City of Portland, Maine - Building or Use Permit Application

389 Congress Street, 04101 Tel: (207) 874-8703, **Fax:** (207) 874-8716

Permit No:	Issue Date:	CBL:
04-1403	SEP 20 '04	089 E001001

Location of Construction:	Owner Name:	Owner Address:	Phone:
40 Hussey Rd	Asbjornsen Morten	40 Hussey Sound Rd	
Business Name:	**Contractor Name:**	**Contractor Address:**	**Phone**
	Owner	Portland	
Lessee/Buyer's Name	**Phone:**	HVAC	IR-1

Past Use:	Proposed Use:	Permit Fee:	Cost of Work:	CEO District:
single family	single family replace existing boiler with a Riello 40 series same footprint	$48.00	$2,500.00	2

FIRE DEPT: ☐ Approved ☐ Denied

Signature:

INSPECTION:
Use Group: R3 Type: HVAC
BOCA 1993
Signature: MB 9/30/04

PEDESTRIAN ACTIVITIES DISTRICT (P. .D.)
Action: ☐ Approved ☐ Approved w/Conditions ☐ Denied
Signature: Date:

Proposed Project Description:
replace existing boiler with a Riello 40 series same footprint

Permit Taken By:	Date Applied For:
dmartin	0912112004

1. This permit application does not preclude the Applicant(s) from meeting applicable State and Federal Rules.
2. Building permits do not include plumbing, septic or electrical work.
3. Building permits are void if work is not started within six (6) months of the date of issuance. False information may invalidate a building permit and stop all work..

Zoning Approval

Special Zone or Reviews	Zoning Appeal	Historic Preservation
☐ Shoreland	☐ Variance	☒ Not in District or Landmark
☐ Wetland S.P. Home	☐ Miscellaneous	☐ Does Not Require Review
☐ Flood Zone previous permit	☐ Conditional Use	☐ Requires Review
☐ Subdivision # 02-1000	☐ Interpretation	☐ Approved
☐ Site Plan OK	☐ Approved	☐ Approved w/Conditions
Maj ☐ Minor ☐ MM ☐	☐ Denied	☐ Denied
Date: MB 9/30/04	Date:	Date: MB

CERTIFICATION

I hereby certify that I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in the application is issued, I certify that the code official's authorized representative shall have the authority to enter all areas covered by such permit at any reasonable hour to enforce the provision of the code(s) applicable to such permit.

SIGNATURE OF APPLICANT | ADDRESS | DATE | PHONE

RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE | DATE | PHONE

89 E 001

FILL IN AND SIGN WITH INK

APPLICATION FOR PERMIT
HEATING OR POWER EQUIPMENT

SEP 2 1 2004

To the INSPECTOR OF BUILDINGS, **PORTLAND, ME.**

The undersigned hereby applies for a permit to install the following heating, cooking or power equipment in accordance with the Laws of Maine, the Building Code of the City of Portland, and the following specifications:

Location / CBL 40 Hussey Use of Building Residential Date 9-17-04

Name and address of owner of appliance

Morten Asbiornsen 40 Hussey Road Peaks Island, ME 04108

Installer's name and address Same as Owner

Telephone 207-766-5892

Location of appliance:

- ☒ Basement
- ☐ Attic
- ☐ Floor
- ☐ Roof

Type of Fuel:

- ☐ Gas
- ☒ Oil
- ☐ Solid

Appliance Name: Riello 40-Serie Smallfootprint

U.L. Approved ☒ Yes ☐ No

Will appliance be installed in accordance with the manufacture's installation instructions? ☒ Yes ☐ No

IF NO Explain:

The Type of License of Installer:

- ☐ Master Plumber #
- ☐ Solid Fuel #
- ☐ **Oil** #
- ☐ Gas#
- ☒ Other Home Owner

Type of Chimney:

- ☐ Masonry Lined
  Factory built
- ☐ Metal
  Factory Built **U.L.** Listing #
- ☒ Direct Vent
  Type Tjernlund uL# 378
  Sidewall model SS1

Type of Fuel Tank

- ☒ Oil
- ☐ Gas

Size of Tank 275 Gallons Existing

Number of Tanks 1

Distance from Tank to Center of Flame 30 **feet.**

Cost of Work: $ 2500

Permit Fee: $ 48.00

Approved

Fire:

Ele.:

