

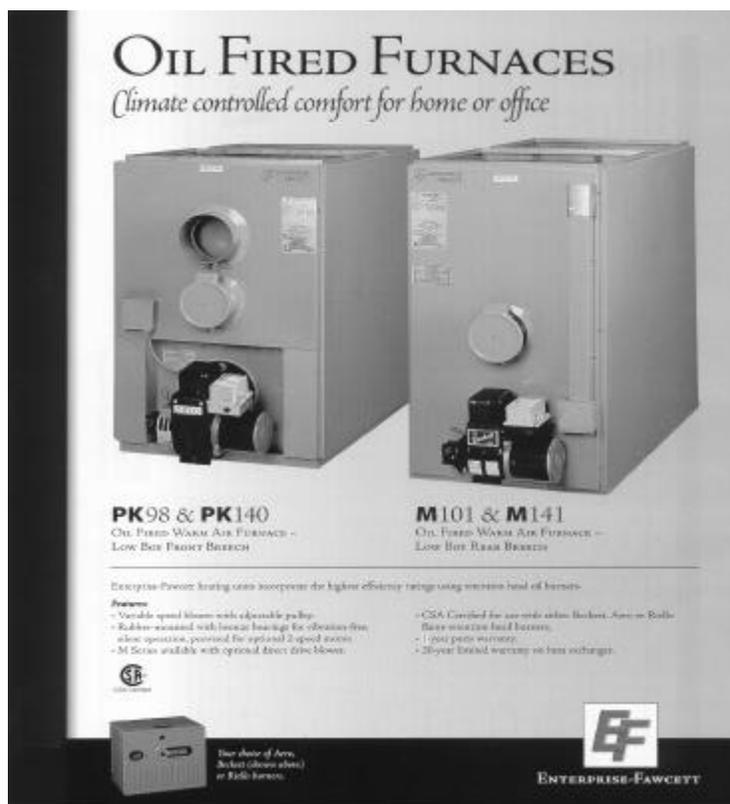
ENTERPRISE FAWCETT

OIL FIRED WARM AIR FURNACES

Models ---- PK98 ---- PK140 Front Breech
Models ---- M101 ---- M141 Rear Breech

OIL FIRED WARM AIR FURNACES

Models PK98/PK140 Front Breech and Models M101/M141 Rear Breech



INSTALLATION, OPERATING, MAINTENANCE AND HOME OWNER INSTRUCTIONS:

Read these instructions carefully and save for future reference. Consult your local authorities concerning local fire safety regulations. Installation must be made in accordance with the Local, Provincial or State codes in your area which may differ from this manual. Always comply with the most severe application. Proper installation and use will ensure safe and satisfactory performance. Improper installation or use could result in voiding your warranty.



ENTERPRISE FAWCETT
Making Wood Stoves Since 1852

73 Lorne Street
Sackville, NB
E4L 4A2

We reserve the right to make improvements and design modifications without notification.

Phone: 506-536-1160
Fax: 506-536-1820
Email: enterpri@nbnet.nb.ca

INSTALLATION

The installation of the unit will be in accordance with regulations of the authorities having jurisdiction. All units must be installed on non-combustible flooring unless otherwise stated on the CSA rating plate. Installation clearances must be shown on the CSA rating plate. Access must be provided for service of the blower and oil burner. It is strongly recommended that the furnace be connected to an approved vent or lined masonry chimney which is capable of creating a draft of not less than 0.02 inches water column.

The oil tank installer must supply and install a shut-off valve at the tank outlet. The oil tank installer also must supply and install an oil filter between the tank and burner. Filter should be serviced annually.

It is recommended that the electrical supply to the furnace be from a separate circuit of not less than 20 amps rating. An emergency switch capable of cutting power to the furnace should be installed in the living area or at the top of the basement stairs.

If the furnace is installed in an enclosed room, a means of providing combustion air to the burner must be available. It is recommended that the combustion air inlet have a free area of one square foot for one gallon input to the burner.

CAUTION

- 1) **DO NOT START THE BURNER UNLESS THE BLOWER ACCESS DOOR IS IN PLACE.**
- 2) **DO NOT TAMPER WITH THE FURNACE OR CONTROLS, CALL A QUALIFIED SERVICE TECHNICIAN.**
- 3) **NEVER BURN GARBAGE OR PAPER IN THE HEATING SYSTEM.**
- 4) **NEVER LEAVE PAPER, RAGS OR COMBUSTIBLES WITHIN THE REQUIRED CLEARANCES OF THE FURNACE.**
- 5) **DO NOT USE GASOLINE, CRANKCASE OIL, OR ANY OIL CONTAINING GASOLINE IN THE FURNACE.**

CONTROLS

The controls consist of a control (fan and limit), protectorelay (primary control) and a blocked vent safety switch. As a general rule these controls are not repairable. If a control is defective, it should be replaced, by a qualified servicer, with a new control of the same make and model number.

OIL BURNER

The burner should be cleaned and adjusted by a licensed burner technician. The burner motor should be lubricated with a few drops of #20 lubricating oil.

COMBUSTION CHAMBER

The combustion chamber is made from a high temperature fibre. It will easily withstand normal flame temperatures but could be damaged if roughly handled or cleaned with a scraper or wire brush. If cleaning is required, do it gently with a light vacuum cleaner.

CLEANING FURNACE

Replace the filter as needed – dirty filters reduce the efficiency. Remove the smoke pipe and clean. Vacuum the inside of the heat exchanger and bottom of radiator through the fire inspection door. Replace and secure the smoke pipe.

