade connectors.
5. Double check that the igniter wires are clear of any movement, i.e. ash drawer, fire pot cleaning rod, cleaning slide plates, etc.
6. Re-install the ash drawer and side panel and re-connect the power.

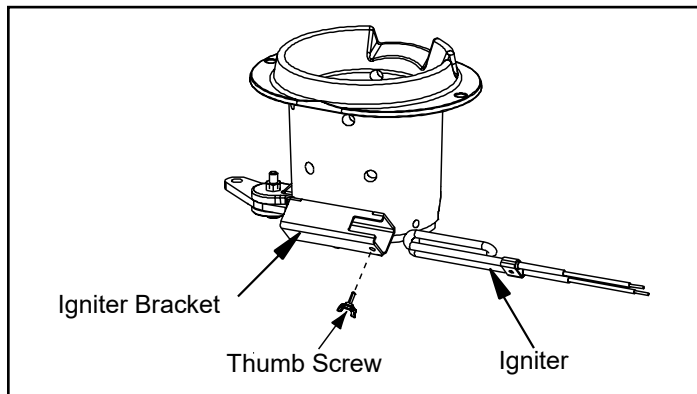


Figure 28.1



### CAUTION

#### Shock Risk.



- Do NOT remove grounding prong from plug.
- Plug directly into properly grounded 3 prong receptacle.
- Route cord away from appliance.
- Do NOT route cord under or in front of appliance.

## F. Glass - PART NUMBER: SRV7021-032

1. Open the face and remove door from the appliance by lifting door off of hinge points and lay on a flat surface face down.
2. Using a flat head screwdriver pry out rope from door and clean any silicone around the screw heads.
3. Using a Phillips head screwdriver remove the seven screws and set aside.
4. Remove glass retainers and set aside.
5. Remove old glass assembly and discard.
6. Lay new glass assembly in place.
7. Add glass retainers.
8. Using a Phillips head screwdriver fasten glass retainers to door assembly ensure glass assembly is centered within the frames.
9. Add rope into crevice as shown below in **Figure 28.2**.
10. Re-install door and close face to appliance.

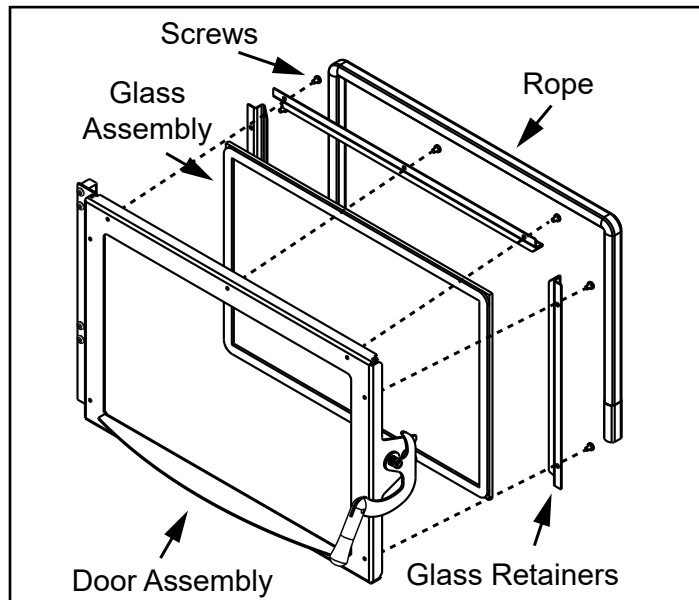


Figure 28.2



### WARNING

#### Handle glass with Care.



- Glass is 5mm thick high temperature heat-resistant ceramic glass.
- DO NOT REPLACE with any other material.
- Alternate material may shatter and cause injury.

# 6 Reference Materials

## A. Component Functions

### 1. Control Box

- The control box is located on upper right side of appliance, behind the right side panel and above the vacuum switch.
- There is a light located inside of the control box. The internal light will turn green when the appliance has reached a temperature of 200°F (93°C) in the fire pot and will turn red when it reaches 600°F (315°C).
- There is also an internal blue light located in the upper left corner of the control box. When you plug in the appliance the blue light will automatically start blinking 6 times in a row for 60 seconds and then will stop.

**NOTE:** Do NOT open the control box. This will void the warranty. If you need to plug in or remove the control box you must first unplug the appliance.

### 2. Convection Blower

The convection blower is mounted at the bottom rear of the appliance. There are 2 impellers, one on each side of the motor. The convection blower pushes heated air through the heat exchange system into the room.

### 3. Exhaust Blower

The exhaust blower is mounted on the right side of the appliance. The exhaust blower is designed to pull the exhaust from the appliance and push it out through the venting system.

### 4. Feed System

The feed system is located on the right side of the appliance and can be removed as an entire assembly. The assembly includes the feed motor, mounting bracket, bearing and feed spring (auger). The hollow feed spring (auger) pulls pellets up the feed tube from the hopper area and drops them down the feed chute into the fire pot.

