

**SPECIFICATIONS**

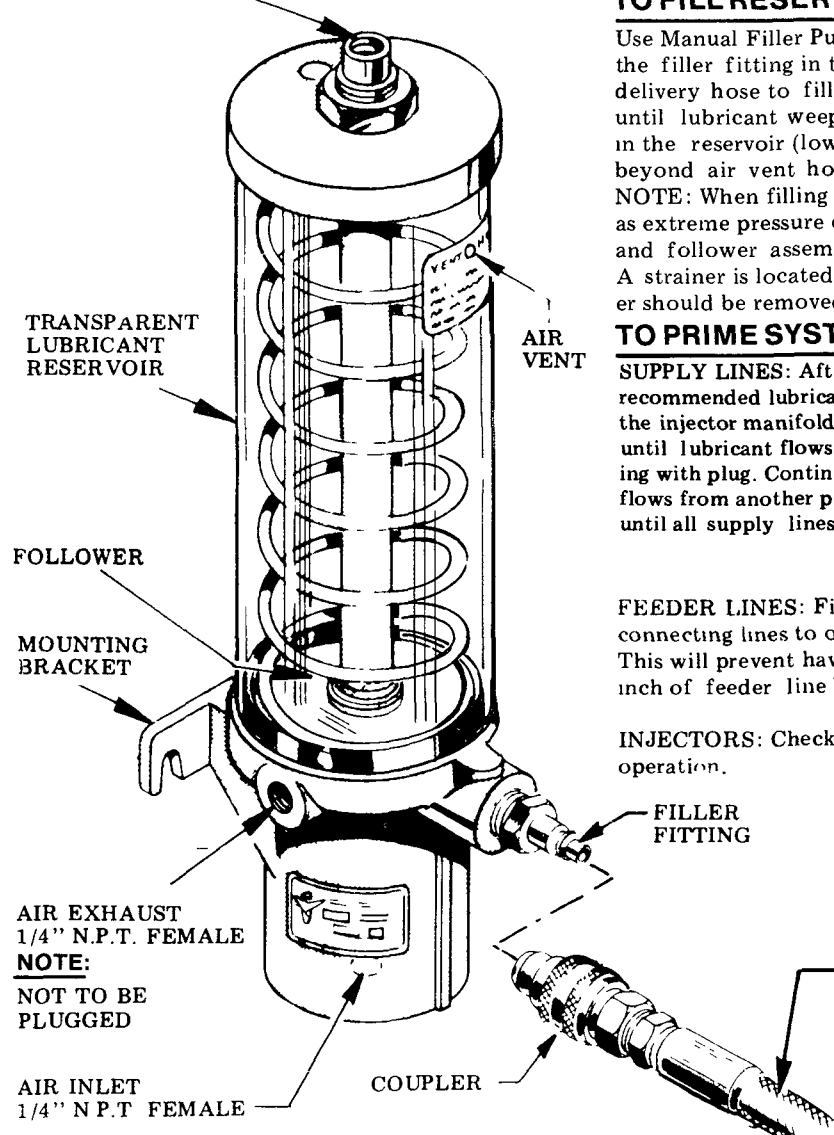
Ratio	Lubricant Output (Cu. In.)	Reservoir Capacity	Air Inlet	Lubricant Outlet	Lubricant Operating Pressure (P.S.I.)			
					Type of System	Minimum	Maximum	Recommended
20:1	*.45	4 lb	1/4" N.P.T. Female	1/4" N.P.T. Female	SL-32 SL-33	1,200 with 60 P.S.I. Air	3,500 with 175 P.S.I. Air	1,500 with 75 P.S.I. Air

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

The 83668 Pump is used as the pumping unit for a centralized lubrication system having a single line circuit of SL-32, or SL-33 Injectors. It is an air operated single stroke spring return pump that discharges .450 cu. in. into the circuit for each pump 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.

LUBRICANT  
 OUTLET  
 1/4" N.P.T. FEMALE



**TO FILL RESERVOIR**

Use Manual Filler Pump 81834 to fill reservoir through the filler fitting in the pump body. Attach coupler on delivery hose to filler fitting. Stroke filler pump handle until lubricant weepage is noted at air vent hole in the reservoir (lower portion of follower must rise beyond air vent hole to expel entrapped air from lubricant). NOTE: When filling the reservoir, caution should be used as extreme pressure can cause damage to reservoir and follower assembly.

A strainer is located beneath the filler fitting. Strainer should be removed and cleaned periodically.

