

CONTOUR

HIGH EFFICIENCY OIL-FIRED FURNACE

Installation, Operation and Maintenance Manual

INSTALLATIONS MUST MEET ALL LOCAL AND FEDERAL
CODES THAT MAY DIFFER FROM THIS MANUAL

Please read this complete manual before beginning installation. These instructions must be kept with the furnace for future reference.

CERTIFIED TO
CONFORMS TO:

CAN/CSA std. B140.0 Std. B140.4
UL 727

GRANBY FURNACES INC

PO Box 637
12118 Hwy 209
Parrsboro Nova Scotia Canada
B0M 1S0

www.granbyindustries.com



TABLE OF CONTENTS

1.0	Homeowner Information	3
1.1	Introduction	3
1.2	Air Filters	3
1.3	Regular Maintenance	3
1.4	Warnings	3
1.5	Direct Vent	3
1.6	Shutting Furnace Down	3
1.7	Restarting Furnace	4
2.0	Installation	4
2.1	Important	4
2.2	Caution	4
2.3	Installation Codes	4
2.4	Placement & Venting	5
2.5	Assemble & Install Burner	6
2.6	Changing Nozzle	6
2.7	Set Burner for Efficient Operation	6
2.8	Blower Settings	7
2.9	Air Conditioning	7
2.10	Humidifier	7
2.11	Thermostat Anticipator Setting	7
2.12	Fan Control	7
2.13	Off Cycle Air Circulation	8
3.0	Burner Specifications	8
4.0	Blocked Vent Switch	9
5.0	Comfort Adjustments	10
6.0	Oil Tank & Piping	10
7.0	Blower Removal	10
8.0	General Specifications	11
9.0	Trouble Shooting Guide	12

10.0 Appendix

Figure – 1	Burner Insertion
Figure – 2	Blower Removal
Figure – 3	Oil Tank & Piping
Figure – 4	Wiring Diagram
Figure – 5	Front Breech Dimensions
Figure – 6	Rear Breech Dimensions
Figure – 7	Dip Switch & Fan Center
Figure – 8	Front Breech Exploded Parts
Figure – 9	Rear Breech Exploded Parts
Table – 1	Front Breech Parts List
Table – 2	Rear Breech Parts List

Keep this manual in a safe place for future reference.

Follow manual carefully for the correct way to install and operate this unit.

Do not operate this appliance until operating instructions have been read and fully understood.

DANGER: Do not use this furnace as a construction heater. Use of this furnace as a construction heater exposes it to abnormal conditions, contaminated combustion air and lack of air filtering. Failure to follow this warning can lead to premature furnace failure which could result in a fire hazard and/or bodily harm and/or material damages.

SAVE THESE INSTRUCTIONS

1.0 HOMEOWNER INFORMATION

1.1 INTRODUCTION

Please read and understand this manual before installing, operating or maintaining the furnace. To ensure you have a clear understanding of the operating procedures of this appliance please take the time to read section **1.0 HOMEOWNER INFORMATION** of the manual.

1.2 AIR FILTERS

To maintain furnace performance and safety, replace dirty filters as required or at least once every heating season. Use new approved disposable filters of the same size and type or clean permanent filters according to manufacturer's instructions. Replace filters or clean the filters more often if dusty conditions exist. Dirty, clogged or wrong sized filters will impair the furnace performance and may cause the furnace to shut down or overheat.

1.3 REGULAR MAINTENANCE

Have a qualified technician check complete furnace operation **at least once a year**. In Canada see B139, Section 14, Maintenance, for recommended servicing procedure. Heat exchanger ducts are accessed through breach access panels at front of unit. Clean flue pipes on a regular basis. Cerafelt (1/4") gaskets may have to be replaced.

1.4 WARNINGS

NEVER burn garbage or paper in the unit.

NEVER store combustible material around it.

DO NOT attempt to start burner when excess oil has accumulated, when unit is full of vapour or when heat exchanger is very hot.

DO NOT use gasoline, crankcase drainings or any oil containing gasoline.

1.5 DIRECT VENT

It is the responsibility of the homeowner to ensure the area around the Direct Vent terminal and air intake is free of snow, ice and debris. The vent terminal should be checked during heavy snowstorms.

1.6 SHUTTING FURNACE DOWN

POWER OFF Turn off main power switch.

FUEL OFF Shut off manual fuel supply valve.

Always keep manual fuel supply valve shut off if the burner is shut down for an extended period.

1.7 RESTARTING FURNACE

Follow this procedure before restarting a unit that has been shut down for an extended period.

INSPECTION Have the furnace/system serviced and inspected by a qualified technician. Make sure furnace/system has not been tampered with.

FUEL Turn on fuel supply and check that there are no leaks.

POWER Turn on power and check that the furnace starts and operates as usual.

OPERATION If the furnace/system fails to operate at any time, call a qualified service technician. If the burner fails to operate at any time, call a qualified burner technician.

2.0 INSTALLATION

2.1 IMPORTANT

Read this instruction manual thoroughly before installing furnace or starting burner. Consult local authorities about your local Fire Safety Regulations. All installations must be in accordance with local state or provincial codes. Improper installation will result in voiding of warranty.

2.2 CAUTION

DO NOT START THE BURNER UNTIL ALL FITTINGS, COVERS AND DOORS ARE IN PLACE. DO NOT TAMPER WITH THE FURNACE OR CONTROLS, CALL A QUALIFIED TECHNICIAN. FOR YOUR SAFETY: DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPOURS AND LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE.

2.3 INSTALLATION CODES

INSTALLATION MUST COMPLY WITH THE REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION. All local and national codes governing the installation of oil burning equipment, wiring and venting must be followed. Some of the applicable codes are:

CAN/CSA B139	Installation Code for Oil Burning Equipment
NFPA 31	Installation Code for Oil Burning Equipment
ANSI/NFPA 90B	Warm Air Heating and Air Conditioning Systems
ANSI/NFPA 70	National Electrical Code
CSA C22.1	Canadian Electrical Code
ANSI/NFPA 211	Chimneys, Fireplaces, Vents and Solid Fuel Burning Appliances

The latest versions of the above codes, which have been approved for use in the location of the installation, must be used.

2.4 PLACEMENT & VENTING

Furnace installation shall conform to the required installation code for oil-fired equipment (USA: NFPA 31, Canada: CSA B139).

- FLOOR SUPPORT** NON-COMBUSTIBLE - If required, support furnace on a Granby Appliance Stand or five (5) concrete blocks. Make sure center of furnace is supported. For a furnace installed on a combustible floor, consult the applicable code and authorities having jurisdiction on the appliance. Floor must be strong enough to carry the weight of the appliance.
- CLEARANCES** Refer to operating decal or section **7.0 GENERAL SPECIFICATIONS**.
- LOCATION** Install the furnace close to chimney/vent and central to ductwork.
- CHIMNEY/VENT** Connect the furnace to a chimney/vent system of size and condition required by the NFPA 31 (USA) or CSA B139 (Canada) code. Furnace is approved for factory built chimney type "L" vents. Breech is certified for 5" vent pipe. Keep vent/flue pipe as short as possible with min. 1/4" per foot upward slope. Use approved fitting through a wall. Vent/flue pipes **MUST NOT** pass through a ceiling. Maximum flue gas temperature is 575°F.
- WALL VENTING** Furnace is approved for Granby Direct Vent with Riello burner.
- COMBUSTION & VENTILATION AIR** Installation codes NFPA 31 and CSA B139 require openings and ductwork to the furnace room to provide fresh outside combustion and circulation air for cooling the furnace casing. **The following is not applicable for Direct Vent installations.** If installed in a closed room, provide two free air ventilation openings of at least 8" x 12" free flow area near ceiling and floor. Oil burners must have sufficient air to allow vent system to operate properly. See the furnace operating decal.
- ELECTRICAL** Wire according to the National Electrical Code (Canadian Electrical Code in Canada) or local codes. Use a separately fused #12 electrical line directly from the service panel to the furnace junction box. Install a manual shut-off switch at the door or stairway to furnace room so furnace can be shut off remotely.
- DRAFT** Use approved control supplied for 5" pipe. Use two draft controls on strong draft chimneys. Set specified draft pressure to -0.03" wc. **Not applicable to Direct Vent installations.**
- ADD-ON** Any furnace can only have one additional appliance added to the ductwork. Other items which do not drastically reduce the air flow are allowed.

