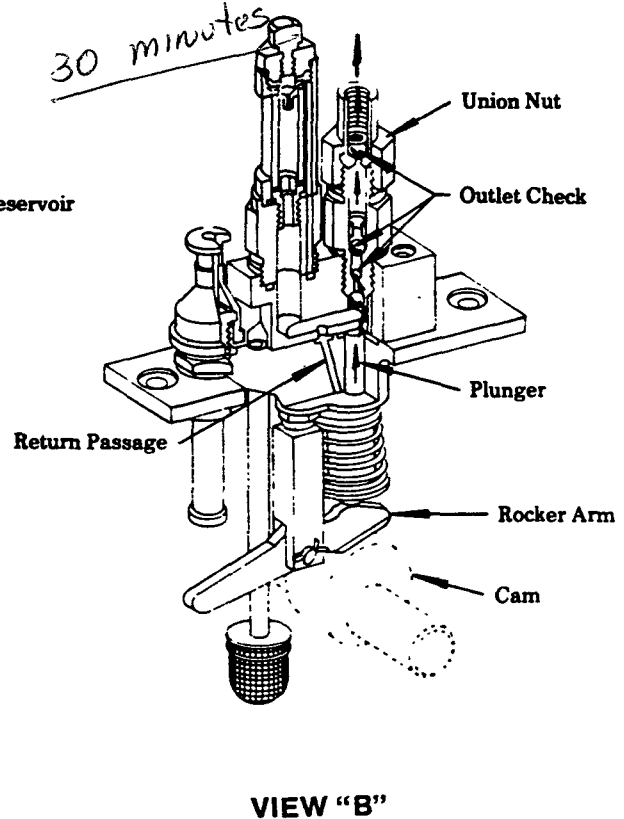
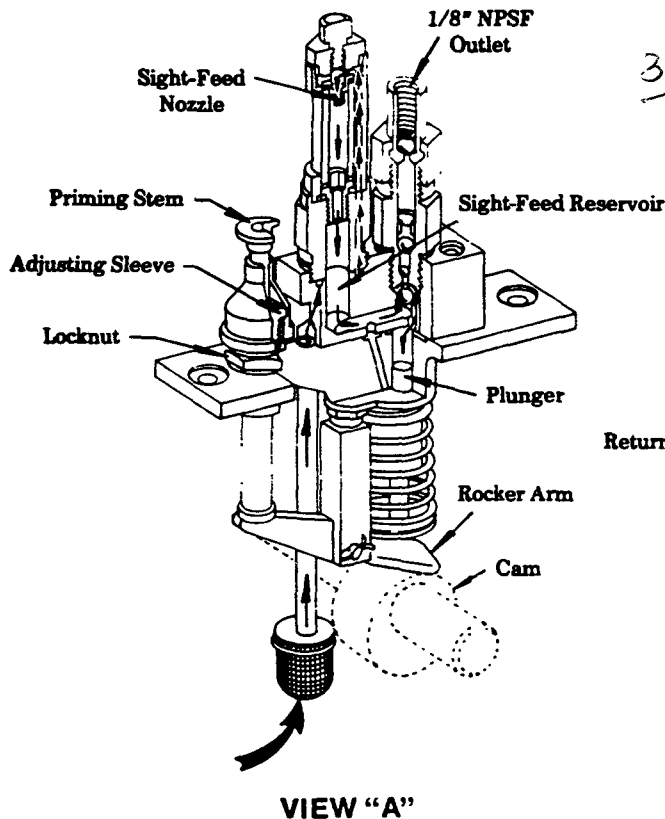


FOR PETROLEUM BASE OR SYNTHETIC LUBRICANTS  
MAX. OIL VISCOSITY - 8000 SUS



## OPERATION

The cam rotates and through the action of the rocker arm, causes the plunger to reciprocate within its bore in the pump body.

The pump stroke, and thus its output, can be changed by varying the adjusting sleeve position. Maximum output is obtained when the adjusting sleeve is fully extended from the pump body. Maximum oil viscosity is 8000 SUS. For viscosity exceeding 8000 SUS, consult factory.

## SUCTION STROKE: VIEW "A"

As the plunger moves downward, oil is drawn through the suction check and into the plunger bore from the small reservoir in the sight-feed base. Reducing the volume of oil in the sight-feed reservoir creates a vacuum which draws oil from the lubricator reservoir, through the suction tube and into the passage in the sight-feed glass. Some quantity of oil will then enter the sight-feed nozzle and drip into the reservoir below. The quantity of lubricant can be determined by counting the drops as they fall.

