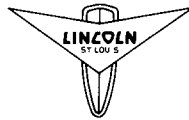


# AIR OPERATED GREASE PUMP

SINGLE STROKE, AIR RETURN  
(WITH ELECTRIC CONTROLS, 220 VOLTS, 50 HZ)



# Model 83987

## Series "A"

### SPECIFICATIONS

| Ratio | Lubricant Output (cu. in.) | Reservoir Capacity | Air Inlet          | Lubricant Outlet   | LUBRICANT OPERATING PRESSURE (P.S.I.) |                                |                                 |                                 |
|-------|----------------------------|--------------------|--------------------|--------------------|---------------------------------------|--------------------------------|---------------------------------|---------------------------------|
|       |                            |                    |                    |                    | Type of System                        | Minimum                        | Maximum                         | Recommended                     |
| 25:1  | *2.15                      | 4 lb.              | 1/4" N.P.T. Female | 1/4" N.P.T. Female | SL-1                                  | 1,850<br>With 75<br>P.S.I. Air | 3,500<br>With 140<br>P.S.I. Air | 2,500<br>With 100<br>P.S.I. Air |
|       |                            |                    |                    |                    | SL-32<br>SL-33                        | 1,200<br>With 50<br>P.S.I. Air | 3,500<br>With 140<br>P.S.I. Air | 1,500<br>With 60<br>P.S.I. Air  |

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

The 83987 Pump is used as the pumping unit for a centralized lubrication system having a single line circuit of SL-1, SL-32 or SL-33 Injectors. It dispenses grease up through N.L.G.I. No. 1.

It is an air operated single stroke pump requiring air for both forward and return stroke that discharges \*2.15 cu. in. of lubricant into the circuit for each pump stroke (Lubrication Cycle).

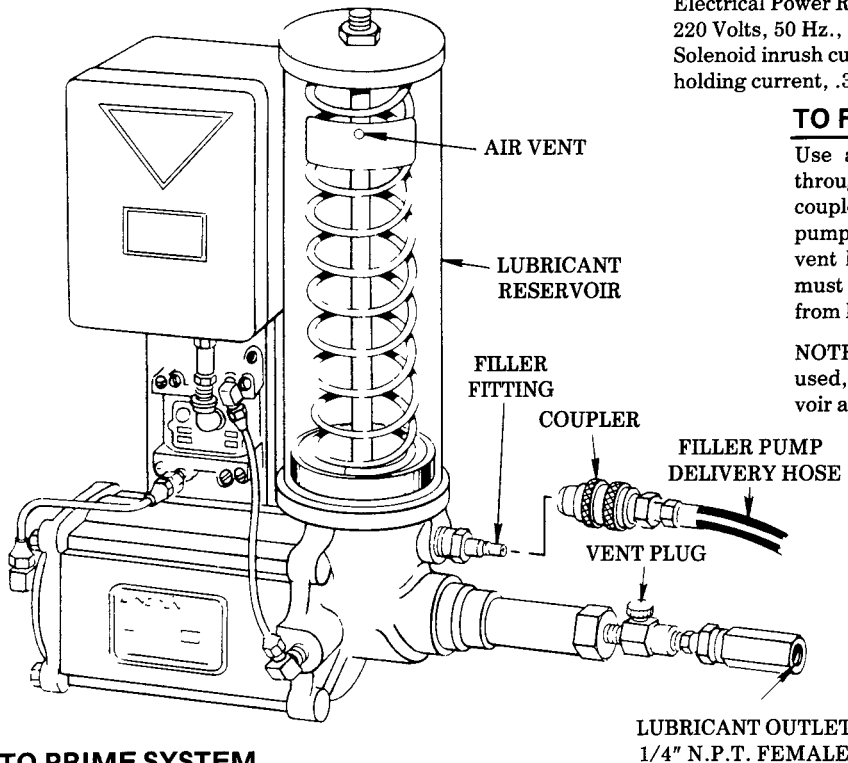
The total quantity of lubricant needed for the lubrication cycle of the system must not exceed the amount of lubricant discharged per pump stroke.

**Electrical Power Requirements:**  
220 Volts, 50 Hz., 25 Volt Amps. Max.  
Solenoid inrush current, .52 amps;  
holding current, .35 amps.

### TO FILL RESERVOIR

Use a 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.



