Model No. 83846
HYDRAULIC OPERATED OIL PUMP
Series "A"

SPECIFICATIONS

SINGLE STROKE, HYDRAULIC RETURN

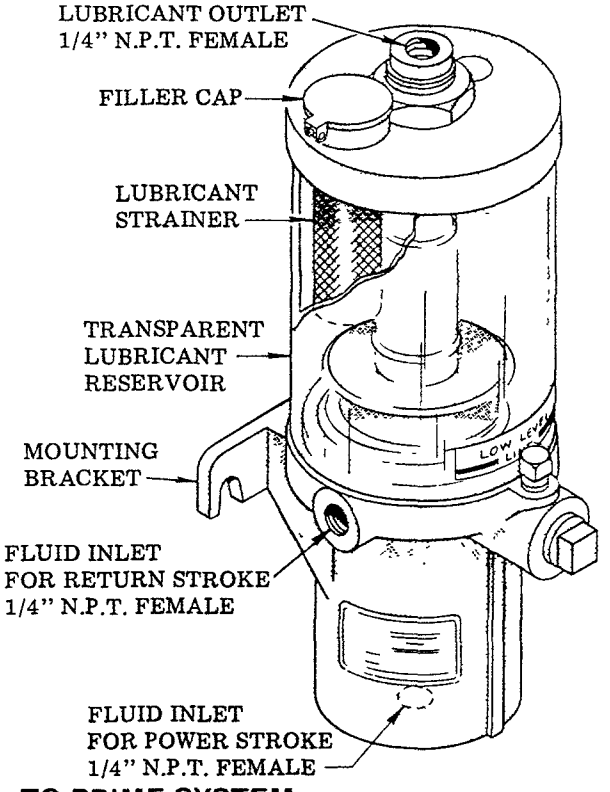
Ratio	Lubricant Output (cu. in.)	Reservoir Capacity	Fluid Inlet	Lubricant Outlet	Lubricant Operating Pressure (P.S.I.)			
					Type of System	Minimum	Maximum	Recommended
13:1	*1.0	2 pints	1/4" N.P.T. Female	1/4" N.P.T. Female	SL-42 SL-43	750 With 60 P.S.I. Fluid	1,000 With 80 P.S.I. Fluid	850 With 65 P.S.I. Fluid

*Based on lubricants that are free of entrapped air. Lubricants that are aerated will reduce output of pump.

The 83846 Pump is used as the pumping unit for a centralized lubrication system having a single line circuit of SL-42 and/or SL-43 Injectors dispensing oil.

It is an hydraulic operated, single stroke pump that discharges *1.0 cu. in. of lubricant into the circuit for each pump stroke (Lubrication Cycle).

The total quantity of lubricant needed for the lubrication cycle of the system must not exceed the amount of lubricant discharged per pump stroke.



Approximately 36 cubic inches (20 fluid ounces) of hydraulic fluid is needed to cycle the pump.

IMPORTANT — Hydraulic pressure for cycling the pump must not exceed 200 P.S.I. (see Fig. 1). If the pressure does exceed 200 P.S.I., a pressure reducing valve set at 70 P.S.I. must be installed in the hydraulic line between the hydraulic pump and the four-way control valve (see Fig. 2).

TO FILL RESERVOIR

The reservoir is filled through the filler cap at the top of the reservoir.

A strainer is located at the filler cap to prevent the induction of foreign material into the lubricant reservoir. Inspect strainer before filling reservoir. When necessary, lift strainer out and clean thoroughly.

TO PRIME SYSTEM

SUPPLY LINES: After pump reservoir has been filled with recommended lubricant, loosen (do not remove) all plugs in dead ends of the injector manifolds and supply lines. Operate pump until lubricant flows from around threads of any loosened plug. Tighten this plug and continue to operate pump until lubricant flows from around threads of another loosened plug. Repeat this procedure until all supply lines are primed.

FEEDER LINES: Fill each feed line with lubricant before connecting lines to outlet of injectors and bearings. This will prevent having to cycle each injector to fill line between injector and bearing.

INJECTORS: Check each injector for proper operation. Injector stem moves when injector discharges lubricant to bearing. This may require cycling system several times. After checking injectors for operation adjust injectors for the volume required for each bearing.