## DISCHARGE STROKE: VIEW "B"

As the plunger moves upward, oil is forced from the plunger bore through the outlet checks and into the bearing feedline.

The suction check prevents backflow into the sight-feed assembly and allows residual vacuum to draw any oil which bypasses the plunger back into the sight-feed reservoir through the return passage.

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(314) 679-4200

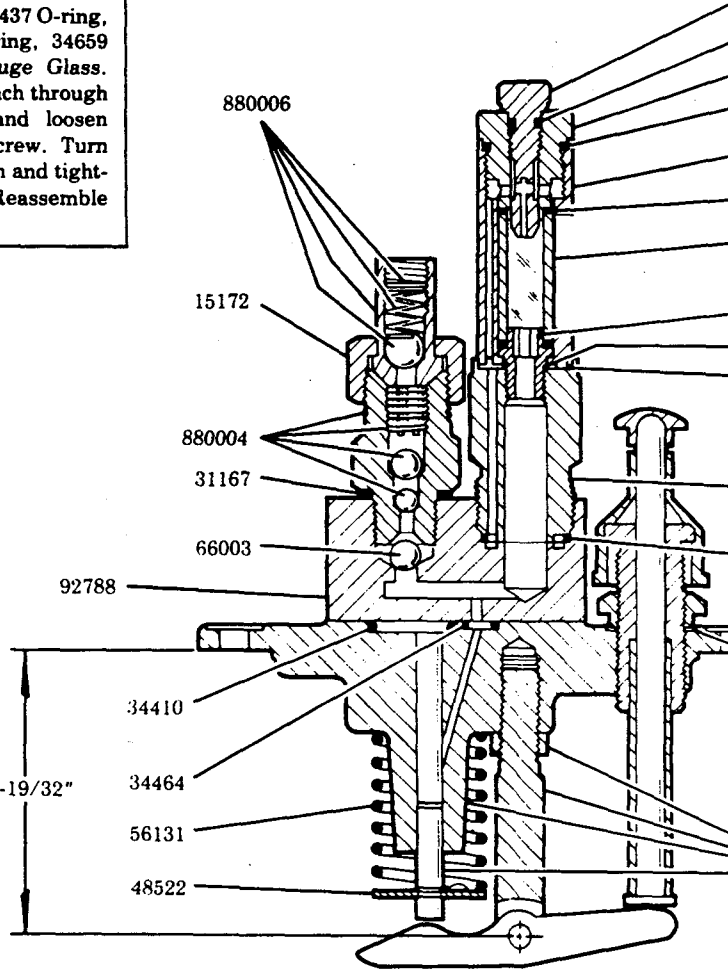
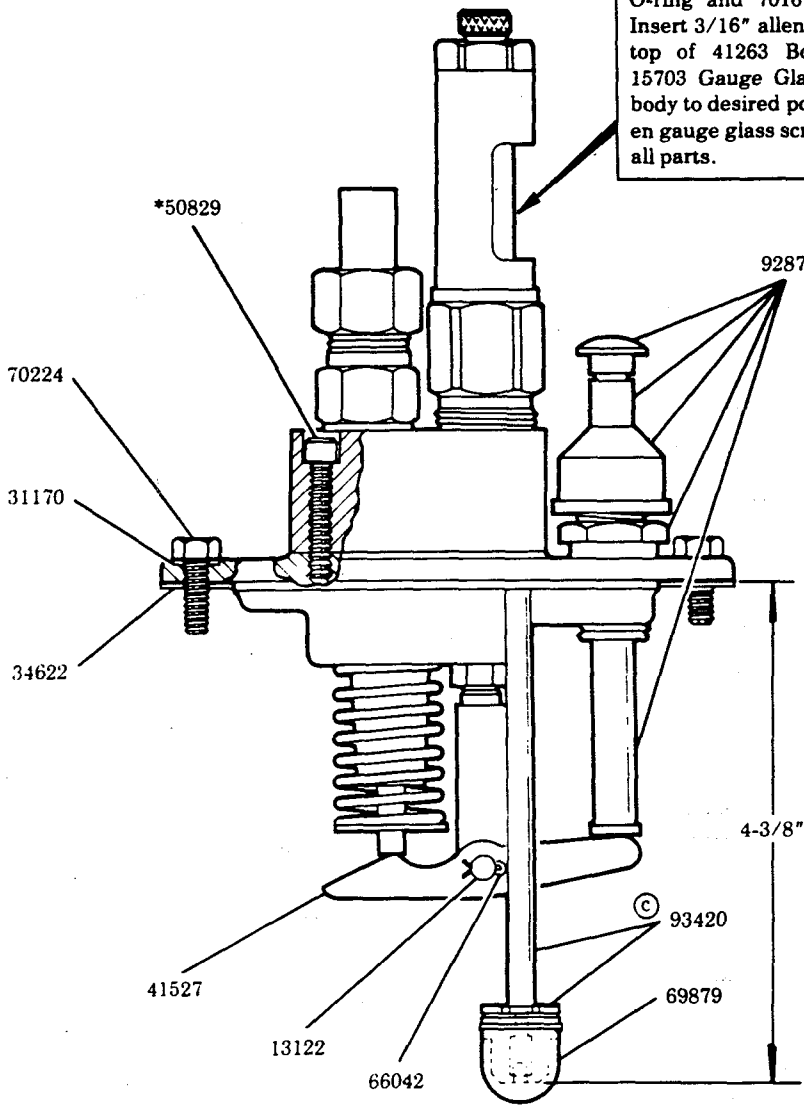
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Form 9053C

