

## Jaeco Hi-Flo Model 312 & 316 Installation & Operation

### Reference DWG #31055

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

### Installation

Level pump so each side and all corners of the baseplate contact the foundation. Do not twist baseplate or misalignment may damage the pump. Tie down bolt holes are provided. Be sure to allow ample clearance for piping. Do **NOT** support the piping with the pump or connect piping in strain. Jaeco pumps are supplied with single ball check valves on suction and discharge of the 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. Make sure highest pipe plug on gear reducer is removed and the vent plug in installed prior to operation.

### Capacity Adjustment

Stop pump; loosen locknut (332) and turn adjusting screw (306B) until required capacity is indicated on the capacity scale. Retighten locknut (322) after adjustment and before starting pump.

- \* It is strongly recommended that if the capacity is to be adjusted repeatedly that the locknut be replaced after each adjustment. Failure to do so may generate excessive backlash in the driveline, resulting in premature wear and potential damage.

### Packing

The factory has properly installed packing (346) and tested the pump. Gland nut (348) adjustment has been set and should not require further tightening, unless leakage is observed. If plunger (336) is scored/scratched, it should be replaced when installing new packing (see packing replacement below).

### Lubrication

**Gear Reducer** (See enclosed instructions).

### Crosshead/Connecting Rod Bearings/Packing

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

### Pump Servicing – Part Replacement

#### Packing

- Remove grease relief assembly (335, 338, 339)
- Loosen set screws (329) and remove liquid end assembly
- Remove gland nut (348), packing set (346) and lantern ring (347) taking care not to scratch cylinder walls (340).
- Inspect plunger for scoring/scratches and replace if necessary (see below).

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- Install, one at a time, the following packing rings: bottom adapter flat side down, V-rings, top adapter flat side up, lantern ring (must line up with grease fitting holes in cylinder), bottom adapter, V-ring and then top adapter.
- Loosely install gland nut.
- Reinstall liquid end assembly
- Tighten set screw (329) and finger tighten gland nut.
- Do NOT tighten more than one turn past finger tight.
- If a rise in stuffing box temperature is observed, loosen and re-adjust 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**

Remove grease relief assembly (335, 338, 339), loosen set screws (329) and remove liquid end assembly. Remove lock nut (322) and rotate connecting rod assembly (331) off tee bolt (320). Slide plunger/connecting rod assembly out of pump housing end. Remove clevis pin (332) from crosshead and remove retaining screw (337) with an allen wrench. Install new plunger and reinstall liquid end assembly.

