

# YJII™ Two Stage Vacuum Pump

## Operating Manual



Read carefully before using

5 cfm

### Vacuum Pump

#### I. Pump components



#### II. Operating Manual

##### 1. Before operating

All motors are designed for operating voltages plus or minus 10% of the normal rating. Single voltage motors are supplied fully connected and ready to operate.

(a) Check the voltage and frequency at the outlet and ensure it matches the specifications on the pump motor metal plate. Ensure that the ON-OFF switch is in the OFF position before connecting the pump to a power source. Remove and discard the exhaust plug from the exhaust fitting.

(b) If required, fill the oil reservoir with oil before turning on the pump. Remove the Oil Fill cap and add oil until oil shows at the bottom of the sight glass. Refer to technical data in manual for the correct oil capacity of pump.

(c) Replace the Oil Fill cap and remove the cap from the inlet fitting. Turn the motor switch to ON position. Place the cap back on the inlet fitting when the pump runs smoothly. This may take 2 to 30 seconds depending on the ambient temperature.

After the pump operates for approximately one minute, check the sight glass for proper oil level, which should be aligned with the sight glass Oil Level line. Refill oil if necessary.

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#### V. Technical Specifications

##### 1. Specifications

Model	93266
Frequency	50/60Hz
Flow Rate	5 CFM 141 LPM
Ultimate Vacuum	25 microns
Stage	2
Power	1/2HP
Inlet Port	1/4" & 3/8" SAE
Oil Capacity	20 oz
Dimensions (inches)	14x5x9
Weight	25 lbs

Notes:

1. This product operates in ambient temperature: 41°F~104°F
2. This product is equipped with Thermal Protection function: If the ambient temperature is too hot, the product may stop functioning. It is recommended not to switch off the power supply immediately. If the product automatically restarts after three minutes, it is recommended to cool the product by lowering the ambient temperature to prolong the life of the vacuum pump.

#### VI. Warranty

Please visit [www.yellowjacket.com](http://www.yellowjacket.com) for warranty information.

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Note: The oil level should be aligned with the indicating line on the sight glass when the pump is running. Insufficient oil filled will result in poor vacuum performance. Excessive oil can result in overflowing of oil from the exhaust fitting. **To reduce the risk of injury, when applying to the R32 and HFO-1234yf, please be sure to operate the pump at cool and ventilated place.**

##### 2. To shut off pump after use

To prolong pump lifespan and smooth start-up, these procedures to shut off pump should be followed.

- (a) Turn off the manifold valve between the pump and the system (shut off pump).
- (b) Remove the hose from the pump inlet.
- (c) Cover the inlet port openings to prevent any contamination or foreign particles from entering the port.

#### III. Maintenance

##### 1. Vacuum pump oil:

The condition and type of oil used in any high performance vacuum pump are extremely important in determining the ultimate attainable vacuum. It is recommended to use High Performance Vacuum Pump Oil, which is specifically blended to maintain maximum viscosity at normal running temperatures and to improve cold weather start up.

##### 2. Oil Change Procedure

- (a) Ensure the pump is warmed up.
- (b) Remove the Oil Drain cap. Drain off contaminated oil into a container and dispose it properly. Oil can be removed from the pump by unscrewing drain plug and allowing to drain into container.

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(c) When the drainage of oil completed, tilt the pump forward to remove the residual oil.

(d) Replace the Oil drain plug. Remove the Oil Fill cap and fill the oil reservoir with new vacuum pump oil until the oil level is seen at the bottom of the sight glass.

(e) Ensure that the inlet ports are covered before turn on the pump. Allow it to run for one minute to check the oil level. If the oil level is below the sight glass Oil Level line, fill oil slowly (with the pump running) until the oil reaches the Oil Level line. Replace the Oil Fill cap, ensure the inlet is covered and the oil drain cap is closed tightly.

(f) i) If the oil is badly contaminated with sludge that forms during operation, you may need to remove the oil reservoir cover and wipe it.

ii) The alternative method to deal with heavily contaminated oil is to force the oil from the pump reservoir. Leave the pump to run until it is warmed up. While the pump is still running, remove the oil drain cap and restrict the exhaust slightly. This will back-pressure the oil reservoir and purge the oil with contaminants. Turn off the pump when oil stop flowing.

iii) Repeat this procedure as required until the contaminants is removed completely.

iv) Replace the Oil Drain cap and refill the oil reservoir to the proper oil level with clean vacuum pump oil.

#### IV. Troubleshooting Guide

Following guide will help you to recover the functionality should there be any malfunctions:

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##### 1. Failure To Start

Check the operating voltage. The pumps are designed to start at  $\pm 10\%$  operating voltage (loaded) at 41°F. However, if the maximum voltage is exceeded, switch malfunction may occur.

##### 2. Oil leakage

- (a) Ensure the oil is not spilled from vacuum pump, etc.
- (b) If leakage occurs, the housing gasket or the shaft seal may need to be replaced. If leakage exists in the area of the oil drain plug, you may need to reseal the plug using a commercial pipe thread sealer.

##### 3. Failure To Attain A Good Vacuum

- (a) Ensure the vacuum gauge and all connections are in good condition and leakfree. You can confirm leakage by monitoring the vacuum with a thermistor gauge while applying vacuum pump oil at connections or suspected leak points. The vacuum will improve briefly while the oil is sealing the leak.
- (b) Ensure the pump oil is clean. A badly contaminated pump may require several oil flushes.
- (c) Ensure the oil is at the proper level. For optimum pump operation, the oil must be even with the Oil Level line on the sight glass when the pump is running. Do not overfill as operating temperatures will cause the oil to expand, which will appear at a higher level than when the pump is not running. To check the oil level, start the pump with the inlet covered. Check the oil level in the sight glass. Add oil if necessary.

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