**To Position Gauge Glass**  
 Remove 16424 Plug, 34437 O-ring, 16425 Cap, 34685 O-ring, 34659 O-ring and 70167 Gauge Glass. Insert 3/16" allen wrench through top of 41263 Body and loosen 15703 Gauge Glass Screw. Turn body to desired position and tighten gauge glass screw. Reassemble all parts.



Description	880187, 880207, 880208 (1/4" Plunger)	880330 (3/8" Plunger)
Plunger Body & Support Assembly	93036	93017
Output/Stroke	0 - .0184 in <sup>3</sup>	0 - .0415 in <sup>3</sup>

**STARTING INSTRUCTIONS**

- 1) Remove the sight feed plug and fill the sight feed approximately 1/3 full of oil.
- 2) Manually operate the pump with the priming stem until oil, without air bubbles, flows from the pump outlet.
- 3) Connect the feedline to the pump outlet union and manually operate the pump with the priming stem until the feedline is filled.
- 4) Connect the feedline to the bearing point. A feedline check valve at the bearing point is recommended and is available as an accessory item.
- 5) Refill the sight feed to the 1/3 full level.
- 6) Refill the lubricator reservoir and adjust the pump output.

**SETTING PUMP OUTPUT**

Count the number of drops falling through the sight feed glass in one minute. Set the adjusting sleeve to obtain the desired quantity and secure the setting with the locknut.

Conversion factors: 1 drop - .002 cu. in.  
 500 drops - 1 cu. in.

**SIGHT FEED**

The sight feed gives a visual indication of the condition of the oil flowing thru the lubrication pump.

An increasing oil level indicates absorption of air in the sight feed by the oil passing thru. Overfill eliminates visual metering of drops in the sight feed, but has no effect on pump operation.

A decreasing oil level indicates the vacuum in the sight feed is withdrawing entrained air from the oil passing thru the sight feed. If air continues to be withdrawn from the oil, an airlock can result.

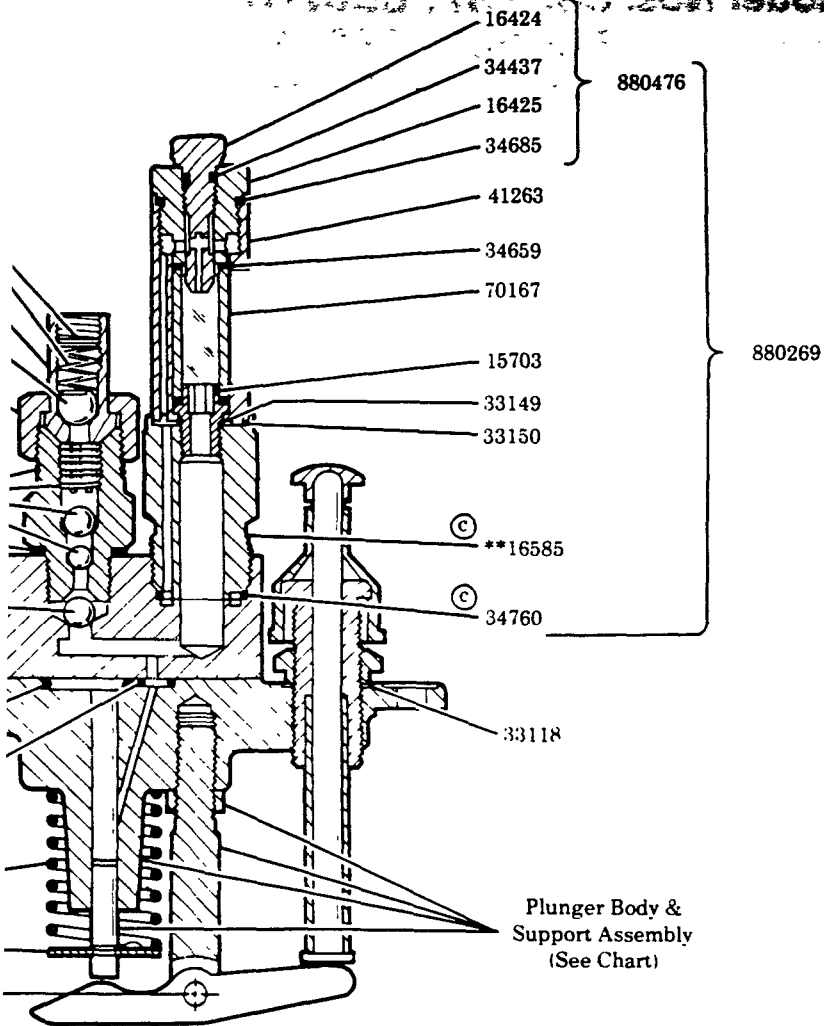
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**SERVICE PARTS**