CHANGING OF AIR FILTERS

Remove the blower compartment door and remove rear filters first, then the second filter, if a second filter is used. Replace the second filter first, then the rear. Use ULC or CSA approved filters of the same size and replace door. The blower should be cleaned and the motor oiled regularly with #20 lubricating oil.

ADJUST BLOWER PULLEYS

Adjust the blower pulleys so that the belt flexibility is 1/2" to 3/4".

ADJUST BURNER AND START UP

- 1) Set thermostat above room temperature. Open the oil valves and purge the air from the oil line, pump and bleed port of the oil pump.
- 2) Do not attempt to start burner when excessive oil has accumulated, in the presence of oil vapour or when the combustion chamber is hot.
- 3) The furnace requires adequate combustion air, one square foot free area for each gallon firing rate.
- 4) To obtain normal efficiency, set draft regulator at 0.02" W.C. with a 0-1 smoke reading
- 5) Check safety controls for proper operation.
- 6) Turn off electrical supply and close oil supply by turning the valve to off position on the oil supply line for extended shut down periods.

FOR AERO, FAFC 2, FAFC 3 and BECKETT AF35 BURNERS ONLY:

(burner installation instructions also packed with burner)

- 1) Remove the three nuts and washers from threaded studs on furnace around burner blast tube opening.
- 2) Check for any damage.
- 3) Check free length of blast tube (See set-up guide attached for selected burner).
- 4) Place service gasket over the three threaded studs.
- 5) Carefully insert burner blast tube into the opening provided and secure with the three washers and nuts.
- 6) Secure the BX cable from the burner to the junction box. See drawing number 1S3185 for wire connections.
- 7) The thermostat must not be installed on an outside wall where it may be affected by radiant heat or excessive drafts. Check correct setting of heat anticipator on the thermostat (.2 amp).

FOR RIELLO BURNERS ONLY:

(burner installation instructions also packed with burner)

- 1) Remove the three nuts and washers from threaded studs on furnace around burner blast tube opening.
- 2) Check for any damage.
- 3) Check free length of blast tube (See set-up guide attached for selected burner).
- 4) Place service gasket over the three threaded studs.
- 5) Carefully insert burner blast tube into the opening provided and secure with the three washers and nuts.
- 6) Secure the BX cable from the burner to the junction box. See drawing number 1S3186A for wire connections.
- 7) The thermostat must not be installed on an outside wall where it may be affected by radiant heat or excessive drafts. Check correct setting of heat anticipator on the thermostat (.2 amp).

ADDITIONAL HOMEOWNERS INSTRUCTIONS

- a) Install the safety switch in a place with easy access and out of the area of the unit. If possible, the top of the basement stairs.
- b) Do not store material around the furnace within these clearances:

Unaccess side	2”
Access side	24”
Rear of front breach	24”
Rear of back breach	24”
Top	1”
Front	24”
Flue Pipe	9”
Base	0
- c) Make sure no combustibles are stored around the furnace (eg: boxes, rags, paper, etc.)
- d) Make sure the unit has enough combustion air in an enclosed room. Have at least a 96 square inch free flow area at ceiling and floor to supply enough air for the oil burner to operate properly. Keep the area around these openings clear so there is no blocking of the vents.
- e) Make sure nothing is obstructing the return air register so there is a free flow.
- f) When renovations are being carried out, unit maintenance should be done before and after the work is completed. Maintenance could be done again in 1 – 2 months after and also change filters.
- g) Make sure the furnace is checked by a qualified service technician and started. Check oil pressure and air, blower and all controls . Check fuel supply and filters for leaks.