2.5 ASSEMBLE & INSTALL BURNER

ASSEMBLE	Check burner model is correct for furnace rating required. Assemble as per burner manufacturer's instructions.
SET END CONE	Beckett AFG – see manufacturer's instructions. Riello – Set turbulator as per furnace operating decal.
SELECT NOZZLE	Select oil input, nozzle required and burner configuration as shown on the furnace operating decal.
INSTALL NOZZLE	Install selected nozzle, check for clean seating and tighten in nozzle adapter.
ELECTRODES	See burner manufacturer's instructions for correct settings.
INSERTION LENGTH	See section 8.0 GENERAL SPECIFICATIONS or Figure –1.
MOUNT BURNER	Tighten top nut first so burner tips down slightly.
PUMP BY-PASS PLUG	For one pipe system; use a factory setting (no plug).
WIRING	Refer to wiring label and Figure – 4 for correct burner connections.
THERMOSTAT	Connect thermostat terminal.

Always set flame with proper draft, smoke and CO₂ measurements.

2.6 CHANGING NOZZLE

NOZZLE CHANGE	If a new nozzle of a different size is installed, change the heating blower speed according to the burner specifications table.
----------------------	---

2.7 SET BURNER FOR EFFICIENT OPERATION

SET END CONE	Beckett - see burner manual. Riello - set turbulator as per furnace operating decal.
PUMP PRESSURE	Beckett - 140 psi. Refer to section 3.0 BURNER SPECIFICATIONS . Riello - Refer to section 3.0 BURNER SPECIFICATIONS .
BURNER AIR	Beckett AFG - set air band and side disk as per settings in section 3.0 BURNER SPECIFICATIONS . Riello - set air damper as settings on label.
SAMPLING HOLE	On smoke/vent pipe, between appliance breech and draft control, punch or drill a 1/4" round opening. Not applicable to Direct Vent installation.

DRAFT PRESSURE Use an accurate draft meter to adjust the draft control to obtain a - 0.03” wc draft pressure at the breech sampling hole. Use two barometric if necessary. Not applicable to Direct Vent installation.

BURNER SETTING After 5 minutes of normal operation, check smoke for zero to trace reading and measure CO₂. Readjust the burner controls as required.

EFFICIENCY Always leave burner set with CO₂ reading about 1% lower than the peak CO₂ efficiency achieved with a zero to trace smoke (e.g. a zero to trace reading of 12.5% CO₂ should be set back 1% to 11.5%). This gives better allowance for fuel and draft variations and maintains a better seasonal efficiency. When the burner is set, lock the adjustments with the locking nuts.

DO NOT START BURNER UNLESS THE BLOWER ACCESS COVER IS SECURED IN PLACE AND ALL FITTINGS AND COVERS ARE IN PLACE.

2.8 BLOWER SETTINGS

Ensure power is off when adjusting blower setting. For heating, use the blower speeds shown on the furnace specifications to give a rise of 70 - 85°F. The #4 Lo blower speed can be used for air circulation when either heating or cooling are required. Set blower speeds to match the installation requirements. On the model number the last 2 digits represent the type of motor: 03 or 05 for a PSC 1/3 or 3/4HP motor and E5 for a 3/4HP ECM high efficiency motor.

2.9 AIR CONDITIONING

The firing rate of 157,000 Btu/h cannot be used in conjunction with an air conditioning coil.

2.10 HUMIDIFIER

If a humidifier is installed ensure that no water can drip or run from it into the furnace. This would cause deterioration and void the furnace warranty.

2.11 THERMOSTAT ANTICIPATOR SETTING

Adjust to thermostat manufacturer’s instruction.

2.12 FAN CONTROL

Fan On	45 seconds after burner starts
Fan Off	Adjustable on electronic board
Limit	165°F - Factory set.

2.13 OFF CYCLE AIR CIRCULATION

#4 LO SPEED All models have the #4 Lo speed switch for optional constant off cycle air circulation. Switch is located on furnace wiring channel.

“FAN ON” When “FAN ON” is selected on the thermostat, the blower will run constantly at the #1 Hi speed providing heat, cooling or neither as selected.

3.0 BURNER SPECIFICATIONS

Model	Burner	Input			Nozzle	Pump (psi)	Air Setting	Turbulator	Blower (Inches)	Motor (hp)	Output		Heating cfm@		Blower Speed	
		USGPH	L/h	Btu/h							Btu/h	kW	0.2"wc	0.5"wc	0.2"wc	0.5"wc
KCR(F)-G2-K111-03	Beckett AFG F3	0.92	3.47	128,800	0.75 70W	150	0.5/3 LFRB	-	G 10-10	1/3	111,000	33	1275	1150	2	1
KCR(F)-N2-K110-03	Beckett NX-LC	0.91	3.43	127,400	0.75 60A	150	2.2 LFRB	-	G 10-10	1/3	110,000	32	1275	1150	2	1
KCR(F)-E1-K110-03	Riello 40 F3	0.98	3.7	137,200	0.75 80A	170	6.0	2.5	G 10-10	1/3	114,000	33	1500	1400	2	1
KCR(F)-G2-K163-05	Beckett AFG F3	0.92	3.47	128,800	0.7570B	150	0.5/3 LFRB	-	GT-12-10	3/4	112,000	33	1550	1625	2	1
	Beckett AFG F6	1.04	3.92	145,600	0.85 70B	150	1/6 LFRB	-	GT 12-10	3/4	125,000	37	1550	1625	2	1
		1.22	4.60	170,800	1.00 70B	150	1/2	-			146,000	43	1550	1625	2	1
		1.35	5.10	189,000	1.20 70B	130	1/5	-			163,000	48	1625	1625	1	1
KCR(F)-N2-K127-05	Beckett NX-LC	1.00	3.78	140,000	0.75 60A	175	2.2 LFRB	-	GT 12-10	3/4	123,000	36	1550	1625	2	1
		1.04	3.92	145,600	0.85 60A	150	3 LFRB	-		3/4	127,000	37	1550	1625	2	1
KCR(F)-N3-K163-05	Beckett NX-LB	1.23	4.64	172,200	1.00 60B	150	2.0	-	GT 12-10	3/4	150,000	44	1550	1625	2	1
		1.35	5.10	189,000	1.10 60B	150	2.5	-			163,000	48	1625	1625	1	1
KCR(F)-E3-K160-05	Riello F5	0.98	3.70	137,200	0.75 80W	170	2.5	3.0	GT 12-10	3/4	114,000	33	1720	1650	4	4
		1.04	3.94	145,600	0.85 60W	150	3.3	2.0			122,000	36	1720	1850	4	3
		1.22	4.64	170,800	1.00 60W	150	3.5	2.5			143,000	42	1870	2000	3	1
		1.35	5.10	189,000	1.10 60W	150	4.0	3.5			157,000	46	2050	N/A	1	N/A

Direct Vent Models

KCR(F)-V3-K120-03	Riello 40 BF5	0.98	3.70	137,200	0.75 70B*	170	4.0	2.0	G 10-10	3/4	114,000	33	1500	1400	2	1
KCR(F)-V5-K145-05	Riello 40 BF5	0.98	3.70	137,200	0.75 70B*	170	4.5	2.0	GT 12-10	3/4	114,000	33	1720	1650	4	4
		1.04	3.94	145,600	0.85 60W	150	5.0	2.0			122,000	36	1720	1850	4	3
		1.22	4.64	170,800	1.00 60W	150	6.2	2.5			143,000	42	1870	2000	3	1

*Use Hago 70B nozzle.