Bldg.: JMB

Approved with Conditions

☐ See attached letter or requirement

Inspector's Signature Date Approved

Signature of Installer

White - Inspection Yellow - File Pink - Applicant's Gold - Assessor's Copy

AUTHORIZATION TO MARK

This authorizes the manufacturer to apply the ETL mark to certified products; also to the multiple listee model numbers as listed on the correlation page of the Listing Report where applicable; when made in accordance with the accompanying descriptions and drawings under the conditions set forth in the Certification Agreement herein:

Applicant:	Tjernlund Products, Inc. 1601 Ninth Street White Bear Lake, MN 55110		
Contact:	**Name:** Mr. Tim Hoyez	**Phone:**	(651) 426-2993
Manufacturer:	Same as Applicant		
Contact:	**Name:** Same as Applicant	**Phone:**	Same as Applicant
Reference Report No.:	500846		

Product Covered: Side Wall Vent System (SWVS), Model SS1:

Restricted to non-solid fuel applications and for appliances having a flue exit temperature not exceeding 650°F. Unit intended for side wall mounting only and for use with appliances equipped with a draft hood, draft diverter or barometric damper.

Clearances to Combustible Materials:

Flue case (all sides) and plenum top:	0 inch
Plenum front & sides:	1/2 inch
Plenum rear:	3 inches
Soffit or adjacent sidewall to vent terminus:	12 inches

The product covered by this report is a motor operated power venter intended to horizontally ventilate the products of combustion generated from oil and gas fired appliances. This side wall vent system may be installed in any building wall, and provides ventilation against adverse conditions such as wind, rain and external blockage. The appliance is controlled by the venter in conjunction with the thermostat or similar control. Excessive temperature and low draft pressure will cause the appliance to be shut off.

The side wall venting system is comprised of 2 principal parts: the plenum accepts the flue gas, dilutes it with fresh air and directs it through the flue gas conduit with a centrifugal type blower assembly. The flue casing penetrates the building wall and contains the flue gas conduit and several fresh air passages. The vent terminus comes attached to the flue case, mounts to the outside of the building and allows both fresh air inlet and flue gas venting. Primary materials in contact with flue gas are aluminized steel, and/or stainless steel. The product is intended to be permanently connected to the electrical supply source and the appliance control circuit.

Standard(s): Standard for Safety – Draft Equipment UL 378

Issued by: Intertek Testing Services NA Inc., 24 Groton Avenue, Cortland, NY 13045-2014 USA

Authorized by: William T. Starr
Certification Manager

Date: May 18, 2004

Control Number: 5268

TABLE OF CONTENTS

PACKAGE LIST

Your Riello 40 burner should include the following parts. Please check to make sure all parts *are* present before beginning the installation.

QTY. DESCRIPTION (parts bag)

- 2 - Mounting flange bolts (short)
- 2 - Semi-flange bolts (long)
- 4 - Nuts
- 2 - Chrome nuts
- 1 - Oil pump connector (supply)
- 1 - Oil pump connector (return)
- 1 - Female ¼" NPT adapter
- 1 - Male 3/8" NPT adapter
- 1 - 2.5 mm Allen key

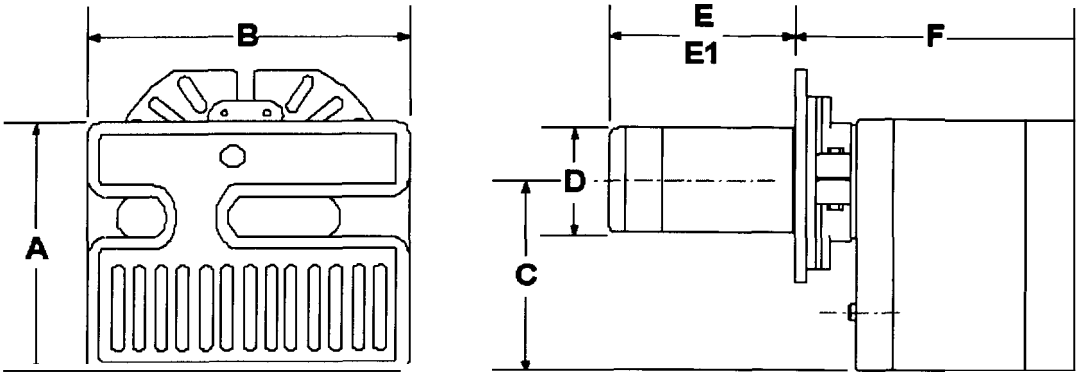
* OEM burners shipped with combustion head mounted