### 5. Fire pot

The fire pot is made of high quality ductile iron and has a cleaning pull-out rod. The floor of the fire pot opens for cleaning when you pull out the rod. Be sure that the floor returns to a completely closed position or your appliance will not operate properly.

### 6. Fuse

The fuse is located on the front of the junction box next to the red call light. The fuse will blow should a short occur and shut off power to the appliance.

### 7. Heat Exchangers

The heat exchangers transfer hot air from the exhaust system into convection air. Remove the stainless steel top baffle to access the heat exchangers. There are 2 clean out rods located under the heat exchangers.



When describing the location of a component, it is always **AS YOU FACE THE FRONT OF THE APPLIANCE.**

### 8. Heat Output Switch

The heat output switch is located on the upper right rear panel. The function of the heat output switch is to regulate the burn rates; low, medium and high settings.

### 9. Hopper Switch

The hopper switch is located in the upper right hand corner of the hopper. This switch is designed to shut down the feed motor whenever the hopper lid is opened.

### 10. Igniter

The igniter is mounted on the base of the fire pot. Combustion air travels over the red hot igniter creating super heated air that ignites the pellets.

### 11. Junction Box And Wiring Harness

The junction box is located on the right side of the appliance, behind the right side panel. The junction box and wiring harness are replaced as one component.

### 12. Power Supply

The power outlet is located behind the control box on the back of the appliance, lower left corner. Check the wall receptacle for 120 volt, 60 Hz (standard current). Make sure the outlet is grounded and has the correct polarity. A good surge protector is recommended.

### 13. Red Call Light

The red call light is on the side of the junction box, next to the fuse. The function of the red call light is to indicate that the thermostat is calling for heat.

### 14. Reset Button

The reset button is located on the back of the appliance in the upper right corner below the heat output control switch. The function of the button is to momentarily open the thermostat circuit, which restarts the system.

### 15. Thermocouple

The thermocouple is located on top of the fire pot inside the thermocouple cover (ceramic protection tube). The thermocouple sends a millivolt signal to the control box indicating the preset temperatures of the green and red lights have been obtained.

### 16. Thermostat

The appliance is designed to run on a 12 volt AC thermostat. The heat anticipator should be set on the lowest setting available.

### 17. Snap Disc #1 (Convection Blower) 110°F

Snap disc #1 is located on the right side of the appliance on the bottom of the heat exchanger box. There are 2 purple wires connected to it. This snap disc turns the convection blower on and off as needed. Power is always present at snap disc #1.

### 18. Snap Disc #2 (Fuel Delivery Interrupt) 250°F

Snap disc #2 is also located on the back side of the feed drop tube. There are 2 orange wires connected to it. This snap disc will turn off the feed system which will turn off the appliance if an over fire condition should occur or if the convection blower should fail to operate. If this occurs the snap disc will automatically reset itself.

### 19. Snap Disc #3 (Back Burn Protector) 250°F

Snap disc #3 is mounted on the back of the auger tube in the center of the appliance and has a reset button. To access it remove the right side panel. If the fire tries to burn back into the feed system or push exhaust up the feed tube, this snap disc will shut the entire system off. This disc must be manually reset.

### 20. Vacuum Switch

The vacuum switch is located on the lower right side of the appliance behind right side panel. This switch turns the feed system on when vacuum is present in the firebox. The vacuum switch is a safety device to shut off the feed motor if the exhaust or the heat exchanger system is dirty or plugged or if the firebox door is open.

### 21. Wiring Harness

See Figure 30.1 below.

