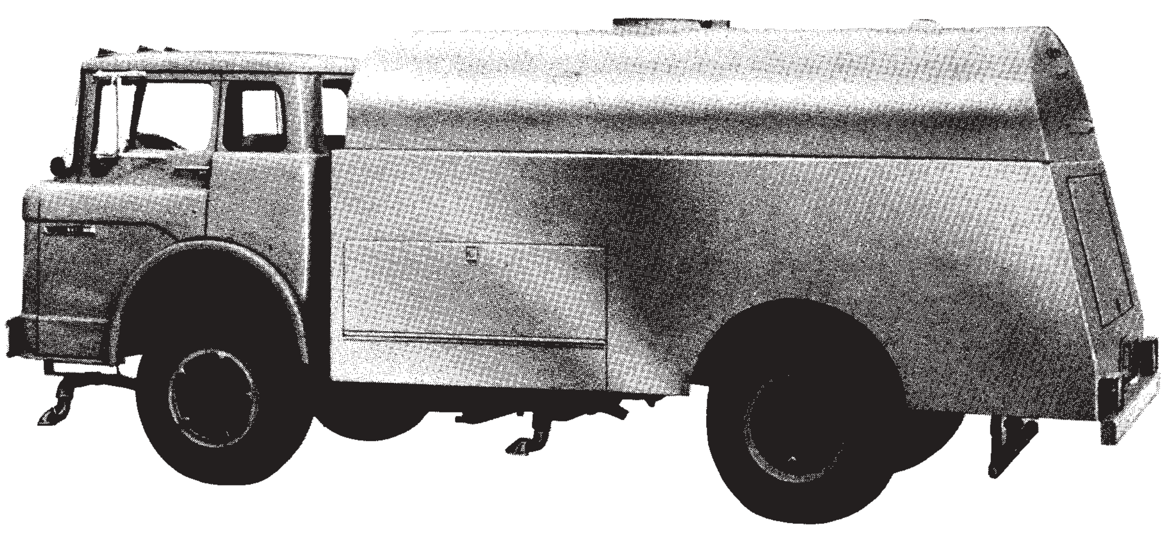
M-802-77

Serial Number Range L-1483, L-1511, L-1516 thru Present Models

STREET FLUSHER
OPERATION, MAINTENANCE, PARTS and SAFETY MANUAL



E. D. ETNYRE & CO., Oregon, Illinois 61061

ETNYRE STREET FLUSHER

OPERATION, MAINTENANCE, PARTS AND SAFETY MANUAL

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HOW TO ORDER PARTS

To assure prompt delivery when ordering parts, please furnish the following information: 1) Complete name and address of consignee. 2) Method of shipment preferred. 3) Is shipment to be prepaid or collect? 4) Serial numbers of units to which parts apply. 5) Complete part numbers and descriptions. 6) Any special instructions.

SPECIFY UNIT SERIAL NUMBER WHEN ORDERING PARTS

WARRANTY

E. D. Etnyre & Co. guarantees for a period of one year from the date of the shipment to repair or replace, F.O.B. its factory, any part which requires replacement due to defect in material or workmanship, but will not be responsible for consequential damages or any further loss by reason of such defect. This guarantee does not cover products that were not manufactured by E. D. Etnyre & Co. except to the extent of the guarantee given by the actual manufacturer.

E. D. ETNYRE & CO., Oregon, Illinois 61061, Phone Area Code 815/732-2116, Cable Address "EDECO"

Table Of Contents

Introduction

This manual contains a complete list of serviceable parts for the Etnyre Street Flusher.

This manual is divided into four sections . . . introductory pages, table of contents, illustrations and parts lists, and numberical index.

The table of contents lists the unit classifications and directs the user to the page where the illustration and parts list may be found.

The individual parts in each illustration are shown in their normal relationship to one another. Reference numbers are used on each illustration and should not be used when ordering parts. A parts list accompanies each illustration.

A numberical index at the rear of the manual contains a listing of all parts numbers with page numbers showing where each part is listed and described.

Operating Instructions

The following instructions are in OPERATION SEQUENCE.

1. Check Oil Reference Figure 1. Page 7.

Hydraulic oil should always be visible in the oil level site glass in the side of the hydraulic oil reservoir. If air or foam in oil is visible check Trouble Shooting Section, Item No. 3, page 11.

2. Pre-Filling Reference Figure 1. Page 7.

Close all drains. They are located as follows: Two drain cocks (20) on each water control valve (19), one 3/8 inch drain valve (21) on bottom of water pump and one drain cock on bottom of pressure transfer diaphragm (22) located at the rear center of the discharge header. NOTE: Do not remove hex plug located in top of diaphragm. There is one drain cock (20) on the bottom of each of the 2 inch pipe elbows in flushing water line below the water control valve (19). On units equipped with a rear hose reel, close the line valve (29) (1½ inch Ball) and the one drain cock (20) in the inlet elbow to the hose reel.

3. Fill Tank Reference Figure 1. Page 7.

Fill tank with water from a hydrant using a filling hose equipped with connectors that will accept both the tank and hydrant threads. A 2½ inch ID x 16 foot large fill hose equipped with a coupling to fit tank connection is provided as standard equipment. The standard fill connection is provided as standard equipment. The standard fill hose is furnished less coupling on one end for the customer to apply a coupling suitable to accommodate the hydrant. The fill strainer (23) at the rear of the tank will back flush when the fill hose is disconnected from the hydrant. WARNING: Filling should be done only through the fill line. The manhole is designed for inspection and maintenance only. The amber full lamp (24) on the rear of the tank will light when the tank is approximately 95 percent full. The overflow pipe will carry off the water when the tank is completely full. The full lamp will remain lit until the water level drops below the 95 percent full mark.

4. Activate Hydraulic System

Engage the P.T.O. by pushing or pulling the knob marked "Pump". This will begin operation of the hydraulic pump. See P.T.O. Operating Instructions on page 8.

5. Flushing Pressure Selection Reference Figure 1

With the transmission in neutral, accelerate the truck engine to provide 1500-1800 R.P.M. on the hydrostatic pump tachometer (7) located in the control panel. Select the desired flushing pressure using the discharge pressure selection valve (8) located on right hand side of the control panel. Rotate the knob of the valve until desired pressure is obtained. Turning the knob clockwise increases the pressure; turning the knob counterclockwise decreases the pressure. The valve is equipped with a locking nut. Be sure the locking nut is released before adjusting pressure. This pressure is read on the pre-determined operating pressure gage (9) located in the control panel.

6. Water Pump Start Up Reference Figure 1

Ignition switch must be on and all control panel switches off (down position). Turn on the red system power switch (11) in the control panel. The amber system power pilot light (17) will now be on. (Note: The following sequence applies to a stationary or moving vehicle) With the hydrostatic pump operating at 1500-1800 R.P.M., press the white system activate switch (12). This is a momentary contact switch and will have to be held in the closed position while water pump begins to rotate and discharge header pressure increases. The green system activate pilot light (15) will come on at the time the white switch (12) is closed. When the header water pressure increases sufficiently the green pilot light (15) will appear to flicker. At this time the white switch (12) may be released. The amber pilot light (17) will go out and the green pilot light (15) will remain lit. The water pressure in the discharge header will increase to the pre-determined pressure and the operating water pressure gauge (10) and the pre-determined operating pressure gauge (9) should indicate the same pressure. If the engine R.P.M. is decreased to a point where the header water pressure drops below the 8-10 lb. set point of the pressure switch – the amber System Power light (17) will relight and the green System Activate light (15) will remain lit. In this condition the system is not operating at a speed sufficient to discharge much water. However, as soon as the engine speed is increased, the water discharge from the pump will be evident from the nozzles. When the system is turned off, or if the tank water level is lowered to the cutout point, the system will drop out automatically and the start-up sequence must be repeated to put the system back into operation. WARNING: Hydrostatic pump speed must not exceed 2800 R.P.M.

7. Nozzle Operation   Reference Figure 1

Water pressure is now available for flushing. Either turn on the Master Nozzle Switch (1) and select each nozzle switch (2,3,5,6) as desired or pre-select all nozzles to be used and then turn on the master nozzle switch. (1) When using the master switch all the nozzles selected will operate at the same time. During the flushing operation additional nozzle/s may be turned on or any nozzles already in service may be turned off and the system will automatically maintain the pre-determined pressure.

At intersections or other locations as desired, if the transmission is shifted into neutral and the engine speed is maintained, the water discharged from the nozzles will be continued until the Master Switch (1) or Nozzle Switches (2, 3, 5, 6) are turned off.

8. Nozzle Adjustment   Reference Figure 1

The spray should strike the pavement from 5 to 8 feet in front of the nozzle. Whether a unit is equipped with 3 or 4 nozzles, the side nozzles (32) (33) should always be adjusted so the inside edge of the spray fans just miss the front wheels of the truck. When a unit is equipped with 3 nozzles and flushing only the right side of street is desired, the left hand front nozzle (34) should be adjusted toward the right so that the left edge of spray fan is directed straight forward. When a unit is equipped with 3 nozzles and flushing the entire street is desired, adjust the left hand front nozzle straight ahead so that the spray fan is equally distributed on either side of the center of the street.

When a unit is equipped with 4 nozzles and flushing only the right hand side of the street is desired, set the right hand front nozzle (35) so that the left hand edge of spray fan is directed straight ahead. The left hand front nozzle is not used in this application. When a unit is equipped with 4 nozzles and flushing the entire street is desired both the left hand (34) and the right hand (35) front nozzles should be adjusted so that the inside edges of the spray fans intersect each other just before they reach the street surface.

9. Automatic Shut Down   Reference Figure 1

When the red low water warning light is activated it indicates that there is only a short period remaining before the pressure system drop-out occurs. When system drop-out occurs the green pilot light (15) will go out and the amber pilot light (17) will relight. The tank will have to be refilled (Ref. Section 3) for further operation.

10. Operational Speeds

The recommended ground speeds for flushing are from 4 to 12 M.P.H. The hydrostatic pump speed should not exceed 2800 R.P.M. Most flushing will be accomplished in first gear. If gear changing occurs, the system pressure may drop and the water discharged from the nozzles will diminish. As soon as the engine speed is resumed, the water pressure and nozzle flow will be as before.

11. Hydraulic System Caution   Reference Figure 1

The unit is equipped with a water immersed oil cooler and the red hydraulic oil overheat pilot light (16) should never be lit. If the red light comes on, shut down the system immediately to prevent damage to the hydraulic components. Refer to maintenance section of this manual.

12. Auxiliary Equipment   Reference Figure 1

1. Spray Bar and Sprinkler Nozzle. Pressure selection for the bar (31) or the sprinkler is accomplished in the same manner as it is for the flushing nozzles (Section 5). The bar (31) or sprinkler operation is selected with the black switch marked "Auxiliary" (4) on the control panel. The master switch (1) must be on.

2. Hose Reel, Manual and Electric. Pressure selection for the hose reels is accomplished in the same manner as for the flushing nozzles (Section 5). Hose reel (27) operation is usually accomplished with the unit in a stationary position thus the truck hand throttle will have to be used to obtain hydraulic pump R.P.M. The hose reel (27) is equipped with a wind lock (28). Be sure this lock (28) has been released before unwinding the hose from the reel. To operate hose (29), turn ball valve handle 90 degrees (parallel with flow is open). The ball valve (29) is located on the left hand side of the hose reel. To wind hose back on a manual reel, use crank provided. When the unit is equipped with

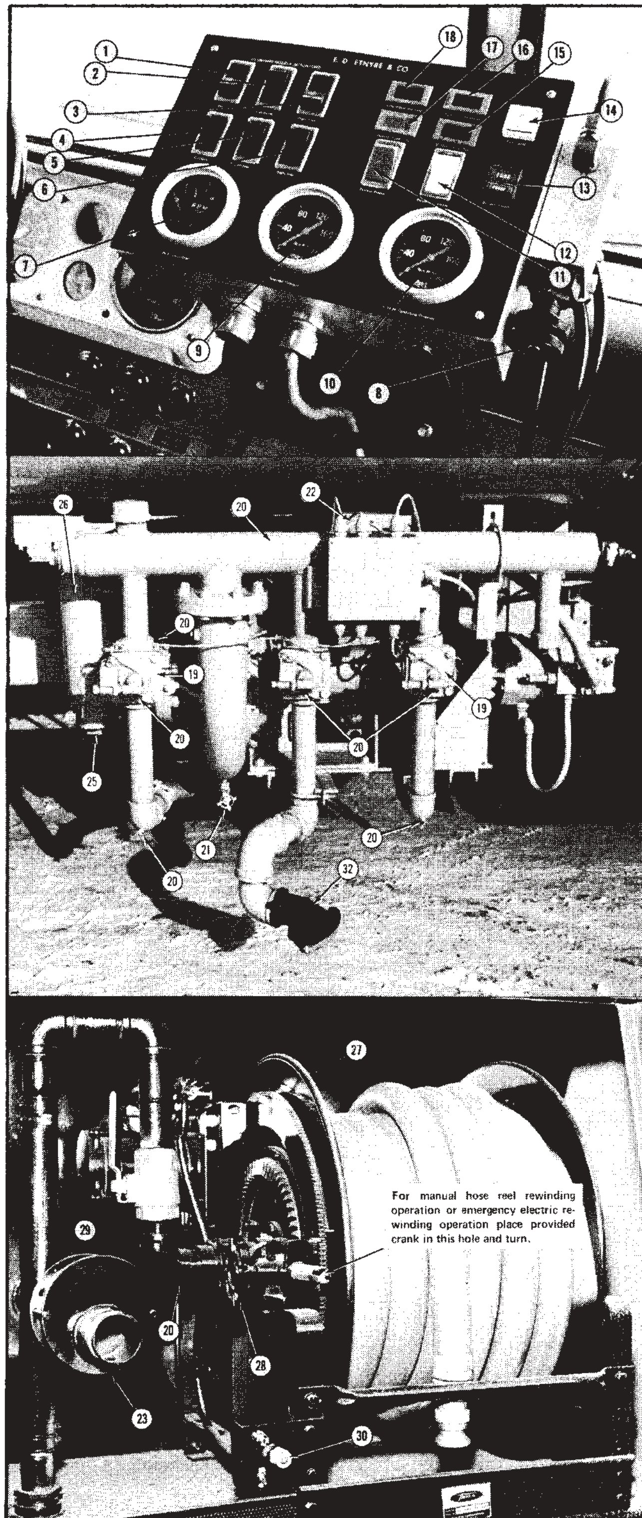
an electric reel, use push button (30) located at the left hand bottom of the reel.

13. Draining System

Reference Figure 1

To drain the water from the unit to prevent freezing damage, *all* the valves described in section 2 must be opened. The residual water in the tank may be drained more quickly and all settled debris which has accumulated in the system may be removed by removing the 3 inch drain plug (25) in the bottom of the pump suction header (26).

CAUTION: Remain clear of all rotating drives (truck and hydraulic pump propeller shafts and water pump drive) during operation or maintenance.



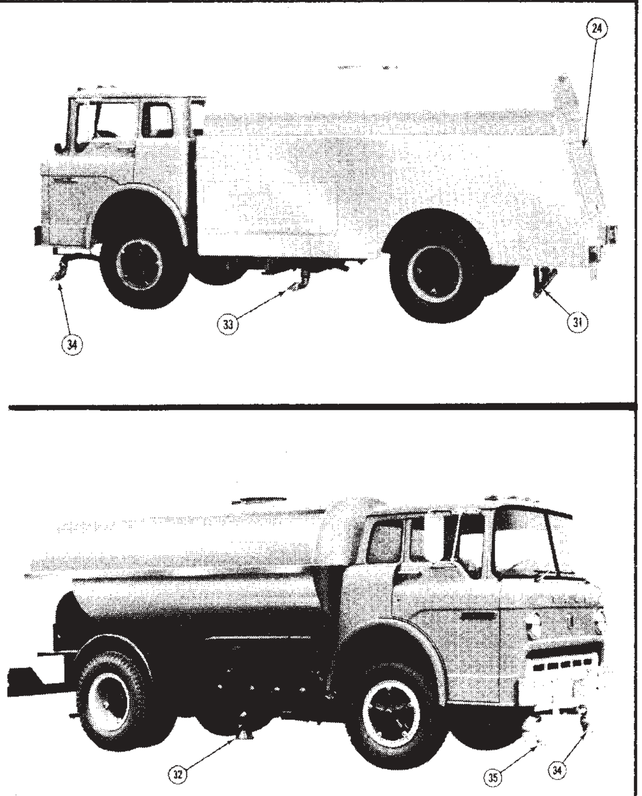


Figure 1.

1. Master Switch, Nozzles
2. Left Front Nozzle
3. Right Front Nozzle
4. Auxiliary Switch
5. Left Side Nozzle
6. Right Side Nozzle
7. Hydrostatic Pump (R.P.M.) Tachometer
8. Discharge Pressure Selection Valve
9. Pressure Gauge, Predetermined Operating
10. Operating Water Pressure Gauge, Discharge Header
11. System Power Switch
12. System Activate Switch
13. System Fuse
14. Fill Lamp Fuse
15. System Activate Pilot Light
16. Hydraulic Oil Overheated Pilot Light
17. System Power Pilot Light
18. Low Water Warning Pilot Light
19. Water Control Valves
20. Drain Cocks
21. 3/8 Inch Drain Valve
22. Pressure Transfer Diaphragm
23. Fill Strainer
24. Full Lamp (Inside Door)
25. Three Inch Drain Plug
26. Pump Suction Header
27. Hose Reel
28. Wind Lock
29. Hose Reel Line Valve
30. Electric Reel Use Pushbutton
31. Spray Bar
32. Right Side Nozzle
33. Left Side Nozzle
34. Left Hand Front Nozzle
35. Right Hand Front Nozzle

Maintenance

1. Lubricate water pump every 90 operating days. Use lithium base general purpose grease. Grease is applied through the alemite fitting located on bearing and shaft housing of the pump. A needle type grease gun must be used to apply grease.

2. Monthly check and tighten if necessary all tank and pump base mountings, tie downs and fasteners.

3. Monthly check to be sure the 4 inch overflow is clean. This may be done by removing manhole cover and visually inspecting the hole in the overflow pipe for obstructions.

4. Weekly check oil level in hydraulic reservoir. Oil should be visible in sight glass located on the outside of the reservoir. If oil is low add suffix "A" transmission fluid until oil level reaches top of the sight glass.