QTY. DESCRIPTION *(carton)*

- 1 - Burner chassis with cover
- 1 - Universal Mounting Flange
- 2 - Semi-flanges
- 1 - Mounting gasket
- 1 - Installation Manual
- 1 - By-pass plug

* **(Separate carton)**
- 1 - Combustion Head

RIELLO 40 F5 TECHNICAL DATA



DIMENSIONS

MODEL F5	B	C	D	E	F
9 11164	10 11/16	7 3132	3 1/2	6	9 13132
	272	180	89	152	239

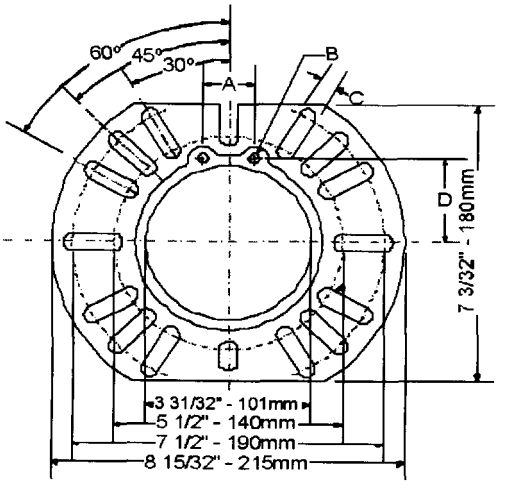
E1: 10-inch long (254mm) tubes are also available.

SPECIFICATIONS

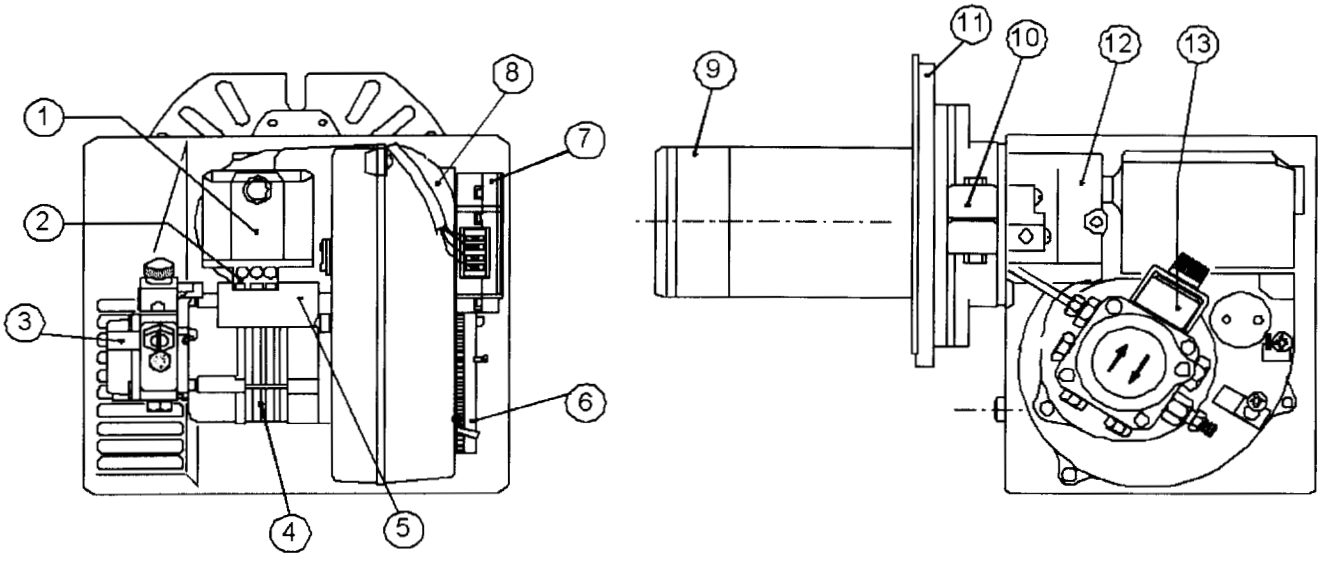
FUEL:	NO heavier than # 2 FUEL OIL
FIRING RATE:	0.75 to 1.65 US GPH
EFFECTIVE OUTPUT:	105,000 to 231,000 BTU/h
VOLTAGE (Single Phase):	120V 60Hz (+ 10% - 15%)
ABSORBED ELECTRICAL POWER:	175 Watts
MOTOR (rated):	3250 rpm - 2.2 AMP
CAPACITOR:	12.5 Microfarads
PUMP PRESSURE:	130 to 200 psig
PRIMARY CONTROL:	RIELLO 530 SE/C
IGNITION TRANSFORMER:	8Kv 16mA