**ENTERPRISE FAWCETT
RESIDENTIAL OIL FURNACE**

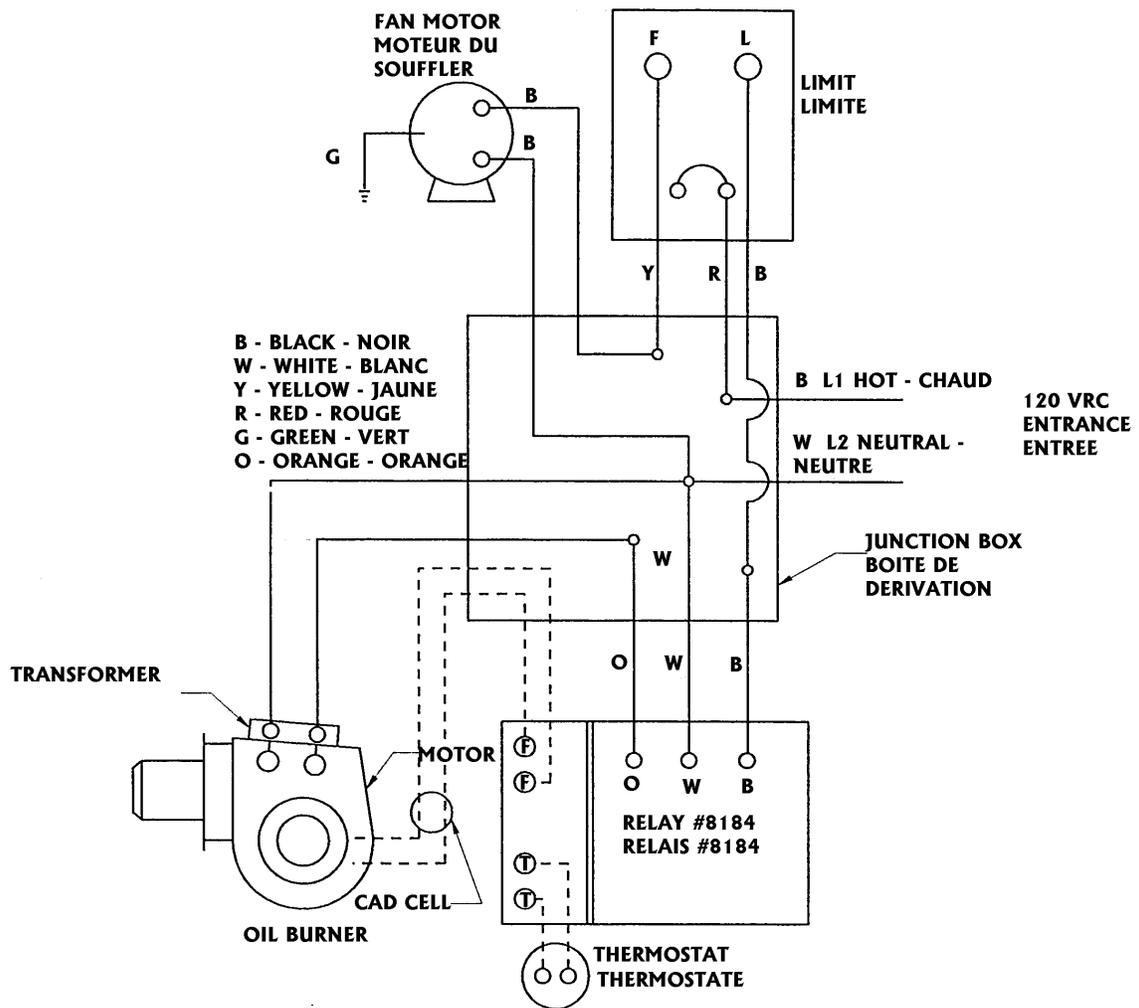
M SERIES - REAR BREECH

PK SERIES - FRONT BREECH

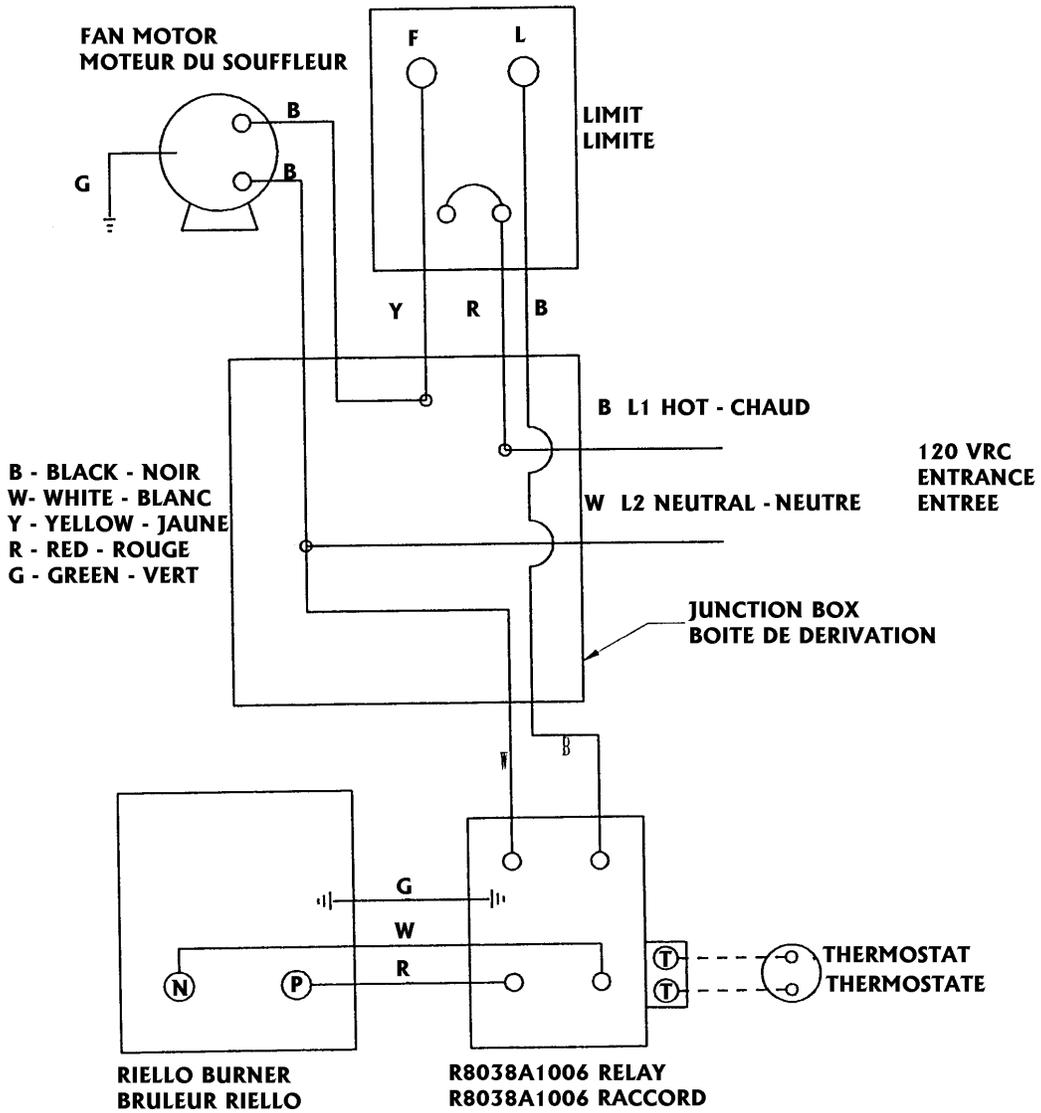
Appliance Model	Burner Make	Model	Insertion Length	Nozzle Delavan Size & Type	Pressure Pump PSI	BTU Output	Turbulator Setting	Air Setting
M101A	Aero	FAFC-2	3C"	W .65-80°	100	78,000		
M101A	Aero	FAFC-2	3C"	W .75-80°	100	90,000		
M101A	Aero	FAFC-2	3C"	W .85-80°	100	102,000		
M101B	Beckett	AF35YHHS	3 ½"	B .65-80°	100	78,000		6/0
M101B	Beckett	AF35YHHS	3 ½"	B .85-70°	100	102,000		10/1
M101R	Riello	F3-6 "	3C"	W .60-80°	120	77,000	.05	3.5
M101R	Riello	F3-6 "	3C"	W .65-80°	135	88,000	1.5	4.0
M101R	Riello	F3-6 "	3C"	W .75-80°	130	97,000	2.0	4.5
M101R	Riello	F5-6 "	3C"	W .75-80°	146	103,000	1.5	2.2