5. Weekly check vacuum gauge attached to hydraulic filter. This check should be made with the hydraulic oil warm (100°F. min) and unit at operating speed. If the vacuum gauge reads in the red, change the filter.

6. If the unit is equipped with a hose reel, lubricate the reel bearings. Apply three or four drops of a light grade of lubricating oil thru the two oil cups provided. This should be done twice a year under normal conditions.

P.T.O. OPERATION

Automatic Transmission

On automatic transmissions, the gears in the transmission turn when the transmission is in neutral, therefore, gear clashing will occur if the power take-off is shifted into gear at this time.

To operate power take-off properly:

1. Shift transmission lever into any of the drive positions. (This will stop transmission gears from turning.)

2. Shift power take-off into gear.

3. Shift transmission into neutral. (This will start transmission gears turning.)

This procedure should eliminate gear clash.

Mechanical Transmission

1. A power take-off is, and should be, operated as an integral part of the main transmission.

2. Before shifting the power take-off into or out of gear . . . disengage the clutch and wait for transmission or P.T.O. gears to stop rotating.

Trouble Shooting

Mechanical Drive System

Malfunction	Probable Cause	How To Determine	Corrective Action
1. Noisy drive line (Hyd Pump/PTO) (Water Pump/ Hyd Mtr)	Worn Universal Joints	Sharp thud on Acceleration or Deceleration of Drive Line	Replace Universal Joint
2. Noisy P.T.O.	Too much backlash	Rumble	Tighten bolts or remove gaskets until proper backlash is obtained
	Too little backlash	Whine	Place additional spacer gaskets between P.T.O. and transmission opening
	Worn bearning or gear	Rumble-Remove and inspect	Replace if necessary

Electrical System-Lighting

(See Wiring Diagram Figure 11. And Parts Page 31)

Malfunction	Probable Cause	How To Determine	Corrective Action
1. Will Not Light-Tail clearance, marker, license plate, back-up rotating beacon and brake lights	Bulb burnt out	Remove lens & check	Replace if necessary
	Fuse blown	Visibly check fuse in panel in truck cab	Replace if fuse is blown. Again find short circuit and correct
	Loose connection	Check terminations with a 12V test light	Reconnect or cut out existing terminal and replace
	Defective switch	With switch on check with test light	Remove and replace if necessary
2. Turn signal will not light	Bulb burnt out	Remove lens & check	Replace if necessary
	Fuse blown	Visibly check fuse in panel in truck cab	Replace if fuse is blown. Again find short circuit and correct
	Loose connection	Check terminations with a 12V test light	Reconnect or cut out existing terminal and replace
	Defective Switch	When all other possibilities have been exhausted & the switch is determined as the problem, consult your manual or truck dealer	Replace

Malfunction	Probable Cause	How To Determine	Corrective Action
	Defective Flasher	Check flasher socket with test light. If power is present try new flasher	Replace
3. Rotating beacon will light but not rotate	Defective motor or drive	Visually observe	Replace drive, motor or entire beacon

Water System (See Wiring Diagram Figure 12. And Parts Page 33)

1. Clayton valve will not open	Solenoid does not operate	Turn switch on and listen for solenoid to click	Replace coil or entire solenoid
	Switch is defective	Check switch-If pilot light operates, switch is alright	Replace Switch
	Loose Connections	Check terminations with test light	Reconnect or replace terminals
2. Clayton valve will not close	Plugged valve strainer	Remove strainer and visually check	Blow or wipe strainer clean and reinstall
3. Pump suddenly stops pumping	Clogged impeller	Visual-No discharge, Hydraulic motor high pressure relief valve will clatter	Clean out debris
4. Excessive leakage around the pump shaft	Worn seal	Visual	Install new seal
5. Poor water pump performance	Worn Impeller	Will not maintain desired discharge pressure-Check operating pressure gauge	Replace Impeller
	Hydraulic pump or motor problems		See hydraulic trouble shooting section
6. Noisy water pump operation	Low discharge head	Water pump chatters or rattles	Speed up pump if possible
	Debris lodged in impellers	Water pump rattles	Remove cover and clean out debris
7. Nozzle plugged	Debris lodged in nozzle slot	When nozzle is turned on spray will split or no water at all will come out of nozzle	Clean nozzle-remove nozzle and push foreign material back through slot being careful not to scratch or nick nozzle spraying surface. Never force debris out of nozzle slot from inside
8. Spray pattern split (Nozzle not plugged)	Scratches or nicks in nozzle slot surfaces	Observe	File and polish all nicks and scratches from nozzle slots

WARNING: Never Run Water Pump Dry

Malfunction	Probable Cause	How To Determine	Corrective Action
Hydraulic Drive System			
1. Loss of Oil – Inspect for external leakage under load *	Fittings	Check for loose hose fittings or damaged "O" ring	Tighten fittings or replace "O" ring
	Hose or Tubing	Check for cracked or worn spots in hose or tubing	Replace hose or tubing

*If oil loss is due to gaskets, seals or "O" rings of the hydraulic pump or motor consult dealer or qualified service personnel.

Malfunction	Probable Cause	How To Determine	Corrective Action
2. Loss of Control **	Low Oil Level	Check reservoir	Replenish to proper level
	Plugged Oil Filter	If filter is plugged vacuum gauge will read in the red. Remove filter housing and check filter	Replace filter element
	Insufficient oil supply	Check for plugged lines or dirty filter. If filter is plugged vacuum gauge will read in the red.	Clean or replace as necessary
		Check oil level in reservoir	Add oil as necessary
	Relief valve malfunction		See "Loss of pressure" (Section 5)

**If loss of control is due to check valves or charge pump malfunction or pump hsg. control asm. "O" ring or other internal failures, consult dealer or qualified service personnel.

Malfunction	Probable Cause	How To Determine	Corrective Action
3. Excessive noise, cavitation and internal damage	Filter	Check for dirty filter. If filter is plugged vacuum gauge will read in the red	Replace filter
	Suction Lines	Check inlet line for collapsed wall or other restrictions	Clean hose or replace as necessary
	Oil	Check oil for excessive viscosity	Replace as necessary
		Check for water in oil	Replace as necessary-Check heat exchanger for possible leaks
	Contamination	Check case drain line for steel or brass particles	Unit probably beyond field repair. Remove and overhaul
	Air in oil	Check inlet line for leaks. Oil will appear milky or foamy and system pressure may be low	Tighten fittings or replace as necessary
		Check oil level in reservoir	Add oil as necessary. Maintain oil level to sight glass
	Low pressure relief valve (See Figure 7. Page 16)	Check low pressure on loop circuit. Should be 175 to 200 P.S.I.	Adjust or replace as necessary

Malfunction	Probable Cause	How To Determine	Corrective Action
4. Overheating	Excessive internal wear (See Figures 2, 3 and 5. Page 16)	Check case drain of pump and motor. Volume should not exceed 1/2 G.P.M. per 1000 P.S.I. working pressure per unit	Unit probably beyond field repair. Remove and overhaul or replace
	High Pressure Relief valve (See Figures 4 and 6. Page 16)	Check relief valve setting	Set relief valves a minimum of 500 P.S.I. above normal operating pressure
	Heat exchanger-water type	Check for plugged oil lines or excessive external corrosion or paint coating	Clean or replace as necessary
5. Loss of Pressure	High Pressure relief valve malfunction (See Figures 4 and 6. Page 16)	Check pressure with motor stalled. Pressure should be within 100 P.S.I. of value on name plate	Adjust relief valve or replace as necessary

WARNING:

1. Throughout the entire operation, hands, parts, tools and immediate area *must be kept clean.* Introduction of foreign material into the system may damage or hinder its operation.

2. Do not operate the hydraulic motor at maximum by-pass pressure for extended periods of time since this will cause overheating of hydraulic oil and result in system damage.

Control System

(See Wiring Diagram Figure 12. And Parts Page 33)

Be sure operating instructions are fully understood before attempting to operate or troubleshoot this system

1. Fill light inoperative	Fuse	Visual Inspection	Replace-1 Amp Max.
	Bulb/s	Visual or Continuity Check	Replace
	Jumper/Main Terminals Loose or Broken	Visual or Continuity Check	Tighten/Repair/Replace
	Defective Switch	Visual or Multi-meter	Replace
2. Tach Not Operating	P.T.O. not engaged	Visual	Engage
	Hyd. Pump not operating	Visual, Check P.T.O. and Drive Shaft	Repair-Refer to Mechanical and Hyd. Drive Trouble Sections
	2-Wire/Main Cable Terminals Loose or Broken	Visual	Tighten/Repair/Replace

Malfunction	Probable Cause	How To Determine	Corrective Action
	Tach circuit connections reversed	Needle tends to negative indication	Reverse tach connection in junction box panel or Reverse 2 pin connector on generator
	Broken tach gauge	Visual, Use Multi-Voltmeter	Replace
	Broken tach generator	Visual, Use Multi-Voltmeter or proven tach gauge Output should be 1.24V DC @ 1000 RPM	Replace
	Twisted or broken drive tang	Remove tach generator and inspect	Replace
3. No "Select" Pressure	Regulator out of Adjustment	Gauge remains at zero	Loosen locknut, turn stem clockwise to correct pressure
	Hydraulic Pump not operating	Visual-tach at zero	Engage P.T.O.
	Hydraulic pump operating slow	Check speed on tach	Increase speed to 1500-1800 R.P.M.
	Dirty/inoperative Reg. valve	Gauge doesn't respond	Rework valve or replace valve
	Inoperative Gauge	Gauge remains at one pressure	Replace
	Trouble in Hydraulic System/No oil pressure available	See Hydraulic drive System Troubles	
4. No electric power in Panel No amber pilot light	Truck ignition not turned on	Visual	Turn on ignition
	Main fuse blown Red fuse Holder	Visual	Replace Fuse 7.5A
	Loose connections Power cord to truck power panel	Visual	Tighten
	Burned out pilot bulb	Multi-meter	Replace
	Bad Switch	Multi-meter	Replace
5. Low-Water pilot won't light	Tank full of water	Visual	Lower level of water
	Pilot bulb burnt out	Multi-meter	Replace
	Jumper/Main Cable Terminals Loose/Broken circuit	Visual or Continuity Check	Tighten/Repair/Replace
	Float switch inoperative	Visual or Multi-meter	Replace switch, Replace float on switch stem
6. Low-Water pilot stays lit	Low water level in tank	Visual	Add water (100 Gal. Min.)

Malfunction	Probable Cause	How To Determine	Corrective Action
	Float switch contacts stuck in closed position, Float is off stem.	Visual and Multi-meter	Replace switch, Replace float on switch stem
	Jumper/Main Cable Wires shorted	Multi-meter	Repair
7. Oil temp pilot light stays lit	Defective thermoswitch in oil reservoir	Multi-meter	Replace
	Shorted wires at thermo switch or terminals	Visual/Multi-meter	Repair/Replace
	Oil overheated 200°F.	Check dial thermometer in tank	Stop system-Refer to hydraulic system (overheated)
8. Water pump won't speed up	No "Select Press"	Visual	See "No Select Press" section
	Solenoid not operating	Listen, Check circuit with multi-meter	Repair circuit/replace solenoid
	Modulator Asm. inoperative (See Figure 8. Page 17 and Accompaning Instructions)	*Visual: Coupling-Control arm asm. doesn't travel from end to end when activate switch is closed	Remove Asm.-Drain *oil from bellows-Check belloframs for easy operation–Re-assemble/Replace
9. System won't lock in – System won't stay locked in System surges when Activate switch is depressed	Pressure switch cable wires loose	Visual	Clean and tighten
	Main Cable/Jumper wires loose	Visual and Multi-meter	Clean/Repair/Tighten
	Interlock float switch inoperative, clip missing & float missing	Multi-meter, Visual	Replace switch or Replace float & retaining wire clip
9A. System won't lock in but operates ok if Activate Button is held down	Transfer Bellows Asm. Trouble (Out of oil, plugs loose or out, broken hose, gauge ruptured, bellows collapsed – loose outer clamp)	Visual Inspection Remove hex plug Insert Probe No flicker in Pilot Lights	Repair/Replace Tighten fittings Replace oil in closed system
	Inoperative press. switch (Out of oil, broken switch, no pressure on gauge (See Figure 10)	Visual, no Flicker in pilot lights	Repair, Replace, Adjust
10. No green pilot light	Light burnt out	Multi-meter	Replace
	Broken white switch	Multi-meter	Replace

Malfunction	Probable Cause	How To Determine	Corrective Action
11. Discharge pressure doesn't match selected pressure	Hydraulic pump not operating fast enough	Visual	Increase Hydraulic Pump R.P.M.
	Select pressure set too high	Visual	Decrease select press.
	Water flow too great	Visual	Turn off nozzle-Check for open hose allowing free flow of water
	Gauge broken	Visual-Gauge doesn't return to zero	Replace
	Hydraulic Oil Cold	Sluggish, slow response	Warm system
	Modulator Trouble	Visual Inspection (Refer to Section 8)	Check oil level in bellows-Tighten plugs *Repair/ Replace
12. Discharge pressure won't remain constant as nozzles are opened or closed	Water demand at pressure selected is greater than input speed of P.T.O. will deliver	Visual	Reduce flow and pressure or increase pump speed
	Modulator Malfunction	Visual-Pump won't return to Neutral and stop	*Repair/Replace Refer to Section 8)
13. Electric hose reel won't operate Wiring Diagram Figure 9. Page 19	Fuse	Visual	Replace, 3A
	Switch	Multi-meter/Jumper	Replace
	Solenoid	Multi-meter/Jumper	Replace
	Motor	Multi-meter/Serviceman	Repair/Replace
	Elbow and Line Frozen or broken	Visual	Replace/Drain water

***WARNING:**

Do not force move the modulator assembly coupling in either direction with oil in bellows. This action will collapse the belloframs and make the unit inoperative.

If this happens, the assembly must be removed from the hydraulic pump, the oil drained, and new bellofram unit installed. The assembly coupling must move freely back and forth with air only in the bellows.

With the bellows assembly complete, remount the assembly on the hydraulic pump, refill the system with hydraulic oil and seal the system with the 1/4 inch pipe plugs.

See figure 8 for details.

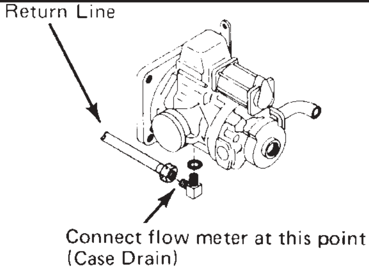


Figure 2. Pump Case Drain Flow Rate Check

1. Disconnect case return line indicated above.
2. Attach flow meter as noted or direct drain flow into a container of known volume for a given period of time. Then from dividing volume by time, a flow rate can be determined. If this flow rate is above maximum allowed, pump is worn internally and should be replaced before proceeding.

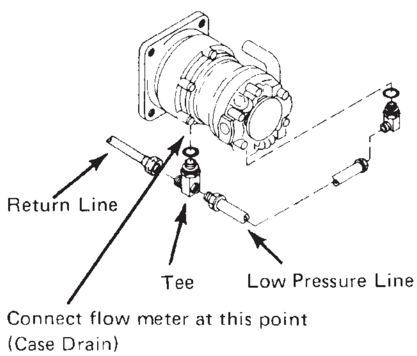


Figure 3. Motor Case Drain Flow Rate Check

1. Disconnect low pressure line at motor tee. If flow from this line is directed into a *clean dry* container the oil may be saved and returned to the reservoir. Extreme care should be taken to insure that while this line is disconnected the hydraulic system is not accidently pumped dry resulting in a damaged system.
2. Disconnect return line and remove tee from motor.
3. Connect flow meter as indicated above or direct flow from tee port (case drain) into a container of known volume for a given period of time. Then from dividing volume by time a flow rate can be determined. If this flow rate is above maximum allowed motor is worn internally and should be replaced before proceeding.

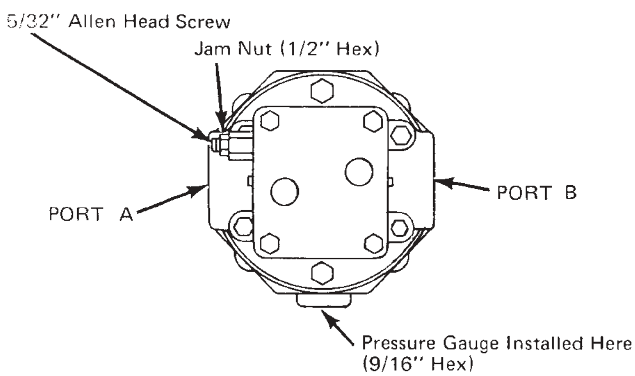


Figure 4. Type IV Hydraulic Motor
Viewed from front of flusher

1. Loosen jam nut (1/2" hex) and turn 5/32" Allen head screw in so as to increase pressure. A pressure increase of 800 P.S.I. per turn may be expected.
2. Increase pressure to recommended level of 4000 to 4500 P.S.I.
3. Retighten jam nut while holding screw.
4. Remove gauge and replace 9/16" hex plug.

