

7.0 SERVICE

REGULAR MAINTENANCE

Check complete operation **at least once a year**. In Canada see B139, (Maintenance), in United States see NFPA 31, for recommended servicing procedure. Clean flue pipes on a regular basis. Replace flue pipes if there is any sign of corrosion or other problems. Gaskets should be checked and may have to be replaced.

CHANGING NOZZLE

It is recommended that the nozzle be replaced once a year. If a new nozzle of a different size is installed, change the blower speed according to section **BURNER INSTALLATION AND SPECIFICATIONS** (see table at page 16) or operating decal as required

CLEANING HEAT EXCHANGER

Heat exchanger must be inspected every heating season. Refer to instructions and pictures below.

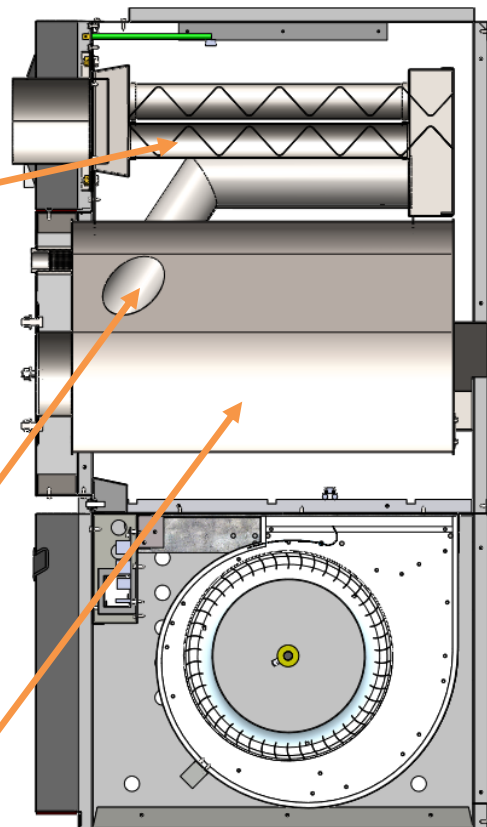
Step 1:
Remove the breech plate

Step 2:
Remove the baffles and clean the round tubes if needed (use a 2" diameter brush)

Step 3:
Remove the burner

Step 4:
Clean the transitions tubes if needed

Step 5:
Clean the combustion chamber if needed



AIR FILTERS

To maintain furnace performance and safety, replace dirty filters as required or at least once every heating season or as required. Use new approved disposable filters of the same size and type. Dirty, clogged or wrong sized filters will impair the furnace performance and may cause the furnace to shut down or overheat

BLOWER REMOVAL

This furnace has a blower sealing system, which is designed to be tight and rattle free. Refer to the instructions and pictures below.

- 1) Shut off oil and power to furnace.
- 2) Remove the two (2) screws securing the blower door (Figure 1).
- 3) Open blower compartment (Figure 2).
- 4) Disconnect the wiring to the blower motor.
- 5) Remove the screw securing the blower side to the separating panel (Figure 3).
- 6) Slide the blower toward you and get the blower out of the furnace (Figure 4).

