

JaecoPak Installation & Operation

Reference DWG #00220 & #00188

WARNING: To prevent personal injury, all moving parts must be protected. Protective guards for all exposed moving parts are available.

A. Installation

Level pump and secure at tie down bolt holes provided. After bolting baseplate, check alignment of motor coupling (41) and realign if necessary. Do **NOT** support piping with the pump or connect piping in strain. Jaeco pumps are supplied with single or double ball check valves on suction and discharge pump. Provide a flooded suction. Suction piping should be one pipe size larger than suction valve thread. Install a suction line strainer with a wire mesh screen. A relief valve may be installed in discharge line close to the pump. Set relief valve for 20% to 25% greater than average operating pressure. Remove red pin from gear reducer oil fill plug (207).

B. Capacity Adjustment

With pump stopped, loosen locknut (22) and turn adjusting screw (13) until required capacity is indicated on the capacity scale. Retighten locknut (22) after adjustment and before starting pump.

C. Packing

The factory has properly installed packing (33) and tested the pump. Gland nut (5) adjustment has been set and should not require further tightening, unless leakage is observed. If plunger (6) is scored/scratched, it should be replaced when installing new packing (see packing replacement).

D. Lubrication

Gear Reducer

The gear reducer housing has two pipe plugs (201) on its end. The upper plug is the oil level fill plug; the lower plug is the oil drain plug. Check the oil level every 60 days and, if necessary, add oil through fill plug hole. Drain and replace oil annually using EP-150 gear oil (AGMA 7). EP-150 gear oil is available from Jaeco Fluid Systems (part no. 50076-P040).

Crosshead/Connecting Rod Bearings/Packing

Lubricate each grease fitting once a week with light hypoid grease until grease appears on outside of bearing area. Lubricate packing with one shot of grease per week.

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E. Pump Servicing – Part Replacement

Packing

Loosen set screw (24) and remove liquid end assembly. Remove gland nut (5), packing set (33) and lantern ring (7) taking care not to scratch cylinder walls (4). Inspect plunger for scoring/scratches and replace if necessary (see below). Install the following packing rings one at a time: bottom adapter flat side down, 3 v-rings, top adapter flat side up, lantern ring, bottom adapter, 1 v-ring and then top adapter (Teflon packing is as follows: bottom adapter, 5 v-rings, top adapter, etc.). Loosely install gland nut. Reinstall liquid end assembly, tighten set screw (24) and finger tighten gland nut. Do NOT tighten more than one quarter turn past finger tight. If a rise in stuffing box temperature is observed, loosen and readjust gland nut. Packing adjusted too tightly will create excessive friction and heat, which will adversely affect the life of the packing, plunger and connecting rod bearings.

Plunger

Loosen set screw (24) and remove liquid end assembly. Remove locknut (22) and rotate connecting rod assembly (31) off tee bolt (12). Slide plunger/connecting rod assembly out of pump housing end. Remove clevis pin (3) from crosshead using a pin punch and remove retaining screw (18) with an allen wrench. Install new plunger and reinstall liquid end assembly.

Connecting Rod Assembly

If connecting rod bearings are worn more than 0.010, replace connecting rod assembly (31, part no. 00025-G001). If replacing one end of connecting rod assembly, make sure center to center bearing distance of reassembled connecting rod does not exceed 2 7/8". Factory recommends replacing as a unit.

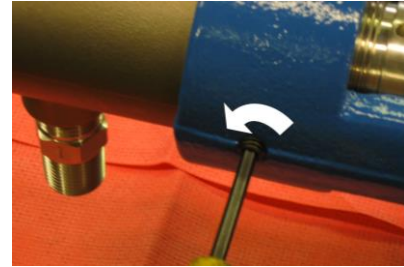
Installation of Breather Assemblies

For outside use of pump, replace the red fill plug (207) on top of gear reducer with the breather assembly. This allows venting of the gear reducer and will prevent dust and water from entering the gear reducer.