M141A	Aero	FAFC-3	3C"	W 1.00-80°	100	118,000		
M141B	Beckett	AF35YY	3 ½"	B 1.00-80°	100	120,000		6/0
M141B	Beckett	AF35YY	3 ½"	B 1.20-70°	100	141,000		9/0
M141R	Riello	F5-6 "	3C"	W .85-60°	146	121,000	2.5	3.5
M141R	Riello	F5-6 "	3C"	W 1.00-60°	146	141,000	3.5	3.5
PK98A	Aero	FAFC 2X	5¾"	A .85-80°	100	96,500		
PK98R	Riello	F3-6 "	5¾"	W .65-60°	135	84,000	1.5	3.0
PK98R	Riello	F3-6 "	5¾"	W .75-60°	130	94,000	2.0	3.4
PK140A	Aero	FAFC-2	5 "	A 1.20-80°	100	136,000		
PK140R	Riello	F5-6 "	5 "	B .85-60°	140	114,000	2.0	2.4
PK140R	Riello	F5-6"	5 "	B 1.00-60°	145	136,000	2.5	2.9
PK98B	Beckett	AF90XN	5¾"	W .75- 80°	100	87,000		8
PK98B	Beckett	AF90XN	5¾"	W .85-80°	100	97,000		10/1
PK140B	Beckett	AF90XN	5"	W1.00-80°	100	114,000		10/4
PK140B	Beckett	AF90XN	5"	W1.20-80°	100	134,000		10/5