Note: The turbulator & air settings found in this section should be used as a guide.

With ECM motors, the last 2 digits of the model number are E5 instead of 05.

4.0 **BLOCKED VENT SWITCH**

Oil-fired appliances installed in Canada require a blocked vent shut-off system when installed on a chimney. A safety switch is included with the furnace to perform this function. It is the installer's responsibility to install the switch in accordance with the instructions provided. Not applicable for Direct Vent systems.

Field Controls Model: WMO-1 (Manual Reset)

Switch Operation

Blocked vent switches are flue gas safety devices for detecting spillage of flue gases due to a blocked flue or inadequate draft. After detecting a problem, the switch de-energizes the system's burner control.

NEVER reset the switch unless the cause of the blockage has been corrected.

Installation

- 1) Pierce a 5/8" hole in to the flue vent pipe near the appliance breech connection.
- 2) This hole must be at least 10" before the draft regulator, vertically or horizontally.
- 3) Remove one of the securing nuts from the threaded tube of the safety switch.
- 4) Tighten the other securing nut onto the pipe as far as possible.
- 5) Insert the threaded tube end into the pierced hole of the flue vent pipe.
- 6) Install the securing nut on the safety switch tube, which protrudes into the flue vent pipe.
Tighten the nut securely.

Wiring Instructions

Caution: Disconnect the electrical power when wiring the unit.

Wire the blocked vent switch in accordance with The National Electrical Code and applicable local codes. Wire the safety switch in series with the burner limit control or aquastat. Route the wiring with an accepted wiring enclosure in accordance with the National Electrical code and applicable local codes. Refer to wiring decal or Figure - 4.

System Test Procedure

- 1) With the power re-established, block the chimney or vent pipe downstream of the switch.
- 2) Adjust the thermostat to call for heat.
- 3) Once the heating system has started the blocked vent switch should shut down the burner within 10 minutes or sooner.
- 4) Once the system has cooled, the blocked vent switch can manually be reset.
- 5) This procedure should be tested a second time.
- 6) After testing the blocked vent switch the chimney should be cleared of obstruction and the heating system tested on a long run cycle.

If the block vent switch shuts down the system, check to ensure there is enough draft in the chimney and venting pipes.

5.0 CLASSIC AIR COMFORT ADJUSTMENTS

- Outlet air consistently too warm or too cold - change the blower motor speed to give the specified air temperature rise (70 - 85°F).
- Outlet air gets too warm and burner shuts down - increase air by changing the blower motor speed to give the specified temperature rise (70 - 85°F).
- Outlet air is too cold or too warm at the end of the heating cycle after the burner has turned off - adjust the "FAN OFF" dip switch on electronic fan center. See Figure – 7.

6.0 OIL TANK & PIPING

Tank installation must conform to local requirements. Install according to the applicable code. Minimize number of connections in suction line and make all connections as tight as possible. Use a pipe joint compound for oil on all pipe threads. To reduce possibility of air leaks, tighten stem packing gland nut on any valves installed in the suction line. Also, be sure the oil filter is tight, as filter gaskets often shrink. Check for kinks in the oil lines as well as for possible air pockets and for loose connections. Two filters as shown in Figure - 3 are recommended. Optional tank gauge protectors and outlet protectors are available at your local dealer.

ONE PIPE SYSTEM Where the tank is above the burner and when the oil flows by gravity to the pump, a single-stage fuel unit with a single oil line to the pump may be used.

TWO PIPE SYSTEM When single line is unsuitable, use double line or see your dealer for special oil line fittings.

7.0 BLOWER REMOVAL

Refer to Figure – 2. Use a reversing drill with 1/4" hex drive for sheet metal screws. Granby furnaces have a blower setting system, which is designed to be tight and rattle free.

- 1) Shut off oil and power to furnace.
- 2) Open blower compartment and disconnect wiring to blower motor.
- 3) Remove the #8 (1/4") hex drive sheet metal screws securing the blower sides to the divider panel.
- 4) Remove the rear 5/16" blower mount nuts.
- 5) Lift the blower straight up, keeping it level to avoid jamming on the blower floor bolts and center panel.
- 6) Shift the blower out of the furnace.

Secure casing insulation with aluminum foil tape to ease blower reinstallation. Replace the blower assembly using the reverse procedure.

8.0 GENERAL SPECIFICATIONS

CLEARANCE TO COMBUSTIBLES

Top	1"	(25 mm)
Front	24"	(610 mm)
Rear	24"	(610 mm)
Side	6"	(152 mm)
Side Access	24"	(610 mm)
Flue Pipe	9"	(229 mm)
Floor		Non-combustible

DRAFT PRESSURE (not applicable to Direct Vent)

Breech draft pressure	-0.03" wc
Over fire draft pressure	-0.01" wc

BURNER INSERTION

Riello	2 1/2"	(63 mm)
Beckett AFG	2 1/2"	(63 mm)
Beckett NX	1 1/2"	(38 mm)

AIR/BLOWER

External static - Non - A/C	0.2" wc
External static - A/C models	0.5" wc
Maximum air temperature rise	85°F
High limit, max design outlet temp	200°F
Thermostat anticipator	0.2 amps
	1345 CFM
3/4 hp #1 speed @ 0.50 static	2000 CFM
3/4 hp @ 0.50' wc static	2000 CFM

MOTOR/BLOWER

1/3 hp 4 Speed/G 10-10
 3/4 hp 4 Speed/GT 12-10 / 3/4 hp/GT12-10

FAN/HIGH LIMIT CONTROLS

Honeywell Fan Center & Thermo-disk

DIMENSIONS

Depth	47 5/16"	(1202 mm)
Height	36 13/16"	(935 mm)
Width	21 15/16"	(557 mm)

PLENUM DIMENSIONS

Cold air return	19" x 20 3/4"	(483 x 527 mm)
Hot air supply	23 7/8" x 20 3/4"	(606 x 527 mm)

A/C COIL LOCATION

Min. height above heat exchanger 10" (254 mm)

See A/C Coil Manufacturers Requirements

OPENING HEIGHTS from floor

Burner c/l	11 1/2"	(292 mm)
Smoke pipe c/l	28 7/16"	(722 mm)

SMOKE/VENT PIPE - 5"

CLEANOUTS

Front clean-out covers, burner openings and smoke pipe, replace baffles after cleaning.

AIR FILTER

Pleated 2 - 15" x 20" x 2"

FUEL not heavier than No. 2 furnace oil

ELECTRICAL – 120 Volts, 60 Hz

Canada	Less than 15 amps.
USA	13.3 amp, circuit protection 20 amps.

9.0 TROUBLE SHOOTING GUIDE

Furnace will not start

Blown fuse	Repair with new fuse.
No oil	Call oil supplier.

Oil burner keeps turning off

Dirty air filter	Change air filter.
Restricted air supply	Check all air supply/return registers.
Limit control	Check blower motor speed. Speed blower up.
Motor over heating	Check motor speed correct for nozzle on furnace label settings. Oil motor bearings.
Dirty Nozzle	Call qualified technician to replace nozzle.

Sooty flame

Wrong pump pressure	Increase pressure to correct setting.
Dirty Nozzle	Replace nozzle.
Improper burner air setting	See section 3.0 BURNER SPECIFICATIONS .
Barometric draft wrong	Adjust barometric regulator for -0.04" wc draft pressure.
Baffle position	Check that the secondary flue gas baffles are positioned properly in the secondary channel. Baffles should not block the primary heat exchanger passage to the secondary heat exchanger channels.

