

SPECIFICATIONS

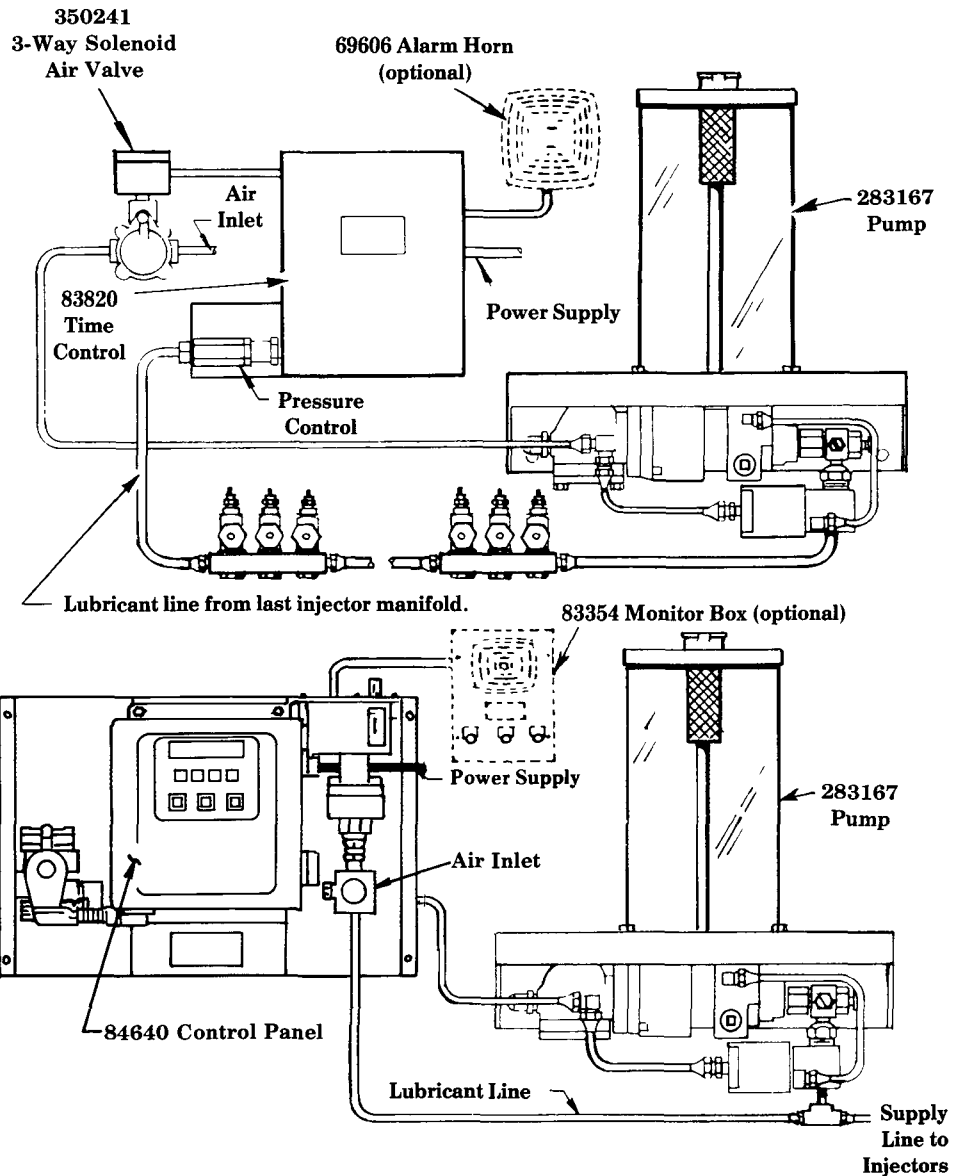
RATIO	LUBRICANT OUTPUT (cu. in.)		RESERVOIR CAPACITY	AIR INLET	LUBRICANT OUTLET	LUBRICANT OPERATING PRESSURE (PSI)			
	PER CYCLE	PER MIN				TYPE OF SYSTEM	MINIMUM	MAXIMUM	RECOM-MENDED
40:1	*.11	12	15 Pints	1/8" NPTF	3/4" NPTF	SL-41 SL-42 SL-43 SL-44	750	1000	850

TYPICAL INSTALLATION

The 283167 Pump is used as the pumping unit for a centralized lubrication system having a single line circuit of SL-41, SL-42, SL-43 or SL-44 Injectors.

It is an air operated reciprocating pump that discharges an established amount of lubricant *.11 cu. in.) into the circuit for each pump cycle.