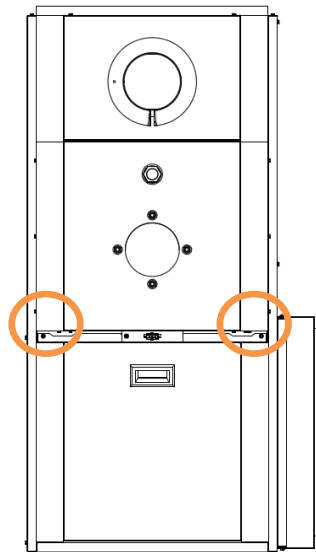


Figure 1

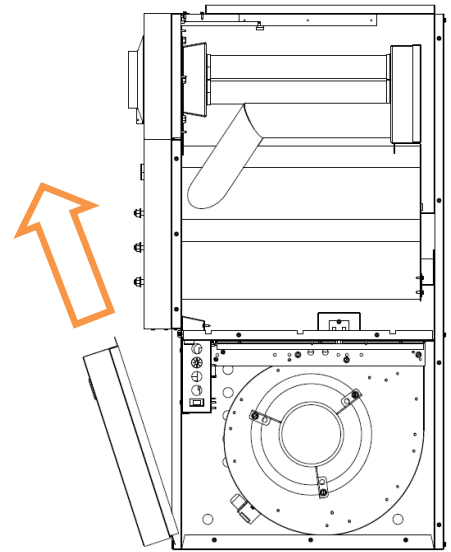


Figure 2

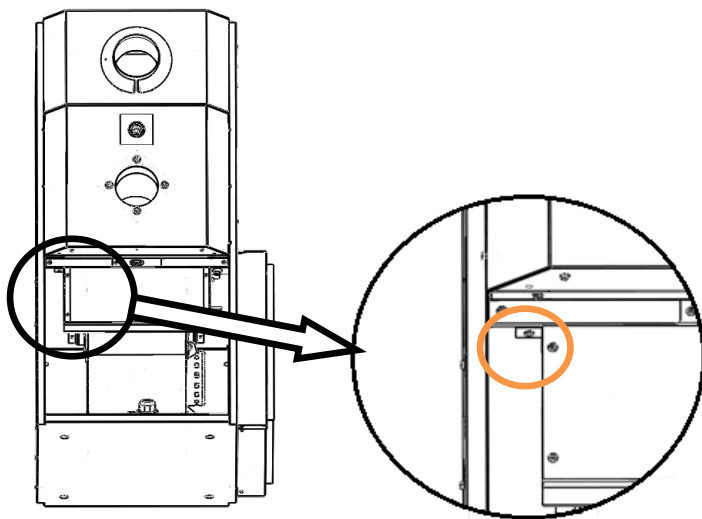


Figure 3

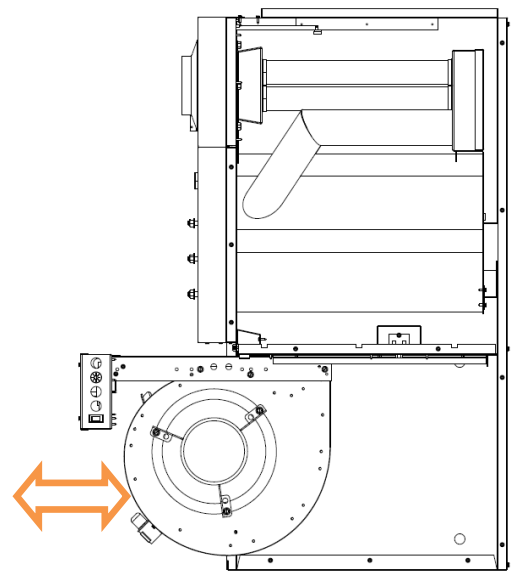
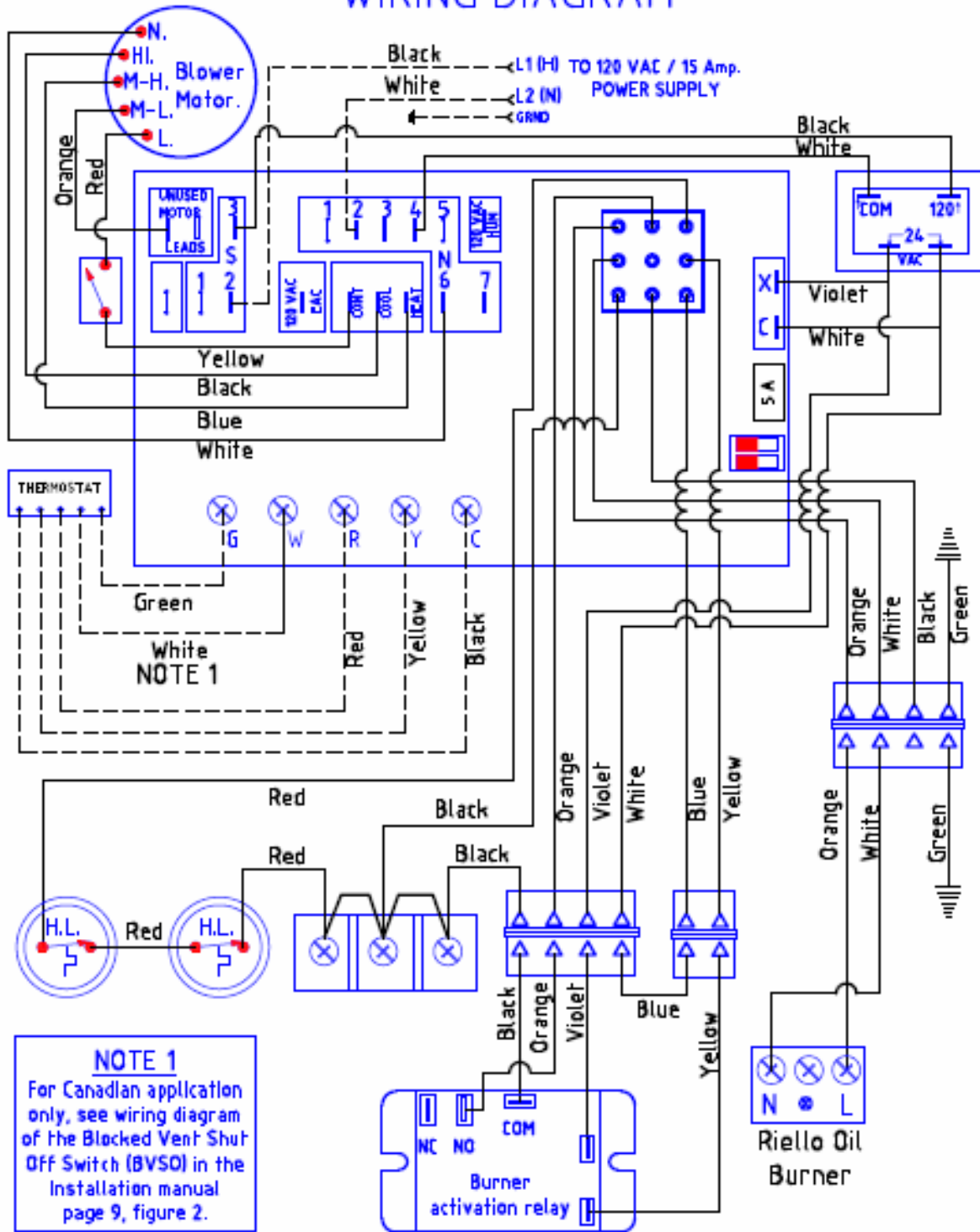