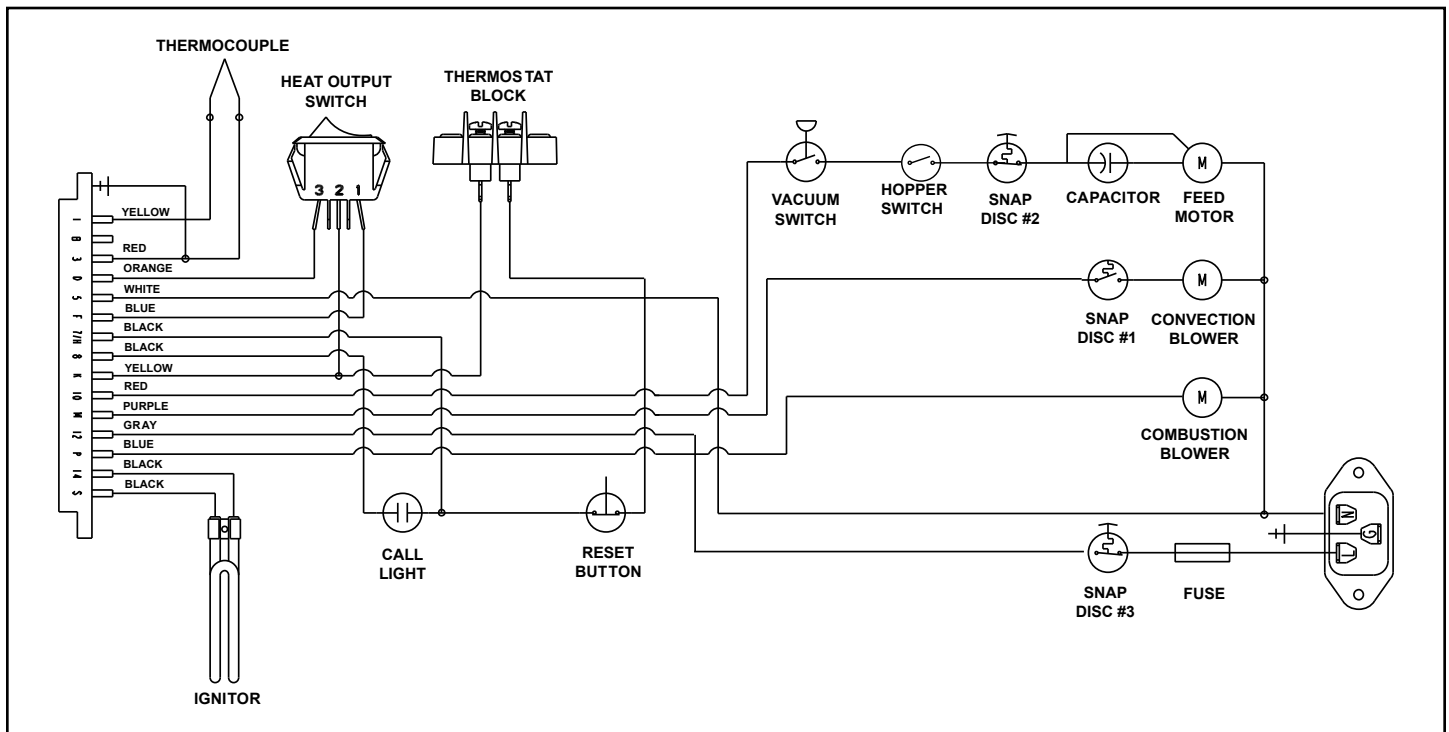


Figure 30.1

## B. Component Locations

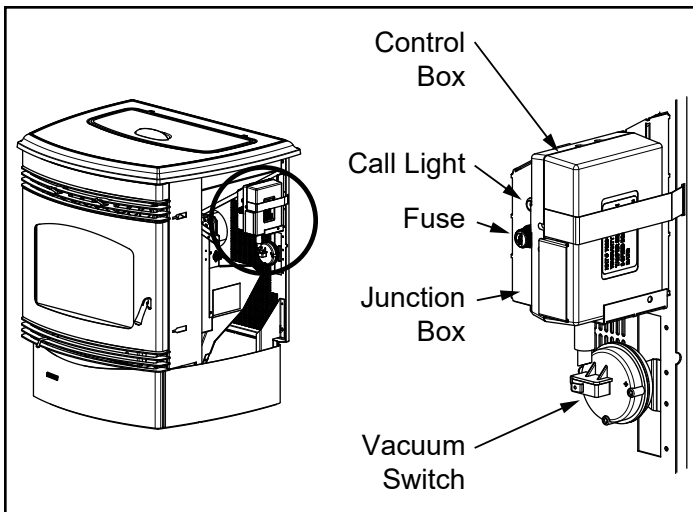


Figure 31.1

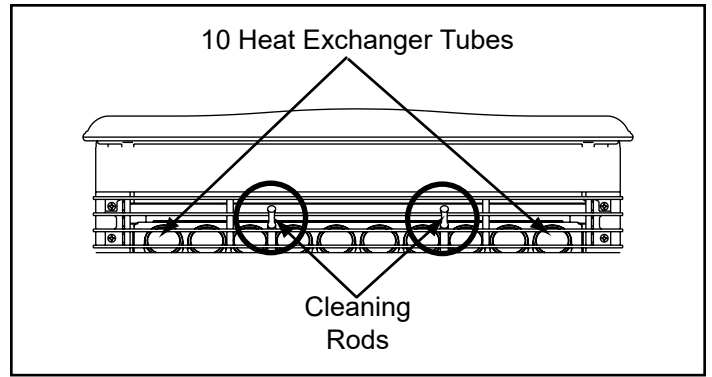


Figure 31.2