NOTE: MAXIMUM BTU OUTPUT WITH AERO BURNER ON M141A IS 118,000 BTU.

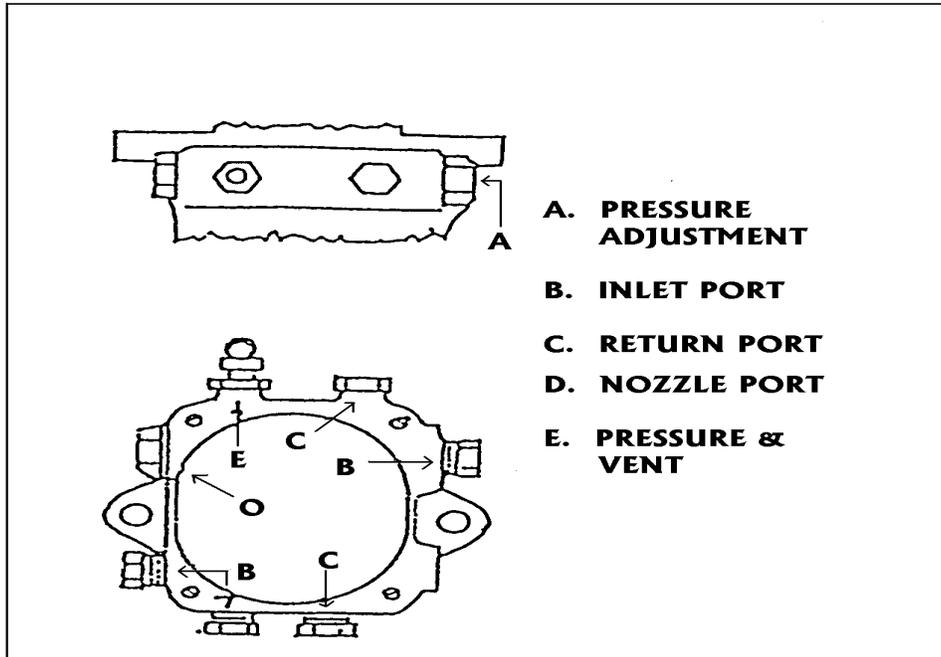
AERO, FAFC2 & FAFC3, BECKETT AF35 - WIRING DIAGRAM #1S3185 DIAGRAMME DU FILAGE



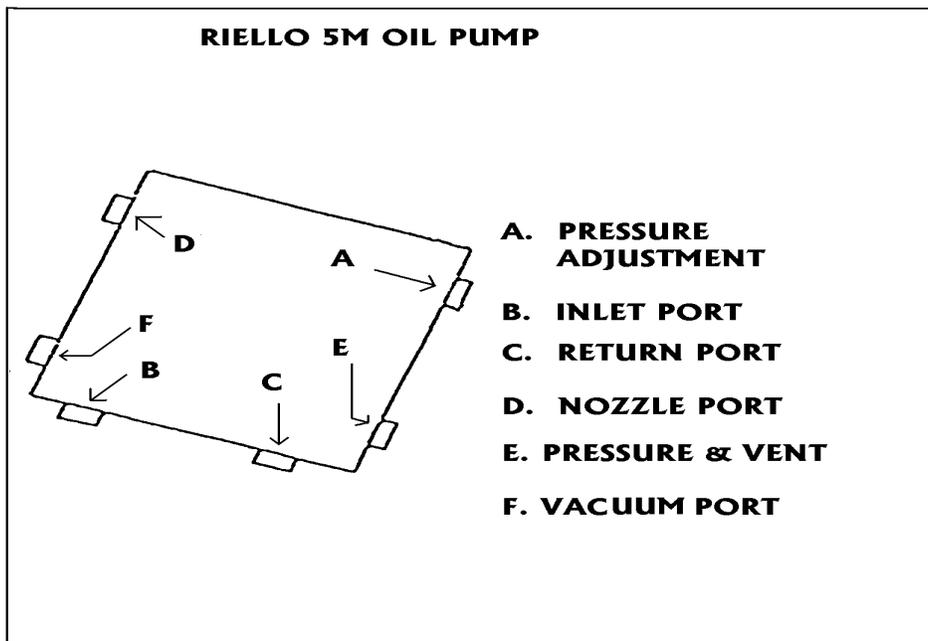
RIELLO BURNER WIRING DIAGRAM #1S186-A
TREFILAGE #1S3186-A POUR BRULEUR RIELLO



AERO & BECKETT OIL PUMP

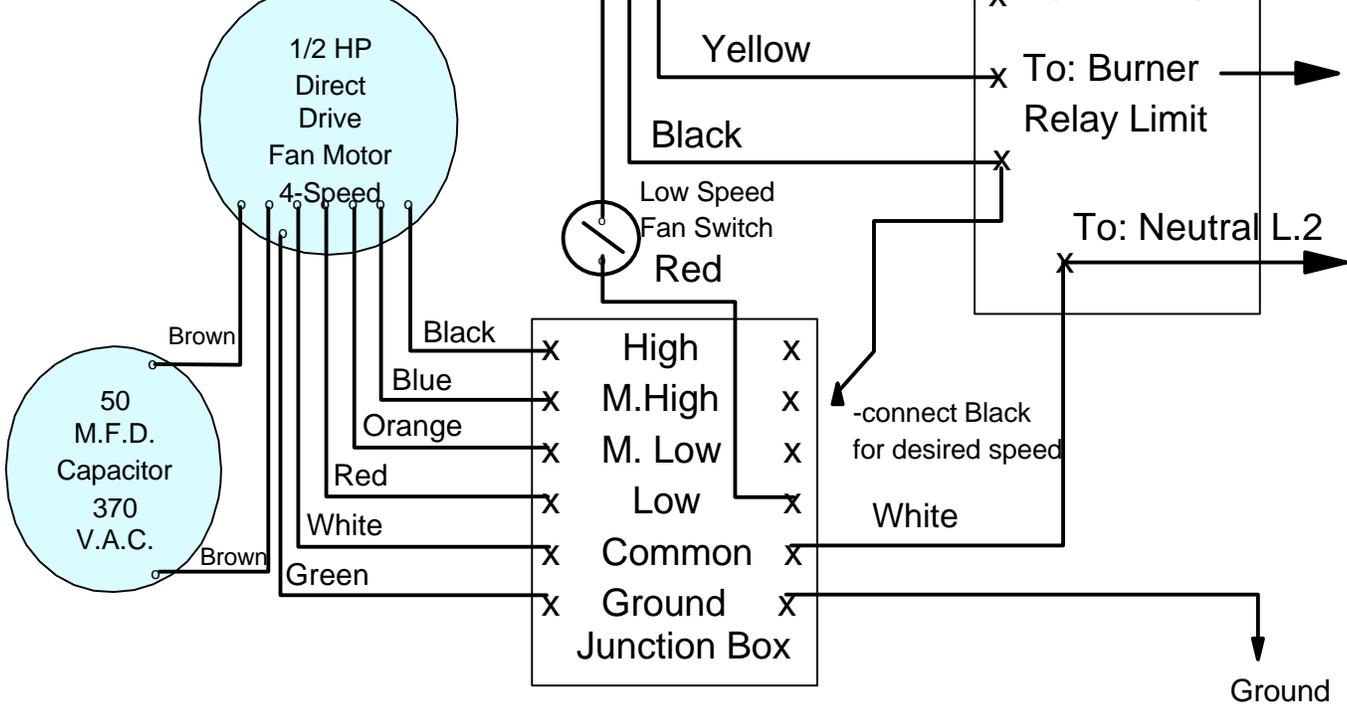


RIELLO 5M OIL PUMP



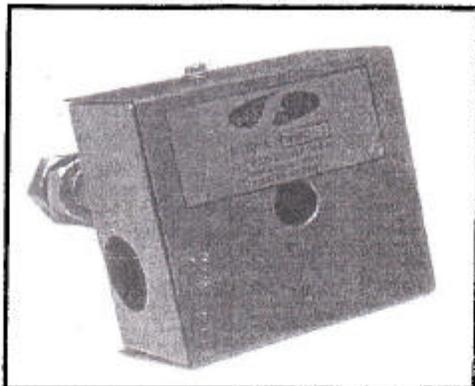
ENTERPRISE FAWCETT Direct Drive Fan Wiring Diagram

Low Speed	0.2 S.P.	917 CFM
	0.5 S.P.	813 CFM
M-Low Speed	0.2 S.P.	1151 CFM
	0.5 S.P.	981 CFM
M-High Speed	0.2 S.P.	1410 CFM
	0.5 S.P.	1202 CFM
High Speed	0.2 S.P.	1592 CFM
	0.5 S.P.	1344 CFM



OIL FIRED SECONDARY SAFETY SWITCH KIT

Model: WMO-1



ITEMS SUPPLIED IN THIS KIT:
1-Secondary safety switch assembly
2-5/8" x 11 UNC Hex Jam Nut

Installation of a Secondary Safety Switch is recommended for Oil fired systems. This device is installed to detect flue gas spillage from a blocked flue system and/or inadequate draft.