Figure 4

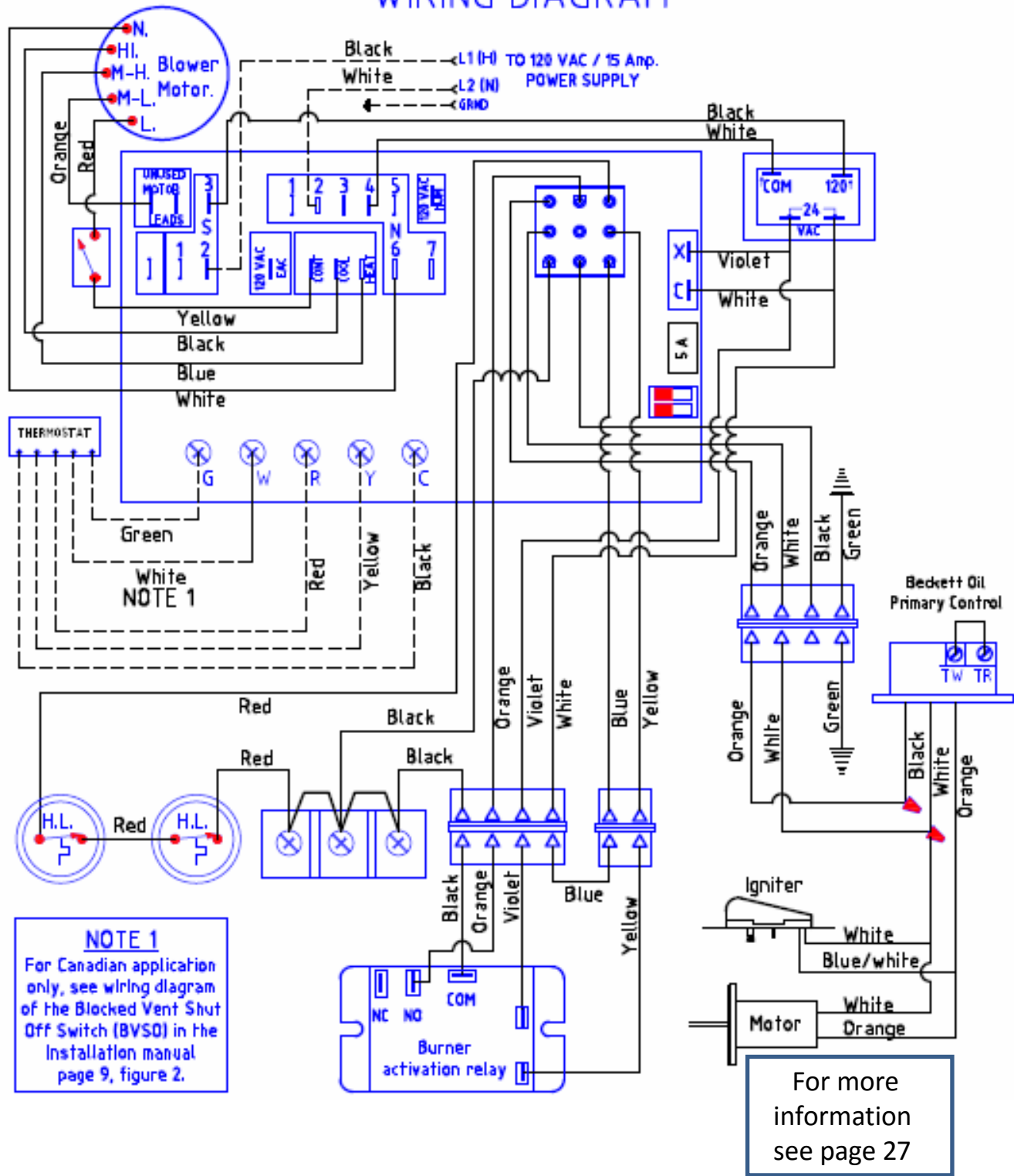
8.0 ELECTRICAL / WIRING DIAGRAMS HEATING & COOLING

KHM RIELLO WIRING DIAGRAM