### TO PRIME SYSTEM

**SUPPLY LINES:** After pump reservoir has been filled with recommended lubricant, turn vent plug counter-clockwise one complete turn and operate pump until lubricant flows freely from opening in vent plug to expel air pockets trapped between the pump and the supply line connection. Tighten vent plug. 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 plug openings closed.

**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. 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 individual bearing.

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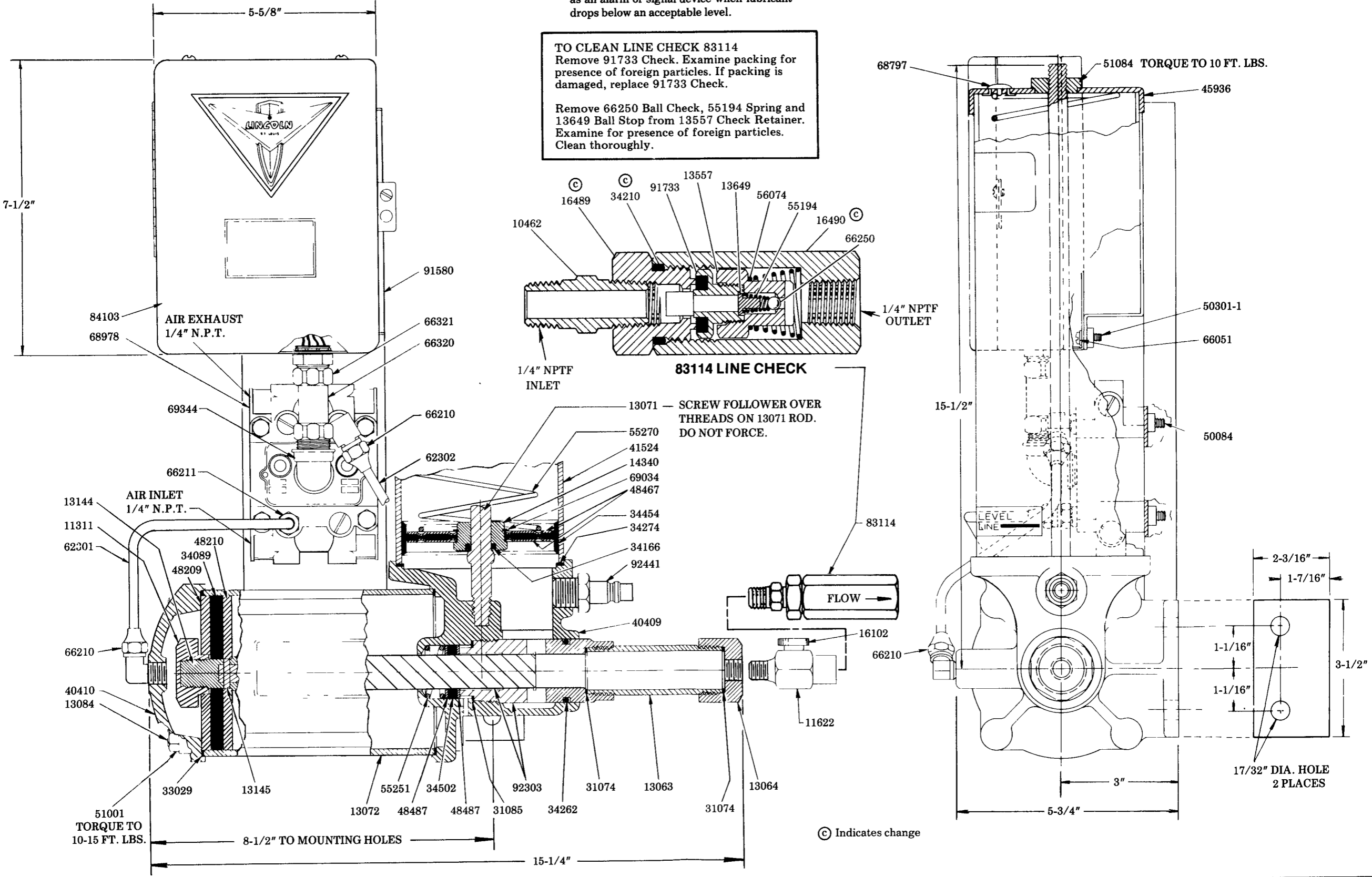
SECTION -C8  
PAGE -168B

**FOR 84103 PROGRAM TIMER REFER TO SERVICE MANUAL - SECTION C8, PAGE 136 SERIES.**

**MODEL 83987  
AIR OPERATED SINGLE STROKE  
GREASE PUMP  
(WITH ELECTRIC CONTROLS)**

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

**TO CLEAN LINE CHECK 83114**  
Remove 91733 Check. Examine packing for presence of foreign particles. If packing is damaged, replace 91733 Check.  
  