This device **MUST** be installed by a qualified installer in accordance with the manufacturer's installation instructions. Wiring **MUST** be in accordance with the National Electrical Code and applicable local codes.

INSTALLATION

1. Pierce a 5/8 dia. Hole into the vent pipe near the appliance outlet. Remove one of the securing nuts from the pipe of the safety switch. Tighten the other securing nut onto the pipe as far as possible. (See Figure 1)
2. Insert the threaded pipe end into the pierced hole, then install the securing nut, then install the securing nut, which was removed in step 1, and tighten securely. (See Figure 2)

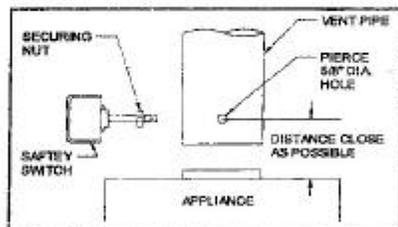


Figure 1

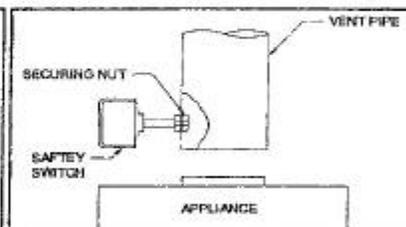


Figure 2

CAUTION: Disconnect electrical power supply when wiring safety switch.

3. Wire safety switch in series into the limit circuit to primary control or as an optional location into the orange wire from the primary to the burner. (See Diagram A and B on reverse side of this instruction sheet) Route wiring with an accepted wiring encloser in accordance with the National Electrical Code and applicable local codes.