**TO PRIME SYSTEM**

**SUPPLY LINES:** After pump reservoir has been filled with recommended lubricant, remove all plugs in dead ends of the injector manifolds and supply lines. Operate pump until lubricant flows from any plug opening. Close opening with plug. Continue operating pump until lubricant flows from another plug opening. Repeat this procedure until all supply lines are primed and.

**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 for every inch of feeder line between injector and bearing.

**INJECTORS:** Check each individual injector for proper operation.

**IMPORTANT:**

Pump must be installed in a vertical position.

**OPERATION OF THE PUMP**

Lubricant in the 41524 Transparent Reservoir flows into the cavity in the 92686 Bushing and Plunger Assembly.

Compressed air entering the bottom of the 41238 Air Cylinder (1/4" N.P.T. female) moves the 40477 Piston upward. As the piston moves upward, the plunger is also moved upward into the bushing. As the plunger moves upward, it moves the charge of lubricant from the bushing cavity through the 84175 Outlet Check to the outlet of the pump.

When the air pressure to the 41238 Air Cylinder is relieved, the 55289 Piston Spring moves the piston and plunger downward. In its extreme down position, the plunger has retracted below the bushing port, permitting lubricant to flow into the bushing cavity.

**WHAT TO DO IF:**

Pump loses prime. — Check lubricant supply.

System fails to cycle and calculated system planning has been followed. — Lubricant may be leaking by the 66250 Ball Check or the 34445 Packing in the 84175 Check and Vent Assembly. Remove these parts and examine for presence of foreign particles. Clean, or replace parts if worn or damaged.

Pump fails to operate — Check air supply. Failure of injectors to cycle can be caused by a leak in the supply line.

**SERVICE PARTS**

Part No.	Description	Part No.	Description	Part No.	Description
14288	Ball Stop	40476	Cylinder End	*66250	Ball
14290	Check Body	40477	Piston	66725	Retaining Ring
14305	Bushing	41238	Cylinder Casting	68530	Retaining Ring
*31020	Gasket	41524	Reservoir	68797	Plug Button
*31086	Gasket	45872	Thrust Washer	69034	Retaining Ring
*34174	"O" Ring	45936	Cover Cap	*69295	Filter
*34211	"O" Ring	48382	Washer	84175	Check Valve and Extension Assembly
*34274	Gasket	48467	Washer	92684	Outlet Bushing Extension Assembly
*34358	"O" Ring	50115	Machine Screw	92686	Bushing and Plunger Assembly
*34368	"O" Ring	51082	Nut	92441	Filler Fitting
*34431	"O" Ring	55270	Follower Spring		
*34445	Gasket	55289	Spring		
*34454	Follower Packing	*56106	Spring		
		62493	Extension Tube		

