

ELIMINATOR® SERIES VACUUM PUMPS

OPERATING INSTRUCTIONS & PARTS MANUAL

2-STAGE,
DIRECT DRIVE



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ABOUT THE ELIMINATOR[®] VACUUM PUMP

***25,400 MICRONS = 1 INCH OF HG.**

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 $\pm 10\%$. 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

	DV-3E	DV-4E	DV-6E
CFM	3 CFM (85 l/m)	4 CFM (113 l/m)	6 CFM (170 l/m)
MOTOR	1/2 HP, 1725 RPM	1/2 HP, 1725 RPM	1/2 HP, 1725 RPM
VOLTAGE	115v, 60Hz	115v, 60Hz	115v, 60Hz
INTAKE PORT	1/4" x 3/8"	1/4" x 3/8"	1/4" x 3/8"
OIL CAPACITY	28 oz (828 cc)	25 oz (739 cc)	25 oz (739 cc)



DUAL VOLTAGE

	DV-3E-250	DV-4E-250	DV-6E-250
MOTOR	1/2 HP, 1725/1425 RPM	1/2 HP, 1725/1425 RPM	1/2 HP, 1725/1425 RPM
VOLTAGE	115v, 60Hz, 230v/50Hz	115v, 60Hz, 230v/50Hz	115v, 60Hz, 230v/50Hz

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.

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.

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.

**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

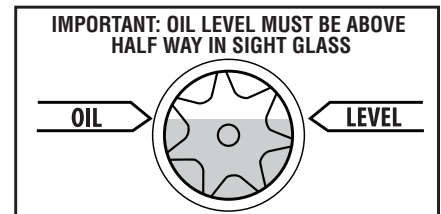
The following procedures will prevent oil from being drawn into the pump cartridge and creating hard start-up.

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.

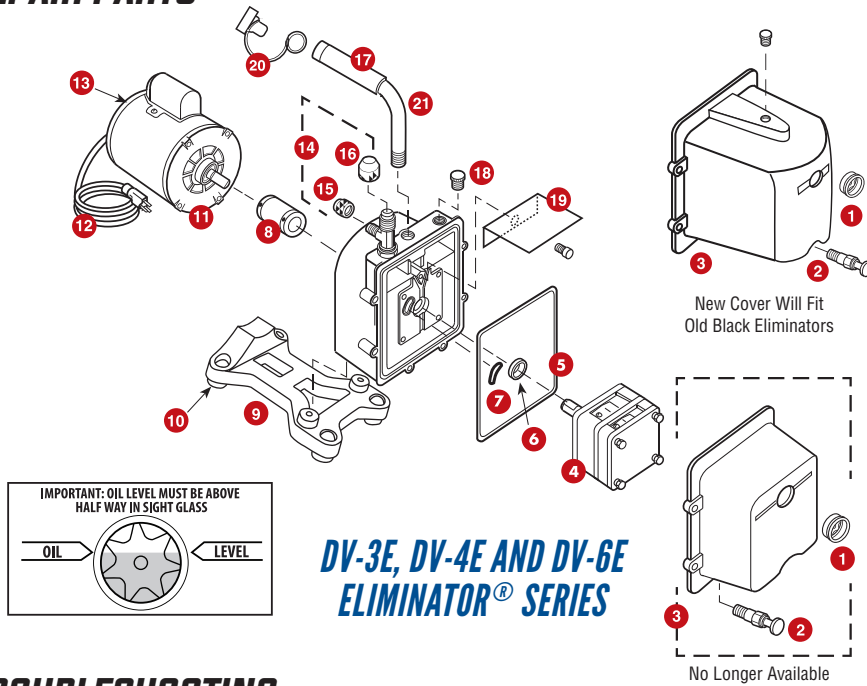


DIGITAL VACUUM GAUGE

SUPERNOVA DV-41

- Fully programmable including alarm settings, shut-off & back-light duration
- Large, easy to read LCD screen
- Factory calibrated and requires no additional calibration
- Measures in microns, PSIA, INHG, Pascals, torr, MTORR, and MBAR
- Allows you to perform other tasks
- Sensor contamination easily cleaned with simple alcohol
- Brass fitting on lengthy flexible cord for hard to reach places