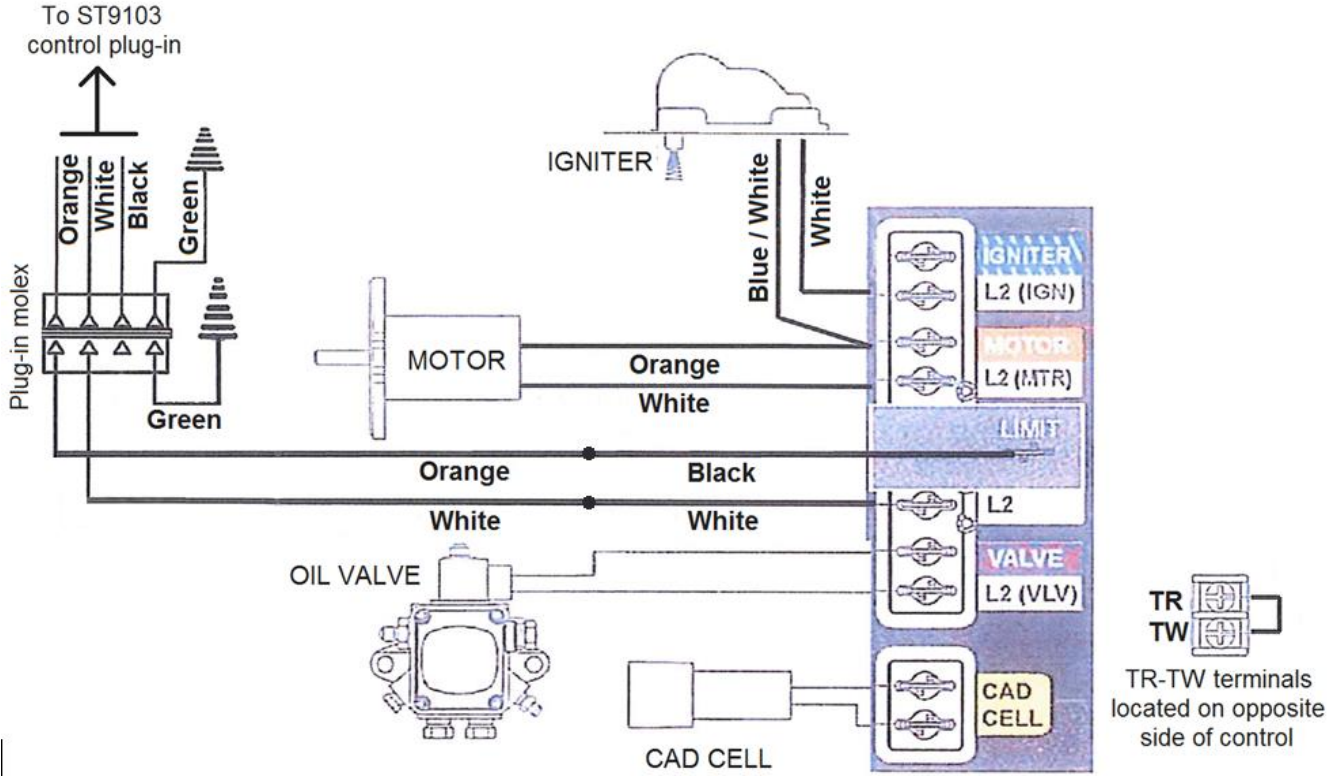


HEATING & COOLING

KHM BECKETT WIRING DIAGRAM

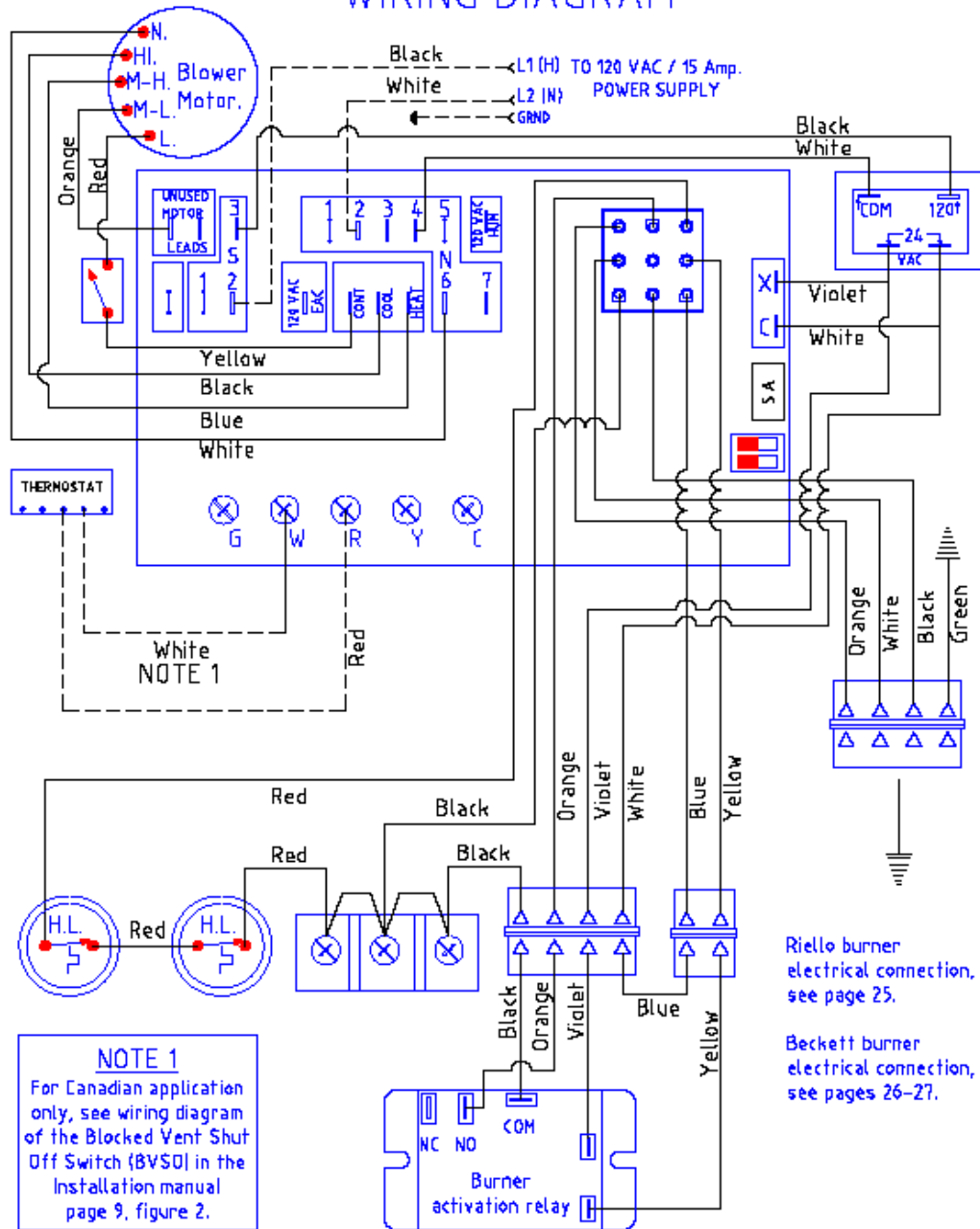


GeniSys control schematic with the ST9103 Board