MOUNTING FLANGE DIMENSIONS

MODEL F5	A	B	C	D
Inch	1 1/4	1/4	7/16	2 3/16
mm	32	6	11	56



OIL BURNER COMPONENTS IDENTIFICATION



STANDARD RIELLO OIL BURNER MODELS 40 F3 & 40 F5 BURNER KEY COMPONENTS

1. 530 SE/C INTEGRATED PRIMARY CONTROL
2. PRIMARY CONTROL SUB-BASE
3. FUEL UNIT (PUMP)
4. PSC MOTOR
5. CAPACITOR
6. AIR ADJUSTMENT AND SHUTTER
7. ELECTRONIC AIR SHUTTER ASSY.
8. WIRE HARNESS FOR AIR SHUTTER
9. COMBUSTION HEAD WITH DRAWER ASSY.
10. SEMI FLANGE 2 PIECES
11. UNIVERSAL MOUNTING FLANGE & GASKET
12. AIR TUBE COVER PLATE
13 PUMP VALVE (COIL)

'PLEASE READ THE MANUAL FOR SPECIFIC INFORMATION ON COMPONENTS
****IF BURNER IS AN OEM BURNER KEY COMPONENTS MAY DIFFER SLIGHTLY**

BURNER SERIAL NUMBER IDENTIFICATION

The Riello 15 character serial number, example, **99 A 8511111 00025,** is identified as follows:
99 = last two digits of the year of manufacture; A = BI-week of manufacture; **8511111** = burner product code; **00025** = increment of 1 for each burner produced – specific to product code – reset to zero each January 1st.

(99) (A) 8511111 00025

Year of manufacture	BI-week of manufacture	Burner product code	Sequence

INITIAL SET-UP

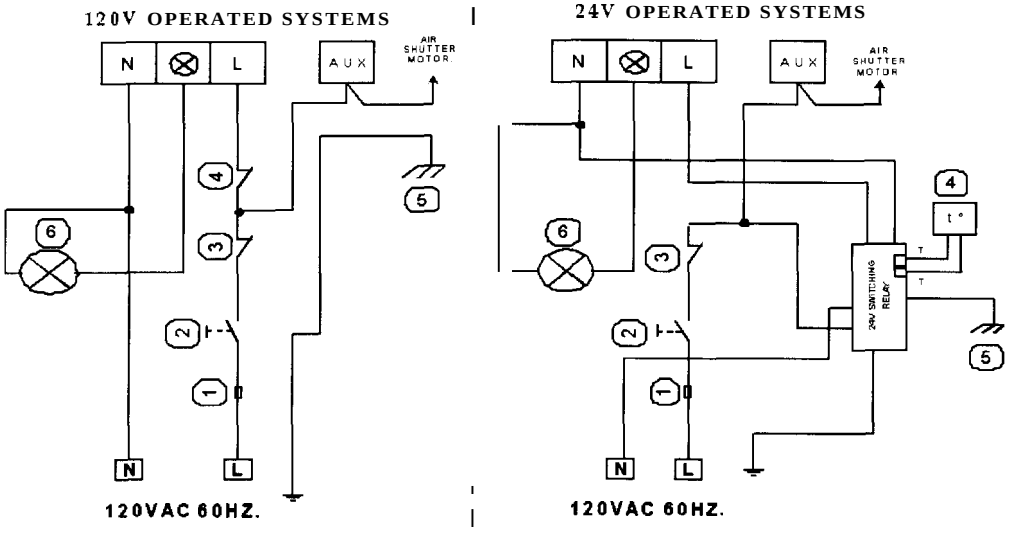
A) Remove burner and air tube from cartons. Check parts list (inside cover) to ensure all parts are present.
B) Remove burner cover by loosing the three screws securing it. Remove control box and air tube cover (see page 8).
C) Remove drawer assembly from air tube, insert nozzle and set Turbulator adjustment for specific input required *(see* pages 8 & 9), then set aside.
D) Mount air tube to burner chassis. *(see* next page)

APPLICATION FIELD WIRING

WIRING DIAGRAM SHOWN BELOW FOR STANDARD RIELLO 530 SE/C PFUMARY CONTROL BOX

INSTALLATION NOTE: ELECTRONIC AIR SHUTTER REQUIRES A CONSTANT 120V POWER SUPPLY TO THE AUX TERMINAL, FAILURE TO PROVIDE THIS WILL RESULT IN NO BURNER OPERATION OR AIR SHUTTER WILL NOTCLOSE.