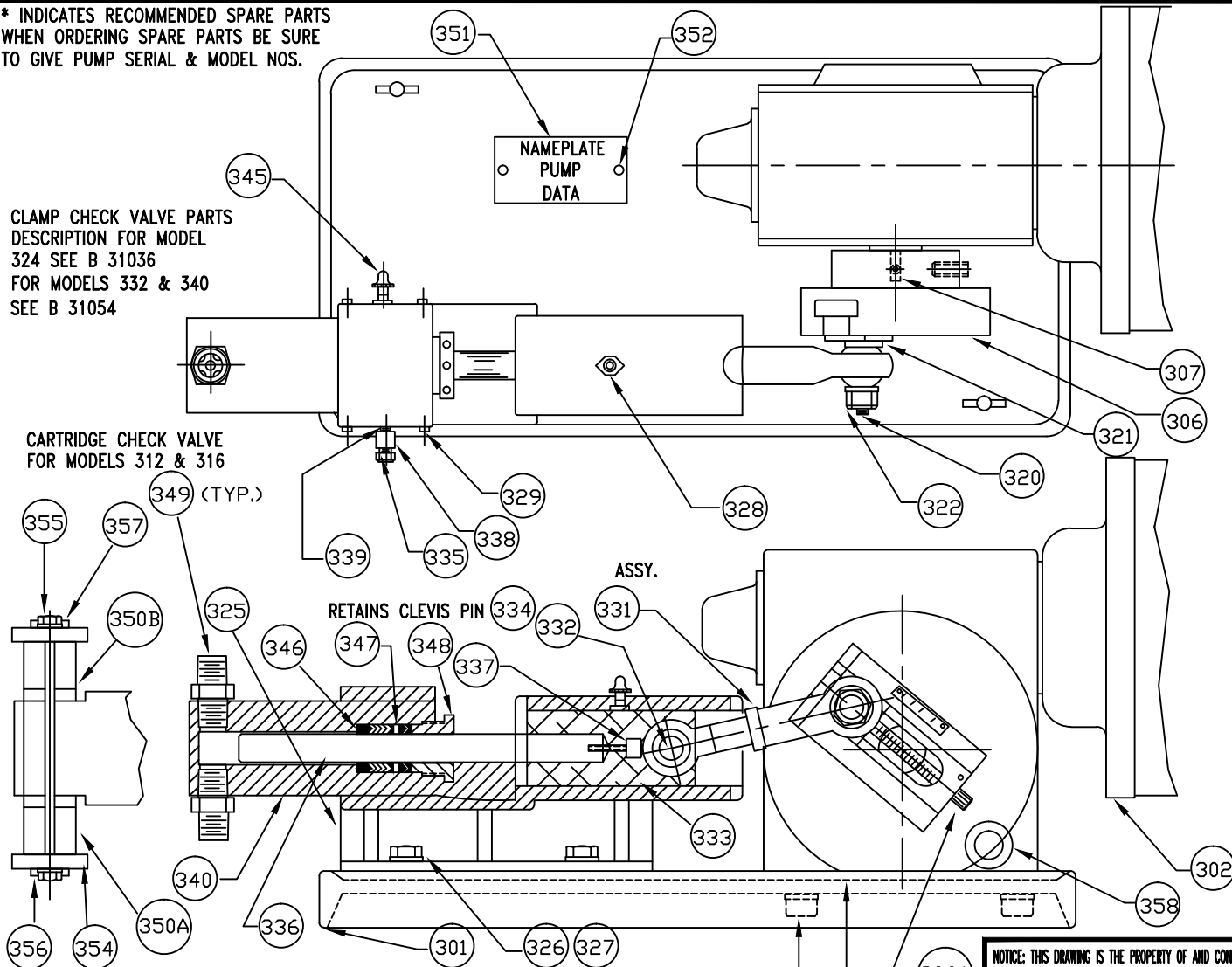
### **Connecting Rod Assembly**

If connecting rod bearings are worn more than 0.010, replace connecting rod assembly (331).

\* INDICATES RECOMMENDED SPARE PARTS  
WHEN ORDERING SPARE PARTS BE SURE  
TO GIVE PUMP SERIAL & MODEL NOS.

CLAMP CHECK VALVE PARTS  
DESCRIPTION FOR MODEL  
324 SEE B 31036  
FOR MODELS 332 & 340  
SEE B 31054

CARTRIDGE CHECK VALVE  
FOR MODELS 312 & 316



ITEM	DESCRIPTION
301	BASEPLATE
302	GEAR REDUCER
303	SCREW SOC. HD. (SET 4)
304	LOCKWASHER (SET 4)
305	SHIM (SET 2) IF REQUIRED
306	ECCENTRIC ASSY. W/ ADJ SCREW SCALE SET SCREWS
306A	ADJUSTING SCREW
307	KEY
320	TEE BOLT
321	STROKE INDICATOR
322	LOCKNUT
325	PUMP HOUSING
326	SCREW HEX HD. (SET 4)
327	LOCKWASHER (SET 4)
328	GREASE FITTING
329	SET SCREW SOC. HD. (SET OF 4)
* 331	CONNECTING ROD ASSY.
332	CLEVIS PIN
333	CROSSHEAD
334	SET SCREW SOC. HD.
335	GREASE RELIEF FITTING
* 336	PISTON
337	SCREW SOC. HD.
338	COUPLING PIPE
339	PIPE NIPPLE

ITEM	DESCRIPTION	ITEM	DESCRIPTION
340	CYLINDER	350B	CHECK VALVE DISCHARGE
345	GREASE FITTING	351	NAMEPLATE
* 346	PACKING	352	DRIVE SCREW (SET OF 2)
347	LANTERN RING	354	CLAMP PLATE
348	GLAND NUT	355	STUD (SET OF 2)
* 349	CHECK VALVE ASSY. CARTRIDGE	356	NUT HEX (SET OF 4)
350A	CHECK VALVE SUCTION	357	LOCKWASHER (SET OF 4)
		358	EYE BOLT (LIFTING LUG)

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REVISIONS		JAECO FLUID SYSTEMS, INC.	
1) REDRAWN 6-3-05 JPC		17 LEE BLVD. STE. D MALVERN, PA 19355-1234	
DATE	9-11-84	PARTS CROSS-SECTION HI-FLO PUMPS	
DR	PRT	DWG NO. 31055	REV.
CHKD		PAGE 34.01D	1
SCALE	NONE		