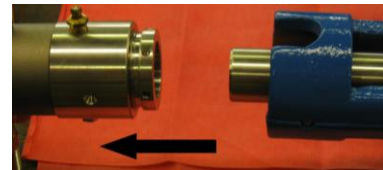
JaecoPak Packing Replacement Instructions

Note: Be sure to relieve pressure on the system, loosen gland nut to relieve pressure of packing on plunger, and detach connected piping in order to ease disassembly.

- 1) Loosen set screw (24)



- 2) Remove liquid end assembly



- 3) Remove gland nut (5)



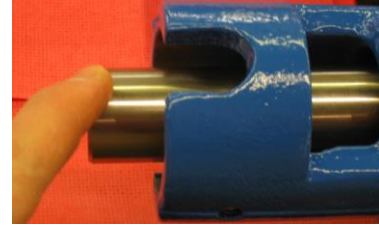
- 4) Remove packing set (33)



NOTE: When removing Packing Set and Lantern Ring (7) use non-marring tools and take care not to scratch cylinder walls (4).

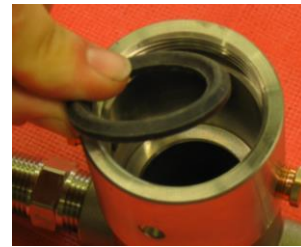
JaecoPak Packing Replacement Instructions

- 5) Inspect plunger and cylinder for scoring/scratches and replace if necessary. ("JAECOPAK INSTALLATION AND OPERATION").

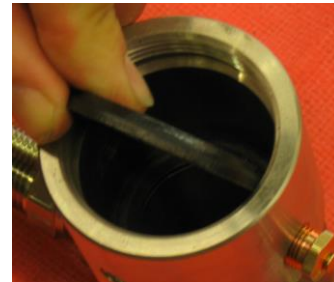


Install the packing assembly one piece at a time:

- 6) Bottom adapter flat side down and domed side up,



- 7) 3 v-rings with domed side up (5 for Teflon v-rings),



- 8) Top adapter cupped side down and flat side up

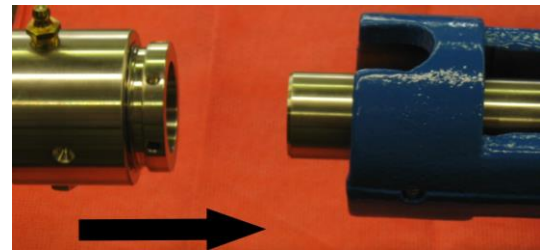


- 9) Lantern ring,

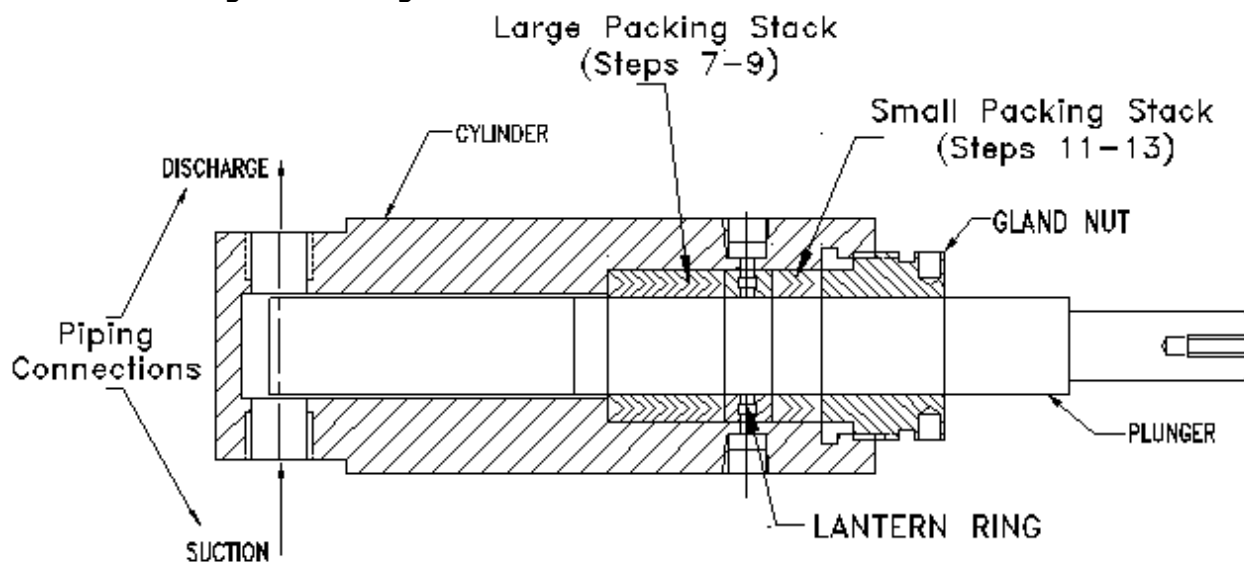


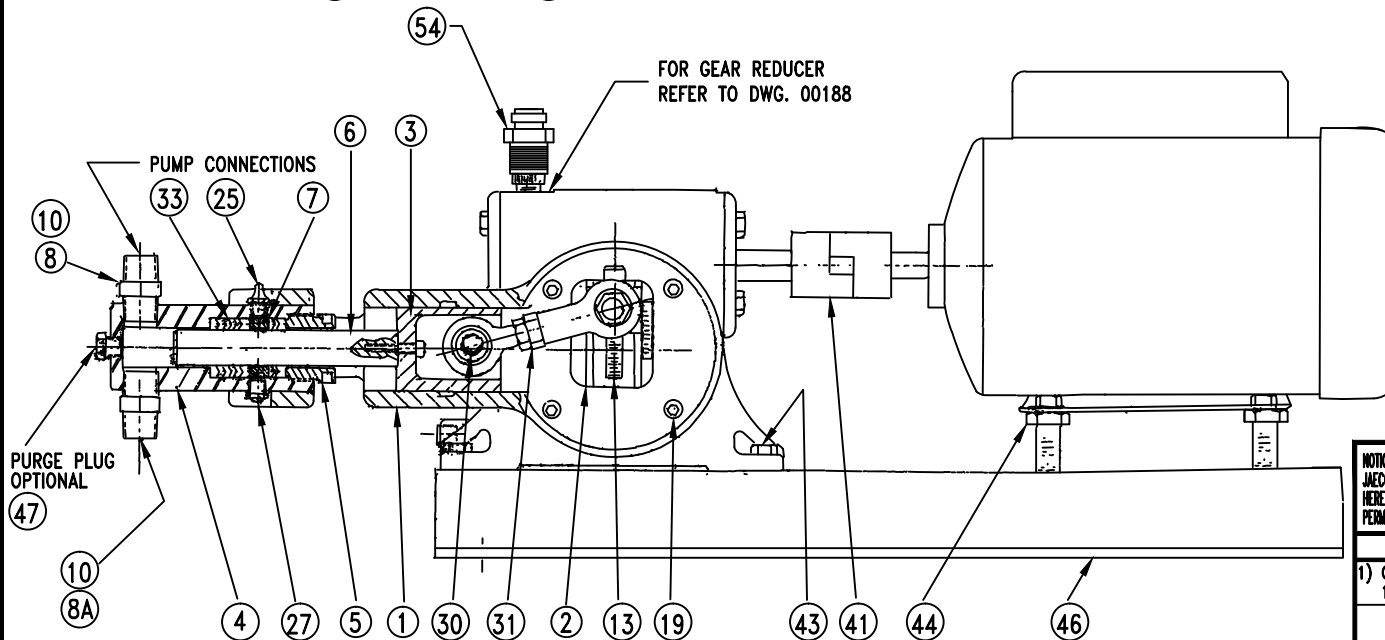
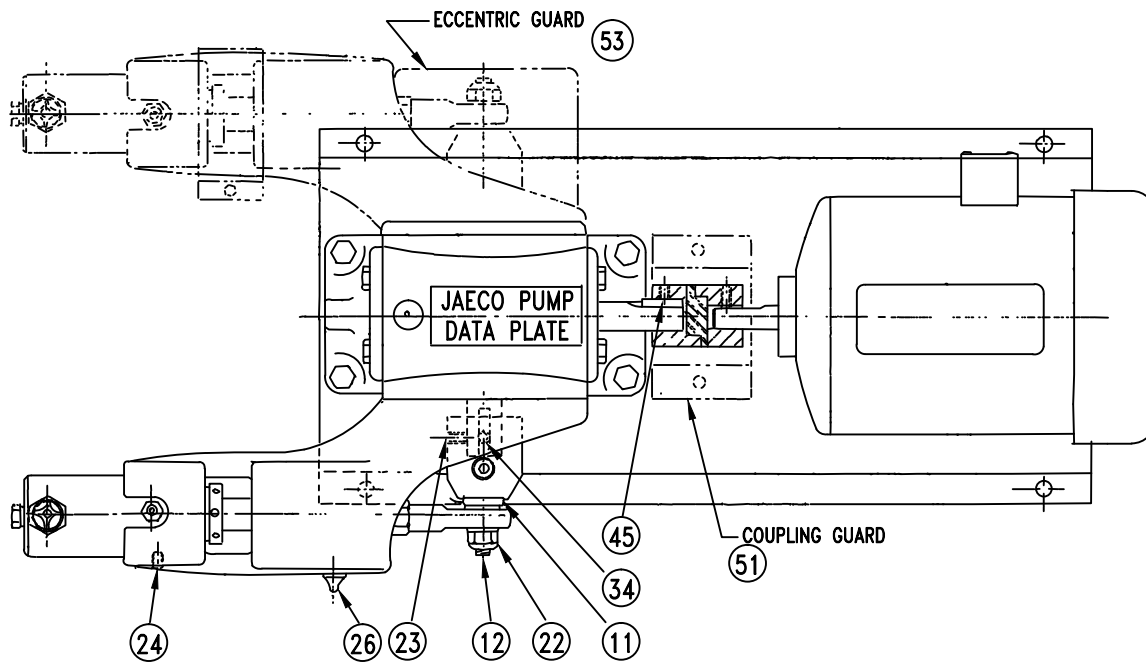
JaecoPak Packing Replacement Instructions

