

# Service Procedures for Predatair40 and Predatair60

500 Hour Service Kit A700156

## General Service Information

### Safety and Service Precautions

Observe these precautions when performing any service:

- Never attempt to clean the filter element with compressed air. Replace the filter element.
- Do not over-tighten the air filter cover retaining nut as this may crush and damage the filter.
- To prevent damage to the oil filter, always use a proper filter wrench. Never over-tighten the filter, as this may damage the seal or the filter.
- Never use any lubricant other than the supplied compressor oil, as other lubricants will damage the compressor and may void warranty.
- Do not overfill the system, as this can flood the sight glass window and make the system appear empty.
- If the system has been operating, shut it off and wait at least 30 seconds for the air pressure to vent before performing service.

 ***If the tank does not have a blow-down cap, you must make sure that there is no pressure left in the system. If there is a pressure gauge, make sure that it is at zero before commencing service. If you are not sure, attach a tool or air nozzle to the air outlet and make sure that there is no pressure.***

- If the system is cold, bring the engine to operating temperature and then operate the compressor system for a few minutes to bring the compressor oil to operating temperature. This will also help to suspend contaminants in the oil so that they can be removed from the system along with the old oil.
- Observe all safety procedures relating to moving belts, hot oil and compressed air. Use all safety equipment to protect yourself.
- Check the old oil and the inside of the tank for any evidence of metal filings or contamination; if found, flush the tank, hoses and cooler. Metal filings will damage the compressor.

### Flushing Procedure

Component failure (such as a gearbox, compressor, hose or cooler core) can leave metal filings and other foreign materials in the system. To flush the system, follow this procedure:

1. Before replacing any failed component, check all other system components for evidence of contamination and clean as thoroughly as possible. Use compressed air to blow out lines and other components.
2. Once the system has been cleaned as thoroughly as possible, replace the failed component and reconnect all lines and fittings.
3. Install a new oil filter and fill the system with VMAC compressor oil to the correct level.
4. Start the truck engine and engage the air system. Allow the system to pressurize and allow it to operate in no-load mode for about 15 minutes without discharging any air.
5. Shut-down, allow the system to cool and change the oil, oil filter and coalescing element. Refill with compressor oil to the correct level.
6. After 50 hours, replace the oil filter and top up the oil level.

## Service Kit Contents

A 500 hour service kit will contain an air filter, oil filter and sufficient oil for the system, 1.06 USG (4 liters), coalescing separator element, O-rings and cap seal.

## Service Procedures

### 1. Replace the Air Filter

1. Clean loose debris from the area around the compressor and the filter cover to prevent contamination entering the compressor.
2. Remove the filter cover retaining nut, the filter cover and the filter element.
3. Immediately cover the air inlet opening by masking with tape or with a clean cloth to prevent contamination. Do not use compressed air or perform any other tasks around the compressor until the filter and cover are replaced.

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4. Clean the inside of the filter cover with a clean, dry cloth. Do not use flammable solvents to clean the inside of the cover. If you do use solvent, rinse the inside of the cover thoroughly with fresh water and dry it before installing the cover.
5. Remove the cloth or masking and install a new air filter. Make sure that the filter fits over the machined step on the housing.
6. Replace the cover and secure it with the cover bolt. Do not over-tighten the bolt.

