

# **LUBE GUARD PUMP ASSEMBLY**



The lube guard pump assembly provides protection for the lubrication system by verifying that the camshaft is rotating while also indicating a low oil level condition in the lubrication box.

During normal operation, oil pressure in the lube guard manifold will fluctuate within a range proportional to the pump output rate. The lube guard maintains pressure in the manifold to indicate sufficient oil level in a lubricator box.

When the oil level in the lubricator box drops below the suction tube, the pump stops generating oil pressure. At this point residual oil pressure vents through the orifice, dropping gauge pressure in the manifold. This drop in pressure will trigger pressure switch set points.





#### **FEATURES**

- Installs in any pump location in a CPI lubricator box, or on the square cam in older lubricator designs
- Utilizes box suction pumps, drawing oil from the lubricator box, cycling it through the lube guard manifold and back into the lubricator box
- Pressure regulator sets the upper pressure limit of the manifold, this is factory set and wire tied
- Orifice kit is included to configure the lube guard to the application oil viscosity and volumetric flow rate
- Rotatable pressure gauge (loosen the tube fitting nut, retighten to connect)

### **OPERATING INSTRUCTIONS**

For proper operation of the lube guard, the correct orifice size must be selected for the operating oil viscosity and volumetric flow rate. Below are two common scenarios when the selection of the orifice needs to be increased or decreased.

#### **Orifice selection examples:**

- 1. Manifold gauge pressure drops too far between pump strokes tripping pressure switch set point. Solution: Replace orifice with a smaller size to maintain a higher minimum manifold pressure.
- 2. Oil level has dropped below suction tube but the manifold pressure is not dropping quickly enough to trip the pressure switch set point in the desired time. Solution: Replace orifice with a larger size to allow manifold pressure to vent quicker.

The lube guard is supplied with an orifice kit; the kit contains five orifices ranging from size #0 to #4. To replace the installed orifice with another size, remove the 1/4" NPT pipe plug, shown in the diagram, on the top side of the manifold (if needed, loosen the tube fitting nut and rotate or remove the pressure gauge and tube adapter as a unit). The orifice requires a flat head screwdriver for removal; replace the orifice followed by the 1/4" NPT pipe plug. Reposition or reinstall the pressure gauge and tube adapter unit as required. Tighten any loosened connections.

#### **Pressure Switch and Gauge**

The lube guard manifold has two 1/4" NPT female ports for installation of pressure switches or gauges; the top port is supplied with a pressure gauge. Any unused ports must be plugged.



## TECHNICAL SPECIFICATIONS

Cylinder Size: 3/8" (9.5 mm)

Approx Weight: 6 lbs (2.7 kg)

MAWP: 300 psi (20.7 bar)

Operating Speed: 2-50 strokes/minute

Certifications:





Lube Guard Part Numbers

PART NO.	PUMP TYPE	DESCRIPTION
650140000091834	P55	With 1/2" Short Tube
650140000091843	P55	With 1" Short Tube

**Orifice Part Numbers** 

PART NO.	SIZE
650030000944210	0
650030000944211	1
650030000944212	)

PART NO.	SIZE
650030000944213	3
650030000944214	4
650140000094422	Kit 0-4



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