FIELD CONTROLS
THE VENTING SOLUTIONS COMPANY

2630 Airport Road • Kinston, NC 28504
Phone: 252-522-3031 • FAX: 252-522-0214
www.fieldcontrols.com

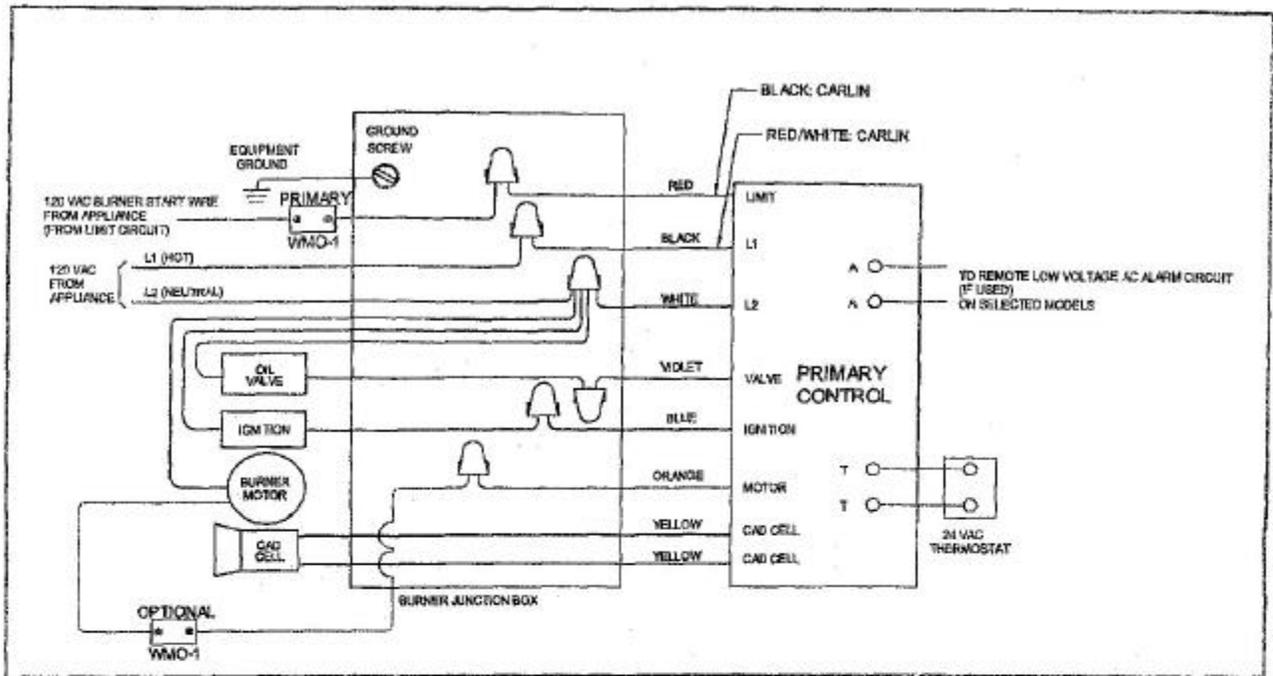


Diagram A
Honeywell R7184B & Carlin 60200-02

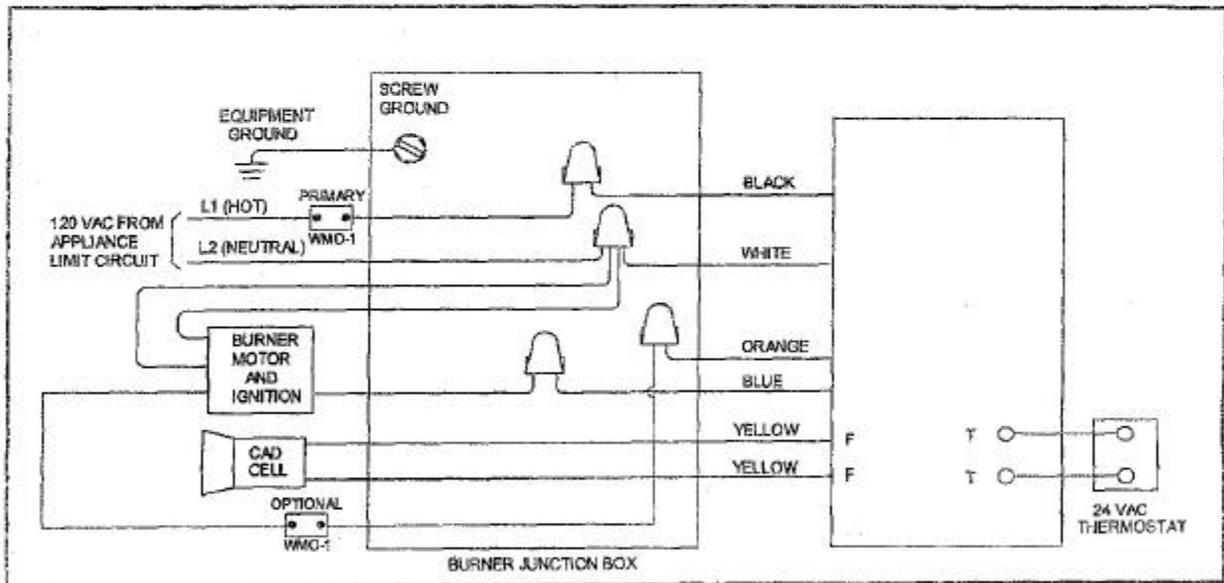
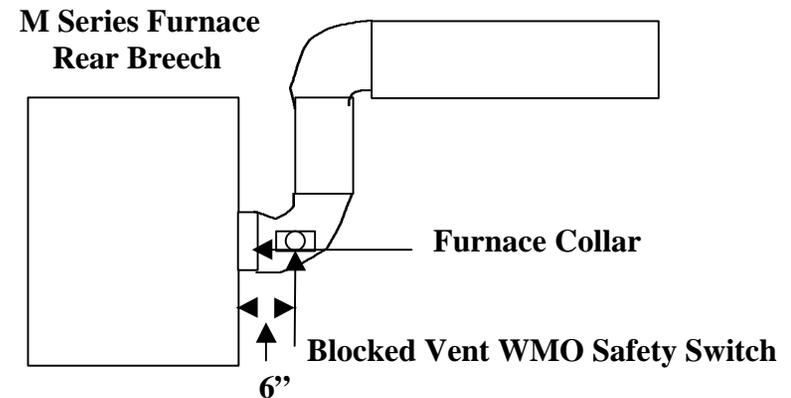
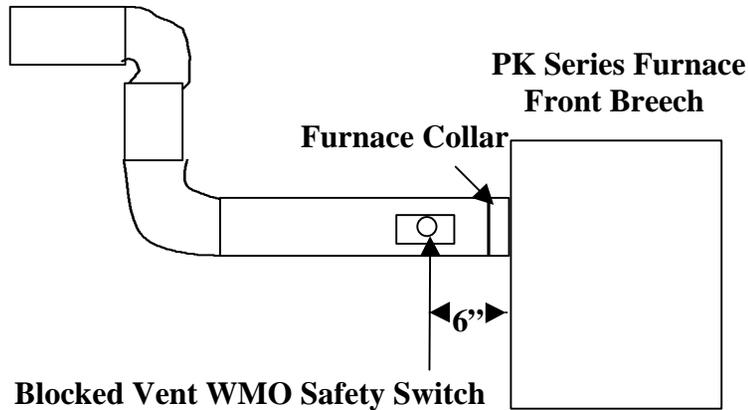


Diagram B
Honeywell R8184G



OIL FIRED SECONDARY SAFETY SWITCH



- The Oil Fired Secondary Safety Switch is to be installed within 6 inches of the Furnace Collar whether it is an elbow or strait duct coming off of the furnace collar, as it is to detect flue gas spillage from a blocked flue system and/or inadequate draft.
- It is to be wired into the fan limit control box as per diagram A or B in your leaflet included with the Safety switch kit.
- This device **MUST** be installed by a qualified installer in accordance with the installation instructions provided.