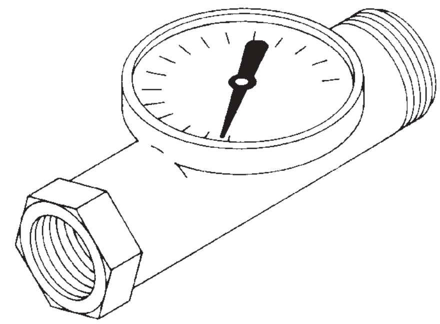


Figure 5. Flow Meter

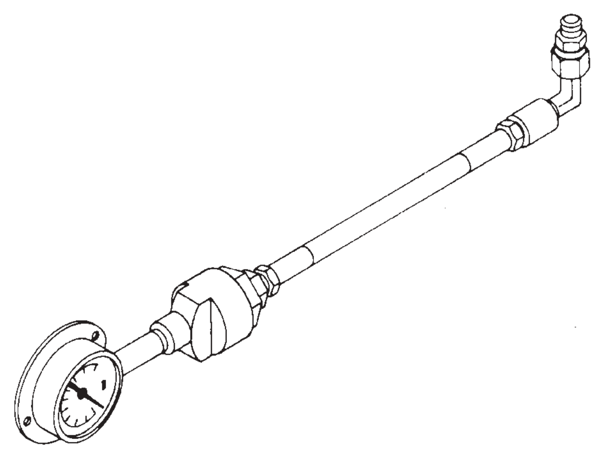


Figure 6. Pressure Gauge

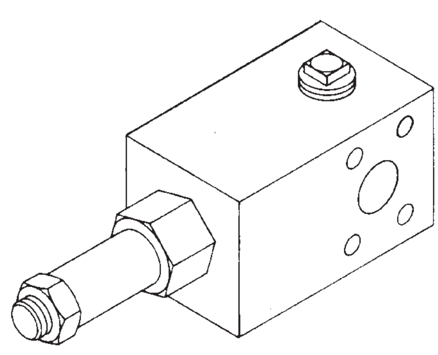


Figure 7. Low Pressure Relief

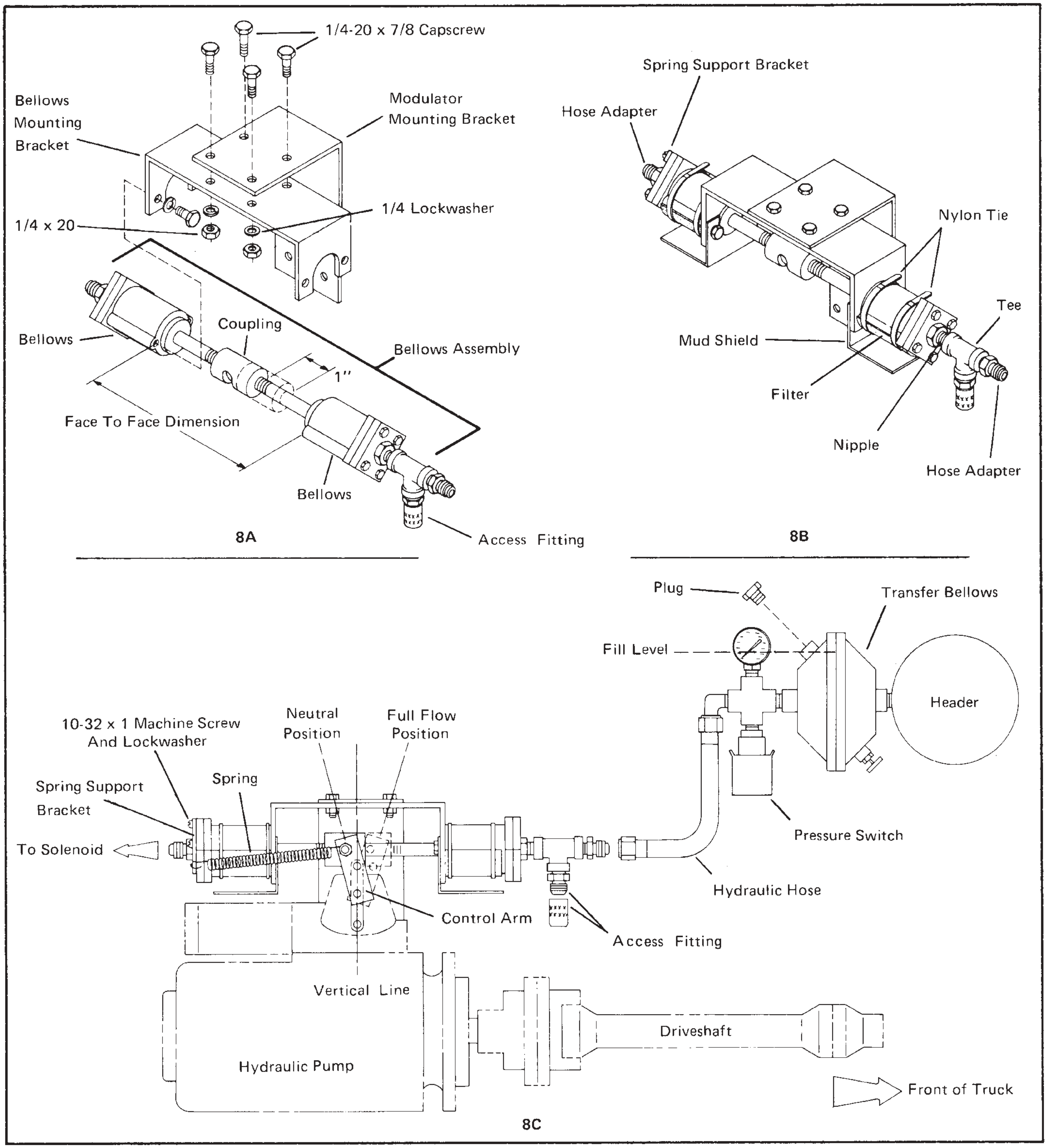


Figure 8. Assembly, Installation and Adjustment of Modulator

Warning: The bellows assembly is a rugged, precision piece of equipment but there are some precautions to be observed when assembling or servicing. The shaft will not stand any twisting because the bellows will be damaged. Therefore, the shaft coupling must be able to rotate freely at all times.

Assembly: (Ref. Figure 8A) Lightly screw 2 bellows assemblies together using the brass coupling. The face to face dimension with one bellows extended and the other retracted should be approximately 5½ inches. Center the brass coupling on the shafts and adjust the face to face dimension of the bellows to match the face to face dimension of the mounting bracket. The bellows assemblies must be mounted with the vent holes down. The modulator mounting bracket must be assembled to the bellow mounted bracket using (4) 1/4-20 x 7/8 capscrews, lockwashers and nuts. Assemble as shown (Figure 8A). Tighten bellows assembly to mounting bracket using (4) 1/4-20 x 7/8 capscrews and lockwashers. The bellows shafts and coupling must slide back and forth freely when both bellows are tight on the bracket. If the shafts do not move freely, shims must be added until they do. Ref. Figure 8B.

Cover the vent hole in each bellows with a filter pad and secure each pad with two nylon ties. The inner tie must be tight against the bellows mounting bracket, otherwise it will cover the vent hole and impede the free movement of the shaft.

Remove the bellows mounting screws one end at a time and install the mud shield as shown in Figure 8B. Next assemble the hose adapters, pipe tee, nipple and access port fitting, using hydraulic grade locktite. Ref. Figure 8C.

The spring support bracket is mounted to the end cap of bellows as shown. Replace the existing screws with (2) 10-32 x 7/8 machine screws and 3/16 lockwashers.

Installation: The Modulator assembly is mounted to the hydraulic pump as follows. Remove the (4) 1/4-20 x 5/8 capscrews from the cover plate of the swash plate control housing on the top of the pump and discard them. These are on the opposite end from the swash plate control arm. Attach the modulator assembly to the hydraulic pump with (4) 1/4-20 x 7/8 Grade 5 capscrews and lockwashers. The bellows with the pipe tee is mounted toward the front or drive line end of the pump.

Remove the 5/16 lock nut holding the swash plate adjusting lever onto the hydraulic pump control shaft. Also remove and discard the flat washer. Insert the control arm thru the shaft coupling and attach the adapter plate assembly to the face of the swash plate adjusting lever. A 1/4-20 x 3/4 capscrew with locknut goes thru the end of the swash plate lever and the middle hole in the adapter plate. Replace the 5/16 locknut and tighten. The spring is attached between the end of the spring support bracket and the end of the control arm. This will hold the swash plate adjusting lever in the neutral position. The 5/16 nut and the 1/4 attaching capscrew should be in a vertical line. Connect the hydraulic hose from the pressure transfer bellows assembly to the pipe tee in the modulator bellows. The hydraulic hose from the solenoid is connected to the bellows on the opposite side.

Remove the hex head plug from the top of the transfer bellows.

Remove the brass seal cap from the schrader type access valve.

Connect a charging hose to the access valve and add hydraulic oil until the system is full to the top of the transfer bellows assembly. Remove the charging hose and replace the brass seal cap onto the access valve. Tighten a 1/4 hex head plug into the transfer bellows case.

This will seal this system from the atmosphere so it can perform properly. If this procedure is not followed and the system is not kept sealed, the system will not function. After an operating period of 5-10 hours, check the oil level in the transfer bellows and add oil if necessary to bring oil level to top. The entire hydraulic system should now be ready to operate. Be sure the main system is full of hydraulic oil.

Adjustment: Engage the P.T.O. and operate the hydraulic pump. Observe the hydraulic motor/water pump combination. The pump should *not* be rotating in either direction. Turn on the control system in the truck cab and depress the white "activate" switch. Follow the Operating Instructions for operating the control panel – except, this is a dry run to check water pump rotation only.

Check to see that the water pump rotates in a counterclockwise direction (looking from suction side of pump). When the white "Activate" switch is released the pump should cease to rotate. A creep of one revolution in 4-5 seconds in the proper direction is permissible.

This is the proper operation mode. If the pump does not stop but continues to rotate in either direction when the controls are turned off, the following modulator adjustment will have to be made.

If the pump rotates rapidly in the wrong direction, the main hoses are connected improperly. This must be corrected immediately. This trouble is not just a control problem but is a basic pump/motor flow problem.

To stop the slow rotation of the water pump that occurs when the system is turned off, adjust the modulator as follows:

Refer back to assembly directions for installing the control arm to the swash plate lever.

Remove the 5/16 locknut and the 1/4-20 x 3/4 capscrew from the adaptor plate. Remove the control arm from the shaft connector coupling. Gently rotate the brass coupling 1/2 to 2 turns as needed to put the swash plate control arm in the neutral position. Moving the coupling towards the back end of the hydraulic pump will slow down or stop the forward rotation of the water pump.

If the coupling is too far towards the back end at the original setting the pump will rotate slowly in the reverse direction when the control system is turned off. Moving the coupling forward will correct this condition.

Reinsert the control arm into the coupling and refasten the adapter plate to the swash plate control lever.

Recheck the running and stopping of the Water Pump.

The water pressure at which the pressure switch in the control system will "drop out" or trip is adjusted as follows:

Remove cover to expose the micro switch and plunger actuating screw. With a 1/4 inch open end wrench, turn the screw in or out to raise or lower the trip point of the switch.

The recommended pressure is 8 to 10 P.S.I. This trip pressure is checked as follows:

With the sytem operating and "locked in," slowly reduce the "select" pressure until the system "drops out." This drop out point is the trip pressure referred to above.

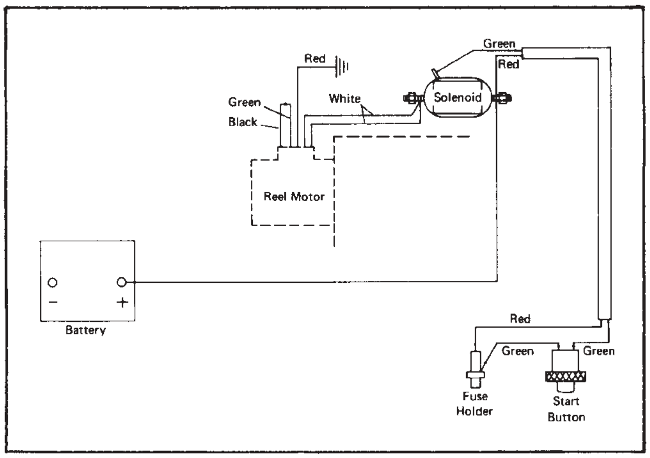


Figure 9. Electric Hose Reel Wiring Diagram

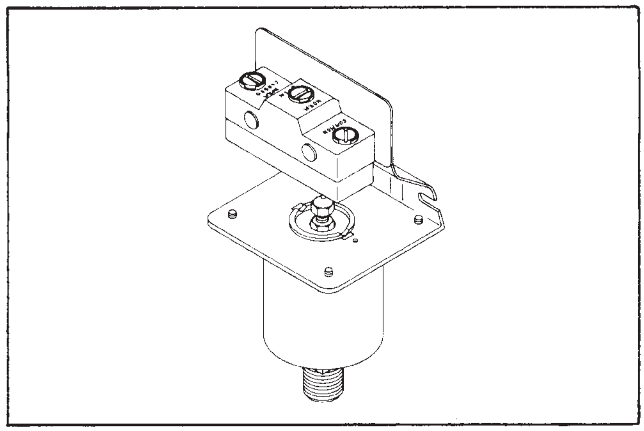


Figure 10. Pressure Switch

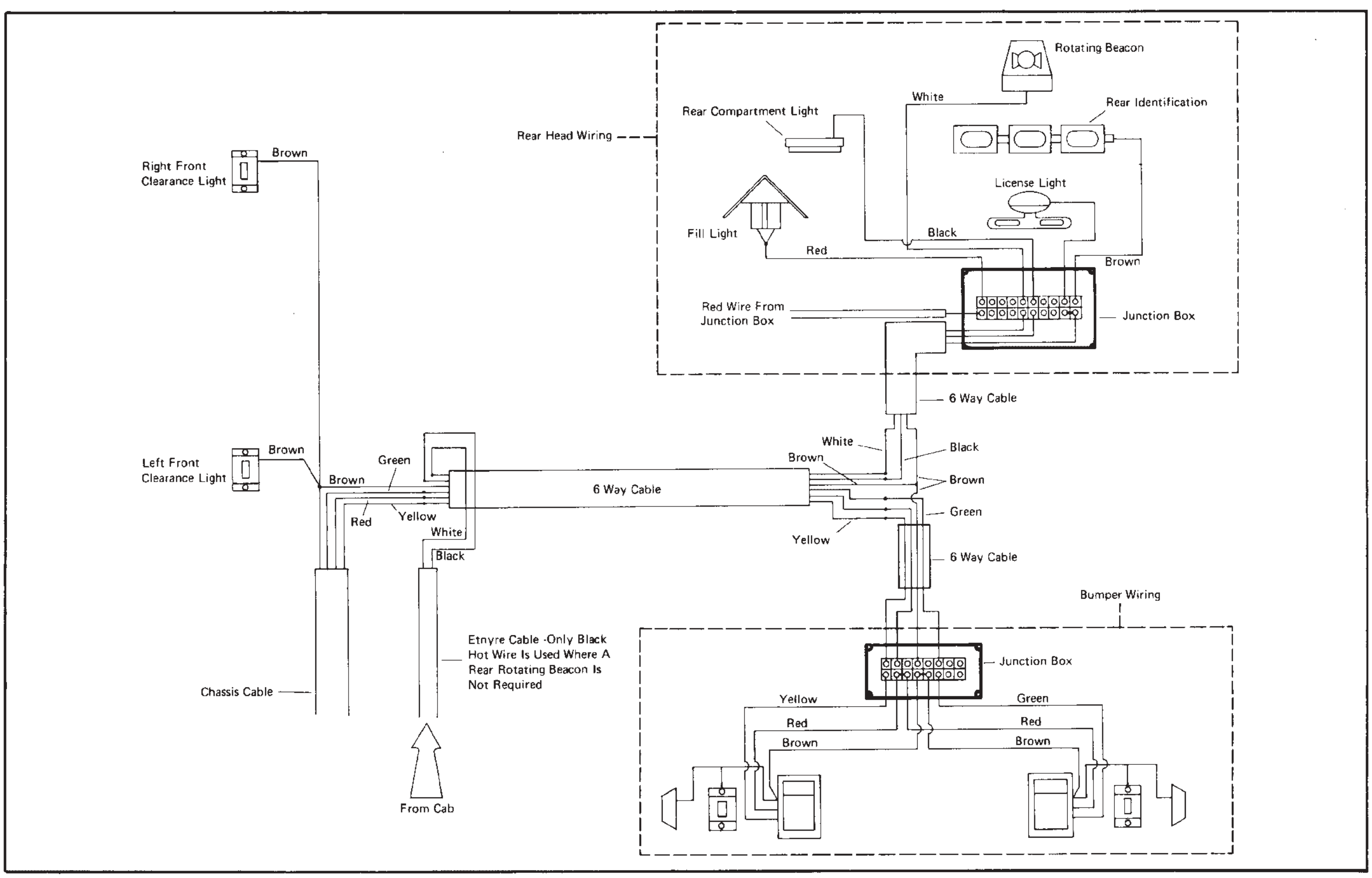
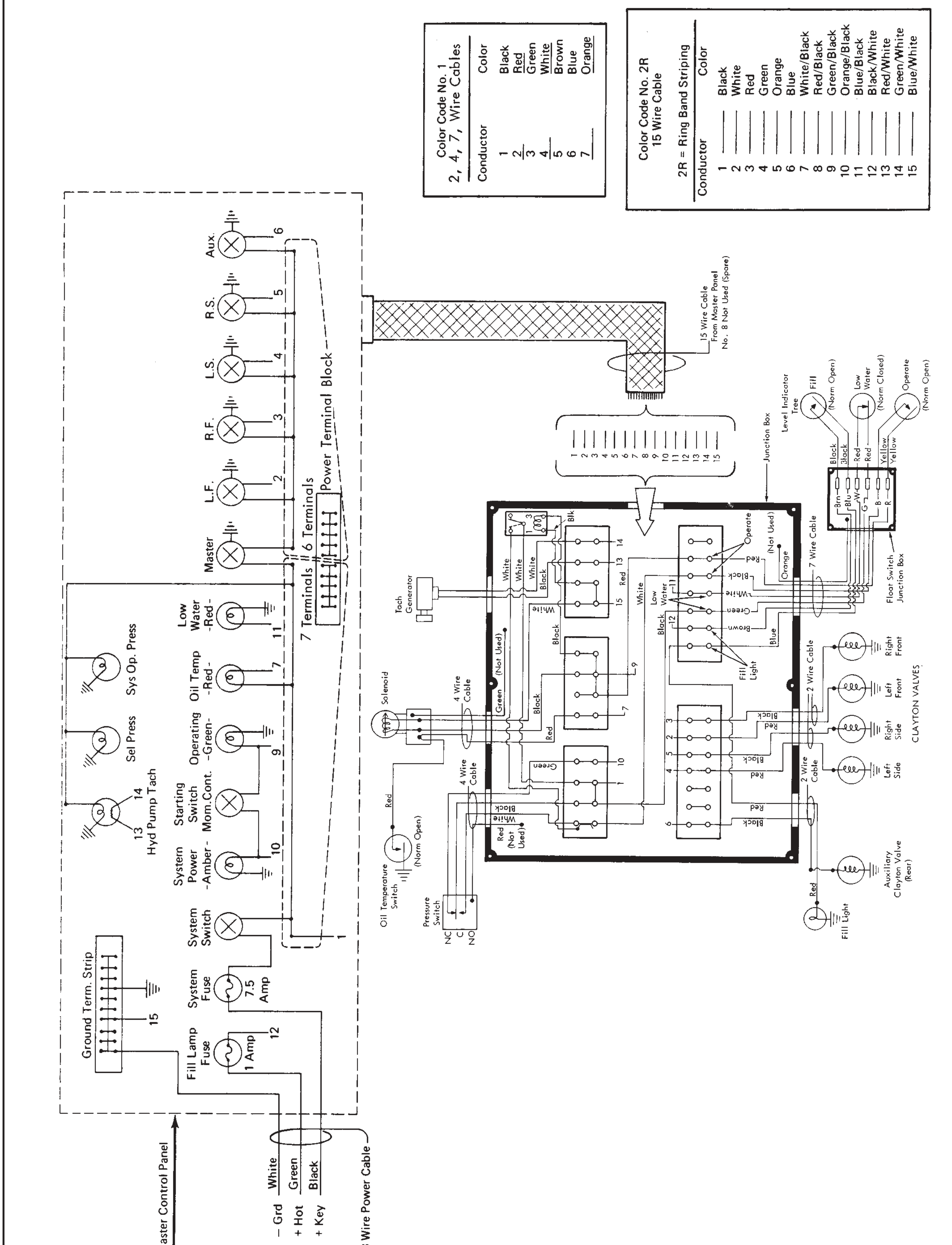