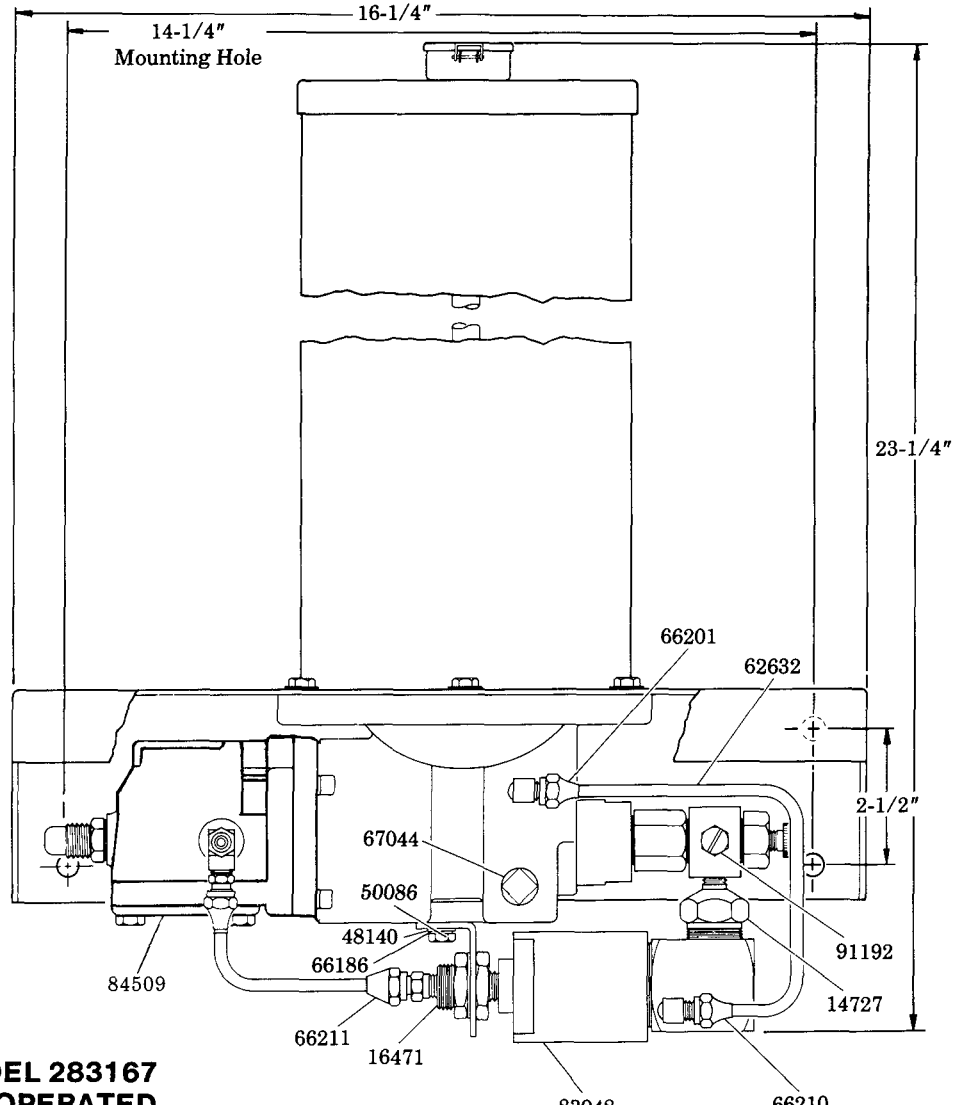
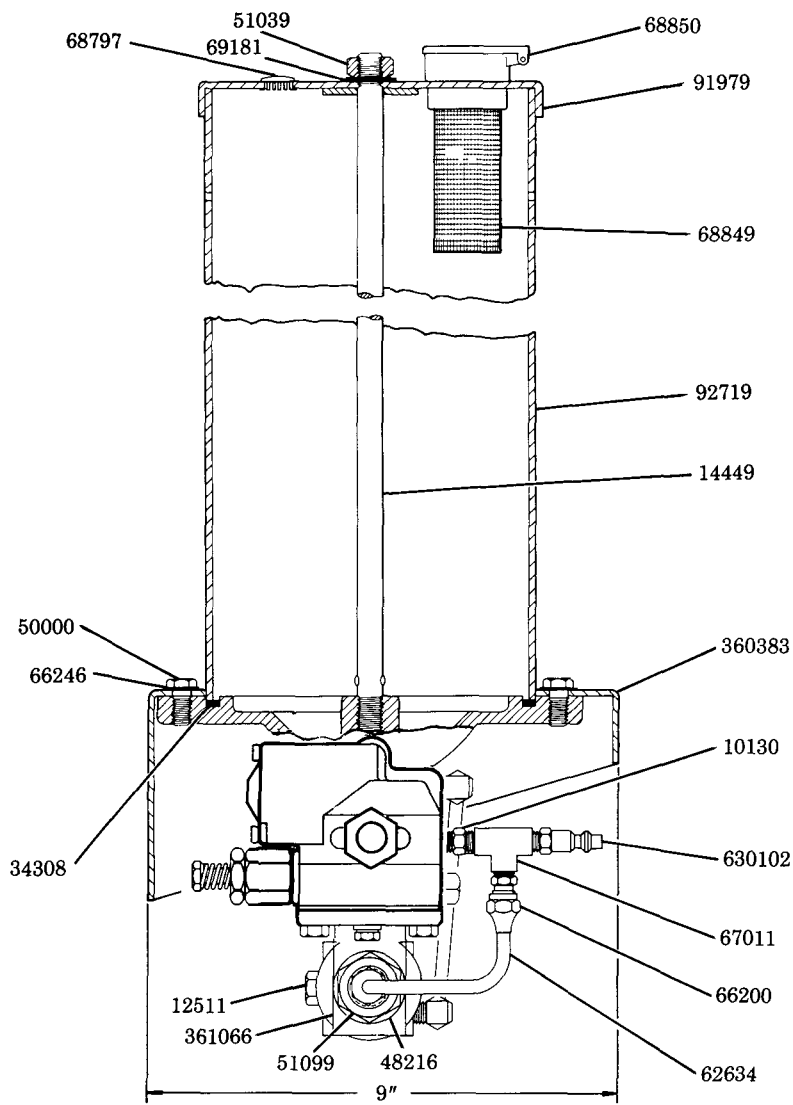
* Based on lubricants that are free of entrapped air. Lubricants that are aerated will reduce output of pump.