HEATING ONLY (2 WIRES THERMOSTAT)

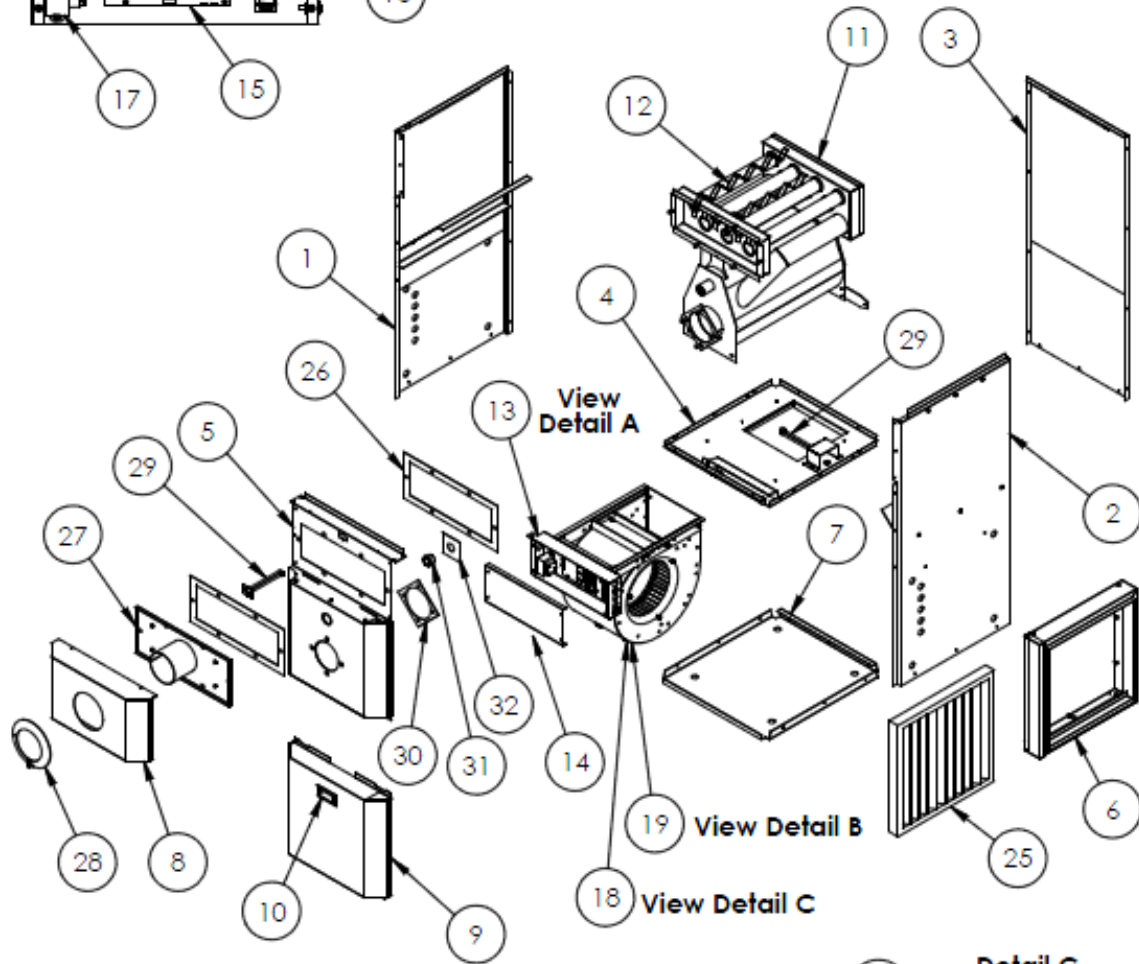
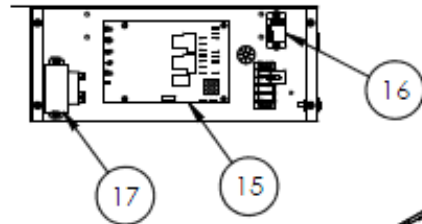
KHM WIRING DIAGRAM



