ELIMINATOR® SERIES VACUUM PUMPS

OPERATING INSTRUCTIONS & PARTS MANUAL

2-STAGE, DIRECT DRIVE

TABLE OF CONTENTS

About the Eliminator® Pump........... 2
Specifications.......................... 2
Caring for your Pump ................. 3
Oil ......................................... 3
Changing Oil............................ 3
Operation............................................. 3
Digital Vacuum Gauge ................ 3
Repair parts............................. 4
Troubleshooting....................... 4
Warranty................................. 4

CONNECT WITH US

AMERICAN MADE

JB INDUSTRIES

WWW.JBIND.COM  800.323.0811  SALES@JBIND.COM
ABOUT THE ELIMINATOR® VACUUM PUMP

Each ELIMINATOR® vacuum pump has been factory tested to guarantee 25 microns or better, and listed CFM performance. The serial number has been recorded. Complete and mail the Warranty Registration Card within 10 days of purchase to validate your warranty. You will be notified of any technical updates.

NOTE
Eliminator® pumps are not to be used on Ammonia or Lithium Bromide (salt water) systems. Pump maintenance is the responsibility of the owner.

PLEASE READ THE
“KEEPING THE LIFE IN YOUR PUMP” BOOKLET

SPECIFICATIONS

PUMP MOTOR:
Pump and oil must be above 30°F. Line voltage must be equal to motor nameplate ±10%. Normal operating temperature is approximately 160°F, which is hot to the touch. Line voltage and ambient conditions can slightly affect this. Motor has automatic resetting thermal overload protection.

The Eliminator® is designed for continuous duty and will run for extended periods without overheating.

US DOMESTIC

<table>
<thead>
<tr>
<th></th>
<th>DV-3E</th>
<th>DV-4E</th>
<th>DV-6E</th>
</tr>
</thead>
<tbody>
<tr>
<td>CFM</td>
<td>3 CFM (85 l/m)</td>
<td>4 CFM (113 l/m)</td>
<td>6 CFM (170 l/m)</td>
</tr>
<tr>
<td>MOTOR</td>
<td>1/2 HP, 1725 RPM</td>
<td>1/2 HP, 1725 RPM</td>
<td>1/2 HP, 1725 RPM</td>
</tr>
<tr>
<td>VOLTAGE</td>
<td>115v, 60Hz</td>
<td>115v, 60Hz</td>
<td>115v, 60Hz</td>
</tr>
<tr>
<td>INTAKE PORT</td>
<td>1/4&quot; x 3/8&quot;</td>
<td>1/4&quot; x 3/8&quot;</td>
<td>1/4&quot; x 3/8&quot;</td>
</tr>
<tr>
<td>OIL CAPACITY</td>
<td>28 oz (828 cc)</td>
<td>25 oz (739 cc)</td>
<td>25 oz (739 cc)</td>
</tr>
</tbody>
</table>

DUAL VOLTAGE

<table>
<thead>
<tr>
<th></th>
<th>DV-3E-250</th>
<th>DV-4E-250</th>
<th>DV-6E-250</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOTOR</td>
<td>1/2 HP, 1725/1425 RPM</td>
<td>1/2 HP, 1725/1425 RPM</td>
<td>1/2 HP, 1725/1425 RPM</td>
</tr>
<tr>
<td>VOLTAGE</td>
<td>115v, 60Hz, 230v/50Hz</td>
<td>115v, 60Hz, 230v/50Hz</td>
<td>115v, 60Hz, 230v/50Hz</td>
</tr>
</tbody>
</table>

IMPORTANT:
This unit has been drained of oil for shipment. Do not attempt to operate without adding oil.
CARING FOR YOUR PUMP
In order to make the best use of your investment, familiarize yourself with the new features and operating instructions before starting pump. With just routine care, following proper maintenance guidelines, your Eliminator® will give you years of reliable service. Eliminator® pumps are designed for deep vacuum work in Air Conditioning and Refrigeration Systems.

IMPORTANT: Use oil specifically refined for deep vacuum pumps. Using oil not refined for deep vacuum pumps and/or operating with contaminated oil will void warranty.

OIL
Slowly add oil until oil level rises to be even with arrows on front of cover. Replace oil fill plug. If oil is too low, you will hear air out of the exhaust. If the oil level is too high, excess oil will be blown out of the exhaust.