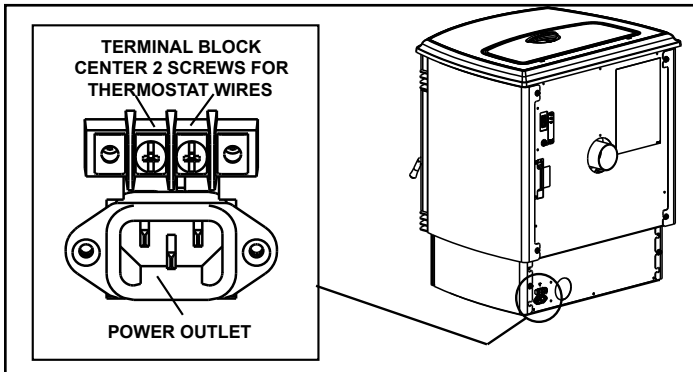


Figure 31.3

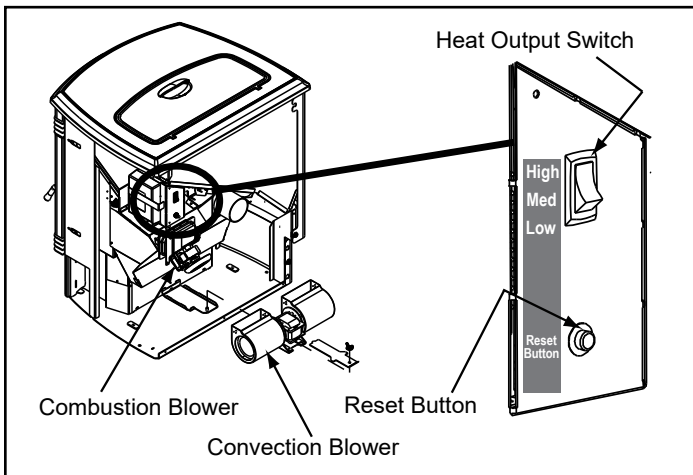
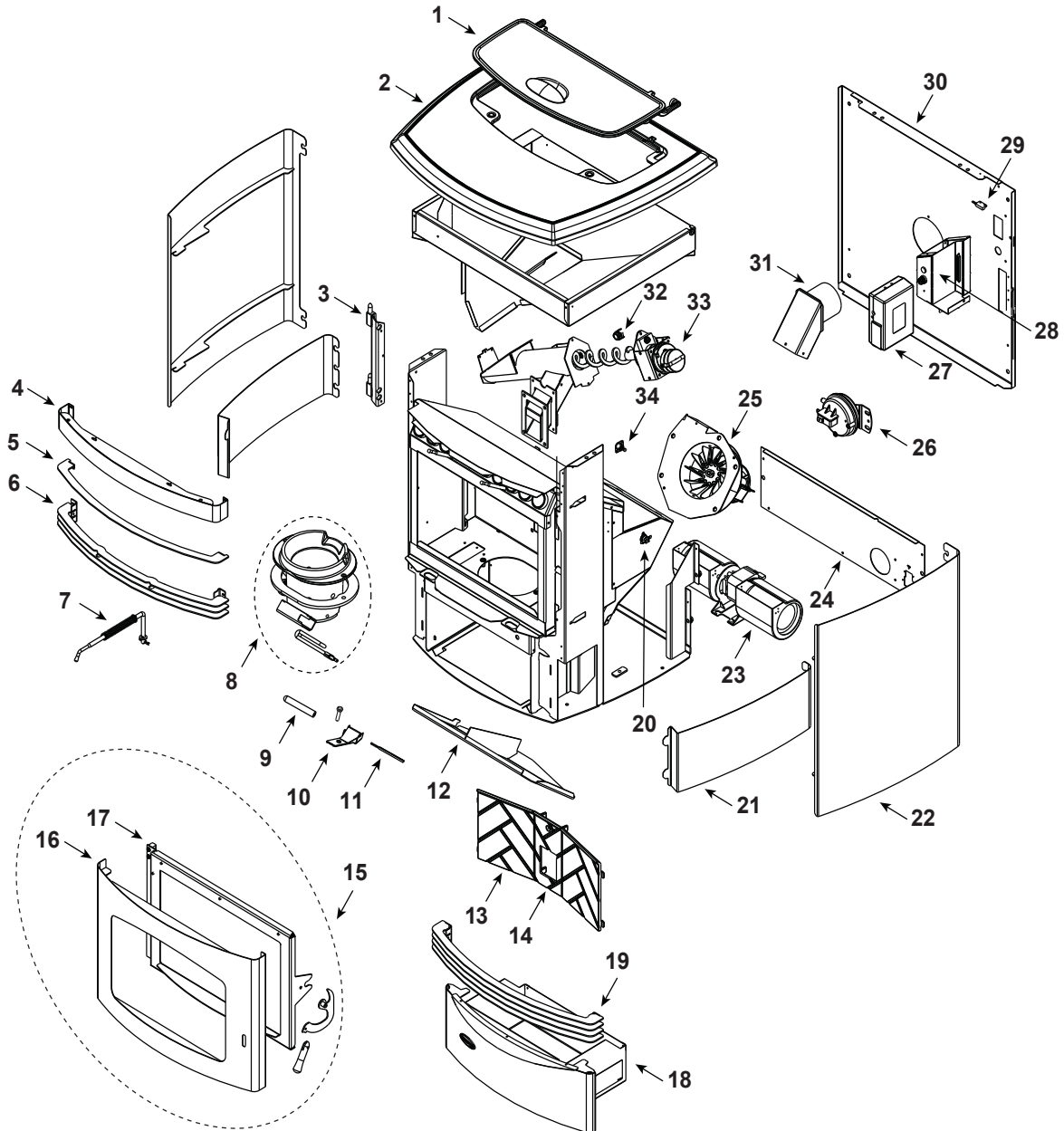


Figure 31.4







Part number list on following page.