Figure 11. Wiring Diagram — Flusher Lighting

Wiring Diagram - Water Control System



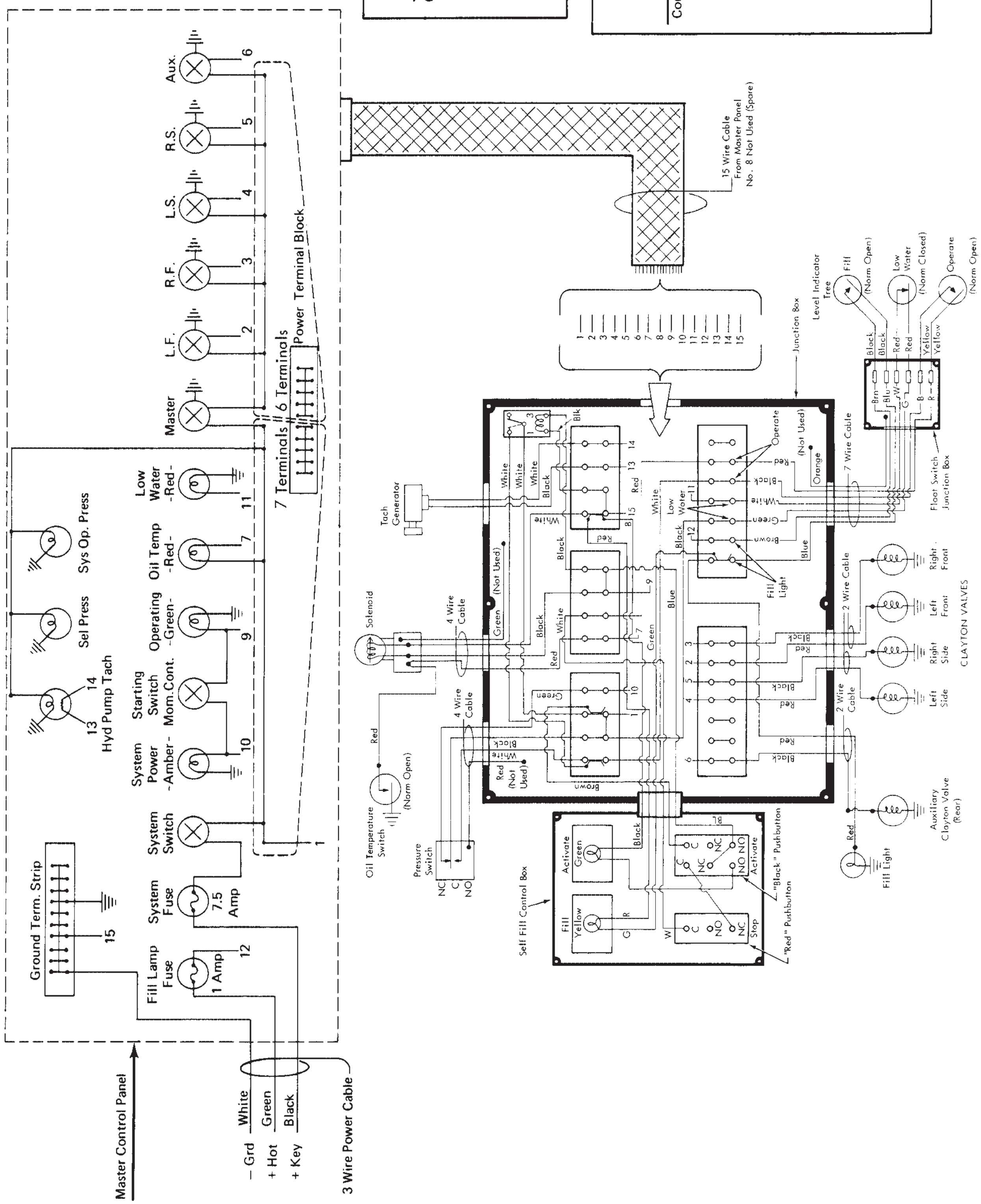
Wiring Diagram - Water Control System With Self Fill

Color Code No. 1
2, 4, 7 Wire Cables

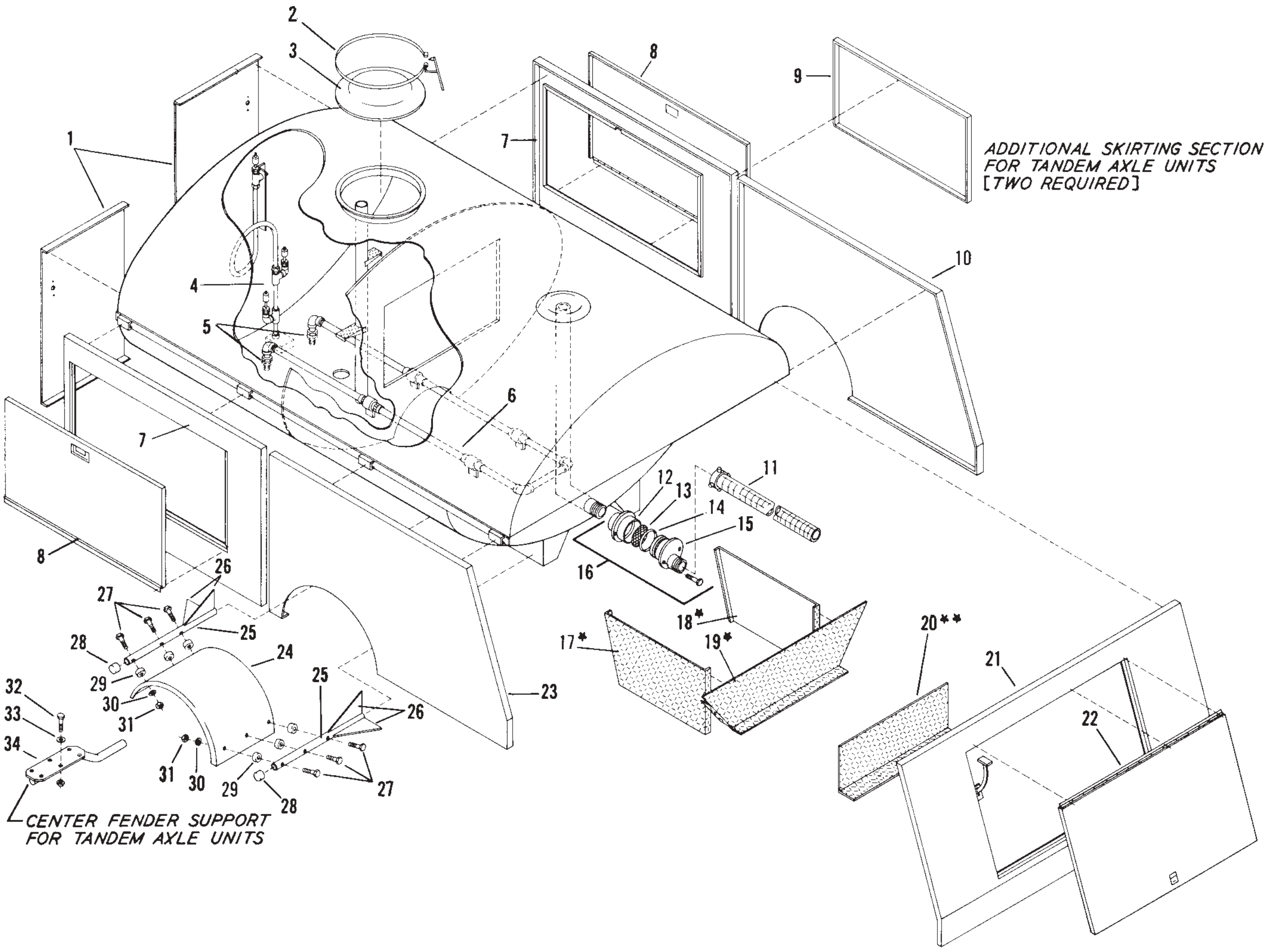
Conductor	Color
1	Black
2	Red
3	Green
4	White
5	Brown
6	Blue
7	Orange

Color Code No. 2R
15 Wire Cable
2R = Ring Band Striping

Conductor	Color
1	Black
2	White
3	Red
4	Green
5	Orange
6	Blue
7	White/Black
8	Red/Black
9	Green/Black
10	Orange/Black
11	Blue/Black
12	Black/White
13	Red/White
14	Green/White
15	Blue/White



Tank & Skirting

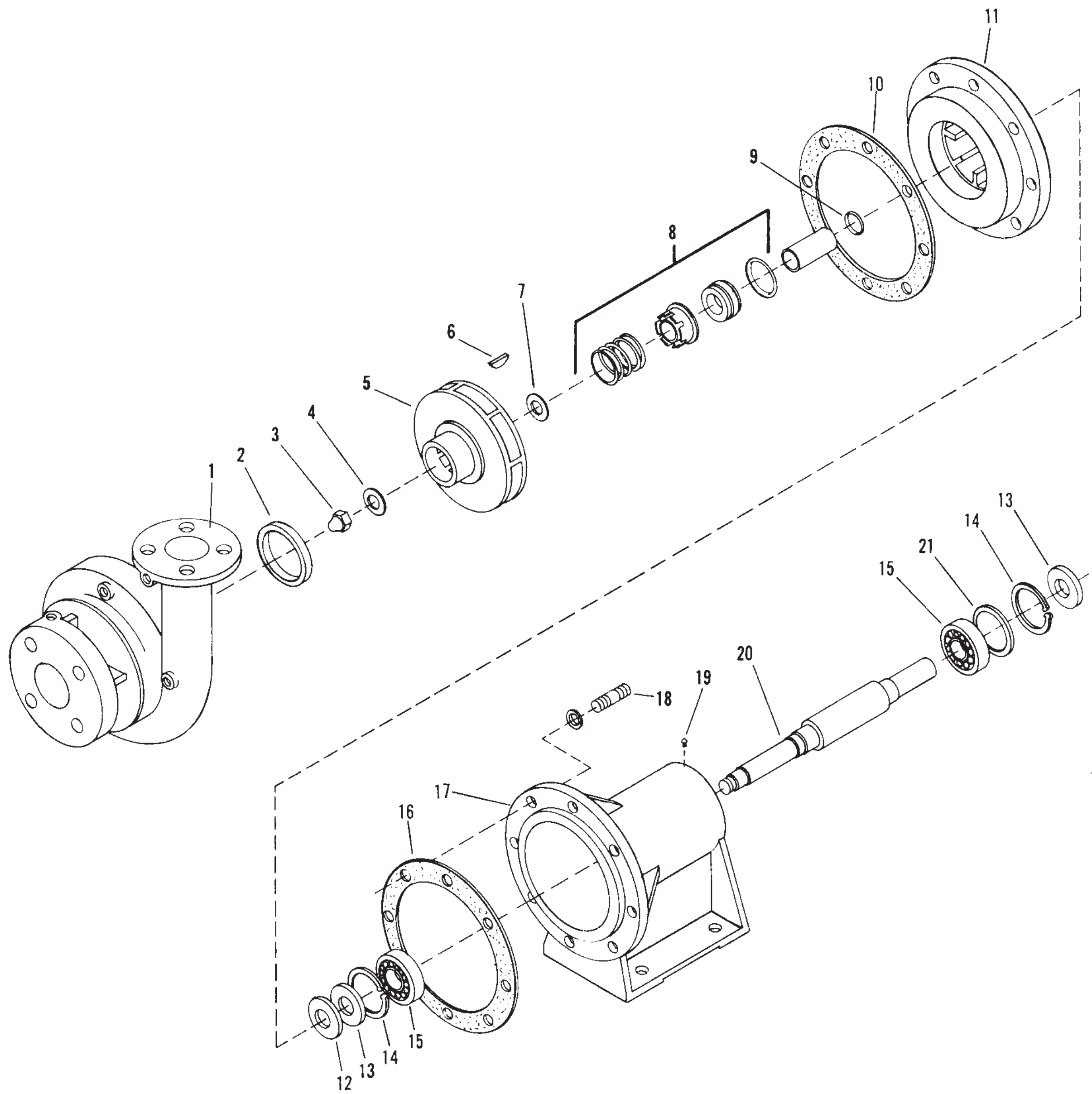


REF.	PART NO.	QTY.	DESCRIPTION
1	2910196	2	PANEL-FRONT
2	2900089	1	CLAMP ASM-MANHOLE RING
3	6000876	1	MANHOLE-STL.INSPECTION,FLUSHER
4	2960182	1	TREE ASM-LEVEL INDICATE (SEE PAGE 33)
5	7430033	2	DISC-CLA,VAL
6	2900090	1	COOLER ASM-HYDRAULIC OIL
7	2910186	2	PANEL ASM-SIDE,FRONT
8	2910189	2	DOOR ASM-FLUSHER SIDE
9	2910184	2	PANEL-CENTER,174 IN TANK
10	2910182	1	PANEL-REAR,RIGHT
11	2990020	1	HOSE-FILL,21/2NPT,FM CPLG O.E.
12	2900066	1	HOUSING ASM-STRAINER,TANK END
13	2900058	1	SCREEN-FLUSHER STRAINER
14	6601019	1	O-RING
15	2900061	1	HOUSING ASM-STRAINER,HOSE END
16	2900067	1	STRAINER ASM-FILL LINE,FLUSHER
17*	2900107	1	PANEL-LT SIDE REAR TRIM
18*	2900108	1	PANEL-RT SIDE REAR TRIM
19*	2900106	1	COVER-FRAME REAR FLUSHER
20**	2910201	1	TRIM-REAR,PLATFORM TO BUMPER
21	2910185	1	PANEL ASM-REAR
22	2910188	1	DOOR ASM-FLUSHER REAR
23	2910183	1	PANEL-REAR,LEFT
24	3310149	2	FENDER-14GA. HR X 25 X 83
	3380381	2	FENDER-STEEL,TANDEM AXLE N/S
25	2910174	4	HANGER-FENDER,FLUSHER REAR
26	2910175	8	GUSSET-SUPPORT,FENDER
27	0122065	12	SCREW-HEX,0.31NCX2.00,GR2,PD
28	6000689	4	CAP-VINYL
29	6000455	4	BUSHING-RUBBER
30	0120214	12	WASHER-LOCK,0.31,SPRING,PD
31	0120376	12	NUT-HEX,0.31NC,PD
32	0121887	12	SCREW-HEX,0.25NCX0.75,GR2,PD
33	6000716	12	WASHER-FLAT,9/32 ID X 1.25,PL
34	2750589	2	BRACE-FENDER
35	9413946	12	NUT-HEX,LOCK,0.25NC,PD

N/S - NOT SHOWN

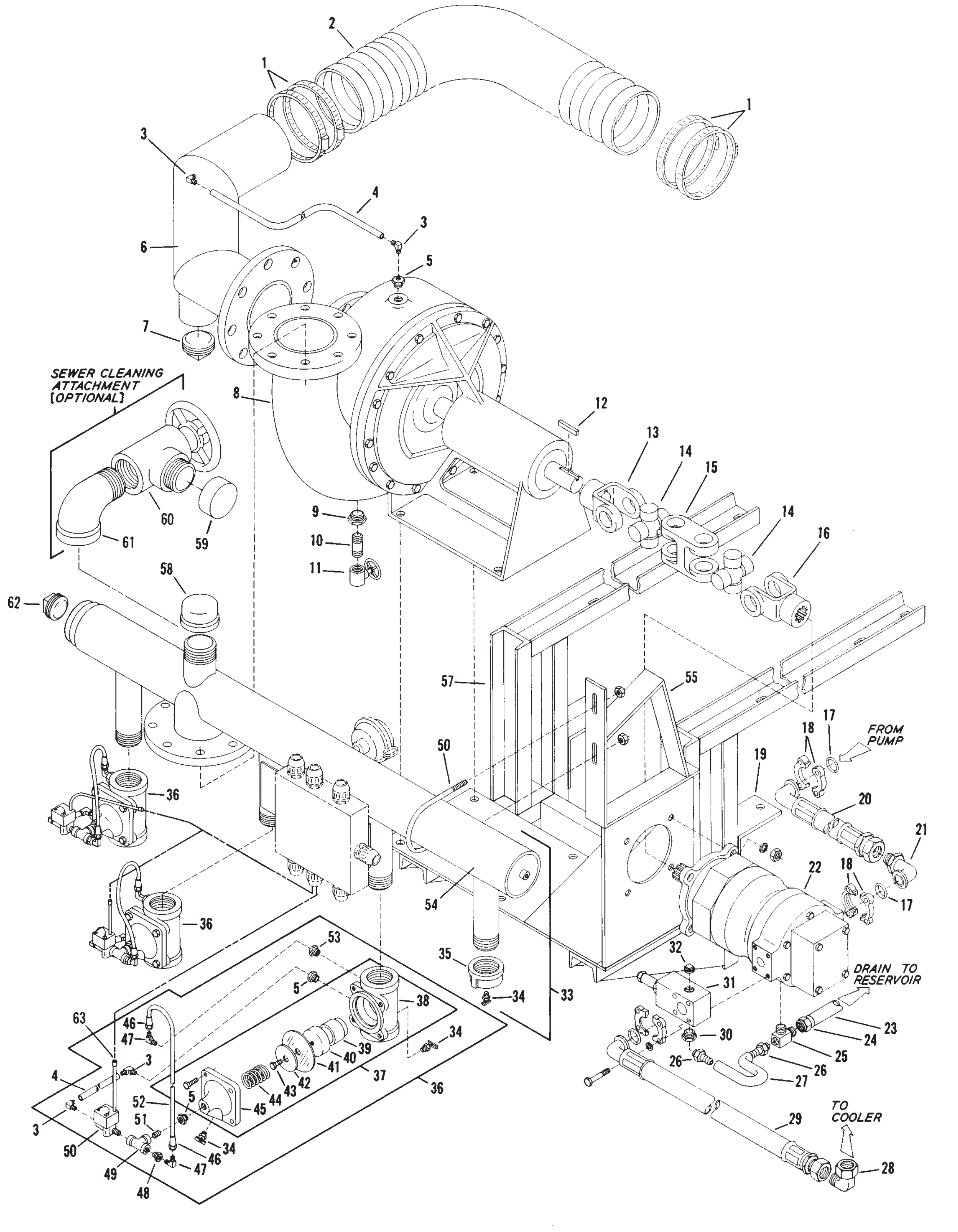
* FOR UNITS WITHOUT SKIRTING
** USED ON SKIRTED UNITS

Water Pump -6600998



REF.	PART NO.	QTY.	DESCRIPTION
1	7020191	1	VOLUTE-5-X4 FLANGED
2	7020121	1	RING-WEAR
3	7020192	1	NUT-IMPELLER
4	7020141	1	WASHER
5	7020144	1	IMPELLER-C/I
6	7020134	1	KEY
7	7020003	1	SHIM
8	7020193	1	SEAL ASM-1.38
9	7020194	1	GASKET-O RING
10	7020195	1	GASKET-VOLUTE TO PLATE
11	7020196	1	PLATE-SEAL
12	7020198	1	SLINGER-WATER
13	7020203	2	CAP-DUST,BEARING
14	7020205	2	RING-RETAINING
15	7020199	2	BEARING-BALL,SGL ROW,SGL SHLD
16	7020206	1	GASKET-HOUSING TO PLATE
17	7020201	1	BEARING HOUSING + LANTERN-FR
18	7020197	16	STUD-0.38,16XZ
19	7020204	1	FITTING-0.125,RELIEF
20	7020200	1	SHAFT-BORE,TAPER IMP
21	7020202	1	SHIM-BEARING,.005 THICK

