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Materials

Virgin PTFE Chemically inert, virtually impervious. Very few chemicals are known to react chemically with PTFE: molten alkali metals, turbulent liquid or gaseous fluorine and a few fluoro-chemicals such as chlorine trifluoride or oxygen difluoride which readily liberate free fluorine at elevated temperatures.

Polypropylene

<table>
<thead>
<tr>
<th>Operating Temperature Limitations</th>
<th>Maximum*</th>
<th>Operating Temperatures</th>
<th>Minimum*</th>
<th>Optimum**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polypropylene</td>
<td>220°F</td>
<td>-35°F</td>
<td>104°C</td>
<td>-37°C</td>
</tr>
<tr>
<td></td>
<td>180°F</td>
<td>32°F</td>
<td>82°C</td>
<td>0°C</td>
</tr>
</tbody>
</table>

This Lincoln pump model is equipped with Polypropylene and PTFE diaphragms and check balls.

Performance Curves

(Lincoln pumps are designed to be powered only by compressed air)

Performance based on water at ambient temperature. Average displacement per pump stroke: .04 liter.

Performance based on water at ambient temperature. Average displacement per pump stroke: .01 gallon.
Dimensions:

EXHAUST VIEW
SUCTION PORT: 1/2" NPT EXTERNAL
1/4" NPT INTERNAL

SIDE VIEW

AIR INLET PORT
1/4" NPT INTERNAL THREADS

INLET VIEW

3/16"

7/16"

7/16"

7/16"

7/16"

7/16"

7/16"

1.1/4"

OPTIONAL HORIZONTAL DISCHARGE PORT

1.1/4"

3 1/8"

5 1/2"

5 1/4"

3/8" TYP. SLOT
Metric Dimensions:
LINCOLN Model 85630 sm-rev0510  Page 4
TROUBLESHOOTING
Possible Symptoms:
- Pump will not cycle.
- Pump cycles, but produces no flow.
- Pump cycles, but flow rate is unsatisfactory.
- Pump cycle seems unbalanced.
- Pump cycle seems to produce excessive vibration.

What to Check: Excessive suction lift in system.
Corrective Action: For lifts exceeding 20 feet (6 meters), filling the pumping chambers with liquid will prime the pump in most cases.

What to Check: Excessive flooded suction in system.
Corrective Action: For flooded conditions exceeding 10 feet (3 meters) of liquid, install a back pressure device.

What to Check: System head exceeds air supply pressure.
Corrective Action: Increase the inlet air pressure to the pump. Most diaphragm pumps are designed for 1:1 pressure ratio at zero flow.

What to Check: Air supply pressure or volume exceeds system head.
Corrective Action: Decrease inlet air pressure and volume to the pump as calculated on the published PERFORMANCE CURVE. Pump is cavitating the fluid by fast cycling.

What to Check: Undersized suction line.
Corrective Action: Meet or exceed pump connection recommendations shown on the DIMENSIONAL DRAWING.

What to Check: Restricted or undersized air line.
Corrective Action: Install a larger air line and connection. Refer to air inlet recommendations shown in your pump’s SERVICE MANUAL.

What to Check: Check ESADS, the Externally Serviceable Air Distribution System of the pump.
Corrective Action: Disassemble and inspect the main air distribution valve, pilot valve and pilot valve actuators. Refer to the parts drawing and air valve section of the SERVICE MANUAL. Check for clogged discharge or closed valve before reassembly.

What to Check: Rigid pipe connections to pump.
Corrective Action: Install flexible connectors and a surge suppressor.

What to Check: Blocked air exhaust muffler.
Corrective Action: Remove muffler screen, clean or de-ice and reinstall. Refer to the Air Exhaust section of your pump SERVICE MANUAL.

What to Check: Pumped fluid in air exhaust muffler.
Corrective Action: Disassemble pump chambers. Inspect for diaphragm rupture or loose diaphragm plate assembly. Refer to the Diaphragm Replacement section of your pump SERVICE MANUAL.

What to Check: Suction side air leakage or air in product.
Corrective Action: Visually inspect all suction side gaskets and pipe connections.

What to Check: Obstructed check valve.
Corrective Action: Disassemble the wet end of the pump and manually dislodge obstruction in the check valve pocket. Refer to the Check Valve section of the pump SERVICE MANUAL for disassembly instructions.

What to Check: Worn or misaligned check valve or check valve seat.
Corrective Action: Inspect check valves and seats for wear and proper seating. Replace if necessary. Refer to Check Valve section of the pump SERVICE MANUAL for disassembly instructions.