Part	Qty.	Description
13122	1	Head pin
15172	1	Coupling nut
15703	1	Gauge glass screw
16424	1	Plug
16425	1	Cap
16585	1	Extension
31167	1	Gasket
31170	2	Washer
33118	1	Washer
33149	1	Gasket
33150	1	Gasket
34410	1	O-ring
34437	1	O-ring
34464	1	O-ring
34622	1	Gasket
34659	2	O-ring
34685	1	O-ring
34760	1	O-ring
41263	1	Body
41527	1	Rocker arm
48522	1	Spring retainer
50829	4	Socket head screw
56131	1	Spring
66003	1	Check ball
66042	1	Cotter pin
69879	1	Strainer assembly
70167	1	Gauge glass
70224	2	Screw
92788	1	Sight feed block assembly
92877	1	Flushing unit assembly
93420	1	Strainer tube assembly
880004	1	Connector assembly
880006	1	Sleeve assembly
880269	1	Sight feed assembly
880476	1	Cap assembly

87, 880207, 380208 (1" Plunger)	880330 (3/8" Plunger)
93036	93017
.0184 in <sup>3</sup>	0 - .0415 in <sup>3</sup>

(C) Indicates change

\*Torque to 37-41 inch-lbs.  
\*\*Torque to 28-32 ft.-lbs.

Under normal conditions, the oil level will rise or fall until an equilibrium condition exists and may change from time to time as the condition of the oil changes. Regardless of the oil level, a continuing passage of the correct volume of oil indicates the pump is operating properly.

**AIRLOCK**

Severely agitated oils, such as oil removed from a crankcase, usually contain entrained air.

Airlocking occurs when air, instead of oil, enters the plunger bore and can't be compressed to a high enough pressure to be forced out of the pump against the feedline backpressure.

Airlocking is caused either by entrained air being separated from the oil by the vacuum in the sight feed, or by air entering the pump when the oil level in the lubricator reservoir is lower than the suction tube inlet. An airlock can be easily detected since, when it occurs, no oil drops will be drawn into the sight feed.

An airlock can be eliminated by refilling the lubricator reservoir, loosening the feedline union at the pump outlet, and manually operating the pump with the priming stem until no air bubbles appear at the pump outlet.

A settling tank or a pressurized pump supply line should be used where excessive air is found in the oil.

**OVERFILL**

Overfilling is caused by the oil absorbing the air in the sight feed as it passes thru the pump.

Normal sight feed operation can be restored by momentarily loosening the nozzle plug assembly at the top of the sight feed to break the vacuum within the sight feed. Do not leave the nozzle plug open for very long as this will allow all of the oil in the suction tube to drain into the lubricator reservoir and may later cause an airlock.