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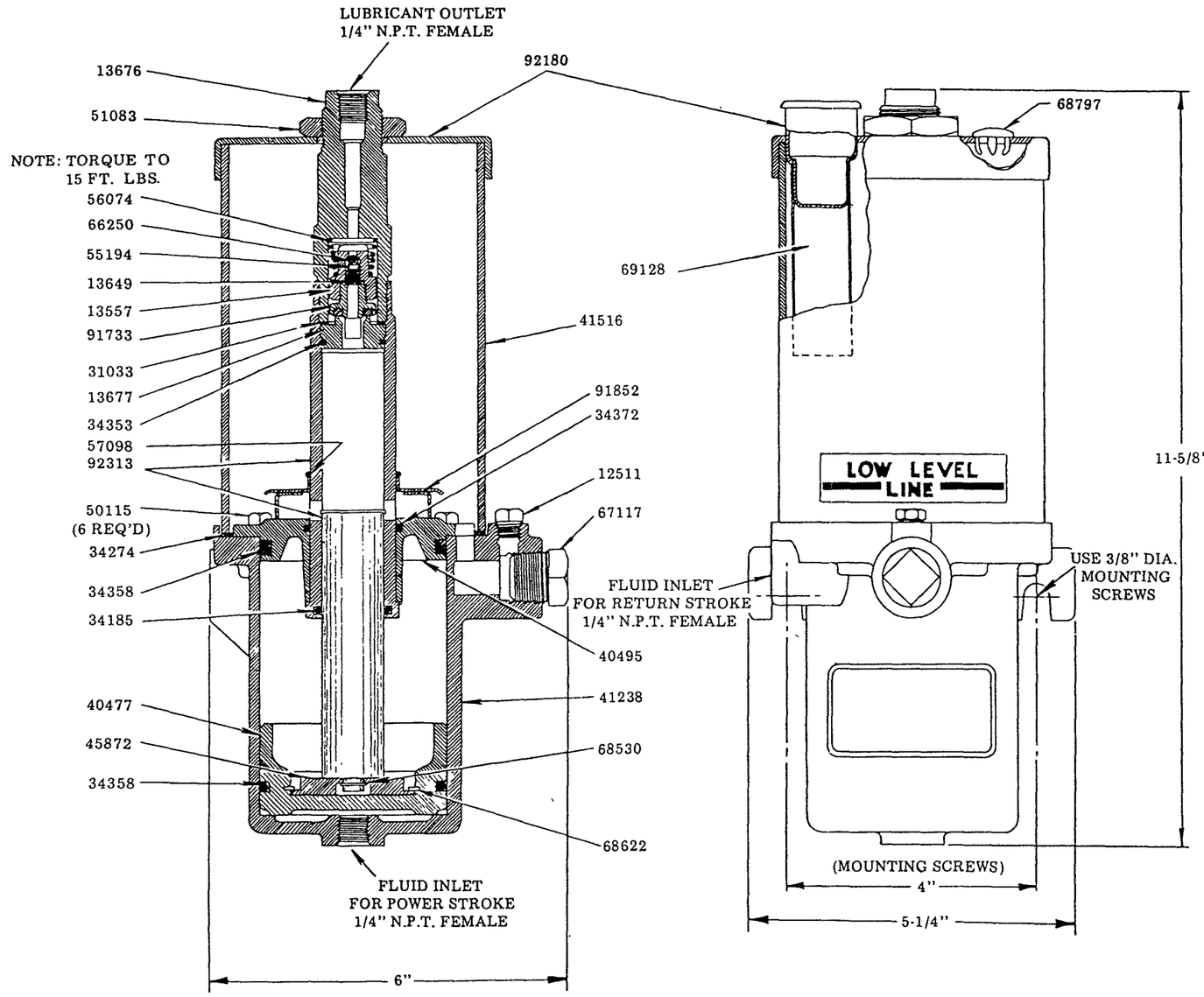

IMPORTANT – Pump must be installed in a vertical position.

OPERATION OF THE PUMP.

Hydraulic fluid, entering the bottom of the cylinder moves the piston upward (power stroke). The plunger moves upward, closing the bushing inlet ports and discharges lubricant from the bushing cavity through the outlet check to the outlet of the pump, through the supply line to the injectors and bearings.