WARNING
DO NOT OPERATE THIS UNIT WITH COMBUSTIBLE GAS

TO FILL RESERVOIR

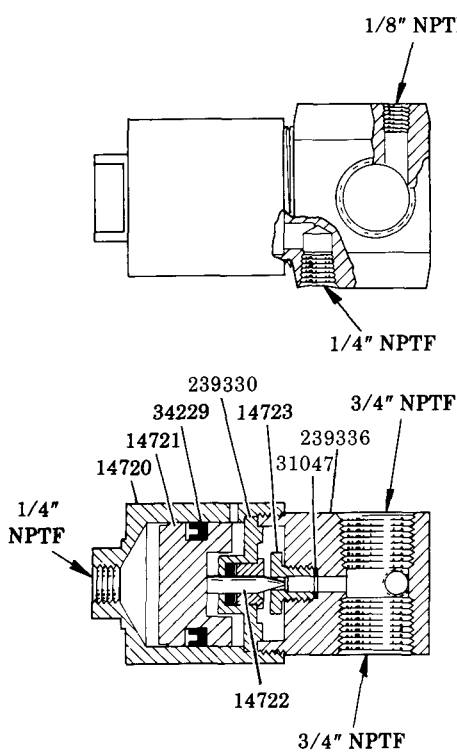
The lubricant reservoir is filled through the filler cap at the top of the reservoir. A strainer is located in the filler cap. Strainer should be removed from the filler cap and cleaned periodically.