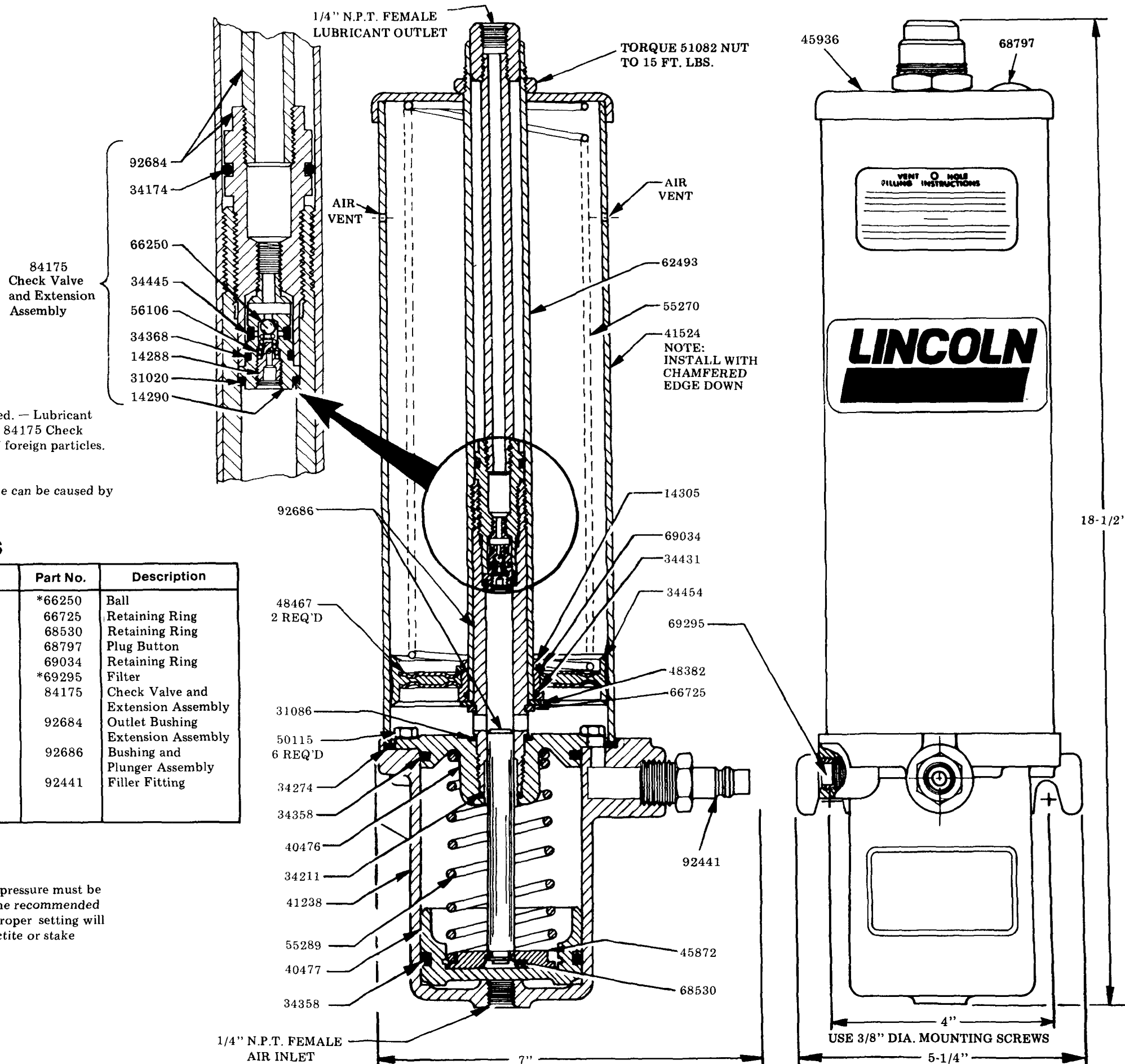
\* Recommended service parts inventory.

**NOTE:**

In reassembling the 84175 Check and Extension Assembly, the vent pressure must be reset. Vent pressure can be varied by the Adjusting Screw, 14288. The recommended pressure setting is 25 P.S.I. minimum to 75 P.S.I. maximum. An improper setting will affect the pump efficiency. Assemble 14288 with non-hardening Loctite or stake threads after adjusting vent pressure

**MODEL 83671**

83671 Low Level Cut-Off Kit may be used as an alarm or signal device when lubricant drops below an acceptable level.



VENT O RING  
FILLING INSTRUCTIONS

**LINCOLN**

NOTE:  
INSTALL WITH  
CHAMFERED  
EDGE DOWN

4"  
USE 3/8" DIA. MOUNTING SCREWS

18-1/2"

1/4" N.P.T. FEMALE  
AIR INLET

TORQUE 51082 NUT  
TO 15 FT. LBS.