- 10) Second bottom adapter, domed side up
- 11) 1 v-ring, domed side up,
- 12) Second top adapter, domed side up
- 13) Now install gland nut and screw in so it's just against the packing
- 14) Reinstall liquid end assembly,



- 15) Tighten set screw (24)
- 16) When preparing to restart pump, snug packing by tightening gland nut NO MORE THAN one quarter turn past finger tight. Once pump is restarted, use spanner or pin wrench to tighten as needed to prevent seepage past packing. DO NOT tighten more than ¼ turn at a time. If a rise in stuffing box temperature is observed, loosen and readjust gland nut. Packing adjusted too tightly will create excessive friction and heat, which will adversely affect the life of the packing, plunger and connecting rod bearings.





ITEM	DESCRIPTION
1	PUMP HOUSING W/BOLTS(19), WASHERS & GASKETS
2	ECCENTRIC ASSY. W/SCREW(13) & SCALE
3	CROSSHEAD
4	CYLINDER
5	GLAND NUT
*	6 PLUNGER W/SCREW
7	LANTERN RING
*	8 VALVE ASSY. DISCH. (DOUBLE BALL) OPTIONAL
*	8A VALVE ASSY. SUCT. (DOUBLE BALL) OPTIONAL
*	10 VALVE ASSY. DISCH. & SUCT. (SINGLE BALL) STD.
11	WASHER AND POINTER
12	TEE BOLT
13	ADJUSTING SCREW
19	BOLT W/WASHER (SET OF 4)
22	LOCK NUT
23	SET SCREW (SET OF 2)
24	SET SCREW
25	GREASE FITTING
26	GREASE FITTING
27	GREASE RELIEF FITTING
30	CLEVIS PIN
*	31 CONNECTING ROD ASSEMBLY
*	33 PACKING
34	KEY
41	COUPLING
43	GEAR REDUCER BOLT(SET OF 4)
44	MOTOR SUPPORT W/WASHER & BOLT (SET OF 4)
45	KEY
46	BASEPLATE
47	PURGE PLUG (OPTIONAL)
51	COUPLING GUARD
53	ECCENTRIC GUARD
54	BREATHER ASSY. (OPTIONAL)

