

	8.18 —	Fuel Oil I	Meterino 1	Zalve. /	Adiusting.	Relief Va	lves
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In the event that a leak occurs in the packing of the metering valve, the packing nut should be snugged gradually to stop the leak.

## **A**Caution

Do not over tighten the metering valve packing nut. Excessive tightening of the packing nut prevents free movement of the metering stem. Failure to follow these instructions could result in equipment damage.



If replacement of the metering valve packing is necessary, procure kit P/N 880-370 and install:

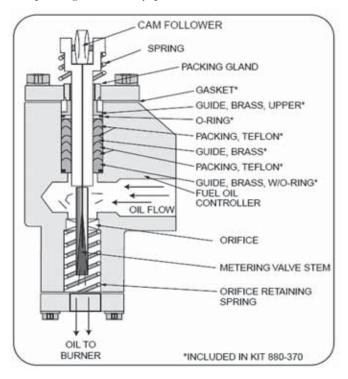


FIGURE 8-8. Metering Valve Packing Sequence

- 1. Shut off the oil flow. Be sure no pressure shows on the gauge.
- 2. Match-mark the cam hub and drive shaft. Match-marking will enable replacement of the cam in its original position and result in a minimum of cam adjustment when the burner is refired.
- 3. Clamp or hold the metering stem in the down position.
- **4.** Loosen the setscrews in the cam hub and rotate, or move the cam to a position where it does not interfere with stem removal.
- **5.** Withdraw the metering valve stem and spring. Do not drop or mishandle. Check for nicks or scratches. Check that the pin holding the metering portion is not protruding. Back off the packing gland.
- **6.** Remove the capscrews holding the jackshaft support bracket so that the bracket can be moved. It may also be necessary to loosen the supporting bracket on the far end of the shaft.
- 7. Remove the existing packing and guides. Do not reuse the packing and guides.
- **8.** Lightly coat the stem with the lubricant provided with the packing kit. Place the new packing, O-rings and guides onto the stem in the sequence shown in Figure 8-8. The beveled face of the guides and the teflon rings must face upward, with the exception of the upper brass guide which is facing down. Be sure that the O-rings are properly located.
- 9. Using the stem as a guide, insert the assembled packing into the cavity, then withdraw the stem.
- **10.** In the event the packing is too high, remove one teflon packing from each side of the middle brass guide as needed. Under no circumstance eliminate the two teflon packings on only one side of the brass guide.
- 11. Replace the gasket, put the support in place, and secure all fastenings.
- **12.** Replace the metering stem and spring. Lightly lubricate the stem to facilitate insertion and easy movement. Use care when inserting so that the orifice and the stem are not damaged.



- **13.** Snug the packing gland, but only sufficiently to place slight tension on the packing. The stem must move freely from the force of the spring.
- 14. Work the stem up and down several times to ensure that it moves freely.
- **15.** Depress the valve stem and replace the cam. Mate the match-marks and secure the setscrews. Be sure the cam spring is centered in the roller.
- 16. Restore oil flow. Test fire the burner at various firing rates being certain that the metering stem freely follows the cam.
- **17.** Tighten the packing gland after a period of operation, if necessary, to maintain proper tension on the packing. Do not over tighten.

If there are indications that the oil metering valve has become clogged at its orifice, it will be necessary to disassemble the control to remove the obstruction. Clean the slotted stem of the oil metering valve with suitable solvent and blow-dry with an air line. Follow the procedure outlined above when removing or reinstalling the metering valve stem. Also check all fuel line strainers.

Should a pressure adjusting or relief valve become clogged, disassemble by releasing the locknut and backing off the screw to relieve tension on the diaphragm. Remove the valve cover and the diaphragm to expose any dirt or foreign material which may have entered the valves. The diaphragms should be replaced annually.

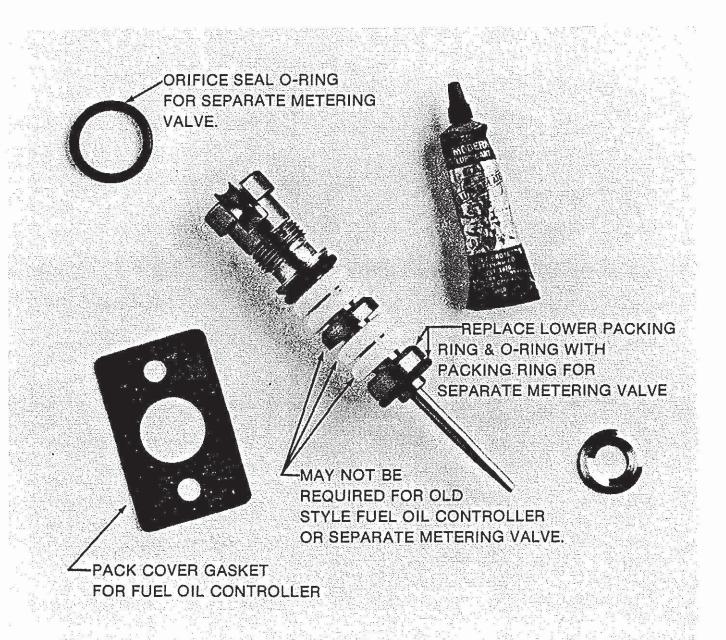
750-94 (revised 2009) **8-19** 



## PL-24 Oil Metering Valve Packing Kit

(for both Separate Oil Metering Valve and Fuel Oil Controller.)