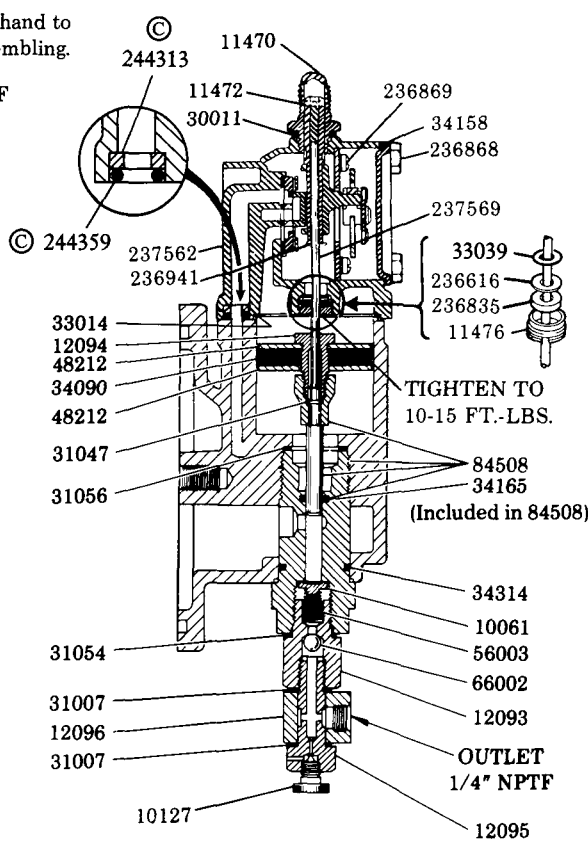
**MODEL 283167
AIR OPERATED
OIL PUMP**

© Indicates Change

IMPORTANT - Start fasteners by hand to avoid stripping threads when re-assembling.



83948 VENT VALVE



MODEL 84509

† Assemble with
Loctite #74 Blue

**OUTLET
1/4" NPTF**

**TO LUBRICATE AIR VALVE
MECHANISM**

Disconnect air to pump, remove the four cover screws, cover plate and cover plate gasket.

Remove and disassemble the air valve casting from the pump.

The air valve casting should be cleaned or flushed to remove any chips, or other foreign particles prior to re-assembly.

Before replacing the toggle assembly, pack cavity with grease.

Use NLGI No. 1 (light grade) water repellent grease. Approximately 1 1/2 ounces.

Replace cover gasket, cover, and screws. Tighten to avoid air leaks.

Periodic inspection of parts at least once each year is advisable.

SERVICE PARTS

Part	Qty.	Description	Part	Qty.	Description	Part	Qty.	Description	Part	Qty.	Description
*10061	1	Pump check disc	30011	1	Valve cap gasket	51039	1	Nut	84509	1	Pump assembly
10127	1	Plug	*31007	2	Gasket	55138	4	Spring	91192	1	Safety unloader assembly
10130	1	Nipple	31047	2	Gasket	55231	1	Spring	*91331	1	Toggle plate assembly
11470	1	Cap	31054	1	Gasket	56003	1	Spring	91979	1	Reservoir cap assembly
*11472	1	Trip rod pin	31056	1	Gasket	56038	2	Spring	92719	1	Reservoir assembly
11476	1	Trip rod packing nut	*33014	1	Gasket	62337	1	Steel tubing	236286	1	Cover
11904	1	Packing nut	*33039	1	Gasket	62399	1	Steel tubing	236615	1	Muffler cover
11905	1	Packing cap	34090	1	Packing (Buna-N)	66002	1	Steel ball	*236616	1	Gasket
12093	1	Check housing	*34110	1	Packing (Buna-N)	*66010	2	Steel ball	236833	1	Muffler
12094	1	Air piston bolt	*34158	1	Gasket (Neoprene)	66200	1	Str tube connector	*236835	1	Packing
12095	1	Outlet body	34165	1	O-ring (Buna-N)	66201	1	90° tube connector	236868	4	Screw
12096	1	Outlet block	*34229	1	Packing (Buna-N)	66210	1	90° tube connector	236869	6	Screw
12511	2	Pipe plug	34308	1	Gasket (Buna-N)	66211	1	Str tube connector	236870	4	Valve seat bolt
12834	1	Spring retainer	34314	1	O-ring (Buna-N)	67044	1	Tee	236941	1	Trip shoe assembly
14449	1	Tie rod	38162	1	Valve gasket (Buna-N)	68797	1	Pipe plug	237562	1	Air valve casting
14720	1	Air cylinder	40812	1	Base casting	68849	1	Plug button	237569	1	Trip rod assembly
14721	1	Piston	45605	1	Valve guide plate	68850	1	Strainer	239330	1	Viton packing assembly
*14722	1	Needle	48212	2	Washer	68850	1	Filler cap	239336	1	Valve body
*14723	1	Valve seat	48237	1	Washer	*83063	1	Valve slide, seat & gasket assy	*244313	1	Seat
14727	1	Valve body	50000	6	Cap screw	83948	1	Vent valve assembly	*244359	1	O-ring (Buna-N)
*30003	1	Gasket	50521	4	Screw	84508	1	Bushing, plunger & o-ring assy	360383	1	Base
									630102	1	Plug

INSTRUCTIONS FOR PUMP USING 84067 CONTROL PANEL

TO PRIME SYSTEM

SUPPLY LINES:

After pump reservoir has been filled with recommended lubricant, loosen all plugs in dead ends of injector manifolds and supply lines. Turn vent plug in pump counter-clockwise one complete turn. Set the delay relay to its maximum four minute position and place timer toggle switch in "A" position (Refer to Service Manual Section C8, Page 178 Series). Close line switch to start pump. Operate pump until lubricant bleeds around vent plug to expel air pockets trapped between the pump and the supply line connection. Tighten vent plug. Continue operating pump until lubricant flows around any plug. Tighten plug. Repeat this procedure until all plug openings are tight and supply lines are primed. Open line switch to shut off pump.