02/22



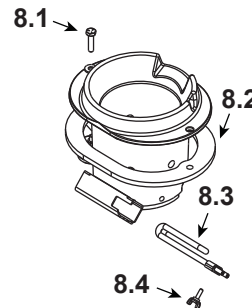
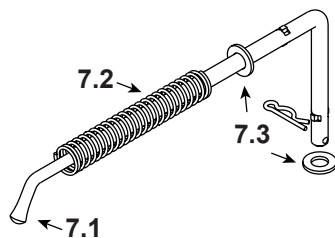
IMPORTANT: THIS IS DATED INFORMATION. Parts must be ordered from a dealer or distributor. **Hearth and Home Technologies does not sell directly to consumers.** Provide model number and serial number when requesting service parts from your dealer or distributor.



**Stocked at Depot**

ITEM	DESCRIPTION	COMMENTS	PART NUMBER	
1	Hopper Lid		SRV7050-132	
	Hopper Lid Stop (Prep Rod)		SRV7050-126	
2	Top		SRV7050-101	
3	Door Hinge Assembly		SRV7019-014	
	Hinge, Door, Male		SRV450-2810	
4	Top Face Assembly		7019-047	
5	Grill Bar (Scraper)	Matte Black, 1 pc	7019-119	
6	Upper Grill Assembly	Matte Black, 3 Pc	7019-007	
	Grill Bracket Cover		7019-199	

### Pull Rod & Firepot Assembly



7	Pull Rod Assembly		7019-009	
7.1	Pull Rod Black Nickel		SRV7019-172	Y
7.2	Spring, Firepot		200-2050	Y
7.3	Washer, 5/16	Pkg of 10	7000-579/10	Y
		Pkg of 50	3-30-0205-50	Y
8	Firepot Assembly		SRV414-5200	Y
8.1	Bolt, Hex Head, 1/4-20 X 1	Pkg of 10	25221A/10	Y
8.2	Gasket, Firepot		SRV240-0930	Y
8.3	Heating Element Assembly 18" (Loop Igniter)	Pkg of 1	SRV7000-462	Y
		Pkg of 10	SRV7000-462/10	Y
8.4	Wing Thumb Screw 8-32 x 1/2	Pkg of 24	7000-223/24	Y
	Bushing, Firepot		410-8320	Y
	Floor, Firepot		414-0290	Y
	Nut, Lock 1/4-20	Pkg of 25	226-0090/25	Y
	Bolt, Firepot, 1-1/4" Long	Pkg of 25	225-0120/25	Y
9	Thermocouple Cover		812-1322	Y
		Pkg of 10	812-4920	Y
10	Thermocouple Clamp		SRV7001-203	Y
	Bolt, Hex Head, 1/4-20 X 1	Pkg of 10	25221A/10	Y
11	Thermocouple		812-4470	Y

Additional service part numbers appear on following page.

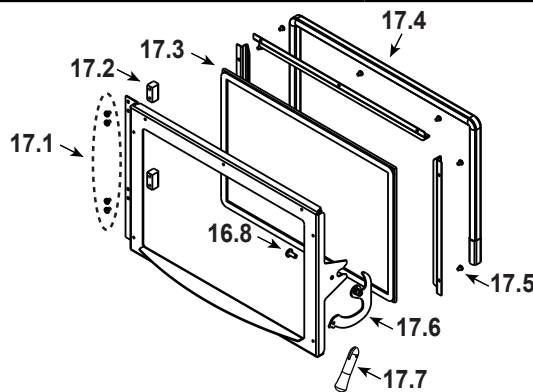
IMPORTANT: THIS IS DATED INFORMATION. Parts must be ordered from a dealer or distributor. **Hearth and Home Technologies does not sell directly to consumers.** Provide model number and serial number when requesting service parts from your dealer or distributor.



**Stocked at Depot**

ITEM	DESCRIPTION	COMMENTS	PART NUMBER	
12	Baffle Assembly		SRV7001-034	Y
13	Brick, Left / Right, Cast		SRV414-0270	
14	Brick, Center, Cast		SRV414-0260	
15	Face Assembly w/Door		SRV7019-045	
16	Face Skin Assembly		SRV7019-046	