1/4" N.P.T. FEMALE  
LUBRICANT OUTLET

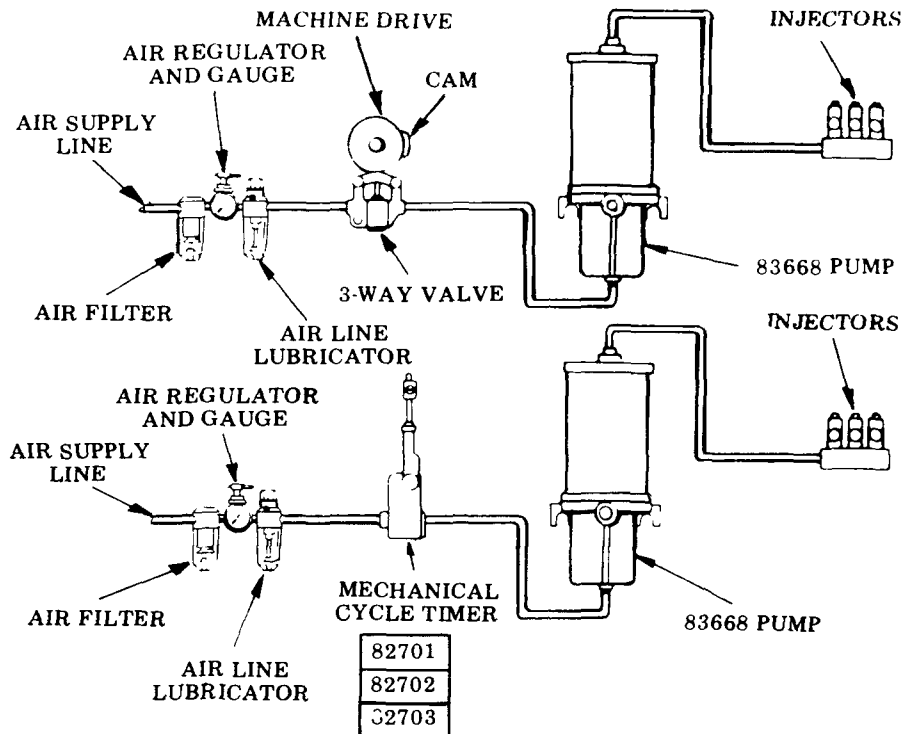
## TYPES OF INSTALLATIONS

Frequency of lubrication cycle can be controlled Mechanically, electrically or manually.

### MECHANICAL CONTROL

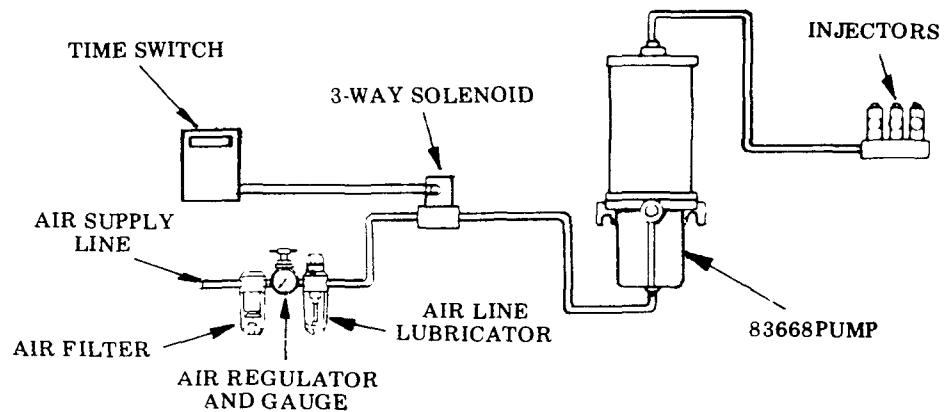
When using mechanical motion of machine to control lubrication frequency, three way valve is engaged by cam permitting air to pass through valve to pump forcing air piston forward and lubricant through supply line to injectors. When the valve is disengaged, air exhausts back through valve and spring in pump returns air piston completing lubrication cycle. Cam dwell on three way valve must be arranged for a minimum of 10 seconds.

When mechanical motion of machine is too rapid to be used as a source of control for frequency of lubrication cycle, a cycle timer with adjustable settings may be used. See separate instructions for Cycle Timers 82701, 82702 and 82703.



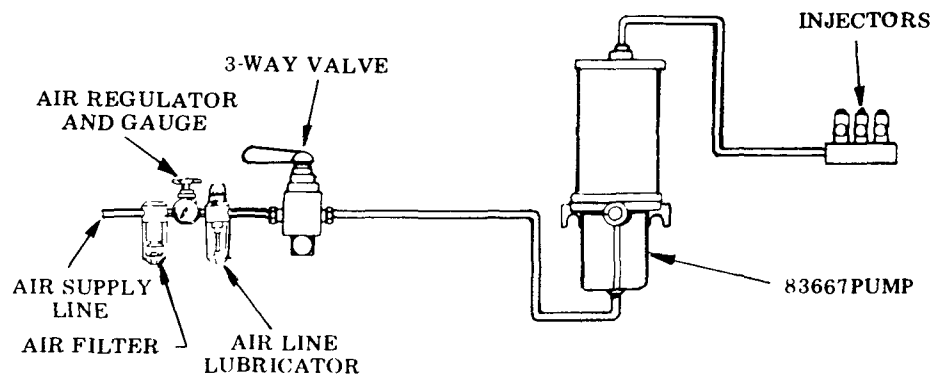
### ELECTRICAL CONTROL

Electrical time switch opens three way solenoid valve permitting air to flow to pump forcing air piston forward and lubricant through supply line to injectors. When valve closes, air exhausts back through valve and spring in pump returns air piston completing lubrication cycle. Frequency of cycle can be set as desired by adjustable pins in time switch.



### MANUAL CONTROL

Opening three way valve for a minimum of 10 seconds permits air to flow to pump forcing air piston forward and lubricant through supply line to injectors. When valve is closed, air exhausts back through valve and spring in pump returns air piston completing lubrication cycle.



#### 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.