IMPORTANT:

Reset the delay to desired interval (Refer to System Planning Manual).

INJECTORS:

Check injectors for proper operation by observing the movement of the indicator stems.

OPERATION

A cycle timer in the control panel, set for the desired lubrication cycle frequency (Refer to Service Manual Section C8, Page 178 Series), opens the solenoid air valve, permitting air to operate the pump. The pump discharges lubricant through the supply line to the injectors. After the injectors operate (discharge lubricant to the bearings), pump continues to build up lubricant pressure in the supply line until sufficient to open the pressure switch, which breaks the electric circuit to the solenoid air valve which shuts off the air to the pump. Injectors automatically re-charge with lubricant and system is ready for the next lubrication cycle. The pressure switch is factory set for 2,500 psi. The pressure switch must be adjusted by turning the adjusting nut counter-clockwise to 850-1,000 psi maximum.

INSTRUCTIONS FOR PUMP USING 83820 TIME CONTROL

TO PRIME SYSTEM

SUPPLY LINES:

After pump reservoir has been filled with recommended lubricant, loosen all plugs in dead ends of injectors manifolds and supply lines. Turn vent plug in pump counter-clockwise one complete turn. Set the delay relay to its maximum position (Refer to Service Manual Section C8, Page 133 Series). Depress push button on top of time control to start pump. Operate pump until lubricant bleeds around vent plug to expel air pockets trapped between the pump and the supply line connection. Tighten vent plug. Continue operating pump until lubricant flows around any plug. Tighten plug. Repeat this procedure until all plug openings are tight and supply lines are primed. Open line switch to shut off pump.

IMPORTANT:

Reset the delay relay to desired interval (Refer to System Planning Manual).

INJECTORS:

Check injectors for proper operation by observing the movement of the indicator stems.

OPERATION

The timer (runs constantly when current is on), drives a cam which has lobes set for the desired lubrication cycle frequency (Refer to

Service Manual Section C8, Page 133 Series). Lobes engage the micro-switch lever arm to activate the switch, closing the circuit to open the 3-way solenoid air valve permitting air to operate the pump. The pump discharges lubricant through the supply line to the injectors. After the injectors operate (discharge lubricant to the bearings), pump continues to build up lubricant pressure in the supply line until sufficient to operate the pressure control which moves a switch plate, breaking the circuit to the 3-way solenoid air valve, shutting off the air to the pump. Injectors automatically re-charge with lubricant and system is ready for the next lubrication cycle.

The pressure control is factory set for 2,500 psi and must be converted for use in an 850 psi system. For low pressure conversion:

- 1) Loosen locknut.
- 2) Turn housing counter-clockwise to remove from pressure control.
- 3) Replace 55277 Spring with 55279 Low Pressure Spring (included with 83820 Time Control).
- 4) Reassemble pressure control, turning housing clockwise to 1,000 psi max. setting.
- 5) Tighten locknut.

VENT VALVE:

The 83948 Vent Valve is operated by compressed air from the same source which operates the pump. When pump is in operation, air pressure keeps the vent valve closed and lubricant is directed through the outlet and to the injectors. When air to the pump is shut off, vent valve opens and supply line pressure vents back into the reservoir.

SAFETY UNLOADER:

91192 Safety Unloader is provided at the pump outlet to prevent the build-up of dangerously high lubricant pressure in the system. It is factory set to open at approximately 1,100 psi to 1,300 psi.

NOTE: Safety unloader requires no adjustment and should not be tampered with.

WHAT TO DO IF:

Pump loses prime: Check lubricant supply.

10127 Vent Plug is provided at the pump outlet for expelling air which may be pocketed in the lubricant. If pump operates continuously without discharging lubricant, it is an indication that the pump has lost its prime. Loosen the vent plug one turn until trapped air is pumped out. If pump continues to operate without discharging lubricant, 10061 Pump Check and 66002 Steel Ball may be fouled. Remove and clean checks and check seats.

The 83948 Vent Valve may also be fouled. Foreign material may prevent 14722 Needle from seating properly or 14723 Valve Seat may be worn or damaged. Clean or replace parts.

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

Pump fails to operate: Check air supply.

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.