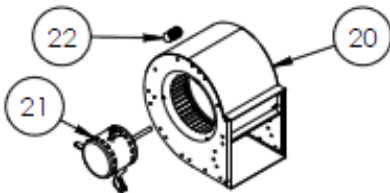
9.0 EXPLODED PARTS VIEW

KHM-100 – Exploded Parts View

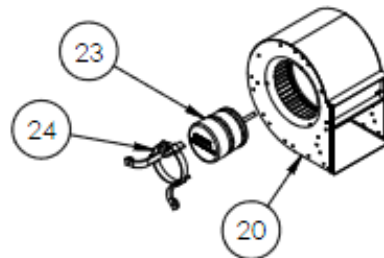
Detail A
13 ELB-PO-0006-00
Electrical Box



Detail B
18 FAN-A0-0002-00
PSC Motor



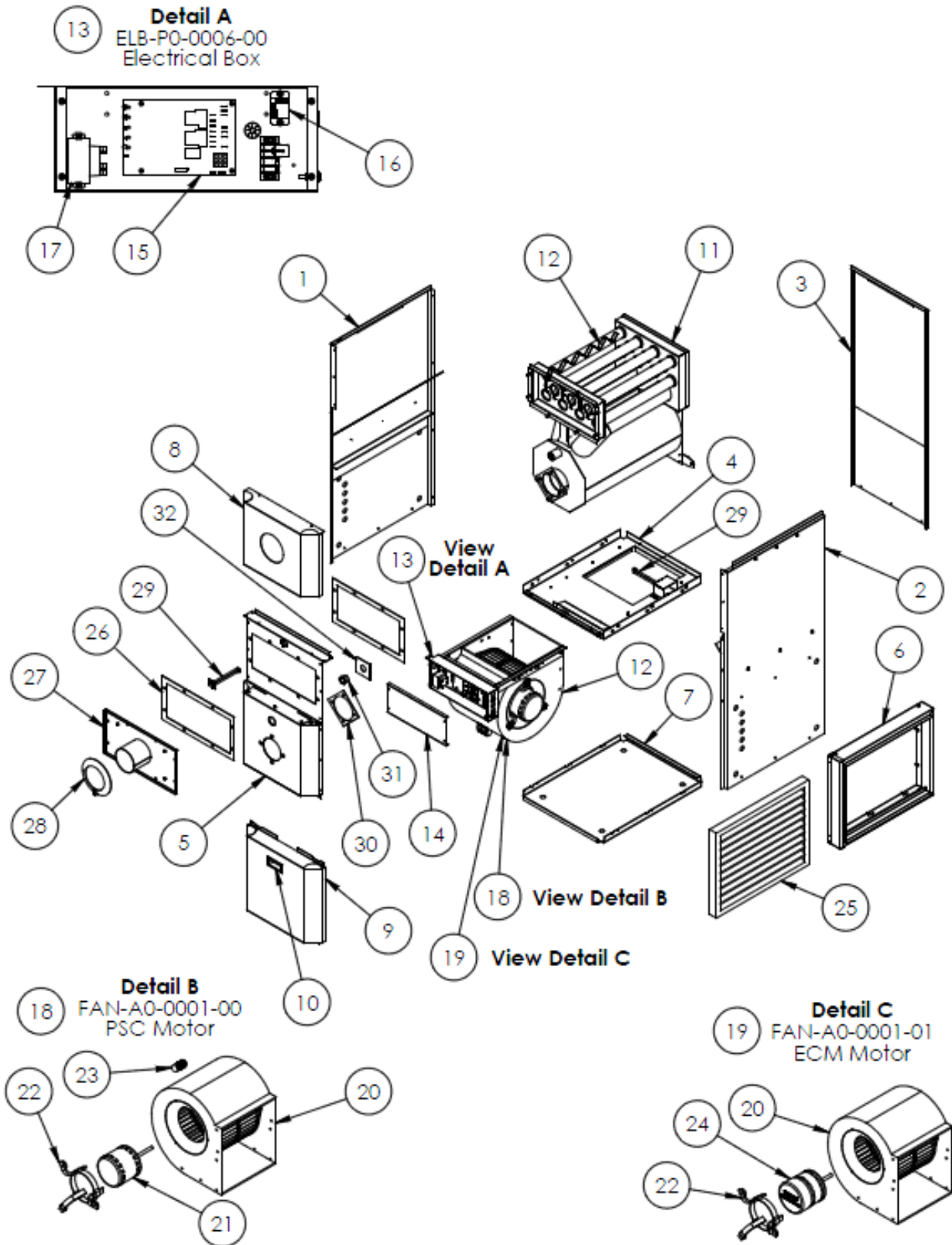
Detail C
19 FAN-A0-0002-01
ECM Motor



KHM-100 – Part List

ITEM	PART NUMBER	DESCRIPTION	QTY
1	CAB-A0-0019-00	Left Panel Assembly	1
2	CAB-A0-0020-00	Right Panel Assembly	1
3	CAB-A0-0018-00	Rear Panel Assembly	1
4	CAB-A0-0016-00	Blower Panel Assembly	1
5	CAB-A0-0021-00	Front Panel Assembly	1
6	CAB-A0-0022-00	20" x 20" Filter Holder Assembly	1
7	CAB-P0-0045-00	Base Panel	1
8	CAB-P0-0052-00	Front Door Panel	1
9	CAB-P0-0051-00	Blower Door Panel	1
10	3HN-00-PULL-00	Handle Flush Pocket Pull	1
11	HEX-A0-0009-00	Heat Exchanger Assembly	1
12	HEX-P0-0064-00	Pipe Baffle Hi-Boy	7
13	ELB-A0-0006-00	Electrical Box Assembly - Hi-Boy Model	1
14	ELB-P0-0014-00	Cover Electric Box - Hi-Boy Model	1
15	4CB-00-FAN0-00	ST9103A1028 Electronic Board	1
16	4RY-00-24V0-00	Relay AE04001 24VAC Form C SPDT 24V	1
17	4TF-00-40VA-00	Transformer HTC-01A0BB01 40 VA	1
18	FAN-A0-0002-00	Fan Motor Assembly KLR-090 PSC Motor	1
19	FAN-A0-0002-01	Fan Motor Assembly KLR-090 ECM Motor	1
20	3BU-10-08DD-00	Blower 10" x 8" Direct Drive (G10-8DD)	1
21	3BM-50-4SDD-01	Motor Blower 1/2 HP Direct Drive 4SP EMERSON	1
22	4CA-00-705M-00	Capacitor 7.5 μ F 370VAC 70C 60 Hz	1
23	3BM-50-ECM0-02	Motor Blower 1/2 HP ECM Ecotech EMERSON	1
24	1SB-00-BUMR-00	Bracket Motor Mounting Direct Drive Blower	1
25	3AF-02-2020-01	Filter Air 20" x 20" x 2" Non-Pleated (Strata Type)	1
26	INS-P0-0015-00	Low-Boy Rear Insulation	2
27	HEX-A0-0013-00	Front Collector Assembly	1
28	CAB-P0-0121-00	Front Flue Collar	1
29	4SD-00-0185-00	Control Limit Snap Disc (185°) Auto Reset (L185-40F)	2
30	INS-P0-0017-00	Burner's Flange Insulation	1
31	3SG-0P-1030-5A	Glass Sight Clear 1" NPT Hex With THD Seal	1
32	INS-P0-0018-00	Sight Glass Insulation	1

KHM-200 – Exploded Parts View



KHM-200 – Part List

ITEM	PART NUMBER	DESCRIPTION	QTY
1	CAB-A0-0027-00	Left Panel Assembly	1
2	CAB-A0-0028-00	Right Panel Assembly	1