Pumping Unit - Hydraulic



SPECIFY UNIT SERIAL NO., PART NO., & PART DESCRIPTION

Pumping Unit Hydraulic

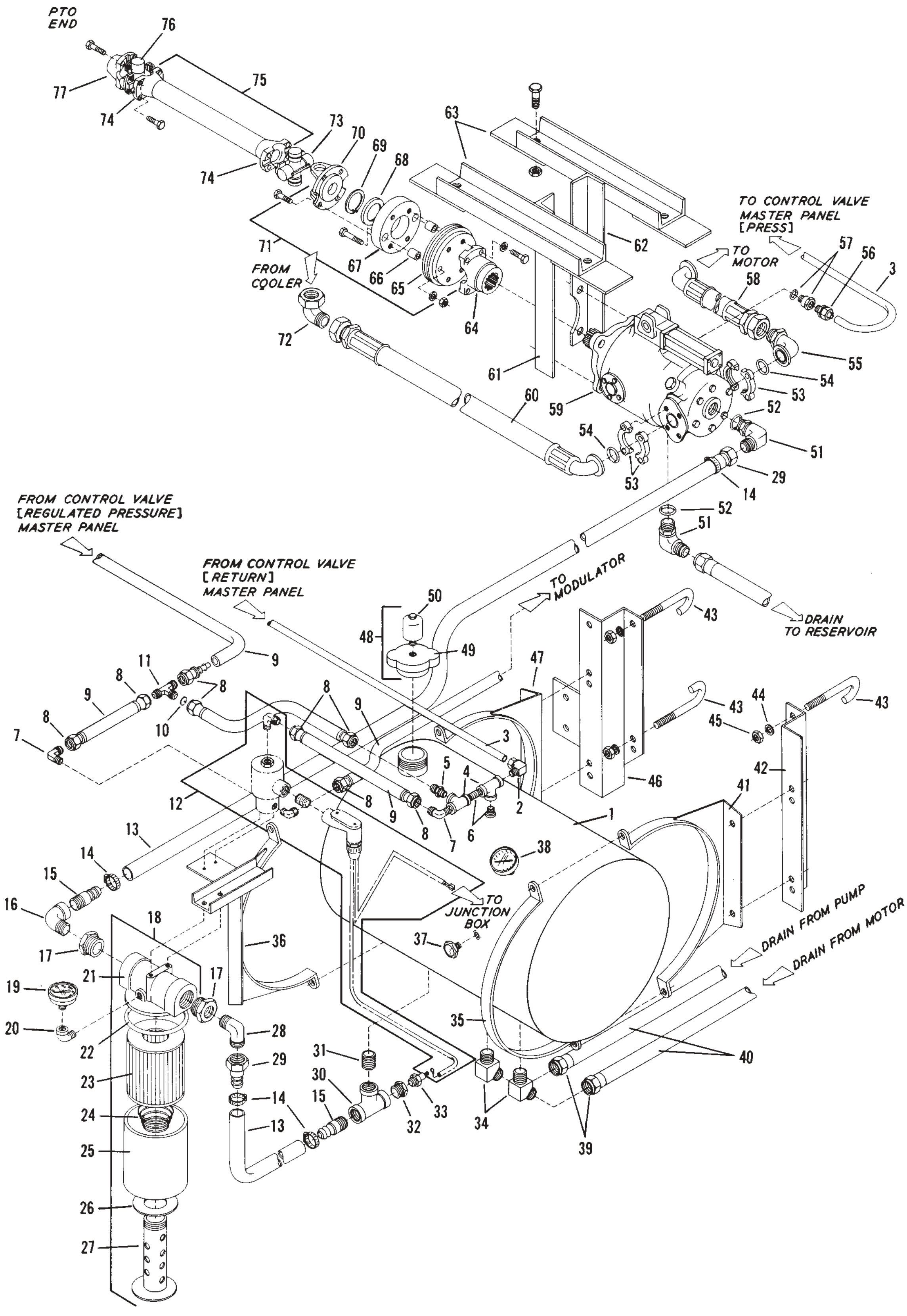
REF.	PART NO.	QTY.	DESCRIPTION
1	6000872	4	CLAMP-HOSE,WORM GEAR
2	6000869	1	HOSE-SUC 5.56X37.0,2.50CUFF BE
3	6700477	8	ELBOW-0.38 TUBE X 0.25MPT
4	6700363	AR	TUBING-POLYETHELENE,.38,PER FT
5	0119931	7	BUSHING,PIPE,0.38X0.25NPT,PN
6	2940260	1	LINE ASM-SUCTION,PUMP END
	2940050	1	GASKET-SUCTION LINE TO PUMP-NS
7	6200153	1	PLUG-PIPE,SQ HD,3.00NPT,PN
8*	6600998	1	PUMP-WATER,FLUSHER
	2940053	1	GASKET-PUMP TO HEADER -NS
9	0142263	1	BUSHING-PIPE,1.00X0.38NPT,PN
10	0120278	1	NIPPLE-PP,SCH 40,0.38X2.00,PN
11	6600189	1	VALVE-GLOBE,0.38 INCH
12	6000161	1	KEY-0.31SQ CR X 1.50 LG
13	6440157	1	YOKE-END,1.38BOREX0.32 KEYWAY
14	6440155	2	JOURNAL AND BEARING KIT
15	6440158	1	YOKE-CENTER
16	6440156	1	YOKE-END,1.25-14 TOOTH INVOL
17	0274253	3	O RING-TUBE FITTING,1.50
18	6600236	6	FLANGE-SPLIT
19	2940291	2	ANGLE-PUMP+MTR BASE TIE DOWN
20	6601002	AR	HOSE-HIGH PRESS,LOOP,FLUSH,6FT
	6601003	AR	HOSE-HIGH PRESS,LOOP,FLUSH,8FT
	6601004	AR	HOSE-HI PRESS LOOP,FLUSH,10FT.
	6601159	AR	HOSE-HI PRESS LOOP,FLUSH,16FT.
	6601160	AR	HOSE-HI PRESS LOOP,FLUSH,17FT.
	6601161	AR	HOSE-HI PRESS LOOP,FLUSH,18FT.
	6601162	AR	HOSE-HI PRESS LOOP,FLUSH,19FT.
21	6601045	1	ELBOW-FLANGE ADAPT JIC X O-RNG
22	6600997	1	MOTOR-HYD DR,FLUSH,WATER PUMP
23	6600646	AR	HOSE-SELF GRIP - PER FOOT
24	6600648	2	NUT-JIC SWIVEL,37DEG 0.75-12
25	3320893	1	ELBOW-0.75MALE JICX1.06 O-RING
26	6600663	2	FITTING-PUSH LOK
27	6600662	1	HOSE-PUSH LOK
28	9410260	AR	ELBOW-HYD,45 DEG
	9410286	AR	ELBOW-HYD,90 DEG
29	6601027	1	HOSE ASM-MOTOR TO COOLER
30	0144034	1	BUSHING-PIPE,0.75X0.50NPT,PN
31	6601044	1	VALVE-RELIEF
32	0219301	1	PLUG-PIPE,SQ HD,0.75NPT,PN
33	2940303	1	HEADER ASM-COMPLETE,W/VALVES (INCL ITEMS 34,35,36 + 54)
34	6600162	7	COCK-DRAIN,0.25IN
35	2940314	1	CAP-PIPE,2.00NPT,PN
36	2940302	3	CLAYTON VALVE ASM-COMPLETE
37	2940055	3	VALVE ASM-CLAYTON,2IN
38	7430076	3	BODY-VALVE
39	7430071	3	SEAT-CLAYTON VALVE
40	7430073	3	RET ASM-DISC,CLA VLV
41	7430069	3	DIAPHRAGM-CLAMP,VALVE
42	7430070	3	WASHER-DIAPH,CLA VALVE
43	7430072	3	BOLT-STEM,CLA VALVE
44	7430042	3	SPRING-CLAYTON VALVE
45	7430078	3	COVER-VALVE,CLAYTON VALVE
46	0120704	6	NUT-FLARED,0.19 X 0.81 LG
47	6200362	6	ELBOW-0.19 TUBE X 0.12MPT
48	0119930	3	BUSHING-PIPE,0.25X0.12NPT,PN
49	0105417	3	TEE-PIPE,0.25NPT,PN
50	6600799	3	VALVE-SOLENOID,12 VOLT DC
51	0105405	3	NIPPLE-SCH 40,0.25X0.87CL,PN
52	6309067	AR	TUBE-0.19 COPPER -PER FOOT
53	2940301	3	STRAINER ASM-CLAYTON VLV,FLUSH
54	2940290	1	HEADER ASM-DISCHARGE,FLUSHER
55	2940295	1	BRKT ASM-HEADER SUPPORT
56	2990003	1	CLIP-4IN PIPE
57	2940271	1	HANGER ASM-MTR+PUMP,FLUSHER
58	6200052	1	CAP-PIPE,2.50NPT,PN
59	6600172	1	CAP-HOSE,2.5 IN
60	6600171	1	VALVE-UNDWR,2.5 IN
61	6200083	1	ELBOW-PIPE,90,ST,2.50NPT,PN
62	0219309	1	PLUG-PIPE,SQ HD,2.00NPT,PN
63	6700891	AR	HOUSING-CONNECTOR SOCKET
	6700893	AR	CONTACT-SOCKET CONNECTOR

*SEE PAGE 23 FOR WATER PUMP PARTS BREAKDOWN

AR - AS REQUIRED
NS - NOT SHOWN

SPECIFY UNIT SERIAL NO., PART NO., & PART DESCRIPTION

Hydraulic Drive System - P.T.O. Drive

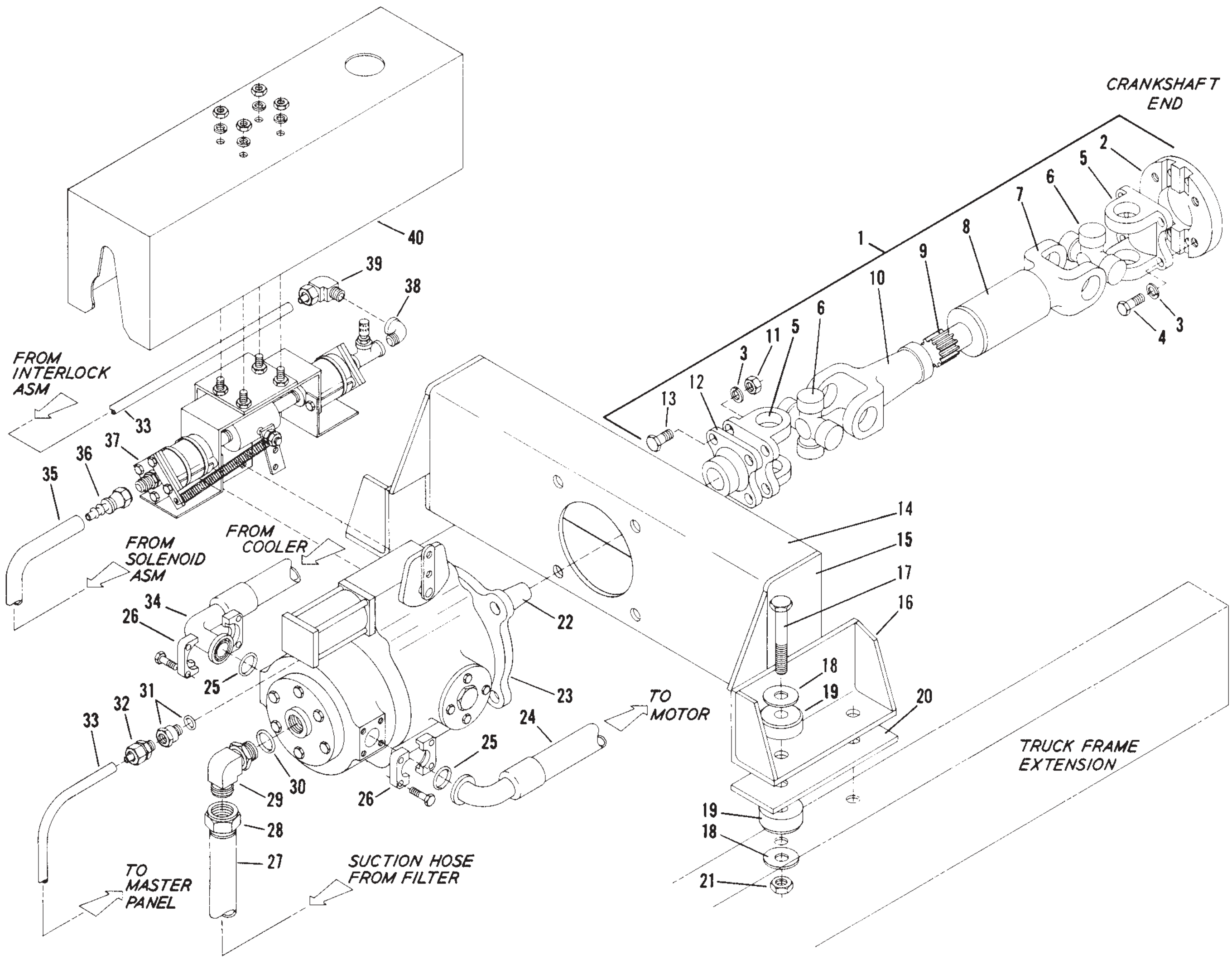


Hydraulic Drive System - P.T.O. Drive

REF.	PART NO.	QTY.	DESCRIPTION
1	3320319	1	TANK ASSEMBLY-HYDRAULIC
2	6600832	1	CONNECTOR-MAL,ELB.38T X .25MPT
3	6309162	AR	TUBING-NYLON,AIR BRK.380D /FT
4	0105417	2	TEE-PIPE,0.25NPT,PN
5	0118750	1	CONNECTOR-FLARED TBG,.38 X .25
6	0142275	2	NIPPLE-PP,SCH40,0.25X1.00,PN
7	0118755	2	ELBOW-.38 TUBE X .25MPT,90 DEG
8	6600306	6	SWIVEL-FEM FLARE
9	6600324	AR	HOSE-0.38,PER FOOT
10	2960157	1	DISC-ORIFICE RESTRICTOR
11	0118807	1	TEE-0.375,45 FLARE
12	2960128	1	SOLENOID ASM-FLUSH,PRESS CONT
13	6600652	AR	HOSE-SUCTION,0.75 ID
14	6600651	4	CLAMP-HOSE,0.75 STNLS
15	6600649	2	FITTING-MALE PIPE,0.75 X 0.75
16	0141621	1	ELBOW-PIPE,90,ST,0.75NPT,PN
17	0144059	2	BUSHING-PIPE,1.25X0.75NPT,PD
18	6600225	1	FILTER
19	7420042	1	INDICATOR-FILTER
20	0105423	1	ELBOW-PIPE,90,ST,0.25NPT,PN
21	7420136	1	HEAD CASTING W/PLUG REL VLV PT
22	7420004	1	O RING
23	7420007	1	FILTER ELEMENT
24	7420046	1	CONICAL SPRING
25	7420076	1	HOUSING
26	7420008	1	GASKET-SEAL
27	7420009	1	POST-CENTER
28	9402867	1	ADAPTER-ELBOW UNION,90 DEG
29	6600650	2	NUT-JIC SWIVEL 37 DEG,0.75-12
30	0125988	1	TEE-PIPE,0.75NPT,PN
31	0190717	1	NIPPLE-PP,SCH 40,0.75X2.00,PN
32	0144034	1	BUSHING-PIPE,0.75X0.50NPT,PN
33	6600237	1	SWITCH-THERMO
34	9402828	2	UNION-ELBOW UNION,45 DEG
35	3320325	1	CLAMP-MTG,HYDRAULIC TANK CLA
36	2920104	1	CLAMP-RES FRT W/FILTER SOL MT
37	6600224	1	PLUG-OIL,EYE SITE
38	6500039	1	THERMOMETER-2IN DIAL,9IN STEM
39	6600648	3	NUT-JIC SWIVEL 37 DEG,0.75-12
40	6600646	AR	HOSE-SELF GRIP,PER FOOT
41	3320322	1	CLAMP ASM-MTG,R,HYD TANK
42	3320812	1	BRACKET-RT HYD RESVR MTG
43	3360304	4	BOLT-HOOK,MT
44	0121574	4	WASHER-LOCK,0.62,SPRING,PD
45	0124589	4	NUT-HEX,0.62NC,PD
46	2920107	1	BRKT ASM-LT RES + LT NOZZLE MT
47	3320323	1	CLAMP ASM-MTG,HYD TANK
48	2920110	1	CAP ASM-FILL,HYD RES FLUSHER
49	2920109	1	CAP-FILL,HYD RESERVOIR,FLUSHER
50	6600223	1	BREATHER
51	9410979	2	ELBOW-90 DEG,37FLXO-RG,0.75 5
52	0274247	2	O RING-TUBE FITTING,0.50
53	6600236	4	FLANGE-SPLIT
54	0274253	2	O RING-TUBE FITTING
55	6601045	1	ELBOW-FLANGE ADAPT JICXO-RING
56	6600831	1	CONNECTOR-MAL,STR.38T X .25MPT
57	6601008	1	ADAPTOR-O RING TO FNPT,FLUSHER
58	6601002	AR	HOSE-HIGH PRESS,LOOP,FLUSH,6FT
	6601003	AR	HOSE-HIGH PRESS,LOOP,FLUSH,8FT
	6601004	AR	HOSE-HIGH PRESS,LOOP,10 FT
59	6600215	AR	PUMP-VARIABLE,RH ROTATION
	6600613	AR	PUMP-HYD,LH ROTATION
60	6601027	1	HOSE ASM-COOLER TO PUMP
61	3320275	1	ANGLE-MT,VERT,L,PUMP HANGER
62	3320276	1	ANGLE-MT,VERT,R,PUMP HANGER
63	2920108	2	CHANNEL-PUMP CARRYING,FLUSHER
64	6440035	1	YOKE-FITTING
65	3320797	1	ADAPTER ASM-MALE SHEAR
66	3170052	2	BUSHING-SHEAR
67	4050127	1	ADAPTER-FEMALE SHEAR
68	3170081	1	RING-RETAINING
69	6000443	1	RING-SNAP
70	6440024	1	YOKE-FLANGE
71	3320336	1	ADAPTER-SHEAR ASSEMBLY
72	9410260	AR	ELBOW-HYD,45 DEG
	9410286	AR	ELBOW-HYD,90 DEG
73	6440025	1	CROSS BRG ASM
74	6440031	2	YOKE-WELD
75	9250280	1	DRIVE LINE ASM(SPECIFY LENGTH)
76	6440026	1	CROSS BEARING ASM
77	6440033	1	YOKE-1.25 BORE