Burner reset tripped

No oil	Call oil supplier.
Frozen oil line	Call technician or oil supplier.
Dirty oil filter	Replace filter.
Dirty nozzle, smoky fire	Replace nozzle, adjust burner air.
Faulty oil pump	Have pump replaced, adjust burner air.
Faulty or dirty electrodes	Have technician clean or replace at breech.
Flame blowing off of burner	On the Beckett burner have igniters wired for intermittent ignition (run constantly with the motor).

Noisy Operation

Loose blower wheel

Tighten loose setscrew or replace.

Damaged motor bearing

Replace blower motor.

Faulty oil pump

Repair or replace oil pump. Reset to correct pressure.

Air leak in oil line

Tighten all connections.

SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE

FOR MOST RECENT UPDATES PLEASE VISIT www.granbyindustries.com.

The following form **MUST** be completed for the warranty to be valid.

Installed by: _____

Address: _____

Telephone: _____ Date: _____

START UP TEST RESULTS

Nozzle: _____ Pressure: _____

Air: _____ Turbulator: _____

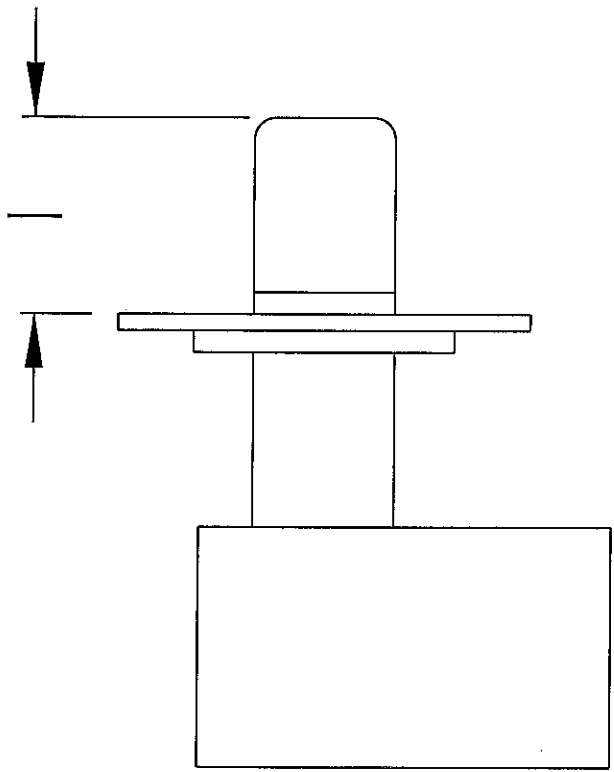
CO₂: _____ Smoke Number: _____

Breech Draft: _____ Stack Temperature: _____

Test Performed By: _____

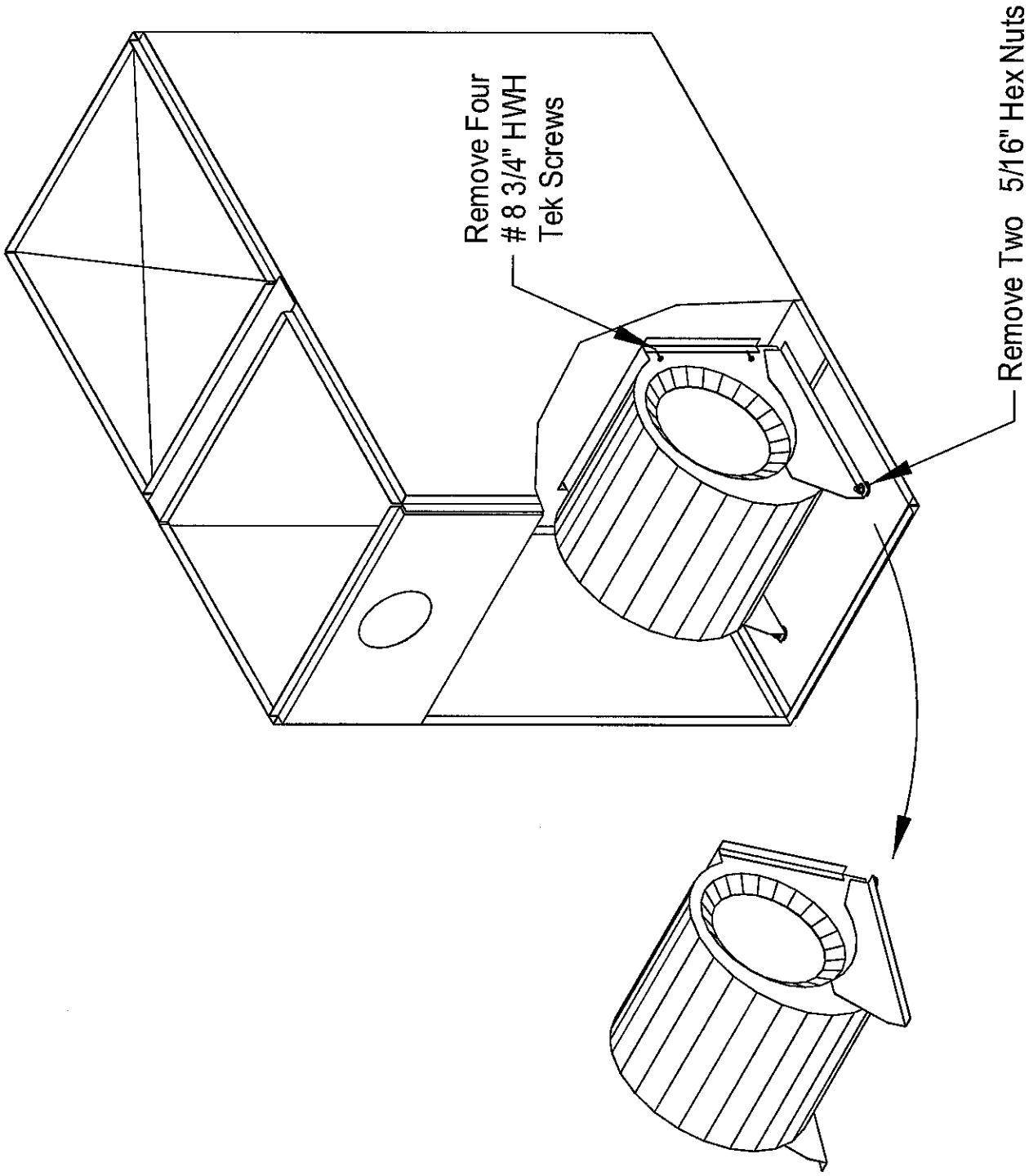
Staple Printout Here:

Staple Smoke Spot Here:



	BURNER INSERTION (I)	
	in	mm
RIELLO	2 1/2	63
BECKETT AFG	2 1/2	63
BECKETT NX	1 1/2	38

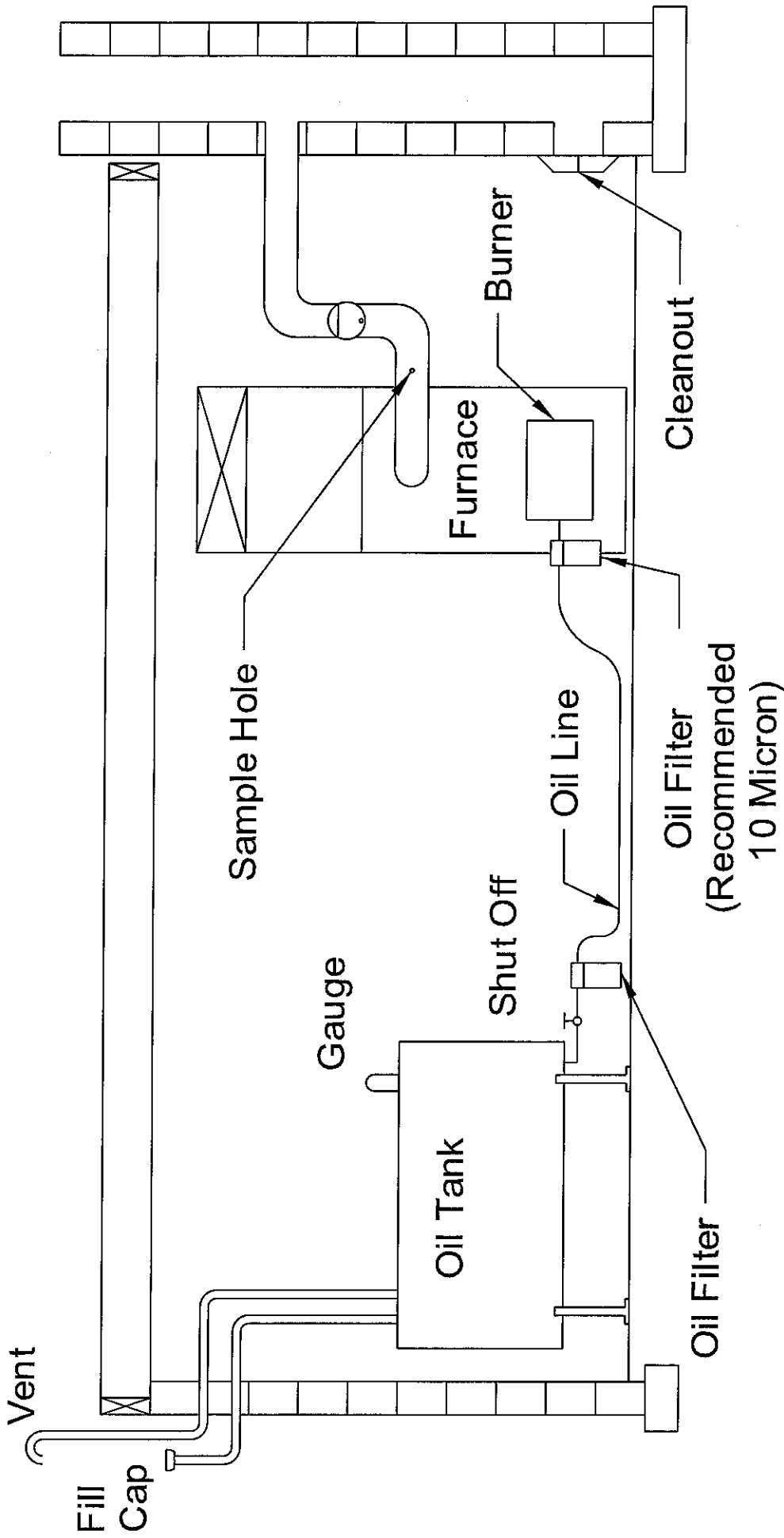
FIGURE - 1
BURNER INSERTION/JAN11



BLOWER REMOVAL

FIGURE - 2

KCBLOREWJAN11

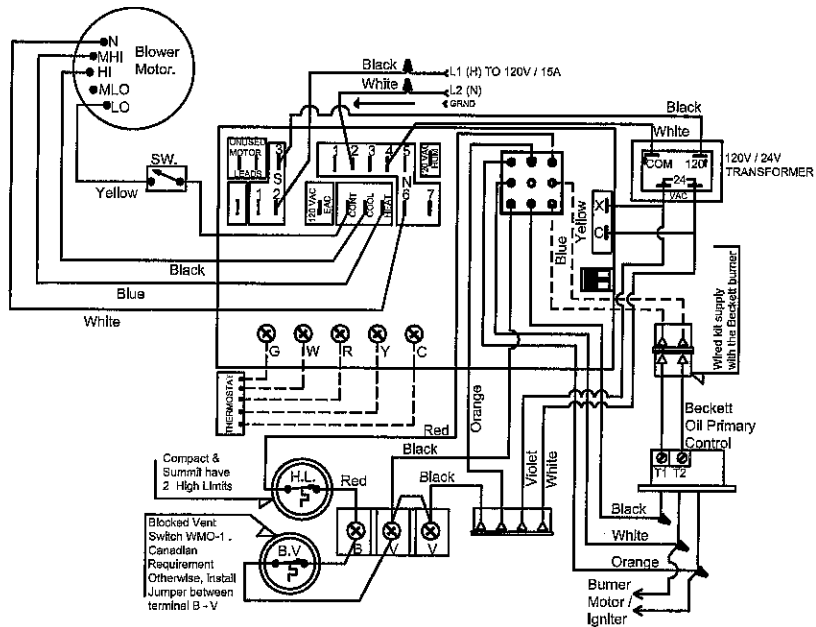


OIL TANK AND PIPING

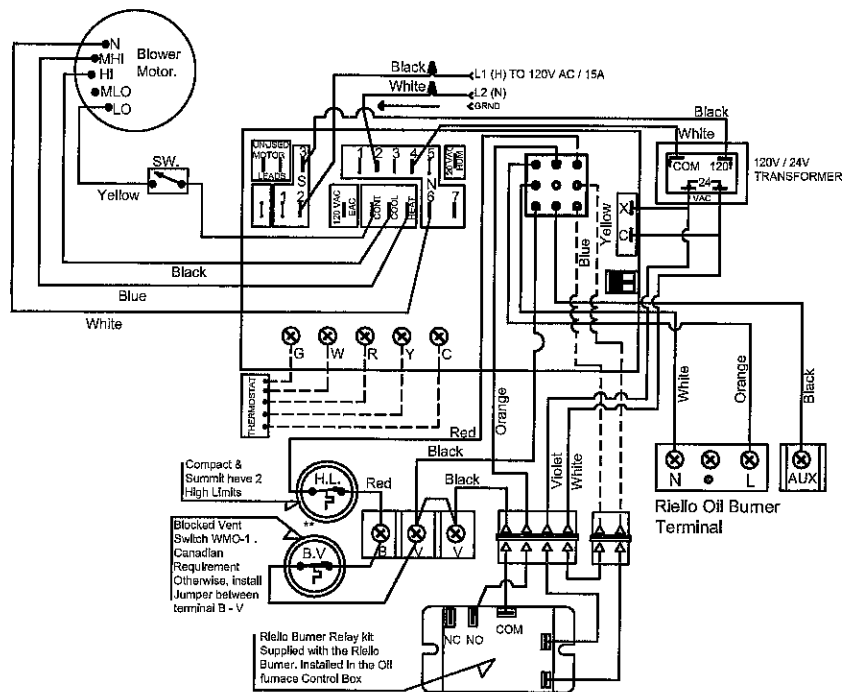
