

## SPECIFICATIONS

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

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 With 75 P.S.I. Air	3,500 With 140 P.S.I. Air	2,500 With 100 P.S.I. Air
					SL-32 SL-33	1,200 With 50 P.S.I. Air	3,500 With 140 P.S.I. Air	1,500 With 60 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).

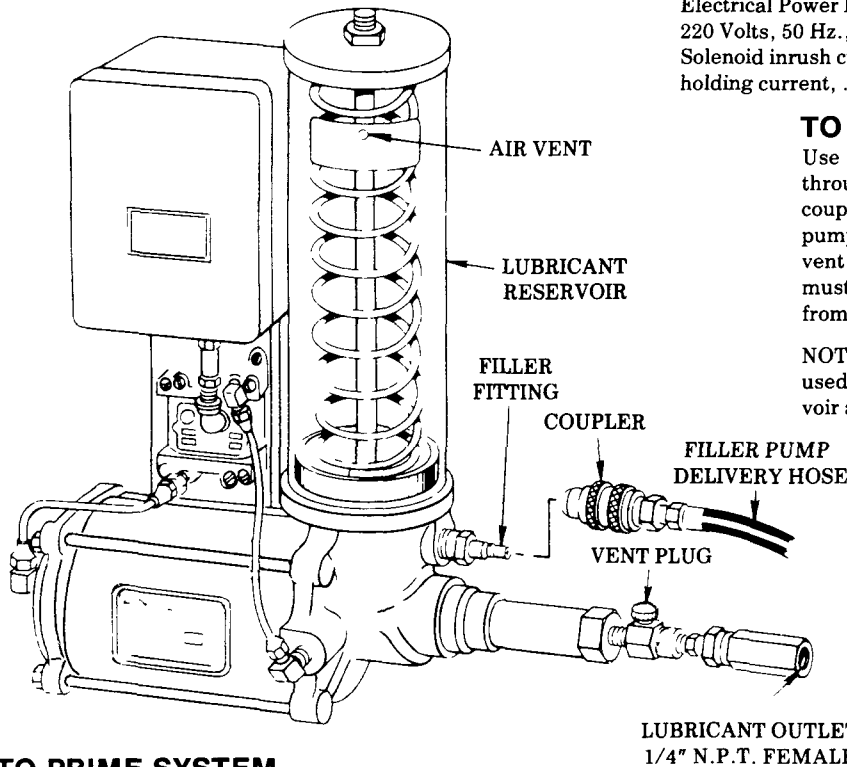
The total quantity of lubricant needed for the lubrication cycle of the system must not exceed the amount of lubricant discharged per pump stroke.