AR - AS REQUIRED

Hydraulic Drive System- Crankshaft Drive

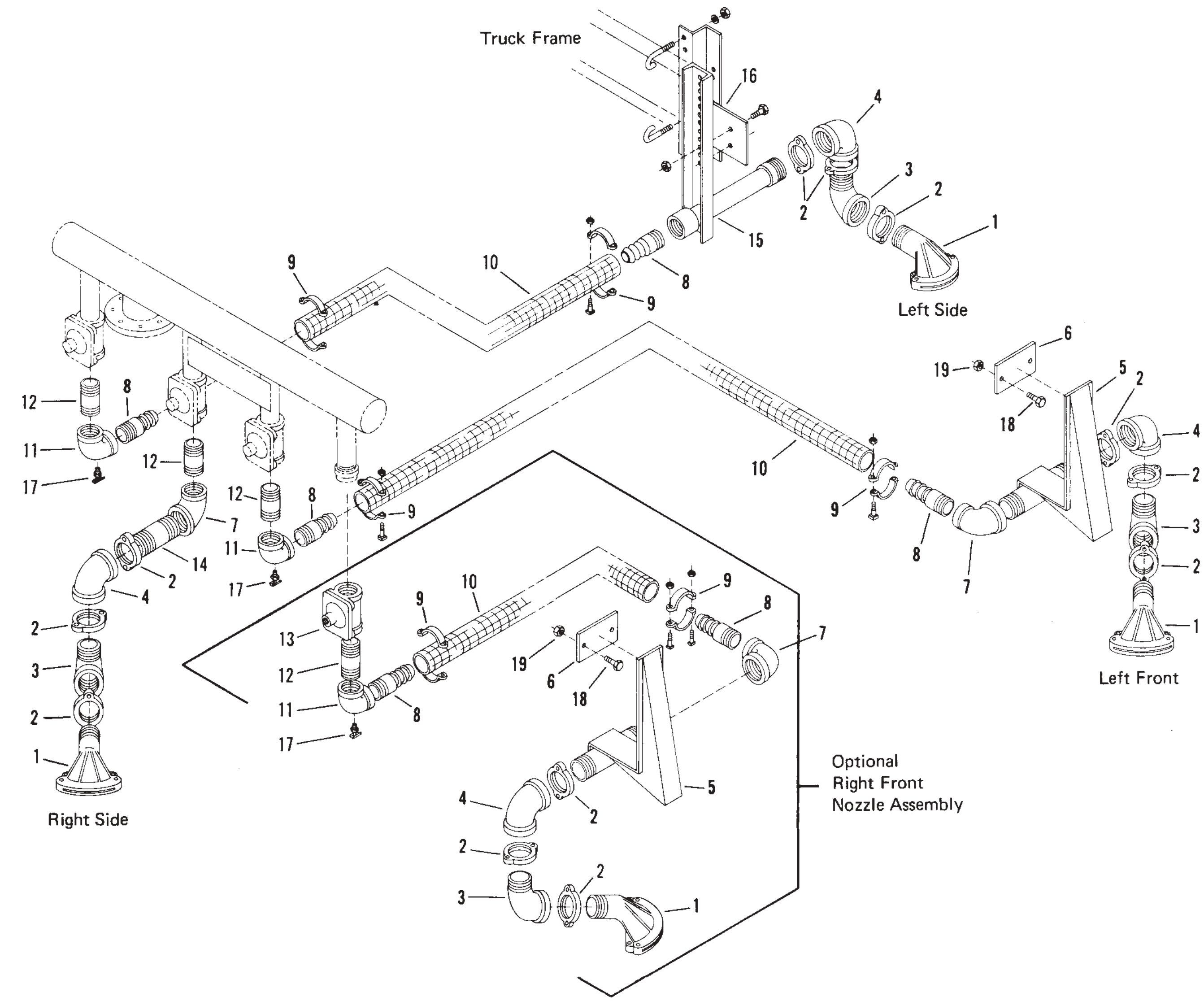


REF.	PART NO.	QTY.	DESCRIPTION
1	9300558	1	LINE-DRIVE,FRT TAKE-OFF
2		1	CUSTOM ADAPTER -WHERE REQUIRED
3	0120382	4	WASHER-LOCK,0.38,SPRING,PD
4	0454904	4	SCREW-HEX,0.38NC X 0.75,GR8,PD
5	3170021	2	YOKE-FLANGE
6	3170013	2	JOURNAL + BEARING KIT
7	6440161	1	YOKE-STUB
8	6303295	AR	TUBE-2.50X16GA,DOM - PER FOOT
9	3110032	1	SHAFT-SLIP STUB
10	3110034	1	YOKE-SLEEVE ASM
11	0120377	4	NUT-HEX,0.38NC,PD
12	6440162	1	FLANGE-COMPANION,TAPER HOLE
13	0186679	4	SCREW-HEX,0.38NC X 1.25,GR8,PD
14	3320960	1	CHANNEL-MTG CRANK DR,HYD PUMP
15	3321006	2	PLATE-END,CHAN.MTG,PUMP,CRK.DR
16	3321005	2	ANGLE-MTG,HYD PUMP,CRANK DRIVE
17	0428715	4	SCREW-HEX,0.62NCX4.00,GR2,PD
18	0130999	8	WASHER-FLAT,0.62A(0.69X1.25)PD
19	6000889	4	MOUNT-SHOCK,HYD PUMP,CRK.DRIVE
20	3321004	2	FILLER-MTG,HYD PUMP,CRK.DRIVE
21	9413948	4	NUT-HEX,LOCK,0.62NC,EA,GRA,PD
22	3321008	1	KIT-CONVERSION,SHAFT,HYD PUMP
23	6600215	AR	PUMP-VARIABLE,RH ROTATION
	6600613	AR	PUMP-HYD,LH ROTATION
24	6601002	AR	HOSE-HIGH PRESS,LOOP,FLUSH,6FT
	6601003	AR	HOSE-HIGH PRESS,LOOP,FLUSH,8FT
	6601004	AR	HOSE-HI PRESS LOOP,FLUSH,10FT
	6601159	AR	HOSE-HI PRESS LOOP,FLUSH,16FT
	6601160	AR	HOSE-HI PRESS LOOP,FLUSH,17FT
	6601161	AR	HOSE-HI PRESS LOOP,FLUSH,18FT
	6601162	AR	HOSE-HI PRESS LOOP,FLUSH,19FT
25	0274253	2	O RING-TUBE FITTING
26	6600236	4	FLANGE-SPLIT
27	6600652	AR	HOSE-SUCTION,0.75ID - PER FOOT
28	6600650	2	NUT-JIC SWIVEL,37DEG,0.75-12
29	9410979	1	ELBOW-90DEG,37FL X O-RG,0.75
30	0274247	1	O RING-TUBE FITTING,0.50
31	6601008	1	ADAPTER-O RING TO FNPT,FLUSHER
32	6600831	1	CONNECTOR-MALE,STR.38TX.25MPT
33	6309162	AR	TUBING-NYLON,.380D - PER FOOT
34	6601027	AR	HOSE ASM-COOLER TO PUMP,5 FT.
	6601155	AR	HOSE ASM-PUMP TO COOLER,13 FT.
	6601156	AR	HOSE ASM-PUMP TO COOLER,14 FT.
	6601157	AR	HOSE ASM-PUMP TO COOLER,15 FT.
	6601158	AR	HOSE ASM-PUMP TO COOLER,16 FT.
35	6600324	AR	HOSE-0.38 - PER FOOT
36	6600306	2	SWIVEL-FEM,FLARE
37	2960142	1	MODULATOR ASM-HYD PUMP,FLUSHER
38	0105423	1	ELBOW-PIPE,90,ST,0.25NPT,PN
39	6600832	1	CONNECTOR-MALE,ELB.38T X.25MPT
40	2920121	1	COVER-MODULATOR,CRANK DRIVE

AR - AS REQUIRED

SPECIFY UNIT SERIAL NO., PART NO., & PART DESCRIPTION

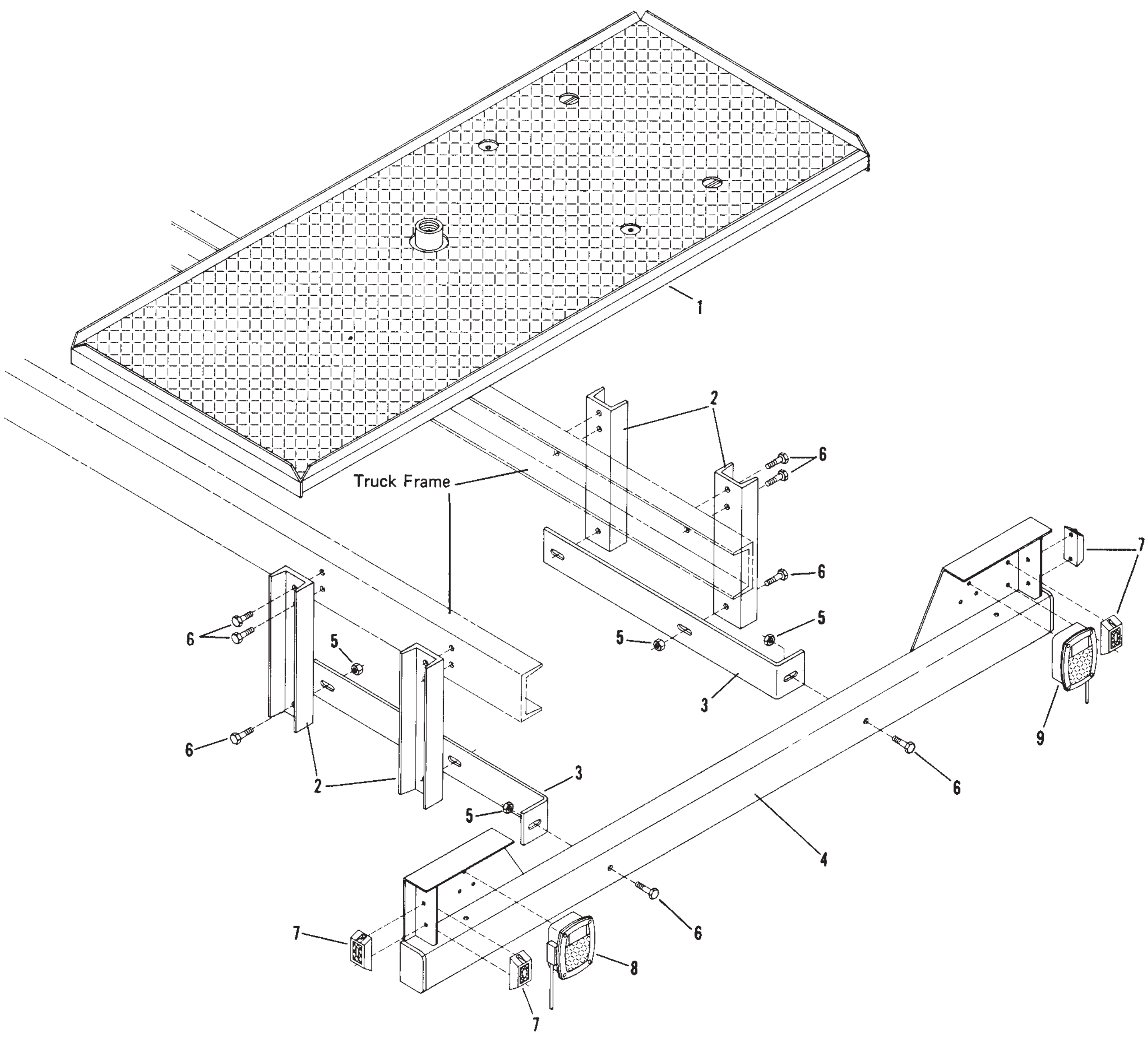
Discharge Piping



REF.	PART NO.	QTY.	DESCRIPTION
1	2940006	4	NOZZLE-ASSEMBLY-FLUSHER,BRASS
2	2940005	12	RING-LOCKING
3	2940014	4	ELBOW-STREET,GALVANIZED
4	2940013	4	ELBOW-GALVANIZED,FACED
5	2940281	2	BRACKET ASM-FRT NOZZLE HANGER
6	2940272	2	PLATE-NOZZLE HANGER ATTACHING
7	6200079	3	ELBOW-PIPE,90,2.50X2.00NPT,PN
8	6200526	6	NIPPLE-COMB-2.00,TYPE SCP
9	6000870	6	CLAMP-HOSE,2.50 OD,DOUBLE BOLT
10	6309186	AR	HOSE 2.00IN,WATER,PER/FT
11	2940296	3	ELBOW-2IN PIPE,W/.25 NPT HOLE
12		4	NIPPLE-PIPE,2.00NPT X AR LGTH
13	2940302	1	CLAYTON VALVE ASM-COMP FLUSHER
14	6200110	1	NIPPLE-PP,SCH 40,2.50X4.00,PN
15	2940276	1	BRKT ASM-NOZZLE MT LT SIDE
16	2920107	1	BRKT ASM-LT RES + LT NOZZLE MT
17	6600162	3	COCK-DRAIN,0.25 IN
18	0122408	4	SCREW-HEX,0.50NCX1.00,GR2,PD
19	9411727	4	NUT-HEX,LOCK,0.50NC,EA,PD

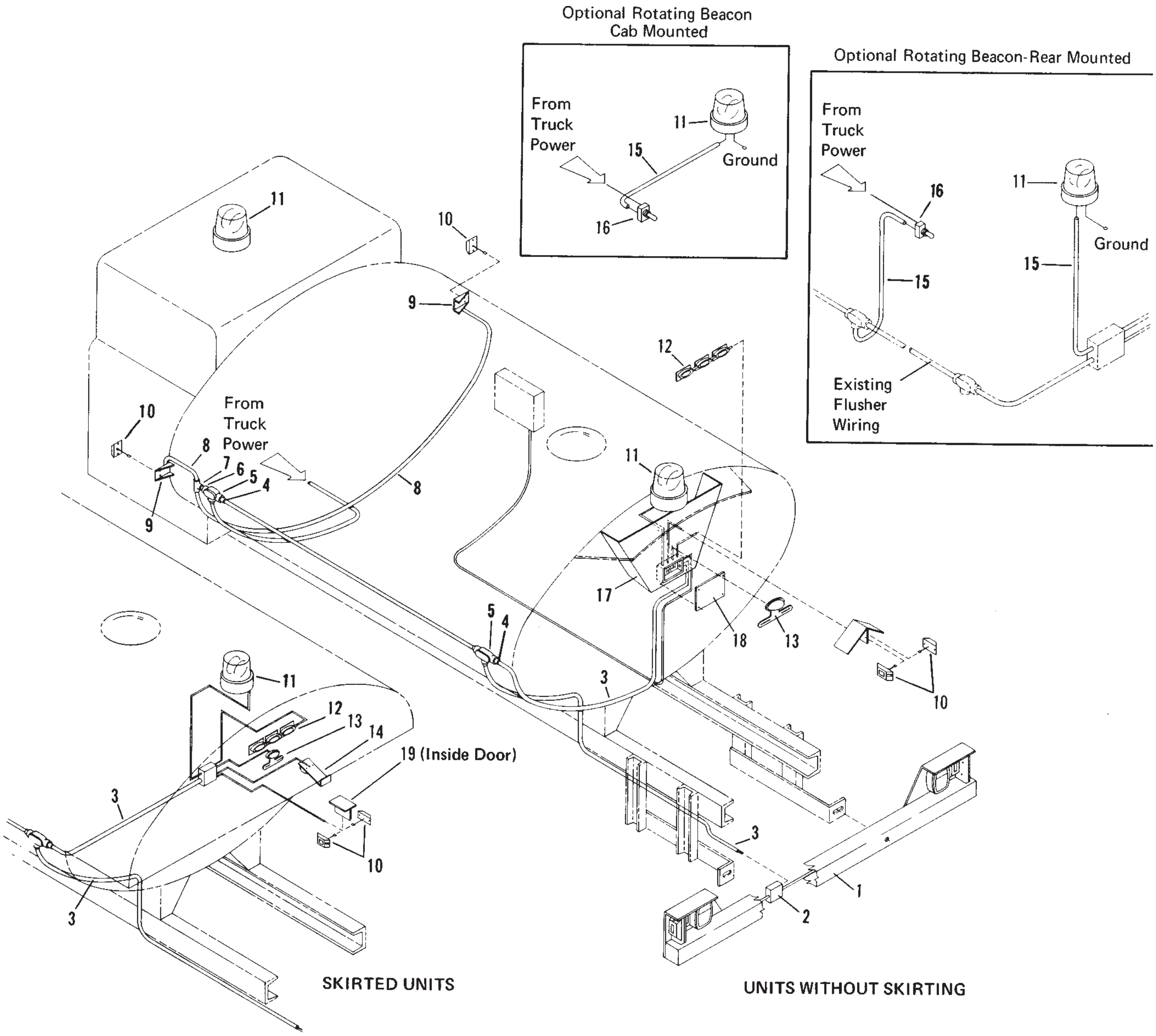
AR - AS REQUIRED

Rear Bumper & Platform



REF.	PART NO.	QTY.	DESCRIPTION
1	2910149	1	PLATFORM ASM-REAR,FLUSHER
2	2910148	4	CHANNEL-HANGER,BUMPER + VALVE
3	2910147	2	BRACKET-BUMPER HANGER
4	2910164	1	BUMPER ASM-FLUSHER,UNIVERSAL
5	9413948	10	NUT-HEX,LOCK,0.62NC,EA,GRA,PD
6	0428211	10	SCREW-HEX,0.62NCX1.25,GR2,PD
7	6700854	4	LIGHT-CLEAR,W/REFLECT RED
8	6700865	1	LIGHT-STOP-TURN+TAIL,LT,FLUSH
9	6700866	1	LIGHT-STOP-TURN+TAIL,RT,FLUSH