* INDICATES RECOMMENDED SPARE PARTS

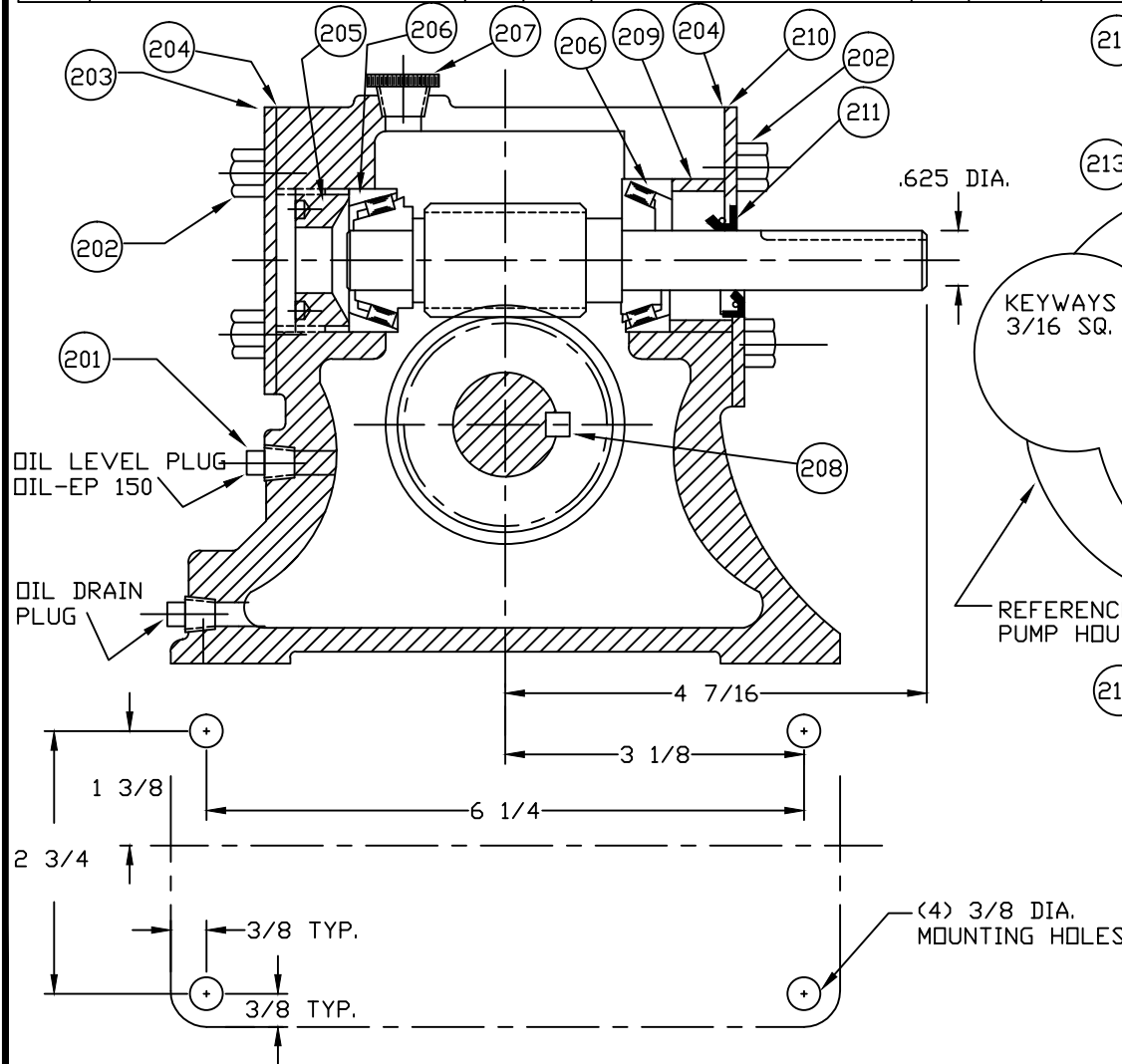
WHEN ORDERING SPARE PARTS BE SURE TO GIVE PUMP SERIAL & MODEL NUMBERS

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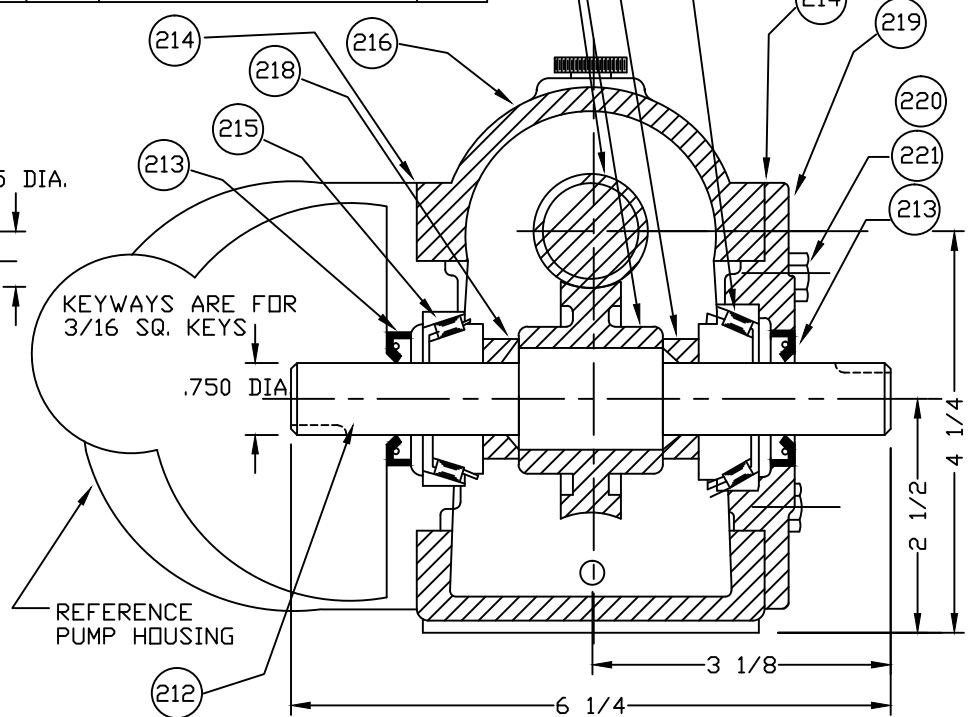
REVISIONS 1) CHANGE PAGE NO. 1/05 JPC		JAECO FLUID SYSTEMS, INC. 17 LEE BLVD. STE. D MALVERN, PA 19355-1234	
		PARTS CROSS SECTION	
		JAECOPAK 1	
DATE 4-18-85		DWG NO. 00220	REV.
DR PRT			
CHKD			
SCALE NONE		PAGE 14.01D	1

ITEM	DESCRIPTION	QTY	ITEM	DESCRIPTION	QTY	ITEM	DESCRIPTION	QTY.
201	OIL PLUG	2	208	KEY	1	215	BEARING SET OUTPUT	2
202	SCREW-HEX HD CAP	8	209	INPUT SPACER	1	216	HOUSING	1
203	CAP-INPUT(BLIND)	1	210	CAP-INPUT(OIL SEAL)	1	217	GEAR SET	1SET
204	GASKET-INPUT	2	211	OIL SEAL-INPUT	1	218	HUB SPACER	2
205	INPUT ADJUSTER	1	212	OUTPUT SHAFT	1	219	CAP-OUTPUT (OIL SEAL)	1
206	BEARING SET-INPUT	2	213	OIL SEAL-OUTPUT	2	220	SCREW-HEX HD. CAP	4
207	FILL PLUG	1	214	GASKET-OUTPUT	1SET	221	NYLITE WASHER	4

IMPORTANT: WHEN ORDERING SPARE PARTS, BE SURE TO INCLUDE PUMP MODEL NO. AND SERIAL NO.



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1) REDRAWN 5-25-05
JPC

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES

MACHINE TOLERANCE
DECIMAL ± .005
FRACTIONS ± 1/64
ANGLES ± 0°-30

JAECO FLUID SYSTEMS, INC.			
17 LEE BLVD. STE. D MALVERN, PA 19355-1234			
DATE	8-30-88	GEAR REDUCER JAECOPAK 1	
DR	PRT	DWG NO. 00188	REV.
CHKD		PAGE 14.02C	1
SCALE	NONE		