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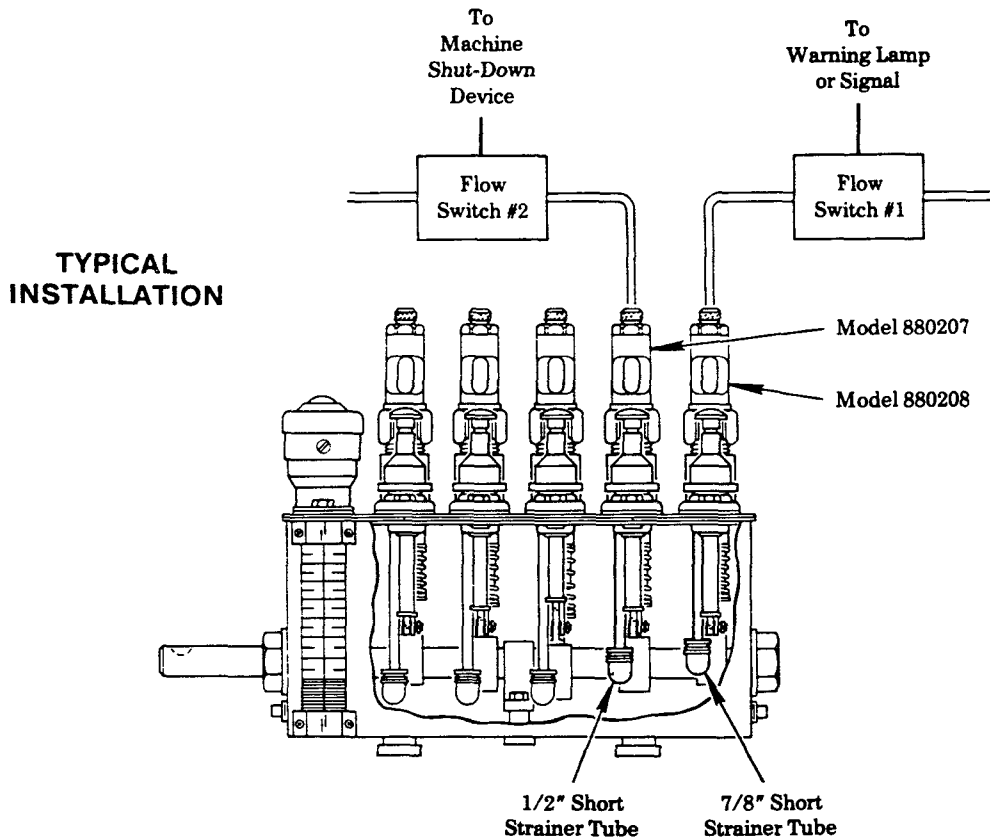
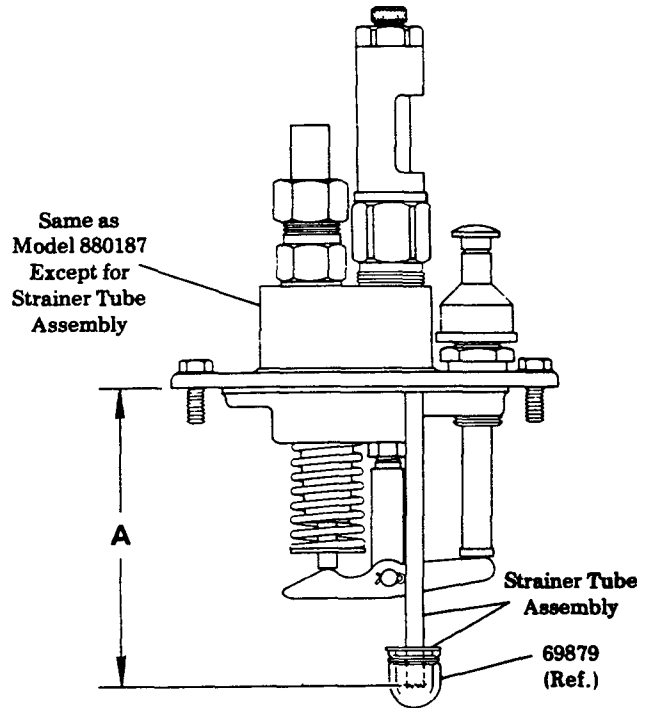
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# MODEL 55 PUMPS w/Short Strainer Tubes

## DESCRIPTION & OPERATION

Models 880207 & 880208 Pumps are similar to Model 880187 Pump except for the lengths of the strainer tubes. Model 880207 has a strainer tube 1/2" shorter than that of Model 880187 and Model 880208 has a 7/8" shorter strainer tube. Both pumps are installed in a lubricator along with standard Model 55 Pumps. Flow switches are installed in the outlet lines of these pumps. When lubricant level drops below 7/8" short strainer tube of Model 880208 Pump, a no-flow condition occurs and Flow Switch #1 activates a warning lamp or signal. If the lubricant level is allowed to drop below 1/2" short strainer tube of Model 880207 Pump, Flow Switch #2 can be used to shut down the machine to prevent damage due to lack of lubrication.

Model	Strainer Tube Assembly	Dim. A
880207	93421	3-7/8"
880208	93422	3-1/2"



**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.**