After all injectors have cycled a four way valve is actuated to reverse the flow of hydraulic fluid to the pump to return the piston and plunger to their down position. The plunger retracts beyond the bushing inlet ports permitting the bushing cavity to recharge with lubricant.

WHAT TO DO IF:

PUMP LOSES PRIME — Check lubricant supply.

SYSTEM FAILS TO CYCLE and caluculated system planning has been followed — lubricant is leaking by the 91733 Outlet Check. Remove 91733 Outlet Check and examine packing for presence of foreign particles. If packing is damaged, replace the 91733 Outlet Check.

Remove the 66250 Ball Check, 55194 Spring and 13649 Ball Stop from 13557 Check Retainer. Examine for presence of foreign particles. Clean thoroughly.

Failure of injectors to cycle can also be caused by a leak in the supply line.

Examine supply lines and connections.

PUMP FAILS TO OPERATE – Check fluid supply.

SERVICE PARTS

Part No.	Description	Part No.	Description	Part No.	Description
12511	Pipe Plug	40477	Piston	* 66250	5/32" Dia. Steel Ball
13557	Check Retainer	40495	Cylinder End	67117	Pipe Plug
13649	Ball Stop	41238	Cylinder	68530	Tru-Arc
13676	Outlet Bushing	41516	Reservoir Assembly	68622	Tru-Arc
13677	Check Seat	45872	Thrust Washer	68797	Plug Button
*31033	Gasket	50115	Machine Screw	69128	Strainer
*34185	O-Ring	51083	Nut	*91733	Check Assembly
*34274	Gasket	*55194	Spring	91852	Baffle Assembly
*34353	O-Ring	*56074	Spring	92180	Cover Assembly
*34358	O-Ring	57098	Ring Spring	92313	Bushing and Plunger Assembly
*34372	O-Ring				

*Recommended service parts inventory.

TYPES OF INSTALLATION

Pump can be installed so that frequency of lubrication cycle can be controlled Manually, mechanically or electrically.

MANUAL CONTROL (Figs. 1 and 2)

Opening of the four-way valve for the power stroke of the pump permits hydraulic fluid to enter the bottom of the pump, moving the piston and plunger upward for the power stroke to dispense lubricant under pressure (1,000 P.S.I.) through the supply line to the injectors and to the bearings. Hydraulic fluid above the piston is displaced by the upward movement of the piston and returns to the reservoir tank through the four-way valve.

After the injectors have cycled, the four-way valve is turned to permit hydraulic fluid to enter the pump above the piston, forcing the piston and plunger downward for the return stroke. Hydraulic fluid below the piston is displaced by the downward movement of the piston and returns to the reservoir tank through the four-way valve.

MECHANICAL CONTROL (Figs. 1 and 2)

Movement of the four-way valve is controlled by a mechanical linkage which is attached to a reciprocating motion of the machine.

ELECTRICAL CONTROL (Fig. 3)

An electrical time switch controls a four-way solenoid hydraulic valve. The frequency of lubrication cycles can be set as desired by adjustable pins in the time switch.

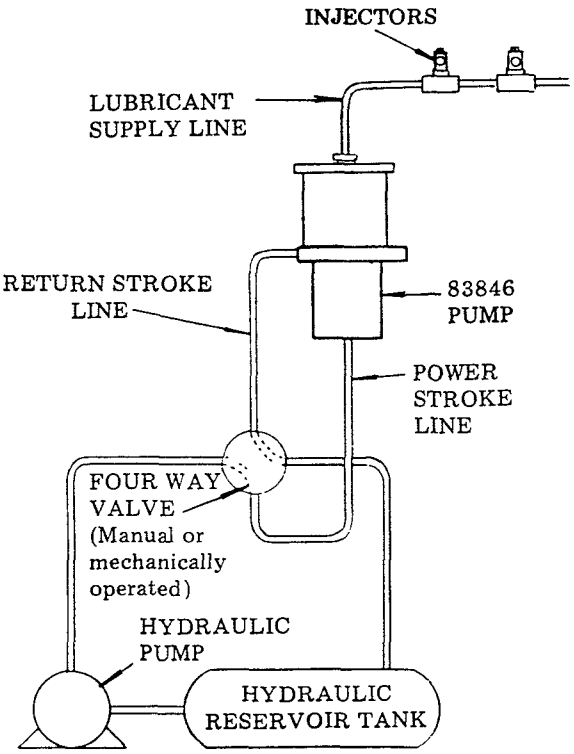

FIG. 1
HYDRAULIC PRESSURE SYSTEM OF LESS THAN 200 P.S.I.