Pump oil should be changed after each use. If system is heavily contaminated, oil may have to be changed several times during evacuation. After initial fill up, it is best to check oil level with pump running.

AFTER EVACUATION, OIL CONTAINS WATER AND CORROSIVE ACIDS, FORMING RUST OVER TIME. DRAIN IMMEDIATELY WHILE PUMP IS WARM.

CHANGING OIL
To reach deep vacuum, Eliminator® pumps need clean, moisture-free oil throughout evacuation. Care should be taken to avoid contact on skin and clothing when changing oil. Used oil should be disposed of in the DV-T1 TANK oil caddy after every evacuation while the pump is warm and the oil is thin.

1 Place the Tank on a level surface. Unscrew black plug counterclockwise in drain base to open.
2 Place vacuum pump in the cradle and drain pump.
3 Once the pump has finished draining, turn the black cap clockwise to close after every use (the Tank can hold up to 5 oil changes).
4 Close drain on pump. Remove oil fill cap and fill to top of OIL LEVEL line with BLACK GOLD Pump Oil. Replace oil fill cap.

FLUSHING: ALWAYS DRAIN PUMP BEFORE FLUSHING!
If the oil is badly contaminated, flushing may be necessary.

Slowly pour 1/3 - 1/2 cup of BLACK GOLD Pump Oil into the intake connection while pump is running. Repeat as required until contamination is removed from oil reservoir, pump rotors, vanes and housing.

Dispose of all oil used in flushing of pump.

IMPORTANT DO NOT START PUMP BEFORE ADDING OIL

OPERATION
The following procedures will prevent oil from being drawn into the pump cartridge and creating hard start-up.

START-UP:
Close both sides of manifold and make connection to vacuum pump or auxiliary blank-off equipment. Start pump.

SHUT-DOWN:
Crack open unused port to break vacuum. Allow pump to run 2-3 seconds. Shut down and remove hose connections and cap intakes.
TROUBLESHOOTING

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Possible Cause(s)</th>
<th>Corrective Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pump won't start</td>
<td>1. Power cord not plugged in securely</td>
<td>1. Plug power cord in securely</td>
</tr>
<tr>
<td></td>
<td>2. Motor switch not on</td>
<td>2. Turn motor switch to ON position</td>
</tr>
<tr>
<td></td>
<td>3. Pump temp. below 30°F</td>
<td>3. Warm up pump to 30°F &amp; turn motor switch on</td>
</tr>
<tr>
<td></td>
<td>4. Inconsistent line voltage</td>
<td>4. Line voltage must be within 10% of 115 volts</td>
</tr>
<tr>
<td>Pump won't pull deep vacuum</td>
<td>1. Contaminated oil</td>
<td>1. Change oil</td>
</tr>
<tr>
<td></td>
<td>2. Oil level too low</td>
<td>2. Add oil</td>
</tr>
<tr>
<td></td>
<td>3. Air leak in system being evacuated</td>
<td>3. Locate &amp; repair leak(s)</td>
</tr>
<tr>
<td></td>
<td>4. Pump inlet fittings missing or not tightened</td>
<td>4. Clean or replace O-ring</td>
</tr>
<tr>
<td></td>
<td>5. Coupler slipping</td>
<td>5. Tighten coupler setscrews to flats of cartridge and motor</td>
</tr>
<tr>
<td>Oil drips from point where shaft enters the pump housing</td>
<td>Damaged shaft seal</td>
<td>Replace</td>
</tr>
<tr>
<td>Pump shuts down and will not start</td>
<td>Thermal overload may be open</td>
<td>Disconnect pump from system. Wait about 15 minutes for motor to cool and turn it on again. If it cycles off again, return pump to factory for repair.</td>
</tr>
<tr>
<td>Pump cycles on and off from a completely cold start and then runs smoothly</td>
<td>Oil backed up into cartridge and was being cleared out. Pump has not been shutdown properly.</td>
<td>Remove 1/4” cap then turn pump on</td>
</tr>
</tbody>
</table>

WARRANTY

Eliminator® pumps are warranted against defects in materials and workmanship for 2 years. All JB products are guaranteed when used in accordance with our directions and recommendations, and we limit this warranty to the repair, replacement, or credit and invoice price (our option) of products which in our opinion are defective due to defects in workmanship and/or materials. In no case will we allow charges for labor, expense or consequential damage. Repairs performed on items out of warranty will be invoiced on a nominal basis. Contact your wholesaler for details.