3	CAB-A0-0026-00	Rear Panel Assembly	1
4	CAB-A0-0024-00	Blower Panel Assembly	1
5	CAB-A0-0029-00	Front Panel Assembly	1
6	CAB-A0-0030-00	20" x 25" Filter Holder Assembly	1
7	CAB-P0-0061-00	Base Panel	1
8	CAB-P0-0065-00	Front Door Panel	1
9	CAB-P0-0051-00	Blower Door Panel	1
10	3HN-00-PULL-00	Handle Flush Pocket Pull	1
11	HEX-A0-0011-00	Heat Exchanger Assembly	1
12	HEX-P0-0064-00	Pipe Baffle Hi-Boy	11
13	ELB-A0-0006-00	Electrical Box Assembly - Hi-Boy Model	1
14	ELB-P0-0014-00	Cover Electric Box - Hi-Boy Model	1
15	4CB-00-FAN0-00	ST9103A1028 Electronic Board	1
16	4RY-00-24V0-00	Relay AE04001 24VAC Form C SPDT 24V	1
17	4TF-00-40VA-00	Transformer HTC-01A0BB01 40 VA	1
18	FAN-A0-0001-00	Fan Motor Assembly KHM-140 PSC Motor	1
19	FAN-A0-0001-01	Fan Motor Assembly KHM-140 ECM Motor	1
20	3BU-12-00DD-00	Blower 12" Direct Drive (GT12-10DD)	1
21	3BM-75-4SDD-01	Motor Blower 3/4 HP Direct Drive 4SP EMERSON	1
22	1SB-00-BUMR-00	Bracket Motor Mounting Direct Drive Blower	1
23	4CA-00-156M-2B	Capacitor 15 μ F 370VAC 70C 60 Hz	1
24	3BM-75-4SDD-02	Motor Blower 3/4 HP ECM Ecotech EMERSON	1
25	3AF-02-2025-01	Filter Air 20" x 25" x 2" Non-Pleated (Strata Type)	1
26	INS-P0-0020-00	Hi-Boy Front Insulation	2
27	HEX-A0-0010-00	Front Collector Assembly	1
28	CAB-P0-0121-00	Front Flue Collar	1
29	4SD-00-0185-00	Control Limit Snap Disc (185°) Auto Reset (L185-40F)	2
30	INS-P0-0017-00	Burner's Flange Insulation	1
31	3SG-0P-1030-5A	Glass Sight Clear 1" NPT Hex With THD Seal	1
32	INS-P0-0018-00	Sight Glass Insulation	1

10. START-UP TEST RESULTS

Model: _____ Serial Number: _____

Unit configuration: Upflow____ Downflow____ Horizontal left____ Horizontal right____

Date of installation: _____

Installer (name & address): _____

START-UP TEST RESULTS

Size of unit (Btu/h): _____

Nozzle: _____ Oil Pressure (psi): _____

Chimney _____ Direct vent system (DVS) _____

Burner adjustments:

RIELLO F3__ BF3__ RIELLO F5__ BF5__ BECKETT AFG LII__ BECKETT AFG F3__

Turbulator: _____ Air band: _____

Air Gate: _____ Air shutter _____

Smoke result: #0 _____ TRACE _____ #1 _____

Combustion Results: _____ CO₂ %

Chimney draft: _____ " W.C.