## 2. Replace the Oil Filter



**Hot oil can cause severe burns.**

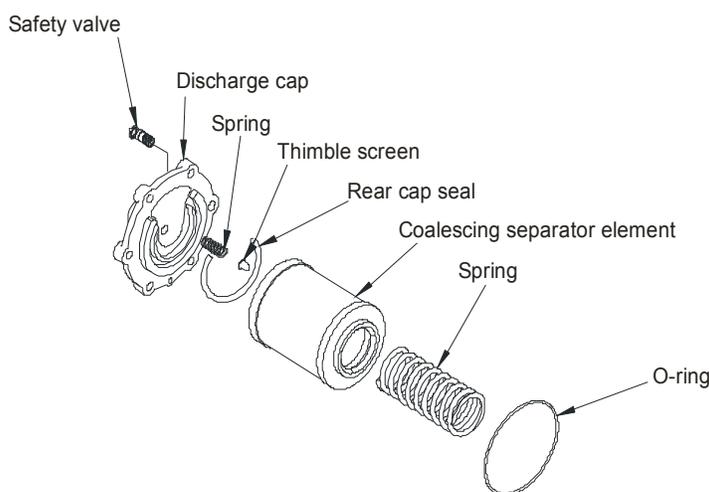
1. Clean the area around the tank and the filter to prevent contamination.
2. Remove the drain plug and drain the oil into a container large enough to hold at least 1.06 USG (4 liters).
3. Install and tighten the plug.
4. Remove the oil filter by turning it counterclockwise. Before discarding the filter, check to make sure that the threaded nipple did not unscrew with the filter. If the nipple is in the filter, remove it carefully to avoid thread damage and replace it in the tank housing.
5. Check the gasket-sealing surface on the front of the tank for contamination, old gasket material or damage.
6. Apply a thin coating of compressor oil to the filter-sealing gasket and fill the filter with VMAC compressor oil.
7. Spin the filter onto the threaded nipple until the gasket contacts the sealing surface on the tank, then tighten the filter an additional 3/4 to 1 turn to seat the sealing gasket.

## 3. Replace the Oil

1. Remove the plug from the fill tube on the tank near the sight glass. Pour VMAC compressor oil into the oil fill hole using a funnel.
2. Check the level at the sight glass at the front of the tank.
3. Continue adding oil until the level is correct. Install the fill plug and tighten it secure

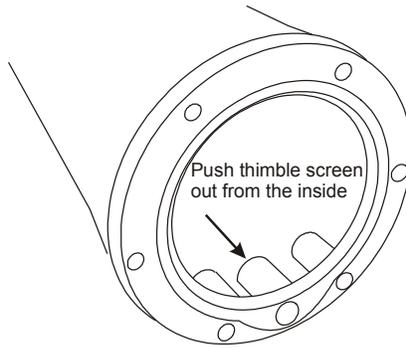
## 4. Changing the Coalescing Separator Element

1. Clean the back of the tank to prevent contamination.
2. Disconnect the air outlet line and poly lines from the back of the tank.
3. Remove the bolts holding the discharge cap from the back of the tank and remove the cap and small spring, if equipped.
4. Remove the coalescing separator element, large spring from inside the tank. Discard the coalescing separator element.
5. Remove and discard the O-ring seal and the rear cap seal.
6. Wipe out the inside of the tank.
7. The tank has a small spring and thimble screen, the screen can be removed by carefully pushing it out of the oil scavenge hole from the inside of the tank.



**Typical PREDATAIR System**

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**Thimble Screen**

8. Check the thimble screen for contamination or damage. If contaminated, clean as necessary and blow out with compressed air. If damaged, replace the thimble screen.



***If you use solvents for cleaning, thoroughly rinse the parts with hot water to remove all solvent residues.***

9. Install new O-rings and rear cap seal.
10. Thoroughly clean the large spring. Remove any rust or contaminants.
11. Install the large spring and a new coalescing separator element. Make sure that the spring is in place, as it holds the coalescing separator element tight against the rear cap seal.



***The large spring also prevents electrostatic buildup by grounding the coalescing separator element. If the spring is not installed, an electric arc may occur, which could result in an explosion, potential tank rupture or fire.***

12. Install the discharge cap and torque the bolts to specifications.
13. Install the lines on the back of the tank.

## 5. Completing the Service

1. Place the manual transmission in neutral or the automatic transmission in park and fully apply the park brake.
2. Start the engine and allow it to reach operating temperature. Engage the hydraulic system.
3. Turn the compressor switch on the control unit to the "ON" position, allow the system to pressurize and return to preset base idle speed.
4. Turn the compressor switch on the control unit to the "OFF" position.
5. Allow the system to settle for 5 minutes, and then check the oil level through the sight glass. The level must be between the minimum and maximum level indicators.
6. Check for oil leaks.
7. Clear the message "HRS: XXXX:XX 500S" on the control box:
  - press and hold the OFF button (about 5 seconds) until "DIAGNOSTICS" appears in the display.
  - release, then press the ON button when "SERVICE LOG" appears in the display.
  - when "SCREEN CLEAR OK" appears in the display press both ON and OFF buttons at the same time.
  - when "DIAGNOSTICS" appears in the display press both ON and OFF buttons to exit.

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