Lights & Wiring

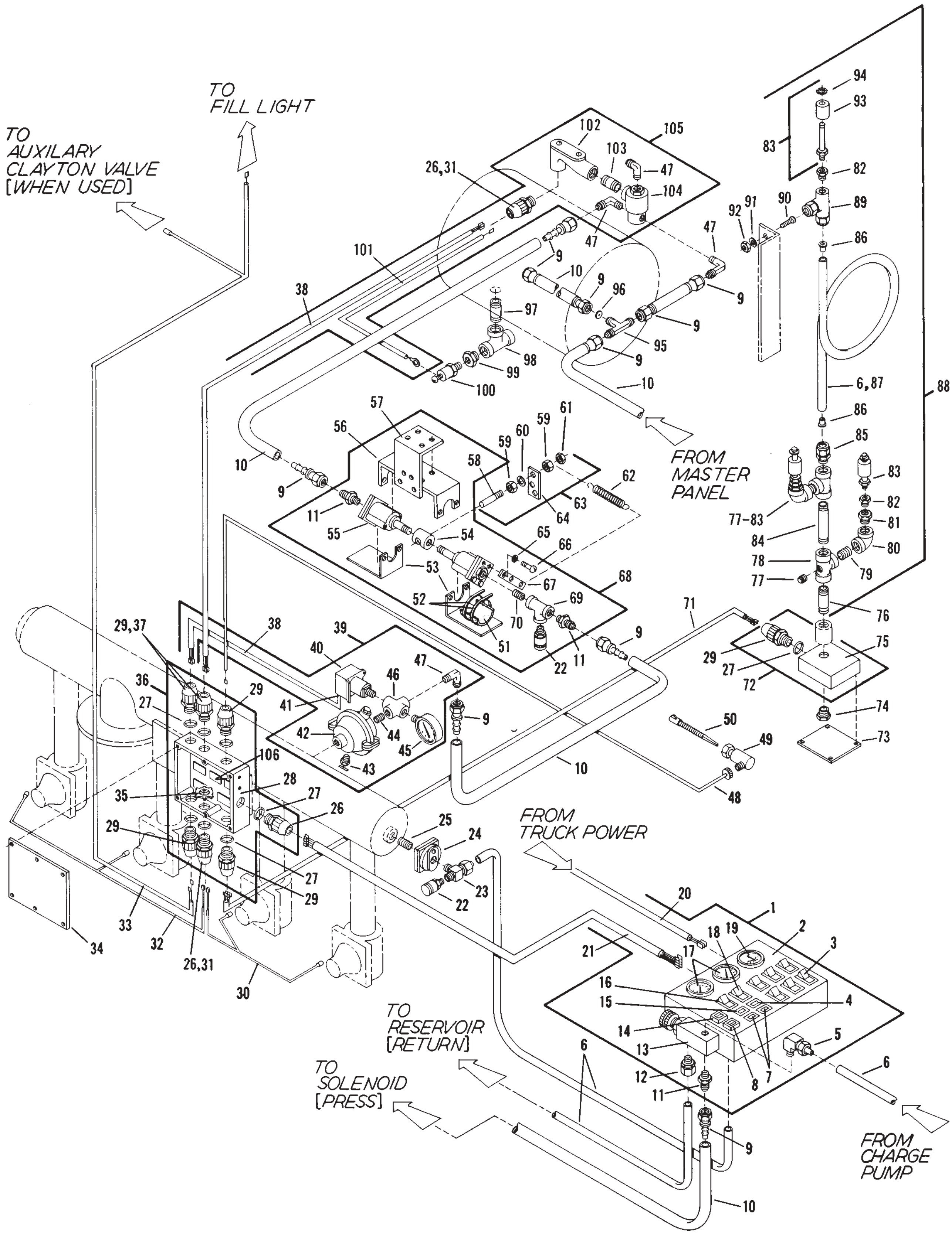


REF.	PART NO.	QTY.	DESCRIPTION
1	2910165	1	BUMPER ASM-COMPLETE
2	3370050	1	COVER-TERM BLK BOX,LOOM BUMPER
3	6700110	AR	CABLE-6/WAY
4	6700925	4	CORD GRIP-MALE
5	2970024	2	UNILET-TEE,FLUSHER LIGHTING
	6700350	2	GASKET-UNILET
	6700349	2	COVER-UNILET
6	6700366	2	CONNECTOR-MINI-BARB.38TX.25MPT
7	0105417	1	TEE-PIPE,0.25NPT,PN
	0105405	1	NIPPLE-SCH 40,0.25X0.87,CL,PN
	0116524	1	BUSHING-PIPE,0.50X0.25NPT,PN
8	6700363	AR	TUBING-POLYETHELENE,0.38
9	2970019	2	BRKT-FRT CLEAR LT MT,FLUSHER
10	2970022	4	LIGHT ASM-FRT CLEAR,AMBER
11	6700856	AR	BEACON-ROTATING,2 BEAM
12	6700084	1	LAMP-IDENTIFICATION
13	6700751	1	LIGHT-LICENSE WITH BRACKET

REF.	PART NO.	QTY.	DESCRIPTION
14	2970023	1	LIGHT ASM-DOME,RR COMP,FLUSHER
15	6000107	AR	LOOM-FIBRE,0.25 IN
16	6700255	AR	SWITCH-TOGGLE
17	2900105	1	PANEL ASM-LIGHT MT,REAR,FLUSH
18	2900109	1	COVER-ELECTRICAL OPENING,PANEL

AR - AS REQUIRED

Control System - Water Distribution



SPECIFY UNIT SERIAL NO., PART NO., & PART DESCRIPTION

Control System - Water Distribution

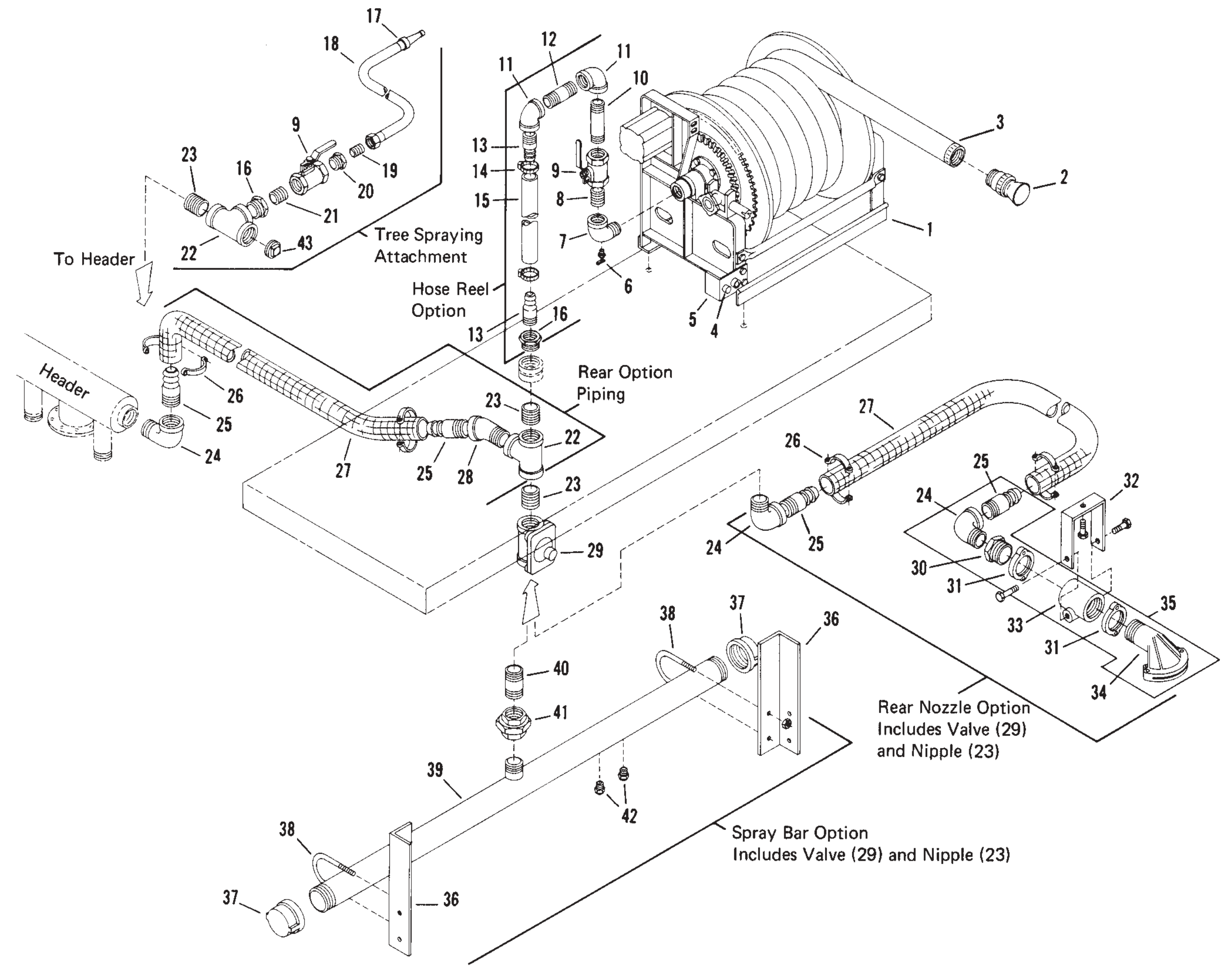
REF.	PART NO.	QTY.	DESCRIPTION
1	2960143	1	PANEL ASM-CONTROL,MASTER (INCL ITEMS 2-5,7,8 AND 11-21)
2	2960122	1	BOX-PANEL,MASTER,HOLE PATTERN
	2960125	1	PLATE-BACKING,MASTER PANEL
3	6700819	6	SWITCH-ROCKER,FLUSHING CONTROL
4	6700814	1	LIGHT-PILOT,AMBER,CONTRL,FLUSH
5	6600832	1	CONNECTOR-MAL,ELB.38T X .25MPT
6	6309162	AR	TUBING-NYLON,AIR BRK.38 OD /FT
7	6700816	2	LIGHT-PILOT,RED,CONTROL,FLUSHR
8	6700820	1	FUSE-FILL LIGHT,FLUSHER
	6700822	1	HOLDER-FUSE,FILL LIGHT,FLUSHER
9	6600306	10	SWIVEL-FEM FLARE
10	6600324	AR	HOSE-0.38 - PER FOOT
11	0118750	3	CONNECTOR-FLARED TBG,.38 X .25
12	6600831	1	CONNECTOR-MAL,STR.38T X.25MPT
13	6601011	1	VALVE-CONTROL,PRESS NOZ,FLUSHR
14	6700821	1	FUSE-SYSTEM POWER,FLUSHER
	6700823	1	HOLDER-FUSE,SYSTEM POWER,FLUSH
15	6700815	1	LIGHT-PILOT,GREEN,CONTRL,FLUSH
16	6700817	1	SWITCH-ROCKER,SYSTEM ACTIVATE
17	6400127	2	GAUGE-PRESSURE,200 PSI
18	6700818	1	SWITCH-ROCKER,SYSTEM PWR,FLUSH
19	6400124	1	METER-TACHOMETER
20	2970042	1	CABLE ASM-POWER SUPPLY,6 FEET
21	2970043	1	CABLE ASM-CONTROL,MAIN,20 FEET
22	6601085	2	VALVE-ACCESS,0.12MPT X 0.25SAE
23	2960171	1	TEE-MALE,BRANCH,TAPPED
24	6400131	1	PROTECTOR-GAUGE,NO.B8498-1
25	0105405	1	NIPPLE-0.25X0.88,CL,PN
26	6700895	2	RELIEF-STRAIN,CORD,LIQ TIGHT
27	0274249	8	O-RING,TUBE FITTING,0.75
28	7520002	1	BOX-JUNCTION,MASTER
29	6700894	6	RELIEF-STRAIN,CORD,LIQ TIGHT
30	2960164	1	HARNESS-CLA VLV,FRT NOZZ CONT
31	6700899	2	GROMMET-2 HOLE,STRAIN RELIEF
32	2960174	1	HARNESS-CLA VLV,SIDE NOZZ CONT
33	2960165	1	HARNESS-RR CLAYTON VLV+FILL LT
34	2960162	1	COVER ASM-MAIN JUNCTION BOX
	2960169	1	DECAL-WIRING DIAGRAM JUNCT BOX
35	6700904	8	NUT-LOCK,0.50 ELECT
36	2960161	1	BOX ASM-MAIN JUNCTION
37	6700922	2	GROMMET-1 HOLE,.25,STR RELIEF
38	6700897	AR	CABLE-4-18,FLUSHER CONTROL /FT
39	2960129	1	INTERLOCK ASM-FLUSH PRESS CONT
40	6700830	1	SWITCH-PRESSURE CONTL,FLUSHER
41	6700015	1	CONNECTOR
42	2960126	1	BELLOWS ASM-TRANSFER,PRESSURE
43	6600162	1	COCK-DRAIN,0.25 IN
44	0105405	1	NIPPLE-SCH 40,0.25X0.87,CL,PN
45	6600168	1	GAUGE-2,5IN X 160 LBS
46	0105419	1	CROSS-PIPE,0.25NPT,PN
47	0118755	4	ELBOW-0.38T X 0.25MPT,90 DEG
48	6400125	1	CABLE-SENDER
49	6400123	1	SENDER-TACHOMETER
50	6400126	1	TANG-DRIVE,TACHOMETER SENDER
51	2960152	2	FILTER-BELLOWS,MODULATOR FLUSH
52	6700167	AR	TIE-PLT-2SCP-0,BLACK
53	2960147	2	GUARD-DUST,BELLOWS,MODULATOR
54	2960149	1	COUPLING-SHAFT,BELLOWS
55	2960127	2	BELLOWS-PRESSURE SENSING
56	2960151	1	BRACKET-MOUNTING,BELLOWS,PRESS
57	2960150	1	BRACKET-MOUNT,MODULATOR
58	2960145	1	PIN-DRIVE,MODULATOR,FLUSHER
59	0124818	2	NUT-HEX,JAM,0.25NC,PD
60	0120380	1	WASHER-LOCK,0.25,SPRING,PD
61	9413946	1	NUT-LOCK,HEX,0.25NC,PD
62	6100261	1	SPRING-EXTEND,MODULATOR,FLUSHR
63	2960146	1	PIN-DRIVE,ASM,CONTROL,PUMP
64	2960144	1	PLATE-ADAPTER,PUMP,HYD
65	0120217	2	WASHER-LOCK,NO.10,SPRING,PD
66	0436754	2	SCREW-MACH,PNSL,10NF X 1.00,PD
67	2960148	1	SUPPORT-SPRING RETURN,BELLOWS
68	2960142	1	MODULATOR ASM-HYD PUMP,FLUSHER

REF.	PART NO.	QTY.	DESCRIPTION
69	0105417	1	TEE-PIPE,0.25NPT,PN
70	0142275	1	NIPPLE-PP,SCH 40,0.25X1.00,PN
71	2960139	1	CABLE ASM-JUMPER,LEVEL TO MAIN
72	2960163	1	BOX ASM-FLOAT SWITCH JUNCTION
73	6700834	1	COVER-BOX,SUB JUNCT CONT,FLUSH
74	6700829	1	NIPPLE-CHASE,NONINSUL,0.50
75	7520003	1	BOX-JUNCTION,TREE,FLOAT
76	6601017	1	NIPPLE-PP,SCH 80,0.50X3.00,PVC
77	0143980	2	PLUG-PIPE,SQ HD,0.38NPT,PD
78	2960130	2	TEE-WATER LEVEL+INTERLOCK TREE
79	6601018	2	NIPPLE-SCH 80,0.50XCL,PVC
80	6601014	2	ELBOW-PIPE,90,.50NPT,PVC,SCH80
81	6601015	2	BUSHING-PIPE,0.50X0.25NPT,PVC
82	0112877	3	BUSHING-PP,HEX,0.13X0.25NPT,BR
83	6700190	3	SWITCH-INDICATOR
84	6601016	1	NIPPLE-PP,SCH 80,0.50X6.00,PVC
85	6601096	1	CONNECTOR-.37TUBEX.50PIPE,COMP
86	6601171	2	INSERT-FERRULE,06TUBE,6T23UIB
87	6700827	10	WIRE-18GA. STR,BLACK,PER FOOT
88	2960183	1	TREE ASM-LEVEL INDICATOR,UNIV
89	6601170	1	TEE-RUN,04FPX06MNX06MN,BRASS
90	6601172	1	MOUNTIE-FITTING,6T22I2B
91	0120380	1	WASHER-LOCK,0.25,SPRING,PD
92	0113739	1	NUT-HEX,0.25NC,BRASS
93	7520001	3	FLOAT-SWITCH,LEVEL,BUNA-N
94	6000921	3	RING-SNAP
95	0118807	1	TEE-0.375,45 FLARE
96	2960157	1	DISK-ORIFICE,RESTRICTOR
97	0190717	1	NIPPLE-PP,SCH 40,0.75X2.00,PN
98	0125988	1	TEE-PIPE,0.75NPT,PN
99	0144034	1	BUSHING-PIPE,0.75X0.50NPT,PN
100	6600237	1	SWITCH-THERMO
101	2960170	1	HARNESS-TEMP CONT,SOL/SENDER
102	6700896	1	BOX-ANGLE,ENTRANCE,JUNCTION
103	0141504	1	NIPPLE-PP,SCH 40,0.50X1.50,PN
104	6601020	1	VALVE-SOL,SYS ACT 12VDC,175PSI
105	2960128	1	SOLENOID ASM-FLUSH PRESS CONT
106	2960184	1	RELAY (NOT SHOWN)