RECOMMENDED FIELD WIRING FOR TYPICAL APPLICATIONS



WIRING LEGEND:

PLEASE NOTE: OPERATING LIMIT AND SAFETY LIMIT ARE TWO SEPARATE LIMITS

(1) MAINDISCONNECT FUSE
(2) MANUAL SERVICE SWITCH
(3) "SAFETY" LIMIT DEVICE
(4) "OPERATING" LIMIT DEVICE
(5) EARTH GROUND CONNECTION BURNER CHASSIS
(6) BURNER CONTROL REMOTE LOCK OUT ALARM DEVICE. WIRED & SUPPLIED BY OTHERS
(AUX) AUXILIARY SUB BASE ADD-ON CONNECTOR (AIR SHUTTER)
(T - T) 24V THERMOSTAT CONNECTIONS - LOW VOLTAGE OPERATED SYSTEMS

MIN. WIRE SIZE:
INSULATED 18 AWG SOLID OR 16 STRD
RATED 105° C

PROPER EARTH GROUNDING MEANS REQ.'D

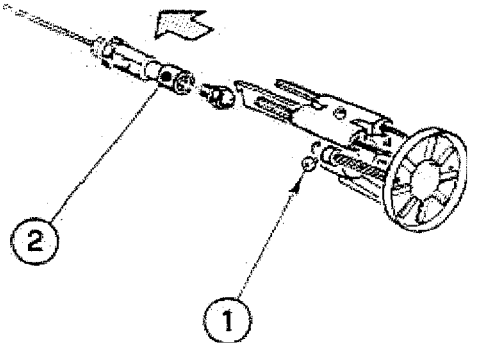
ALL WIRING SHOWN PROVIDED BY OTHERS

WARNING: DO NOT activate burner until proper oil line connections have been made, or failure of the pump shaft *seal* may *occur*.

WARNING: DO NOT activate burner until all safety and operating controls have been **wired in series with the burner, as required by local code authorities and/or as specified by the appliance manufacturer.**

NOZZLE PLACEMENT

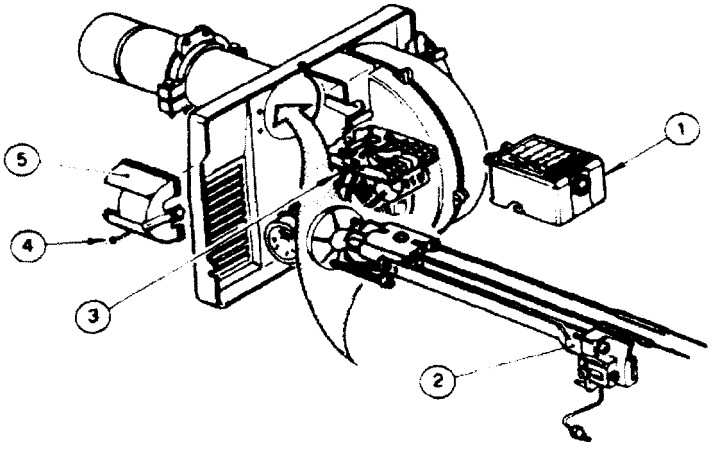
A) Determine the proper firing rate for the boiler or furnace units, considering the specific application, and then use the Burner Setup charts on page 15 to select the proper nozzle and pump pressure to obtain the required input from the burner.
B) Remove the NOZZLE ADAPTER (2) from the DRAWER ASSEMBLY by loosening the SCREW (1).
C) Insert the proper NOZZLE into the NOZZLE ADAPTER and tighten securely (Do not over tighten).
D) Replace adapter, with nozzle installed, into drawer assembly and secure with screw (1).