### #17 Door Assembly



17	Door Assembly		SRV7019-058	
17.1	Screw, Pan Head Philips, 10/32 X 1/4	Pkg of 24	229-1230/24	Y
17.2	Hinge, Female		SRV450-2910	Y
17.3	Glass Assembly		SRV7021-032	Y
	Glass Tape, 1/2" X 1/16"	10 Ft	240-0290/10	Y
		35 Ft	SRV240-0290M	
17.4	3/4 Inch Rope Gasket	50 Ft	SRV240-0051M	
		100 Ft	832-1520	
	Tape, Door Corner - Field Cut to Size	1 Ft	SRV7027-227	Y
17.5	Screw, Pan Head Philips 8-32X1/4	Pkg of 40	225-0240/40	Y
17.6	Door Latch Assembly		SRV7019-015	
17.7	Door Handle Assembly		SRV7019-037	
	Door Handle Black Nickel		SRV7019-174	
	Pin 3/16 x 1/2		7000-229	
18	Ash Drawer Assembly		SRV7050-002	
	Logo, Quadra-Fire	Pkg of 10	7000-649/10	
19	Lower Grill Assembly	Matte Black, 4 Pc	7019-008	
20	Snap Disc, 110-20, #1		SRV230-1220	Y
21	Pedestal Side Curtain		SRV7050-105	
22	Side Curtain Assembly		SRV7050-005	
23	Blower, Convection		812-4900	Y
	Blower Magnet	Pkg of 10	7019-188/10	Y

Additional service part numbers appear on following page.

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**Stocked at Depot**

ITEM	DESCRIPTION	COMMENTS	PART NUMBER	
24	Pedestal Back		SRV7050-134	
25	Blower, Exhaust		812-4400	Y
	Gasket, Exhaust Blower (Between...)	Housing & Stove	SRV240-0812	Y
		Motor & Housing	812-4710	Y
26	Vacuum Switch		SRV7000-531	Y
	Hose, Vacuum, 5/32 Id	3 Ft	SRV240-0450	Y
	Hose, Barb Assembly		SRV229-0920	
27	Control Board 3 Speed		SRV7000-704	Y
	Fuse, 8 Amp, Control Box	Pkg of 10	812-3780/10	Y
28	Wire Harness / Junction Box		SRV7001-194	Y
	Switch, 3-Position - Heat Output Rocker Switch		812-3500	Y
	Reset Button Assembly		SRV7000-040	
	Fuse, 7 Amp, Junction Box	Pkg of 10	812-0380/10	Y
29	Hopper Switch		SRV7000-375	Y
	Wire Harness Hopper Switch		SRV7050-130	Y
30	Back		SRV7050-102	
31	Exhaust Transition Assembly		SRV7001-009	
32	Snap Disc, Manual Reset #3		SRV230-1290	Y
	Bracket, Snap Disc #3		7001-221	
<p><b>#33 Feed Assembly</b></p>				
33	Feed Assembly		812-4760	Y
33.1	Screw 8-32 x 3/8	Pkg of 40	225-0500/40	Y
33.2	Feed Motor		812-4421	Y
33.3	Collar, Set, 7/8		229-0520	
33.4	Bearing, Feed System, Nylon		SRV7000-598	Y
33.5	Gasket, Feed Motor		SRV240-0731	Y
33.6	Feed Spring Assembly (Only)		SRV7001-046	Y
33.7	Screw, 5/16-18 x 1/4	Pkg of 25	225-0550/25	Y
34	Snap Disc #2		SRV7000-268	Y
	Bracket for Snap Disc		SRV7005-253	
	Wire Harness for Snap Disc #2		SRV7001-224	

Additional service part numbers appear on following page.

IMPORTANT: THIS IS DATED INFORMATION. Parts must be ordered from a dealer or distributor. **Hearth and Home Technologies does not sell directly to consumers.** Provide model number and serial number when requesting service parts from your dealer or distributor.



**Stocked at Depot**

ITEM	DESCRIPTION	COMMENTS	PART NUMBER	
	Component Pack Assembly		SRV7050-017	
	Cleanout Tool		SRV414-1140	Y
	Harness, Thermostat Wire	25 Ft	230-0810	
	Power Cord		812-1180	Y
	Deflector, Bottom Airwash		SRV413-0680	
	Feed Adjustment Plate		SRV7001-182	
	Magnet Round		SRV7000-140	Y
	Plate, Ash Cleanout		SRV7001-186	
	Scraper Repair Kit	<b>No longer available</b>	SCRAPER-SF	
	Thermostat, Programmable		PROG-STAT	
ACCESSORIES				
	Log Set		LOGS-30-OE	Y
	Log, Left		7050-144	
	Log, Right		7050-143	
	Louvre Grille Assembly - Complete Set	Black Nickel	GRL-SFI-NB	
		Nickel	GRL-SFI-NL	
	Grill Bar (Scraper)	Black Nickel	7019-191	
		Nickel	SRV7019-164	
	Upper Grill Assembly	Black Nickel	7019-189	
		Nickel	SRV7019-162	
	Lower Grill Assembly	Black Nickel	7019-190	
		Nickel	SRV7019-163	
	Collar, Offset, Top Vent	3" to 6"	812-3570	
	Outside Air Kit, Rear		811-0872	
	Channel, Air Intake		SRV413-7040	
	Cover, Outside Air Kit, Floor		SRV411-1071	
	Hose, Alum Flex, 2 Inch x 3 Ft	3 Ft	SRV200-0860	
	Outside Air Cap Assembly		SRV7001-044	
	Outside Air Collar Assembly		SRV7001-045	
	Trim Plate, Outside Air Kit		SRV412-7100	
	Pull Rod Handle		PULLROD-HNDL	
	Smart-Batt II, Battery Operated	<b>No longer available</b>	SMARTBATT-B	
	Smart-Stat II, receiver Requires 110 VAC		SMART-STAT-HHT	
	Top Vent Adapter		TPVNT-2	
	Vent Adapter, 3-4"		811-0720	
	Vent Adapter, 90, Cleanout		TPVNT-6	
	Gasket Clean Out Top Flue		SRV411-1130	
	Vent Adapter, Rear		811-0620	
	Damper, 3 inch		PEL-DAMP3	Y
	Damper, 4 inch		PEL-DAMP4	