**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.

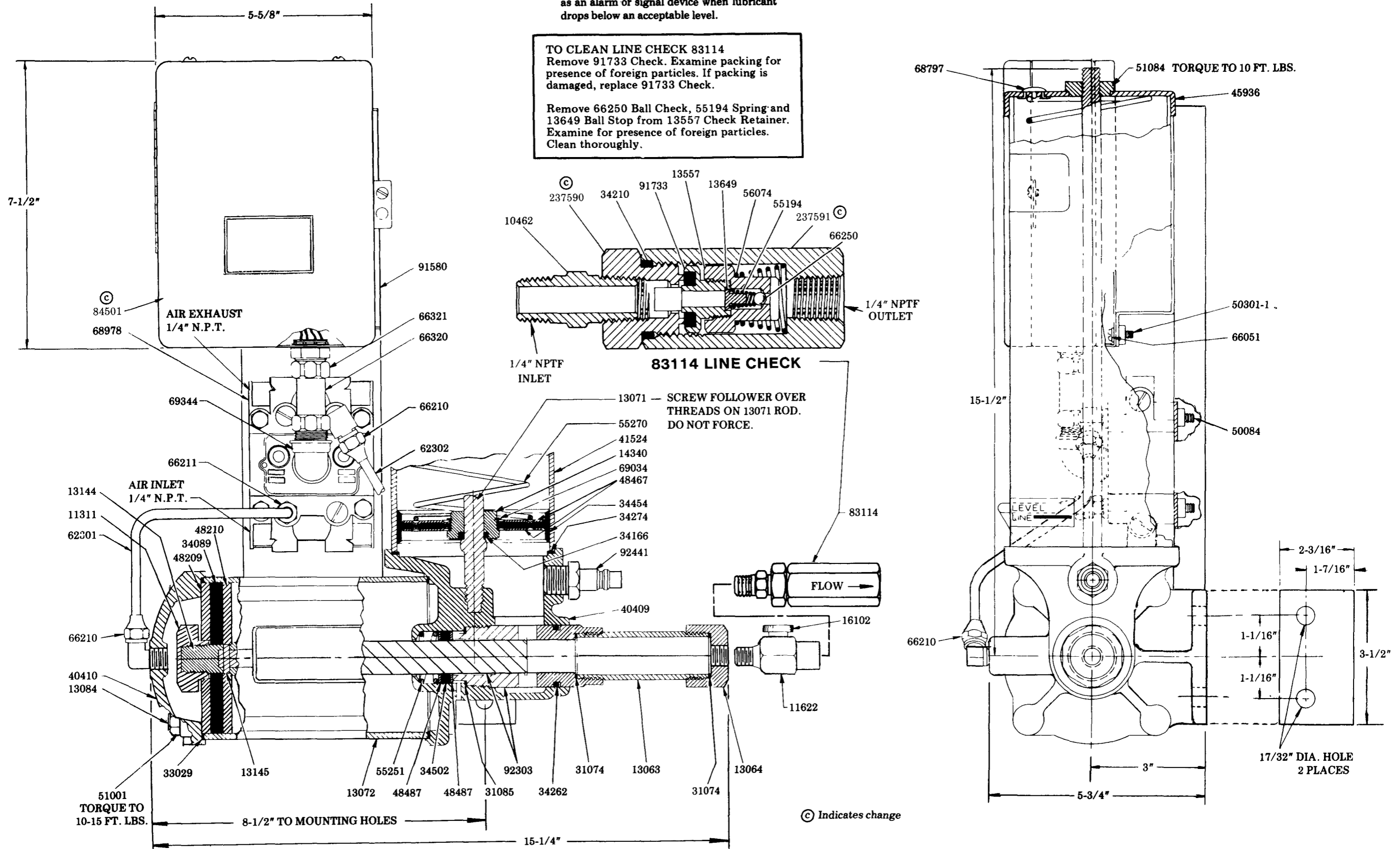
FOR 84103 PROGRAM TIME REFER TO SERVICE MANUAL - SECTION C8, PAGE 136 SERIES.

**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.	Qty.	Description	Part No.	Qty.	Description
10462	1	Nipple	48467	2	Washer
11311	1	Piston nut	48487	2	Washer
11622	1	Outlet body	50084	4	Screw
13063	1	Pump tube	50301-1	2	Screw
13064	1	Outlet	51001	4	Nut
13071	1	Tie rod	51084	1	Nut
13072	1	Air cylinder	*55194	1	Spring
13084	4	Tie rod	55251	1	Spring
13144	1	Packing stud	55270	1	Spring
13145	1	Pin	*56074	1	Spring
13557	1	Check retainer	62301	1	Copper tube
13649	1	Ball stop	62302	1	Copper tube
14340	1	Bushing	66051	2	Lockwasher
16102	1	Vent plug	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	91580	1	Support assembly
40409	1	Body casting	91733	1	Check
40410	1	Cylinder cap	92303	1	Bushing & plunger
41524	1	Reservoir	92441	1	Filler fitting
45936	1	Cover cap	236892	1	Program timer
48209	1	Washer	237590	1	Check seat
48210	1	Washer	237591	1	Check body

\*Recommended service parts inventory.

### 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.