FIGURE - 3

FINSTALLJAN11

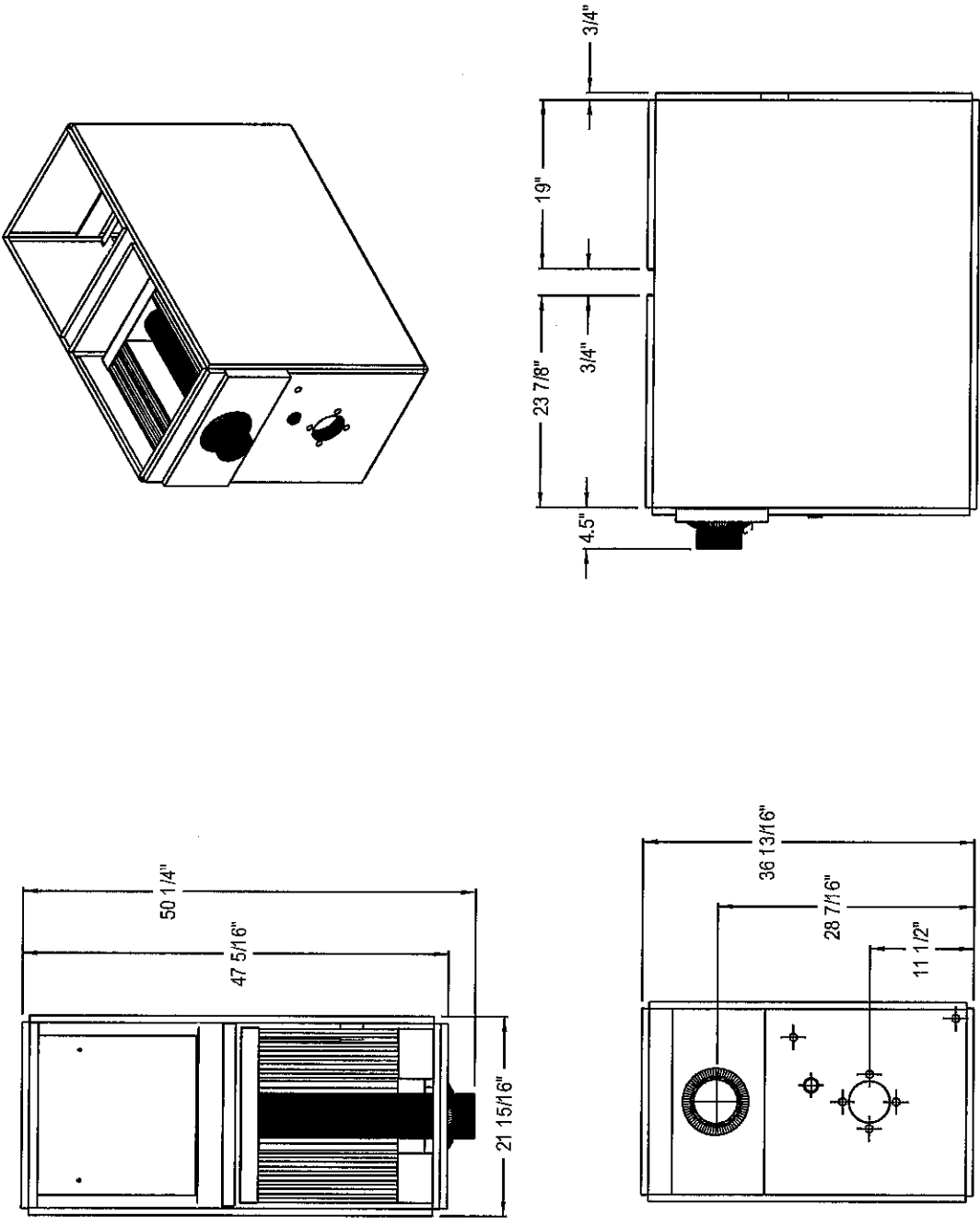
BECKETT WIRING DIAGRAM



RIELLO WIRING DIAGRAM



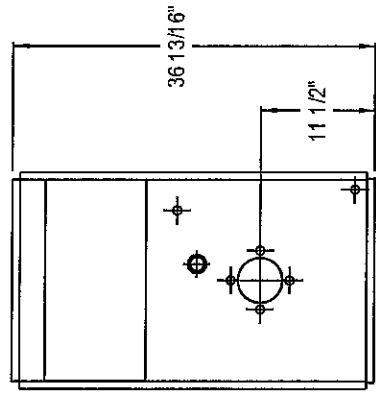
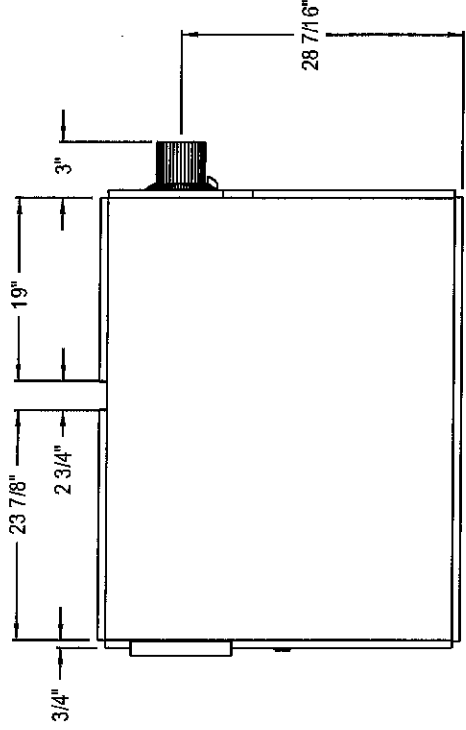
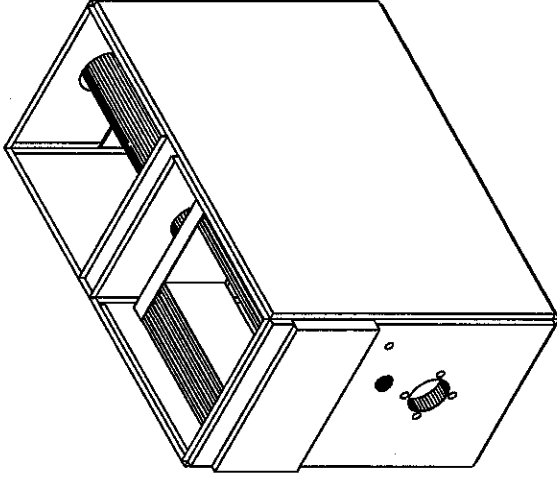
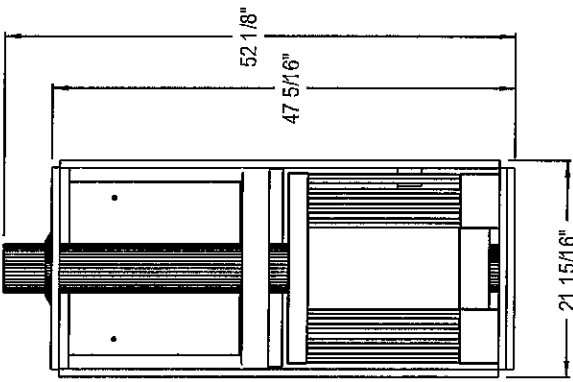
**WIRING DIAGRAM
FIGURE - 4**