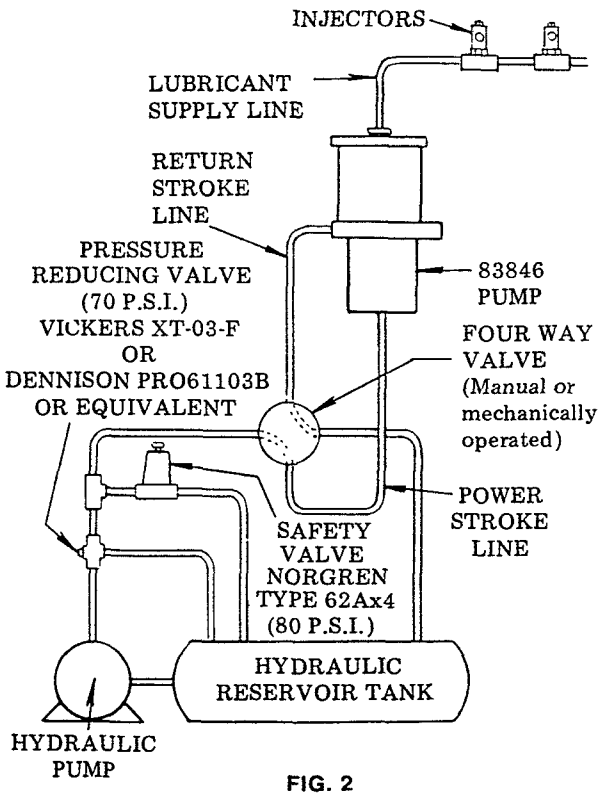

FIG. 2
HYDRAULIC PRESSURE SYSTEM EXCEEDING 200 P.S.I.
(Pressure must be reduced)

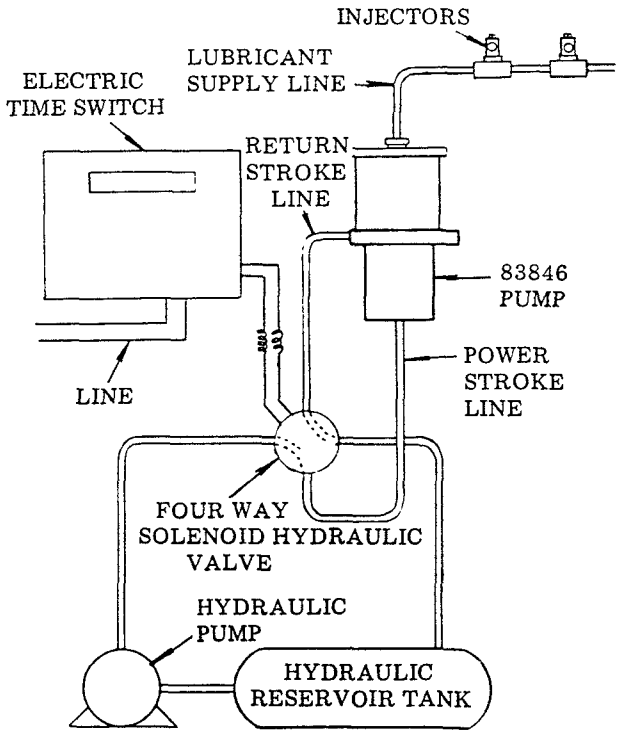

FIG. 3
ELECTRICAL CONTROL
CIRCUIT IDENTICAL WITH FIGS. 1 or 2 EXCEPT FOR THE FOUR-WAY VALVE AND THE ELECTRICAL CONTROL

RETAIN THIS INFORMATION FOR FUTURE REFERENCE

When ordering replacement parts, list: Part Number, Description, Model Number, and Series Letter.

LINCOLN provides a Distributor Network that stocks equipment and replacement parts.