Remove 66250 Ball Check, 55194 Spring and 13649 Ball Stop from 13557 Check Retainer. Examine for presence of foreign particles. Clean thoroughly.



## OPERATION

The pre-determined lubrication cycle frequency is set on the adjustable program timer (Refer to service manual, section C8, page 136 series for proper setting of 84103 Program Timer).

Lubrication cycle starts when a clip in the dial of the program timer contacts the micro-switch, or when operator holds push button depressed, energizing the air solenoid valve which admits air to pump.

When the clip contact is released, or the operator releases the push button, the de-energized air solenoid valve returns to its normal position and admits air to the opposite side of the pump air cylinder.

As pump plunger returns to its retracted position, the lubricant pressure in the system is relieved, permitting the injectors to re-charge.

System is now ready for the next lubrication cycle.

## WHAT TO DO IF:

**PUMP LOSES PRIME** - Check lubricant supply.

**SYSTEM FAILS TO CYCLE** and calculated system planning has been followed - lubricant is leaking by packing of 91733 Check or the 66250 Check. Remove and clean. Failure of injectors to cycle can also be caused by a leak in supply lines. Examine supply lines and connections.

**PUMP FAILS TO OPERATE** - check air supply.

## SERVICE PARTS

| PART NO. | QUAN. | DESCRIPTION      | PART NO. | QUAN. | DESCRIPTION               |
|----------|-------|------------------|----------|-------|---------------------------|
| 10462    | 1     | Nipple           | 48209    | 1     | Washer                    |
| 11311    | 1     | Piston nut       | 48210    | 1     | Washer                    |
| 11622    | 1     | Outlet body      | 48467    | 2     | Washer                    |
| 13063    | 1     | Pump tube        | 48487    | 2     | Washer                    |
| 13064    | 1     | Outlet           | 50084    | 4     | Screw                     |
| 13071    | 1     | Tie rod          | 50301-1  | 2     | Screw                     |
| 13072    | 1     | Air cylinder     | 51001    | 4     | Nut                       |
| 13084    | 4     | Tie rod          | 51084    | 1     | Nut                       |
| 13144    | 1     | Packing stud     | *55194   | 1     | Spring                    |
| 13145    | 1     | Pin              | 55251    | 1     | Spring                    |
| 13557    | 1     | Check retainer   | 55270    | 1     | Spring                    |
| 13649    | 1     | Ball stop        | *56074   | 1     | Spring                    |
| 14340    | 1     | Bushing          | 62301    | 1     | Copper tube               |
| 16102    | 1     | Vent plug        | 62302    | 1     | Copper tube               |
| 16489    | 1     | Check seat       | 66051    | 2     | Lockwasher                |
| 16490    | 1     | Check body       | 66210    | 3     | 90° Tubing connector      |
| *31074   | 2     | Gasket           | 66211    | 1     | Straight tubing connector |
| *31085   | 1     | Gasket           | *66250   | 1     | Ball                      |
| *33029   | 2     | Gasket           | 66320    | 1     | Conduit                   |
| *34089   | 1     | Packing          | 66321    | 1     | Straight conduit fitting  |
| *34166   | 1     | O-ring           | 68797    | 1     | Plug button               |
| *34210   | 1     | O-ring           | *68978   | 1     | 4 Way solenoid air valve  |
| *34262   | 1     | O-ring           | 69034    | 1     | Retaining ring            |
| *34274   | 1     | Gasket           | 69344    | 1     | 90° Conduit fitting       |
| *34454   | 1     | Follower packing | 83114    | 1     | Line check assembly       |
| *34502   | 2     | Packing          | 84103    | 1     | Program timer             |
| 40409    | 1     | Body casting     | 91580    | 1     | Support assembly          |
| 40410    | 1     | Cylinder cap     | 91733    | 1     | Check                     |
| 41524    | 1     | Reservoir        | 92303    | 1     | Bushing & plunger         |
| 45936    | 1     | Cover cap        | 92441    | 1     | Filler fitting            |

\*Recommended service parts inventory.

### RETAIN THIS INFORMATION FOR FUTURE REFERENCE

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

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

A list of Authorized Service Departments will be furnished upon request.