Beginning Manufacturing Date: April 2019  
Ending Manufacturing Date: Active

IMPORTANT: THIS IS DATED INFORMATION. Parts must be ordered from a dealer or distributor. **Hearth and Home Technologies does not sell directly to consumers.** Provide model number and serial number when requesting service parts from your dealer or distributor.



**Stocked  
at Depot**

ITEM	DESCRIPTION	COMMENTS	PART NUMBER	
<b>FASTENERS</b>				
	Avk Rivnut Repair Kit - 1/4-20 & 3/8-16 Rivnut Tools		RIVNUT-REPAIR	Y
	Blower Magnet	Pkg of 10	7019-188/10	Y
	Bolt, Firepot, 1-1/4" Long	Qty: 25	225-0120/25	
	Bolt, Hex Head, 1/4-20 X 1	Pkg of 10	25221A/10	Y
	Bumper, Rubber	Pkg of 12	SRV224-0340/12	Y
	Magnet Round		SRV7000-140	Y
	Nut, Lock 1/4-20	Qty: 25	226-0090/25	Y
	Nut, Ser Flange Small 1/4-20	Pkg of 24	226-0130/24	Y
	Pin 3/16 x 1/2		7000-229	
	Rivet, Iron, 1/4 X 1-1/4	Pkg of 25	229-0090/25	
	Screw, 8-32 X 1/4	Qty: 40	225-0240/40	
	Screw, Hwh 1/4-20 X 3/4 Ns	Pkg of 25	220-0080/25	Y
	Screw Flat Head Screw 1/4-20	Pkg of 24	7000-130/24	Y
	Screw, Flat Head Philips 8-32X1/2	Pkg of 12	220-0490/12	Y
	Screw, Flat Head Philips 8-32 X 1/2	Pkg of 10	832-0860	Y
	Screw, Machine Screw 1/4-20 X 5/8	Pkg of 24	220-0440/24	Y
	Screw, Pan Head Philips 8-32 X 3/4	Pkg of 24	229-1100/24	Y
	Screw, Pan Head Philips 8-32 X 3/8	Pkg of 40	225-0500/40	Y
	Screw, Pan Head Philips Tc 8-32X1/2	Pkg of 25	220-0030/25	Y
	Screw, Pan Head Philips, 10/32 x 1/4	Pkg of 24	229-1230/24	Y
	Screw, Flat Head Philips 8-32X1/2	Pkg of 12	220-0490/12	Y
	Screw, Set 5/16-18 X 1/4	Qty: 25	225-0550/25	Y
	Screw, Sheet Metal #8 X 1/2 S-Grip	Pkg of 40	12460/40	Y
	Screw, Wing Thumb, 8-32 x 1/2	Pkg of 24	7000-223/24	Y
	Screw, 5/16 - 18 x 1-1/2	Pkg of 24	7000-101/24	Y
	Washer, 1/4 Sae	Pkg of 24	28758/24	Y
	Washer, 5/16 Sae	Pkg of 10	7000-579/10	Y
		Pkg of 50	3-30-0205-50	Y

# QUADRA-FIRE®

NOTHING BURNS LIKE A QUAD

## CONTACT INFORMATION

Hearth & Home Technologies  
352 Mountain House Road  
Halifax, PA 17032  
Division of HNI INDUSTRIES

Please contact your Quadra-Fire dealer with any questions or concerns.  
For the number of your nearest Quadra-Fire dealer  
log onto [www.quadrafire.com](http://www.quadrafire.com)



## CAUTION



### DO NOT DISCARD THIS MANUAL

- Important operating and maintenance instructions included.
- Read, understand and follow these instructions for safe installation and operation.
- Leave this manual with party responsible for use and operation of this appliance.