Ambient temperature: _____ °F

Gross flue temperature: _____ °F

Temperature rise: _____ °F (see page 34)

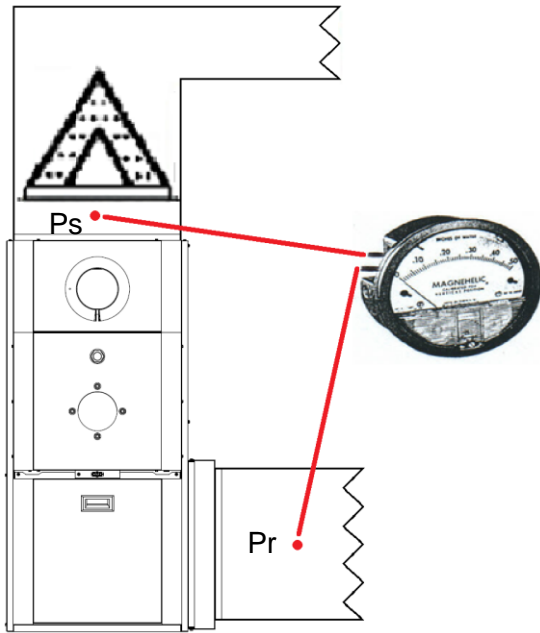
External total static pressure: _____ " W.C. (see page 34)

A/C Coil total resistance: _____ " W.C. (see page 34)

TEST PROCEDURES

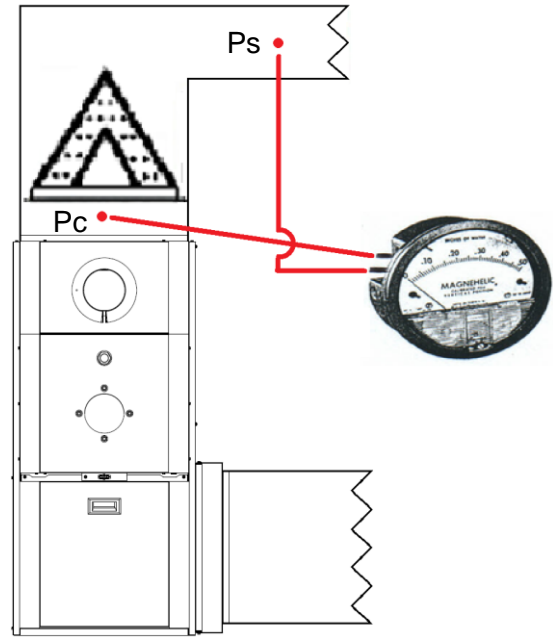
External Total Static Pressure Reading

Supply Pressure (Ps) + Return Pressure (Pr)



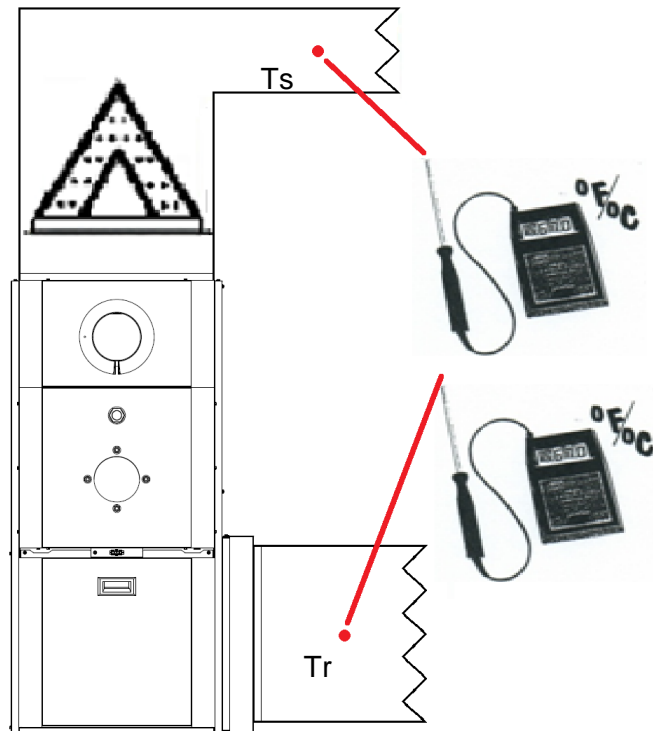
A/C Coil Total Resistance Reading

Coil Pressure (Pc) - Supply Pressure (Ps)



Temperature Rise Reading ***

Supply Temp. (Ts) - Return Temp. (Tr)



*** Probe must not be in direct sight of heat exchanger.



Granby Furnaces Inc. manufactures a full line of oil-fired furnaces in its 70,000 square feet facility. Granby products are sold across Canada and the United States through a distribution network.

Our team of engineers, designers and technicians continually research and develop products to go beyond the demanding specifications of today's certifications.



Thank you for choosing Granby.