Enterprise Fawcett
Div. Of 3135772 Canada Inc.
73 Lorne St, Sackville, NB E4L 4A2
www.enterprise-fawcett.com
enterpri@nbnet.nb.ca
Ph: 506-536-1160 Fax: 506-536-1820

SPECIFICATIONS

Model	Type of Unit	Input US GPH	Output BTU/HR	Nozzle	Beckett Oil Burner	Aero Oil Burner	Riello Oil Burner	60°W Nozzle	Blower	.2WC		.5WC		CFM Range at .2 & .5 SP	Air Filter Size	
									Belt	Direct	Motor	Belt	Direct	Motor		
PK 98	Low-boy	.75	86,000	80°W	AF90XN	FAFC-2X	40-F3	.65	N/A	N/A	1/3 HP	3 1/4 x 6	N/A	1/3 HP	950-1300	① 20"x25"x1"
	Front Breech	.85	98,000	80°W	AF90XN	FAFC-2X	40-F3	.75	N/A	N/A	1/3 HP	3 1/4 x 7	N/A	1/3 HP	950-1300	① 20"x25"x1"
PK 140	Low-boy	1.00	118,000	80°W	AF90XN	FAFC-2	40-F5	.85	N/A	N/A	1/2 HP	3 1/2 x 6	N/A	1/2 HP	960-1400	② 16"x25"x1"
	Front Breech	1.20	136,000	80°W	AF90XN	FAFC-2	40-F5	1.00	N/A	N/A	1/2 HP	3 1/2 x 6	N/A	1/2 HP	960-1400	② 16"x25"x1"
M 101	Low-boy	.65	78,000	80°W	AF35YHHS	FAFC-2	40-F3	.60	G-10DD	G-10DD	1/2 HP	3 1/2 x 7 1 1/3 HP	4-Speed	1/2 HP	840	② 16"x24"x1"
	Rear Breech	.75	90,000	80°W	AF35YHHS	FAFC-2	40-F3	.65	G-10	G-10DD	1/2 HP	3 1/2 x 7 1 1/3 HP	4-Speed	1/2 HP	to	② 16"x24"x1"
M 141	Multi-fired	.85	101,000	80°W	AF35YHHS	FAFC-2	40-F3 or F5	.75	G-10	G-10DD	1/2 HP	3 1/2 x 7 1 1/3 HP	4-Speed	1/2 HP	1300	② 16"x24"x1"
	Low-boy	1.00	118,000	80°W	AF35YY	FAFC-3	40-F5	.85	G-10	G-10DD	1/2 HP	3 1/2 x 6 1 1/2 HP	4-Speed	1/2 HP	960	② 16"x24"x1"
M	Rear Breech	1.10	130,000	80°W	AF35YY	N/A	N/A	N/A	G-10	G-10DD	1/2 HP	3 1/2 x 6 1 1/2 HP	4-Speed	1/2 HP	to	② 16"x24"x1"
	Multi-fired	1.20	141,000	80°W	AF35YY	N/A	40-F5	1.00	G-10	G-10DD	1/2 HP	3 1/2 x 6 1 1/2 HP	4-Speed	1/2 HP	1400	② 16"x24"x1"

Both the PK and M model furnaces are approved for use with L-vent pipe and Tjernland SSC "Sideshot" vent.

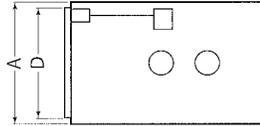
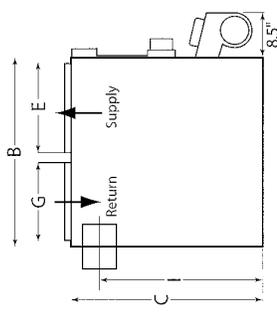
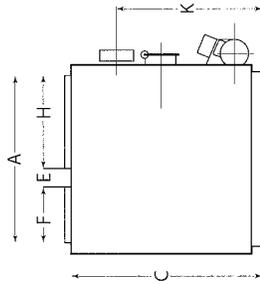
The M series only is available with direct drive blower.

All models operate with flue draft of -.02"W.C.

Burners

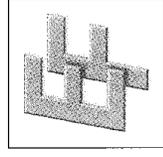
Units are CSA Certified for use with all of these Flame Retention Head Burners:

- B = Beckett
- A = Aero
- R = Riello



Model	A	B	C	D	E	F	H	K	Smoke Pipe	Weight
PK 98	43 7/8"	27 1/4"	42"	25 3/4"	3 1/2"	14"	22 1/4"	32"	7"	280 lbs.
	111 cm	69 cm	106 cm	65 cm	8 cm	36 cm	56 cm	81 cm	17 cm	127 kg
PK 140	43 7/8"	27 1/4"	49 7/8"	25 3/4"	3 1/2"	14"	22 1/4"	35"	8"	360 lbs.
	111 cm	69 cm	126 cm	65 cm	8 cm	36 cm	56 cm	89 cm	20 cm	163 kg

Model	A	B	C	D	E	G	Smoke Pipe	I	Weight
M Series	23 3/4"	47"	43"	22 1/2"	22"	20"	7"	38"	280 lbs.
	60 cm	119 cm	109 cm	57 cm	56 cm	51 cm	18 cm	97 cm	127 kg



ENTERPRISE-FAWCETT

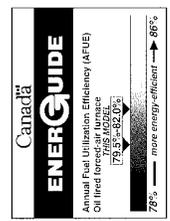
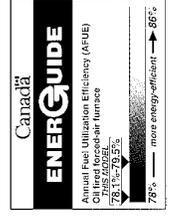
73 Lorne Street
 Sackville, NB E4L 4A2
 Tel. 506/ 536-1160
 Fax 506/ 536-1820
 Email enterprise@nbnet.nb.ca
www.enterprise-fawcett.com
 Printed in Canada

PK98 / PK 140
 SERIES

M101 / M141
 SERIES



VERIFIED FOR ENERGY PERFORMANCE



We reserve the right to make improvements and design modifications without notice.