### We recommend that you record the following pertinent information for your heating appliance.

Date purchased/installed: \_\_\_\_\_

Serial Number: \_\_\_\_\_

Location on appliance: \_\_\_\_\_

Dealership purchased from: \_\_\_\_\_

Dealer Phone: 1(     ) - \_\_\_\_\_

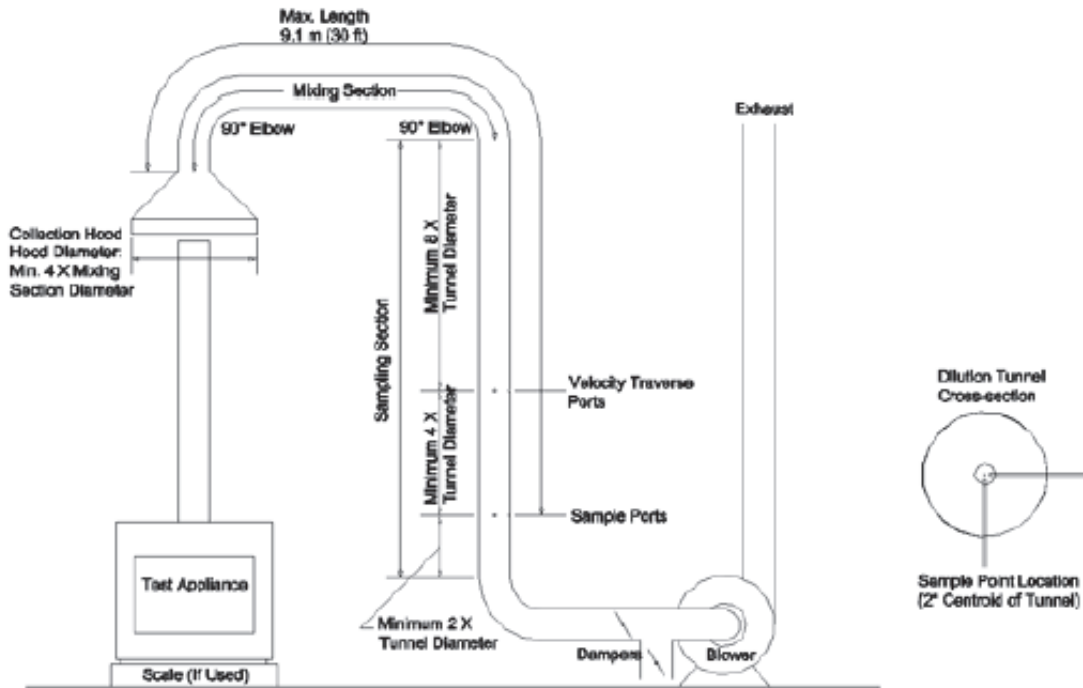
Notes:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

This product may be covered by one or more of the following patents: (United States) 5341794, 5263471, 6688302, 7216645, 7047962 or other U.S. and foreign patents pending.

  
**HEARTH & HOME**  
technologies™




# **Appendix B – Dilution Tunnel Schematic & Tunnel Used**

## Example of ASTM E2515-11 Dilution Tunnel



Prior to testing, sample point and travers point locations are verified to ensure placement is within specifications. Collection hood, tunnel diameter, and mixing section length are also verified to be within specifications.



Information	Tunnel 1	Tunnel 2	Tunnel 3
Name of Tunnel	6" Dilution Tunnel	6" Dilution Tunnel	12" Dilution Tunnel
Location of Tunnel	OMNI Test Lab, Emissions Booth 1	OMNI Test Lab, Emissions Booth 2	OMNI Test Lab, Emissions Booth 3
Presence of Mixing Baffles (EPA 5G)	Two steel semicircles on opposite sides of the duct midway between the T connector and elbow upstream of sampling section (available but not used)	Two steel semicircles on opposite sides of the duct midway between the T connector and elbow upstream of sampling section (available but not used)	There are no mixing baffles
Presence of mixing section (ASTM E2515)	5' mixing section of dilution tunnel	5' mixing section of dilution tunnel	5' mixing section of dilution tunnel
Description of Tunnel Turns	Steel T connector and 90° elbow are used for connecting mixing section, the sampling section. The elbow before the sampling section begins is of the same 6" diameter as the sampling section straight ducting	Steel T connector and 90° elbow are used for connecting mixing section, the sampling section. The elbow before the sampling section begins is of the same 6" diameter as the sampling section straight ducting	Steel T connector and 90° elbow are used for connecting mixing section, the sampling section. The elbow before the sampling section begins is of the same 12" diameter as the sampling section straight ducting
Diameter of Horizontal Flue Section	6"	6"	12"
Diameter of Sampling Section	6"	6"	12"
Photograph of Tunnel Apparatus			

# **Appendix C – Revision History**

Date	Project No.	Tech. & Evaluator	Report Sect.	Summary of Changes
02/13/2019	0061PM077E (Edition 000)	Bruce Davis Ken Morgan	ALL	First Issue of Report
09/20/2023	0061PM077E (Edition 001)	Riley Tiegs Ken Morgan	Preface	New edition of report update (Pg1-3)
			1.2	Run summary updated to address its appropriateness. (Pg7)
			2	Emissions results now show Train Precision (Pg 14)
			1	Corrected/Uncorrected Values added to report. (pg 5)
			Appendix B	Dilution Tunnel Schematic and Tunnel used added to report
			Appendix C	Revision History Created
			Appendix A	New manual added