INSTALLATION/REMOVAL OF DRAWER ASSEMBLY

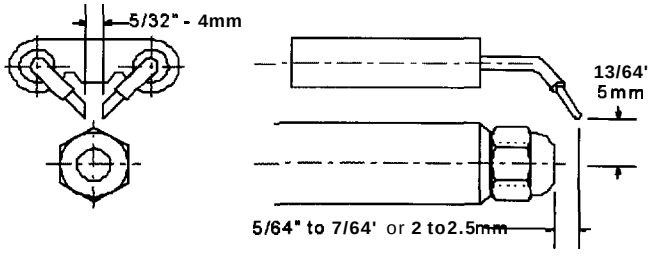
Removal:

A) Loosen off oil delivery tube nut from pump.
B) Loosen SCREW (3), and then *unplug* CONTROL BOX (1) by carefully pulling it back and then up.
C) Remove the AIR TUBE COVER PLATE (5) by loosening the retaining SCREW (4) (Two SCREWS – Model F5).
D) Loosen SCREW (2), and then slide the complete drawer assembly out of the combustion head as shown.
E) To insert drawer assembly, reverse the procedure in items A to D above.



ELECTRODE SETTING

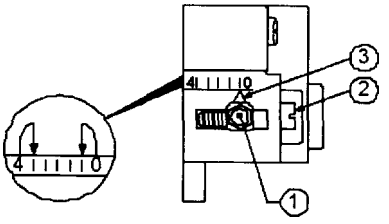
IMPORTANT: THIS DIMENSIONS MUST BE OBSERVED AND VERIFIED.



TURBULATOR SETTING

A) Loosen NUT (1), and then turn SCREW (2) until the INDEX MARKER (3) is aligned with the correct index number as per the Burner Setup charts, or OEM specifications given with the appliance.
B) Retighten the RETAINING NUT (1).

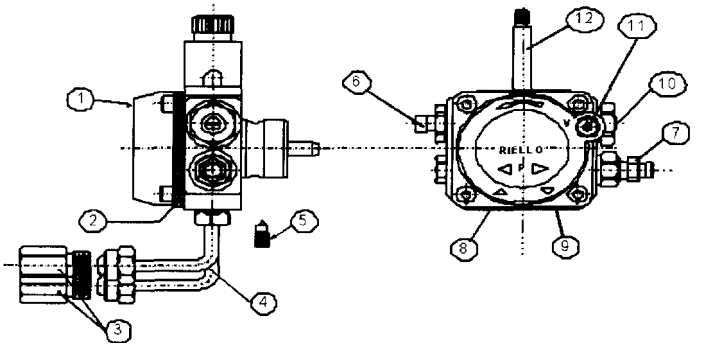
NOTE: OEM specifications take priority over retrofit specifications shown in this manual



MODEL F3 NOTE: Zero and four are scale indicators only From left to right the first line is 4 and the last line 0.
MODEL F5: Same as above, except, scale indicators are 0 and 3.

PUMP CONNECTIONS AND PORT IDENTIFICATION

This burner is shipped with the oil pump set to operate on a single line system. To operate on a two-line system the by-pass plug must be installed.
WARNING: Do not operate a **single** line system with the by-pass plug installed. Operating a **single** line system with the by-pass plug installed will result in damage to the pump shaft seal.
NOTE Pump pressure must be set at time of burner start-up. A pressure gauge is attached to the **PRESSURE PORT** (7) for pressure readings. Two **PIPE CONNECTORS** (4) are supplied with the burner for connection to either a single or two-line system. Also supplied are two **ADAPTORS** (3), two female ¼" NPT, to adapt oil lines to burner pipe connectors. All pump port threads are **British Parallel Thread** design. Direct connection of NPT threads to the pump **will** damage the pump body.
Riello manometers and vacuum gauges **do not** require any adapters, and can be safely connected **to** the pump ports. **An** NPT (metric) adapter must be used when connecting other gauge models.



PUMP LEGEND

1 PUMP COVER
2 PUMP COVER O-RING
3 BSPP TO NPT ADAPTERS
4 SUPPLY AND RETURN OIL LINES
5 RETURN PORT BY PASS SCREW
6 NOZZLE PORT - PUMP OULET TO NOZZLE
7 PUMP PRESSURE PORT AND BI FEDER PORT
8 PUMP SUPPLY PORT
9 PUMP RETURN PORT
10 PUMP PRESSURE REGULATING SCREW
11 VACUUM PORT
12 PUMP VALVE STEM

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