AR - AS REQUIRED
NS - NOT SHOWN

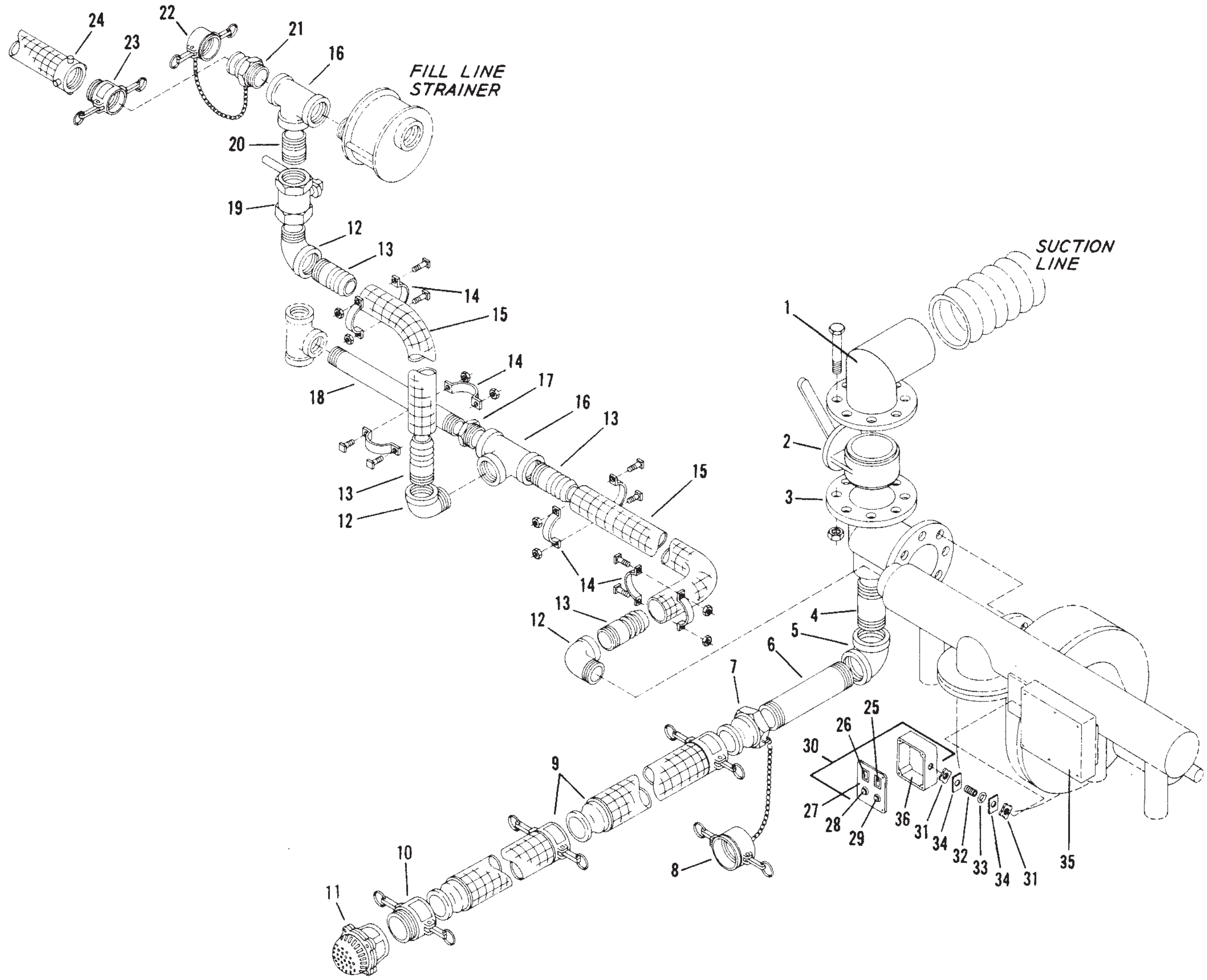
SPECIFY UNIT SERIAL NO., PART NO., & PART DESCRIPTION

Discharge Piping Options



REF.	PART NO.	QTY.	DESCRIPTION	REF.	PART NO.	QTY.	DESCRIPTION
1	6000875	AR	REEL-HOSE,ELECTRIC (SHOWN)	24	0187154	AR	ELBOW-PIPE,90,ST,2.00NPT,PN
	6000874	AR	REEL-HOSE,MANUAL (N/S)		6200083	AR	ELBOW-PIPE,90,ST,2.50NPT,PN
2	6000877	AR	NOZZLE-1.00NPT,ADJUSTABLE	25	6200526	AR	NIPPLE-COMB-2.00,TYPE SCP
	6601036	AR	NOZZLE-1.50NPT,ADJUSTABLE		6200559	AR	NIPPLE-COMB 2.5 HOSE X 2.5 NPT
3	6601037	AR	HOSE ASM-1.5 ID X 100 FT LG	26	6000870	AR	CLAMP-HOSE,2.50 OD,DOUBLE BOLT
	6000873	AR	HOSE ASM-1.00X150FT,W/M+F ENDS		6000915	AR	CLAMP-DOUBLE BOLT 3IN OD HOSE
4	3160040	1	FUSEHOLDER-BUSS,PANEL MOUNTED	27	6309186	AR	HOSE-2.00IN,WATER -PER FOOT
	6700821	1	FUSE-SYSTEM POWER,FLUSHER		6309211	AR	HOSE-WATER P1196 2.50IN-PER FT
5	2970017	1	BRKT-SWITCH+FUSE MT,HOSE REEL	28	0218220	1	ELBOW-PIPE,45,ST,2.00NPT,PN
6	6600162	1	COCK-DRAIN,0.25 IN		6200565	AR	ELBOW-PIPE,45,ST,2.50NPT,PN
7	0218202	1	ELBOW-PIPE,90,ST,1.50NPT,PN	29	2940302	1	CLAYTON VALVE ASM-COMP,FLUSHER
8	0216341	1	NIPPLE-SCH 40,1.50X1.75,CL,PN	30	6200039	1	BUSHING-PIPE,2.50X2.00NPT,PN
9	6200528	AR	VALVE-BALL,HOSE REEL	31	2940005	2	RING-LOCKING
10	0451894	1	NIPPLE-PP,SCH 40,1.50X6.50,PN	32	2980013	1	YOKE-HANGER,SPRINKLER NOZZLE
11	0187558	2	ELBOW-PIPE,90,1.50NPT,PN	33	2980012	1	BRACKET-NOZZLE MT RR SPRINKLER
12	0219379	1	NIPPLE-PP,SCH 40,1.50X4.00,PN	34	2940006	1	NOZZLE ASSEMBLY-FLUSHER,BRASS
13	6200527	2	NIPPLE-COMB-1.50,TYPE SCP	35	2980014	1	NOZZLE ASM-COMP,RR SPRINKLER
14	6000871	2	CLAMP-HOSE	36	2940305	2	ANGLE-HANGER SPRAYBAR FLUSHER
15	6309187	AR	HOSE-1.50IN,WATER -PER FOOT	37	0178438	2	CAP-PIPE,2.00NPT,PN
16	0218857	2	BUSHING-PIPE,2.00X1.50NPT,PN	38	3390085	2	CLIP-2IN PIPE
17	6600474	1	NOZZLE-1.00,BRASS	39	2940077	1	SECTION ASSEMBLY-CENTER
18	6600182	1	HOSE-1.00IN,CPLGS	40		1	NIPPLE-PIPE,2.00NPT X AR LGTH
19	0127874	1	NIPPLE-SCH 40,1.00X1.50,CL,PN	41	6000419	1	UNION-RAILROAD,2 IN
20	0218855	1	BUSHING-PIPE,1.50X1.00NPT,PN	42	3351011	AR	NOZZLE-1/8,SPRAY BAR
21	0216341	1	NIPPLE-SCH 40,1.50X1.75,CL,PN	43	0219309	1	PLUG-PIPE,SQ HD,2.00NPT,PN
22	0192553	AR	TEE-PIPE,2.00NPT,PN	44	6200039	AR	BUSHING-PP,2.50X2.00NPT,PN *NS
	6200168	AR	TEE-PIPE,2.00X2.00X2.50NPT,PN				NS - NOT SHOWN
23	0219400	3	NIPPLE-SCH 40,2.00X2.00,CL,PN				AR - AS REQUIRED

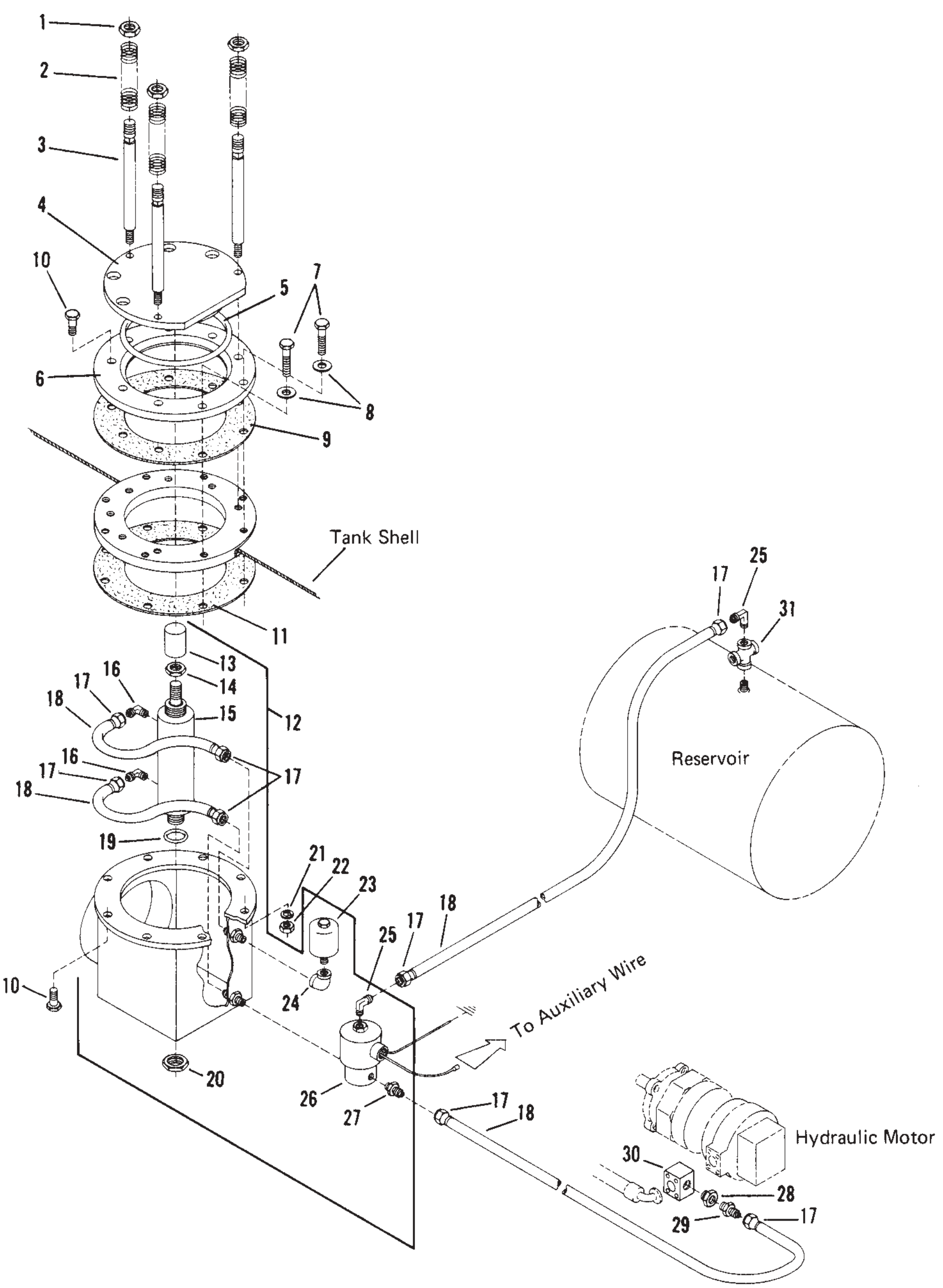
Self Filling Attachment



REF.	PART NO.	QTY.	DESCRIPTION
1	2940310	1	LINE ASM-SUCT HOSE TO VLV
2	6601097	1	VALVE-BUTTERFLY,5IN
3	2940311	1	LINE ASM-SUCT PUMP TO VLV
4	6200128	1	NIPPLE-PP,SCH 40,3.00X6.00,PN
5	6200073	1	ELBOW-PIPE,90,3.00NPT,PN
6	6200558	1	PIPE-SCH 40,3.00X15.00,TBE,PN
7	6600277	1	ADAPTER-FEM THD 3.00 EVERTITE
8	6601099	1	CAP-DUST 3.0 EVERTITE W/CHAIN
9	6601098	2	HOSE ASM-SUCT W/M+F ENDS,P11.L
10	6601102	1	COUPLER-3.0 EVERTITE,PART B
11	6200561	1	FOOT VALVE
12	6200083	3	ELBOW-PIPE,90,ST,2.50NPT,PN
13	6200559	4	NIPPLE-COMB 2.5HOSE X 2.5NPT
14	6000915	4	CLAMP-DOUBLE BOLT,3IN OD HOSE
15	6309211	12	HOSE-WATER,P1196 2.50IN,PER FT
16	6200162	2	TEE-PIPE,2.50NPT,PN
17	6200039	1	BUSHING-PIPE,2.50X2.00NPT,PN
18	6200307	1	PIPE-SCH 40,2.00X24.00,TBE,PN
19	6600067	1	VALVE-BUTTERFLY,2.5
20	6200108	1	NIPPLE-SHORT,2.5 IN
21	6601154	1	ADAPTER-MALE THD,2.50 EVERTITE
22	6601100	1	CAP-DUST,2.5 EVERTITE W/CHAIN
23	6601101	1	COUPLER-2.5 EVERTITE,PART B
24	2990020	1	HOSE-FILL,2.50NPT,FM CPLG
25	6700815	1	LIGHT-PILOT,GREEN,CONTROL
26	6700814	1	LIGHT-PILOT,AMBER,CONTROL
27	2960177	1	COVER-SELF FILL CONTROL BOX
	2960175	1	DECAL-SELF FILLER CONTROL
28	6700914	1	SWITCH-PB,ELECTRIC,SPDT,RED
	6700916	1	FACENUT-SWITCH,ELECTRIC,PB
29	6700915	1	SWITCH-PB,ELECTRIC,DPDT,BLACK
	6700916	1	FACENUT-SWITCH,ELECTRIC,PB
30	2970047	1	COVER ASM CONT
31	6700904	2	NUT-LOCK,0.50 IN,ELECTRICAL
32	6601018	1	NIPPLE-SCH 80,0.50XCL,PVC
33	0274249	1	O RING-TUBE FITTING,0.75
34	2960176	2	WASHER
35	2960172	1	DECAL-WIRING DIA.JUNCT BOX,SF
36	2960178	1	BOX-SELF FILLING CONTROL
37	2750398	2	TROUGH-HOSE,EXP METAL,96IN NS

NS - NOT SHOWN

Optional 10 Inch Dump Valve



REF.	PART NO.	QTY.	DESCRIPTION
1	9416894	3	NUT-HEX,LOCK,0.75NC,EA,PD
2	6000926	3	SPRING-COMP,DUMP VALVE,FLUSHER
3	2940318	3	ROD-GUIDE,VALVE PLUG
4	2940317	1	PLUG-VALVE,10 IN DUMP
5	6601174	1	O RING-10 IN,VALVE PLUG
6	2940316	1	SEAT-VALVE,10 IN DUMP
7	0122472	2	SCREW-HEX,0.50NCX2.50,GR2,PD
8	6600264	2	GASKET-0.5 X 0.75,COPPER
9	2940325	1	GASKET-TANK FLANGE TO VLV SEAT
10	0122433	13	SCREW-HEX,0.50NCX1.50,GR2,PD
11	2940326	1	GASKET-TANK FLANGE TO PLEN ASM
12	2940319	1	PLENUM ASM-DISCHARGE,10IN DUMP
13	2940324	1	SLEEVE-THREADED,CYL MOUNT
14	0426897	1	NUT-HEX,JAM,0.75NC,PD
15	6600140	1	CYLINDER-AIR FRT SUC A-3X6
16	6200179	2	ELBOW-FLARED TUBE
17	6600306	8	SWIVEL-FEM,FLARE
18	6600324	AR	HOSE-0.38 - PER FOOT
19	6601173	1	O RING-1.38 X 1.62
20		1	NUT (INCL WITH CYLINDER)
21	0120384	2	WASHER-LOCK,0.50,SPRING,PD
22	0120378	2	NUT-HEX,0.50NC,PD
23	6600223	1	BREATHER
24	0105413	1	ELBOW-PIPE,90,0.25NPT,PN
25	0118755	2	ELBOW-0.38T X 0.25MPT,90 DEG
26	6601020	1	VALVE-SOL,SYS ACT,12V DC
27	0118750	1	ADAPTER-AUTO,ST
28	6200174	1	UNN-HLF,0.38T X 0.38MPT
29	0142269	1	BUSHING-PIPE,0.50X0.38NPT,PN
30	3320994	1	ADAPTOR-HYD MTR,TAP,AUX EQPT
31	0105419	1	CROSS-PIPE,0.25NPT,PN

AR - AS REQUIRED

SPECIFY UNIT SERIAL NO., PART NO., & PART DESCRIPTION

Index

Index

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