REPAIR PARTS



DV-3E, DV-4E AND DV-6E ELIMINATOR® SERIES

TROUBLESHOOTING

Symptom	Possible Cause(s)	Corrective Action
Pump won't start	<ol style="list-style-type: none"> 1. Power cord not plugged in securely 2. Motor switch not on 3. Pump temp. below 30°F 4. Inconsistent line voltage 	<ol style="list-style-type: none"> 1. Plug power cord in securely 2. Turn motor switch to ON position 3. Warm up pump to 30°F & turn motor switch on 4. Line voltage must be within 10% of 115 volts
Pump won't pull deep vacuum	<ol style="list-style-type: none"> 1. Contaminated oil 2. Oil level too low 3. Air leak in system being evacuated 4. Pump inlet fittings missing or not tightened 5. Coupler slipping 	<ol style="list-style-type: none"> 1. Change oil 2. Add oil 3. Locate & repair leak(s) 4. Clean or replace O-ring 5. Tighten coupler setscrews to flats of cartridge and motor
Oil drips from point where shaft enters the pump housing	Damaged shaft seal	Replace
Pump shuts down and will not start	Thermal overload may be open	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.
Pump cycles on and off from a completely cold start and then runs smoothly	Oil backed up into cartridge and was being cleared out. Pump has not been shutdown properly.	Remove 1/4" cap then turn pump on

WARRANTY

Eliminator® pumps are warrantied 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.

REF. NO. | PART NO. | DESCRIPTION

ELIMINATOR® PUMP REPAIR PARTS

1	PR-1	Sight Glass
2	PR-2	Drain Valve
3	PR-10	DV-3E, DV-4E And DV-6E Cover Assembly Includes Sight Glass, Drain Valve, Oil Fill Plug
4 New	PR-403	DV-3E Cartridge Complete With O-Rings & Cover Seal
	PR-404	DV-4E Cartridge Complete With O-Rings & Cover Seal
	PR-406	DV-6E Cartridge Complete With O-Rings & Cover Seal
5 New	PR-217	Cover Seal
6	PR-3	Shaft Seal
7	PR-315	Trap Intake O-Ring
8	PR-208	Flexible Coupler
	PR-6	Flexible Coupler
	PR-77	Flexible Section only
9	PR-62	Pump Base (Includes Rubber Feet)
10	PR-59	Rubber Foot
Not Shown	PR-18	Cartridge Valve Repair Kit
11	PR-207	1/2 Hp, 115/230 V, 50/60 Hz Motor With Line Cord & Switch
	PR-206	1/2 Hp Motor With Line Cord & Switch
12	PR-31	Line Cord (Emerson Motor)
12 New	PR-58	Line Cord (Marathon Motor)
13	PR-54	Motor Switch, Rocker
14	PR-63	Intake Tee With Cap
15	NFT5-4	1/4" O-Ring Cap
16	NFT5-6	3/8" O-Ring Cap
17 Black	PR-500	3/8 Rubber grip & Cap
17 Hammertone	PR-501	1/2" Rubber grip & cap
18	PR-22	Oil Fill Plug With O-Ring
	PR-39	DV-3E Splash Guard w/Screw
19	PR-40	DV-4E & DV6E Splash Guard w/Screw
	PR-40	DV-4E & DV6E Splash Guard w/Screw
20 Black	DV-EP6	Tethered Safety Plug 3/8"
20 Hammertone	DV-EP8	Tethered Safety Plug 1/2"
21 Black	PR-205	Cushioned Handle 3/8" NPT
21 Hammertone	PR-65	Cushioned Handle 1/2" NPT



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