CONTOUR (FRONT BREECH) DIMENSIONS

FIGURE - 5

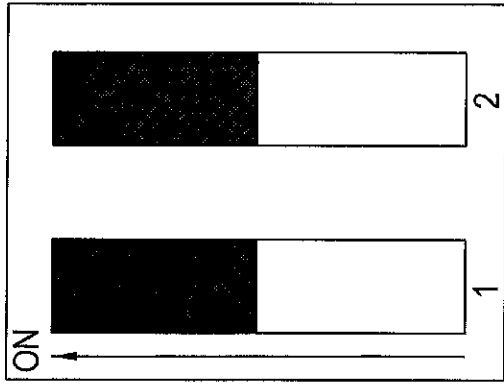
KCF_00810411



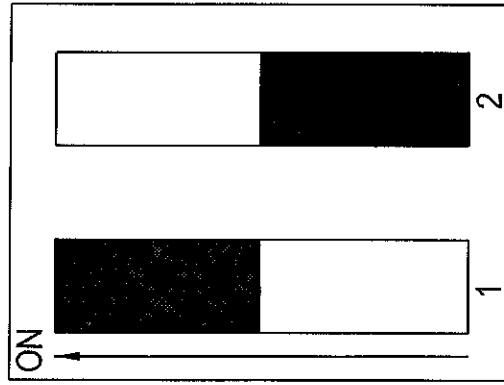
CONTOUR (REAR BREECH) DIMENSIONS

FIGURE - 6

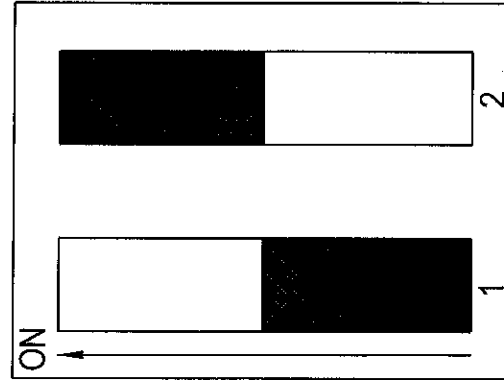
REF: J20012011



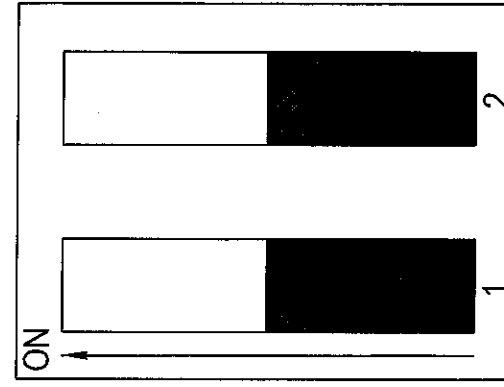
60 SEC



90 SEC



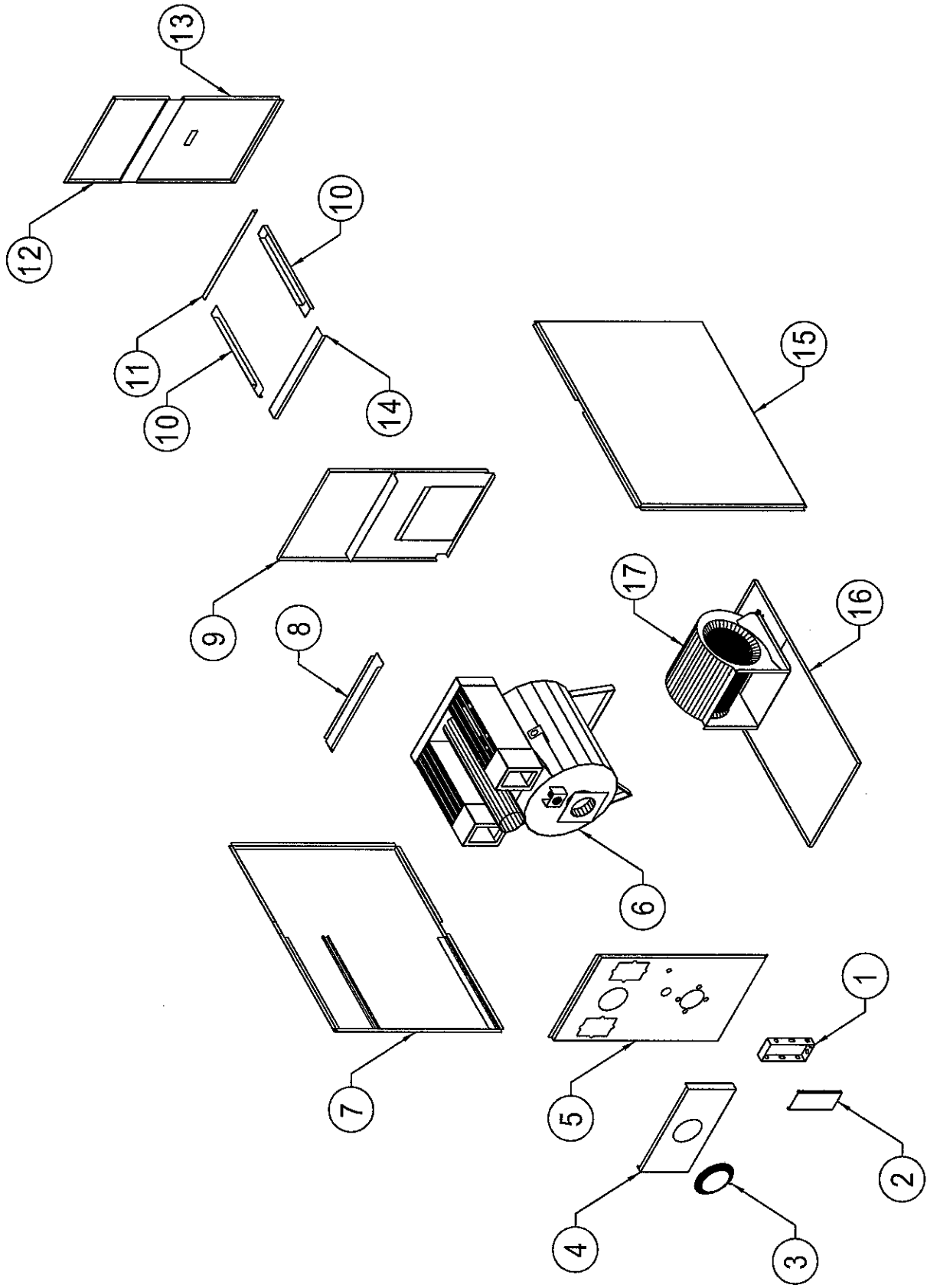
120 SEC



150 SEC

FAN CENTER DIP SWITCH

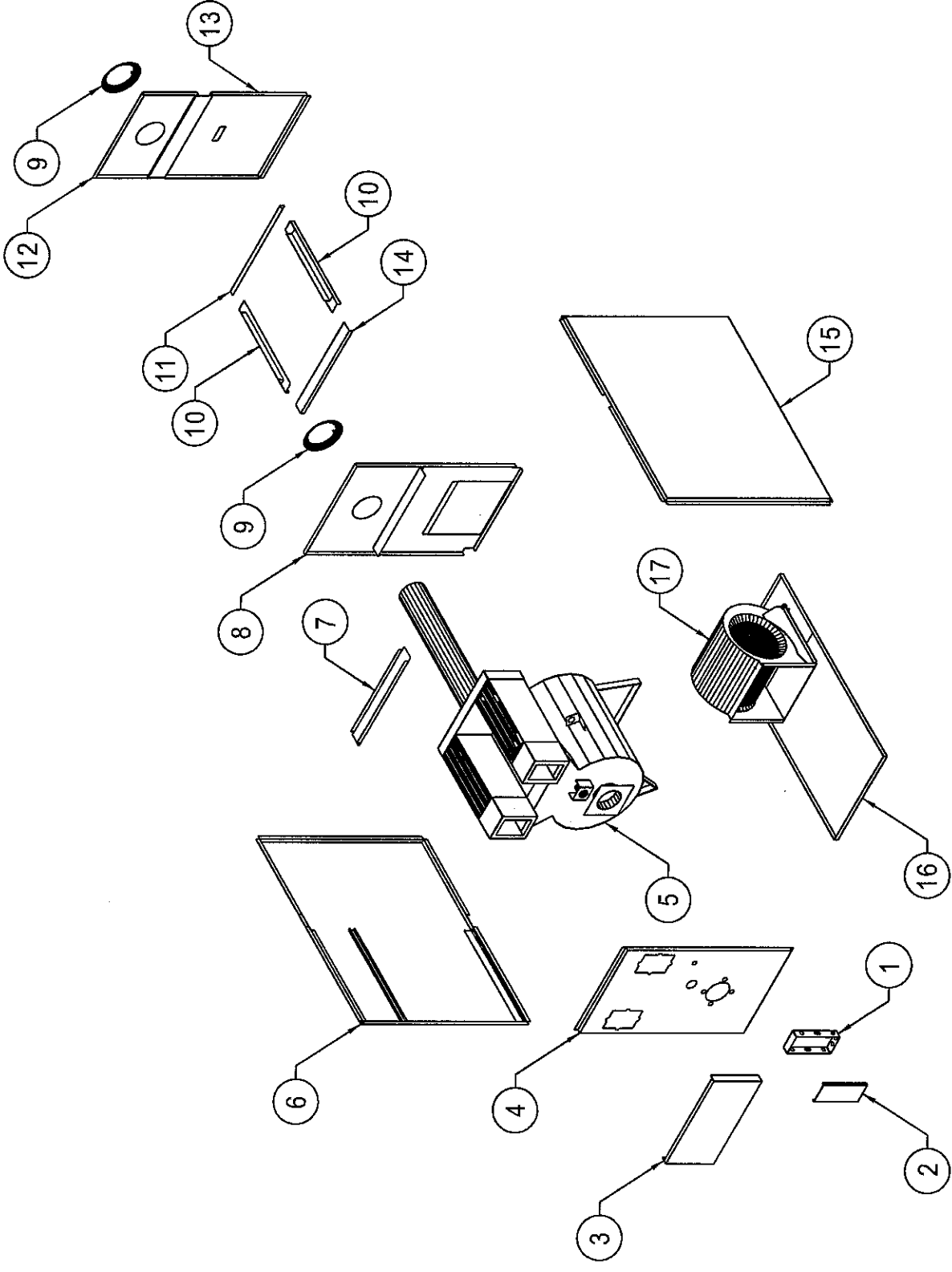
FIGURE - 7



CONTOUR FRONT BREECH PARTS LIST

FIGURE - 8

KCFRPMANJAW11



CONTOUR REAR BREECH PARTS LIST

FIGURE - 9

KCRAFTMAN_JUN11

Table - 1

Contour Front Breech Oil-Fired Furnace		
Order No.	Item No.	Part Description
ELB-P0-0006-00	KCF-1	Wiring Box
ELB-P0-0008-00	KCF-2	Wiring Box Cover
K00-CB-0103-00	KCF-3	Smoke Pipe Collar
KCF-CB-0039-00	KCF-4	Cabinet Cleanout Cover
KCF-CB-0400-00	KCF-5	Front Panel Assembly
KCF-HE-0000-00	KCF-6	Heat Exchanger Assembly
KC0-CB-0100-00	KCF-7	Side Panel Assembly (Left)
K00-CB-0022-00	KCF-8	Top Divider
KCF-CB-0500-00	KCF-9	Center Panel Assembly
KCF-CB-0300-00	KCF-10	Side Filter Frame Assembly (Left/Right)
KCF-CB-0350-00	KCF-11	Rear Filter Frame Assembly
K00-CB-0026-00	KCF-12	Top Back Panel
KC0-CB-0036-00	KCF-13	Blower Door
KC0-CB-0375-00	KCF-14	Front Filter Frame Assembly
KC0-CB-0110-00	KCF-15	Side Panel Assemblies (Right)
K00-CB-0019-00	KCF-16	Base Pan
3BU-10-00DD-00	KCF-17	G10 DD Blower
K00-HE-0100-00	KCF-18	Smoke Pipe Flange Assembly
K00-HE-0155-00	KCF-19	Flange Blank
3BU-12-00DD-00	KCF-20	GT12 DD Blower
3HN-00-PULL-00	KCF-21	Blower Door Handle
3BM-33-4SDD-00	KCF-22	Motor 1/3 Direct Drive 4 Speed
3BM-75-4SDD-00	KCF-23	Motor 3/4 Direct Drive 4 Speed
3BM-75-4SDD-02	KCF-24	Motor 3/4 Direct Drive ECM
4CA-00-505M-23	KCF-25	5 Micro Capacitor
4CA-00-206M-2B	KCF-26	20 Micro Farad Capacitor
K00-BM-1033-50	KCF-27	Blower/Motor Assembly 1/3
K00-BM-1275-50	KCF-28	Blower/Motor Assembly 3/4
3SG-0P-1030-5A	KCF-29	Sight Glass
K00-HE-0104-0	KCF-30	Sight Glass Ring (Not Shown)
K00-HE-0020-00	KCF-31	Complete Gasket Set (Not Shown)
3BN-0F-3SBT-00	KCF-32	F3 Riello SBT Burner
3BN-0F-5SBT-00	KCF-33	F5 Riello SBT Burner
3BN-BF-3SBT-00	KCF-34	BF3 Riello SBT Burner (Direct Vent)
3BN-BF-5SBT-00	KCF-35	BF5 Riello SBT Burner (Direct Vent)
	KCF-36	Beckett Burner AFG Chasis