Furnished as a Kit Only, Discard Those Items Not Required



## PACKING KIT, OIL METERING VALVE CONSISTING OF: (2) 908-145 Packing, Crane 816 CVU Teflon (1) 66-156 Ring, Packing, Crane Chemloy No. 70719 (1) (A) Washer, Packing 91-57 (1) 887-22 Tube, Lubriplate 011, 3/8 02. BE COPIES ON USED IN ANY WAY DETRIMENTAL TO THE COMPANY. (A) 66-2 Ring, Packing THIS DRAWING IS THE PROPERTY OF THE CLEAVER-BROOKS DIVISION IS SUBJECT TO CHANGE WITHOUT NOTICE, AND IS NOT TO SE COPIET ON USED IN ANY WAY DETRIMENTAL TO THE 66-112 (A) Ring, Packing "(1) O Ring, Orifice Seal 853-1 32-1295 (A) Gasket, Packing Cover (1) Instruction Sheet, Form Cl3-3805 DISTRIBUTION CODING-CK AUS This is a Universal Kit covering the separate Metering Valve and Fuel Oil Controller Valve. GRN M-A When installing disregard parts not applicable. Used only on separate valve type. Used only on Fuel Oil Controller type. CB50-600 ALL MATERIAL SIZES ON BILL OF MATERIAL ARE FOR REFERENCE ONLY. DRAWING DIMENSIONS MUST SE FOLLOWED. TOLERANCE, UNLESS OTHERWISE SPECIFIED: FRACTIONAL ± DECIMAL ± USED ON ANGLES ± HOLE LOCATIONS & DRILLED, PUNCHED OR SLOTTED HOLES ± .010 113-3 3/802 WAS 1/20Z GG-112 WAS ONE REGD. Cleaver Brooks STRATFORD LEBANON 1 6-2-71 MILWAUKEN, WIECONSIN, U.S.A

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PACKING KIT, METERING VALVE

-A-

908

DRWG. NO

## KIT, PL-24 OIL METERING VALVE PACKING CONSISTING OF:

QTY.	PART NO.	DESCRIPTION
(1)	32-1295	GASKET, PACKING COVER
(1)	661-29	NUT, PACKING
(1)	661-30	RING, LOWER PACKING
(1)	661-31	RING, MIDDLE PACKING
(1)	661-32	RING, UPPER PACKING
(1)	853-1025	O-RING #2-210, 3/4" ID X 1" OD X 1/8" DIA.
(1)	887-22	TUBE, LUBRIPLATE OIL, 3/8 OZ.
(2)	908-145	PACKING SET TEFLON
(1)*	66-2	RING, PACKING
(1)*	853-1	O-RING, ORIFICE SEAL

THIS IS A UNIVERSAL KIT COVERING THE SEPARATE METERING VALVE AND FUEL OIL CONTROLLER.

WHEN INSTALLING DISREGARD PARTS NOT APPLICABLE.

\* = USED ONLY ON SEPARATE VALVE TYPE.

ALL MATERIAL SIZES ON BILL OF MATERIAL ARE FOR REFERENCE ONLY.

DRAWN

CHECKED

TOLERANCE, UNLESS OTHERWISE SPECIFIED: FRACTIONAL

HOLE LOCATIONS

ANGLES

DRILLED, PUNCHED OR SLOTTED HOLES = .010

HOLE LOCATIONS

ANGLES

DRILLED, PUNCHED OR SLOTTED HOLES = .010

Cleaver Brooks

GREENVILLE, MISS.
STRATFORD, ONT.

KIT, PL-24 OIL METERING VALVE
PACKING

DRWG. NO. 880 A 370

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2	945 104	Diaphragm, 3-1/4" Dia
1	32A 1296	Casket, Diaphragm
1.	924A130	Spring
1	945A111	Seat, Upper Spring
1	945A112	Stem
1	940A1509	Inner Valve
1	924A126	Spring, Inner Valve
1	945A113	Seat, Lower Spring

DNG. 739 D3 (OLD STYLE) 739D75 (NEW DESIGN)

ALL MATERIAL SIZES ON BILL OF MATERIAL ARE FOR REFERENCE ONLY. DRAWING DIMENSIONS MUST BE FOLLOWED. FRACTIONAL ±

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AUKEE, WISCONSIN

Parts, Regulating Valve Controller

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1 194A80 DIAPHRAGM, REGULATOR, SUB-ASSY.
1 32A1291 GASKET, DIAPHRAGM
1 924A129 SPRING
2 924A128 SPRING SEAT

REF: DWG: 739D3 (OLD STYLE) 739D75 (NEW DESIGN)

ALL MATERIAL SIZES ON BILL OF MATERIAL ARE FOR REFERENCE OF "Y. DRAWING DIMENSIONS MUST BE FOLLOWED. SCALE 12-3-75 TOLERANCE, UNLESS OTHERWISE SPECIFIED: FRACTIONAL DRILLED, PUNCHED OR SLOTTED HOLES = .010 HOLE LOCATIONS : ANGLES = R.K.S. DISTRIBUTION CODING-CK BOXES CAUTION THIS DRWG. CHECKED R.S.R. IS REGISTERED TO BELOW LEB ENR AUS ENG W-A APPROVED RSR STR P-S GRN MEX CSA U.L. USED ON: LEBANON STRATFORD REVISIONS MILWAUKEE, WISCONSIN, U.S.A. KIT, REPAIR PARTS, BACK PRESSURE VALVE, FUEL OIL 12-3-75 CONTROLLER 880-A-76 DRWG. NO.

880-A-76-

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