What to Check: Blocked suction line.
Corrective Action: Remove or flush obstruction. Check and clear all suction screens and strainers.

What to Check: Blocked discharge line.
Corrective Action: Check for obstruction or closed discharge line valves.

What to Check: Blocked pumping chamber.
Corrective Action: Disassemble and inspect the wetted chambers of the pump. Remove or flush any obstructions.

What to Check: Entrained air or vapor lock in one or both pumping chambers.
Corrective Action: Purge chambers through tapped chamber vent plugs. PURGING THE CHAMBERS OF AIR CAN BE DANGEROUS! Contact the Technical Services Department before performing this procedure. Any model with top-ported discharge will reduce or eliminate problems with entrained air.

If your pump continues to perform below your expectations, contact your local Distributor or factory Technical Services Group for a service evaluation.

WARRANTY
This pump is warranted for a period of five years against defective material and workmanship. Failure to comply with the recommendations stated in this manual will void all factory warranty.

RECYCLING
Many components of Metallic AODD pumps are made of recyclable materials (see chart on page 9 for material specifications). We encourage pump user to recycle worn out parts and pumps whenever possible, after any hazardous pumped fluids are thoroughly flushed.
CAUTION
The air exhaust should be piped to an area for safe disposition of the product being pumped, in the event of a diaphragm failure.
## Composite Repair Parts List

<table>
<thead>
<tr>
<th>ITEM</th>
<th>PART NO.</th>
<th>DESCRIPTION</th>
<th>QTY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>274735</td>
<td>Body, Main Air Valve</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>274736</td>
<td>Sleeve &amp; Spool Set</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>252927</td>
<td>O-Rings</td>
<td>8</td>
</tr>
<tr>
<td>6</td>
<td>252926</td>
<td>Cap, End with O-Ring</td>
<td>2</td>
</tr>
<tr>
<td>7</td>
<td>252928</td>
<td>Ring, Retaining</td>
<td>2</td>
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<tr>
<td>8</td>
<td>274738</td>
<td>Gasket, Valve Body</td>
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<tr>
<td>9</td>
<td>274739</td>
<td>Cap, Air Inlet</td>
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<tr>
<td>10</td>
<td>240783</td>
<td>Washer, Flat 1/4”</td>
<td>8</td>
</tr>
<tr>
<td>11</td>
<td>274740</td>
<td>Capscrew, Hex Head 1/4-20 5” Long</td>
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<tr>
<td>12</td>
<td>274741</td>
<td>Gasket, Intermediate Bracket</td>
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<td>274742</td>
<td>Intermediate, Bracket</td>
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<tr>
<td>14</td>
<td>274743</td>
<td>Muffler</td>
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<td>15</td>
<td>274744</td>
<td>Cap, Air Exhaust</td>
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<td>Nut, Hex 1/4-20UNC</td>
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<td>274745</td>
<td>Insert, Gland</td>
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<td>274746</td>
<td>Seal, K-R</td>
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<td>274747</td>
<td>Rod, Diaphragm</td>
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<td>Sleeve, Pilot Valve with O-rings</td>
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<td>Ring, Retaining - Pilot Valve Sleeve</td>
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<td>Spool, Pilot Valve with O-rings</td>
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<td>274753</td>
<td>Plate, Inner Diaphragm</td>
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<td>274754</td>
<td>Diaphragm</td>
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<td>Plate, Outer Diaphragm</td>
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<td>274756</td>
<td>Clamp, V-Band</td>
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<td>T-Bolt</td>
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<td>Chamber, Outer</td>
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<td>27461</td>
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<td>27462</td>
<td>Ball, Check</td>
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<td>27463</td>
<td>Elbow, Suction</td>
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<td>37</td>
<td>27464</td>
<td>Screw, Machine 10-32UNF x 1” Long</td>
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<td>38</td>
<td>27465</td>
<td>Nut, Hex Flange 10-32UNF</td>
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<td>27466</td>
<td>Elbow, Discharge</td>
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<td>27467</td>
<td>Seal, Manifold</td>
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<td>27468</td>
<td>Manifold, Horizontal</td>
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<td>27469</td>
<td>Manifold, Vertical</td>
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<td>43</td>
<td>27470</td>
<td>Gasket, Sealing</td>
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</tbody>
</table>
Declaration of Conformity

Lincoln

Title

Name, Position

February 19, 2008

Signature of Authorized Person

To verify conformance:

Units for Liquids - Common Safety Requirements harmonized standard

Machine: This product has used EN 809, Pumps and Pumps

Directive 2006/42/EC

Lincoln® One Lincoln Way, St. Louis, MO 63120-1578

Declaration of Conformity