	KCF-37	Beckett Burner NX Chasis
4CB-00-FAN0-00	KCF-38	ST9103 Classic Air Board
4SD-00-0160-00	KCF-39	165°F Snap Disk
K00-CB-0037-00	KCF-40	Cleanout Cover Plates (Set)
4SW-00-BLVT-01	KCF-41	Blocked Vent Switch (Not Shown)

Please have serial # & date of manufacture ready when ordering parts

Table- 2

Contour Rear Breech Oil-Fired Furnace		
Order No.	Item No.	Part Description
ELB-P0-0006-00	KCR-1	Wiring Box
ELB-P0-0008-00	KCR-2	Wiring Box Cover
KCR-CB-0039-00	KCR-3	Cabinet Cleanout Cover
KCR-CB-0400-00	KCR-4	Front Panel Assembly
KCR-HE-0000-00	KCR-5	Heat Exchanger Assembly
KC0-CB-0100-00	KCR-6	Side Panel Assembly (Left)
K00-CB-0022-00	KCR-7	Top Divider
KCR-CB-0500-00	KCR-8	Center Panel Assembly
K00-CB-0103-00	KCR-9	Smoke Pipe Collar
KCR-CB-0300-00	KCR-10	Side Filter Frame Assembly (Left/Right)
KCR-CB-0350-00	KCR-11	Rear Filter Frame Assembly
KCR-CB-0025-00	KCR-12	Top Back Panel
KC0-CB-0036-00	KCR-13	Blower Door
KC0-CB-0375-00	KCR-14	Front Filter Frame Assembly
KC0-CB-0110-00	KCR-15	Side Panel Assembly (Right)
K00-CB-0019-00	KCR-16	Base Pan
3BU-10-00DD-00	KCR-17	G10 DD Blower
	KCR-18	Smoke Pipe Flange Assembly w/Gasket
K00-CB-0037-00	KCR-19	Cleanout Cover Plates
3BU-12-00DD-00	KCR-20	GT12 DD Blower
3HN-00-PULL-00	KCR-21	Blower Door Handle
3BM-33-4SDD-00	KCR-22	Motor 1/3 Direct Drive 4 Speed
3BM-75-4SDD-00	KCR-23	Motor 3/4 Direct Drive 4 Speed
3BM-75-4SDD-02	KCR-24	Motor 3/4 Direct Drive ECM
4CA-00-505M-23	KCR-25	5 Micro Capacitor
4CA-00-206M-2B	KCR-26	20 Micro Farad Capacitor
K00-BM-1033-50	KCR-27	Blower/Motor Assembly 1/3
K00-BM-1275-50	KCR-28	Blower/Motor Assembly 3/4
3SG-0P-1030-5A	KCR-29	Sight Glass
K00-HE-0104-0	KCR-30	Sight Glass Ring (Not Shown)
K00-HE-0020-00	KCR-31	Complete Gasket Set (Not Shown)
3BN-0F-3SBT-00	KCR-32	F3 Riello SBT Burner
3BN-0F-5SBT-00	KCR-33	F5 Riello SBT Burner
3BN-BF-3SBT-00	KCR-34	BF3 Riello SBT Burner (Direct Vent)
3BN-BF-5SBT-00	KCR-35	BF5 Riello SBT Burner (Direct Vent)
	KCR-36	Beckett Burner AFG Chasis
	KCR-37	Beckett Burner NX Chasis
4CB-00-FAN0-00	KCR-38	ST9103 Classic Air Board
4SD-00-0160-00	KCR-39	165°F Snap Disk
K00-CB-0037-00	KCR-40	Cleanout Cover Plates (Set)
4SW-00-BLVT-01	KCR-41	Blocked Vent Switch (Not Shown)

Please have serial # & date of manufacture ready when ordering parts