

Filter Service

Effective fluids filtration is vital to the longevity and performance of your Wagner. See the previous section on preventive maintenance for the scheduled intervals for filter element replacement where applicable.

Some filter elements (the air cleaner elements, for example) do not have an established service interval, but must be changed based on need. Variations in environmental conditions result in different servicing requirements.

See Figure 5-5-1 for the location of the filters on your machine. See Figure 5-5-12 for engine filter locations. Refer to the parts manual or suggested stocking guide (SSG) for your machine for part numbers of filter elements. You should always have a full set of replacement elements in stock for your machine. Contact your dealer for details.

Refer to the following pages for timing and procedures of filter element replacement.



WARNING

Severe burn hazard.

Lubricating oils are extremely hot while the machine is running, and may cause severe burns or death upon contact.

Shut down the machine, employ lockout/tagout procedures, and allow the machine to cool. Wear appropriate personal protective equipment when changing fluids or filter elements.

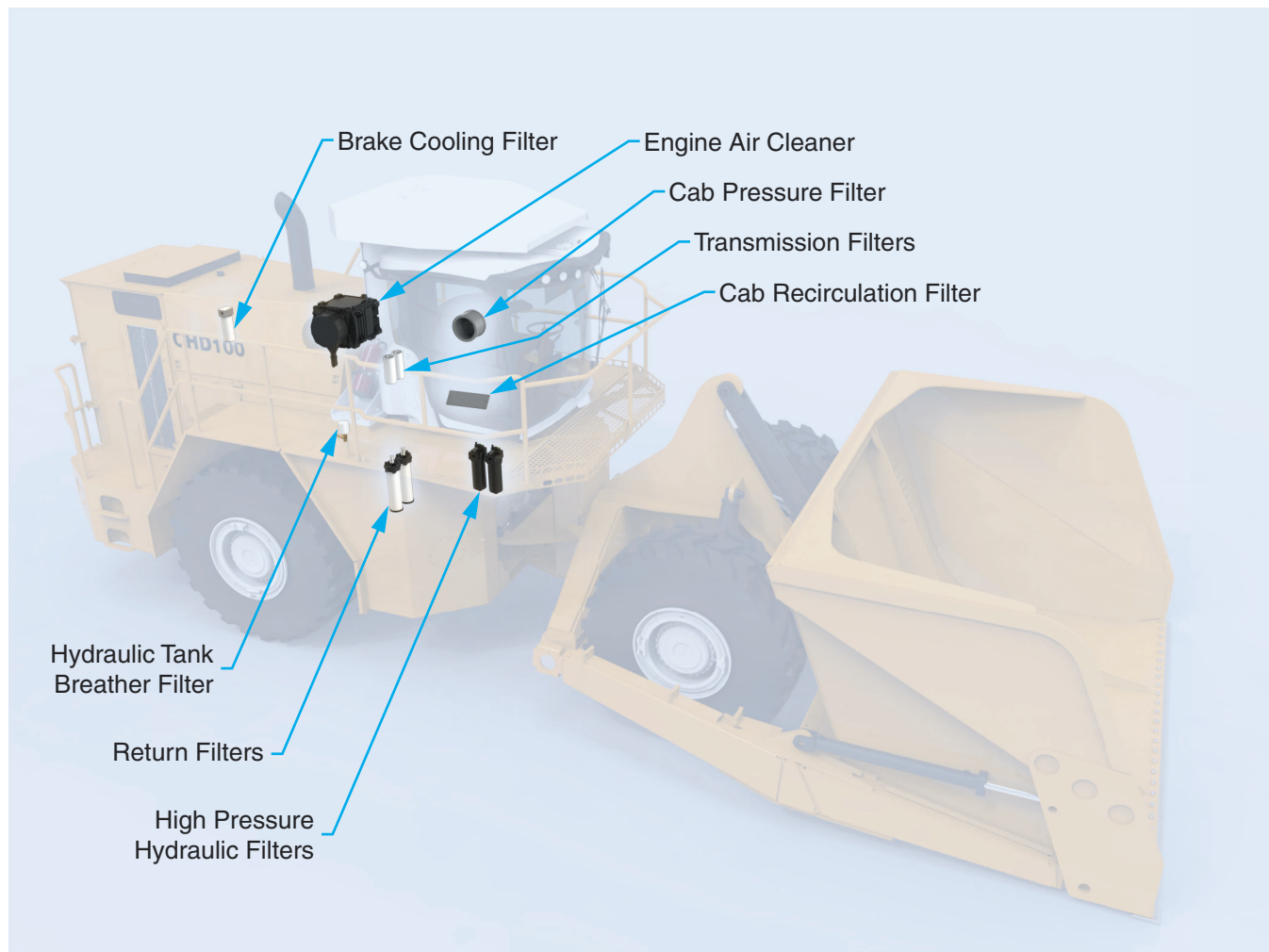


Figure 5-5-1 Filter Arrangement

High Pressure Filters

Service Interval: Quarterly, every 500 hours, or when a warning appears on the Wagner smart screen, whichever occurs first.

The high pressure filters are mounted next to the transmission and swivel box, on the right side of the machine. See Figure 5-5-2.

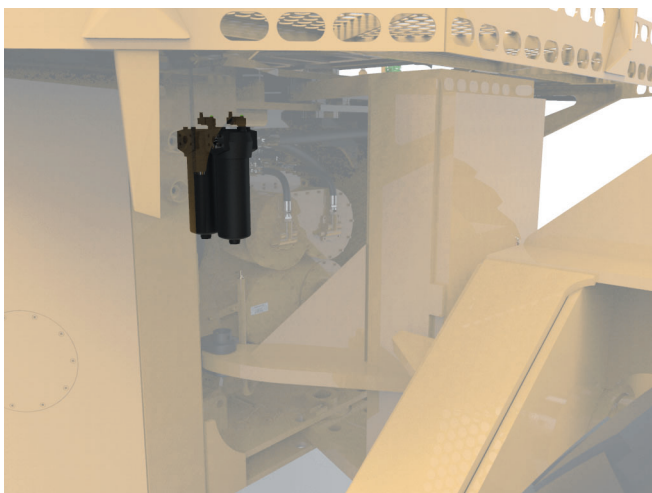


Figure 5-5-2 High Pressure Filters Location

Service Instructions

1. Stop system power and vent captive pressure.
2. Drain filter assembly.
3. Remove bowl and element assembly.
4. Push down to squeeze tangs and lift element (see Figure 5-5-3).



Figure 5-5-4

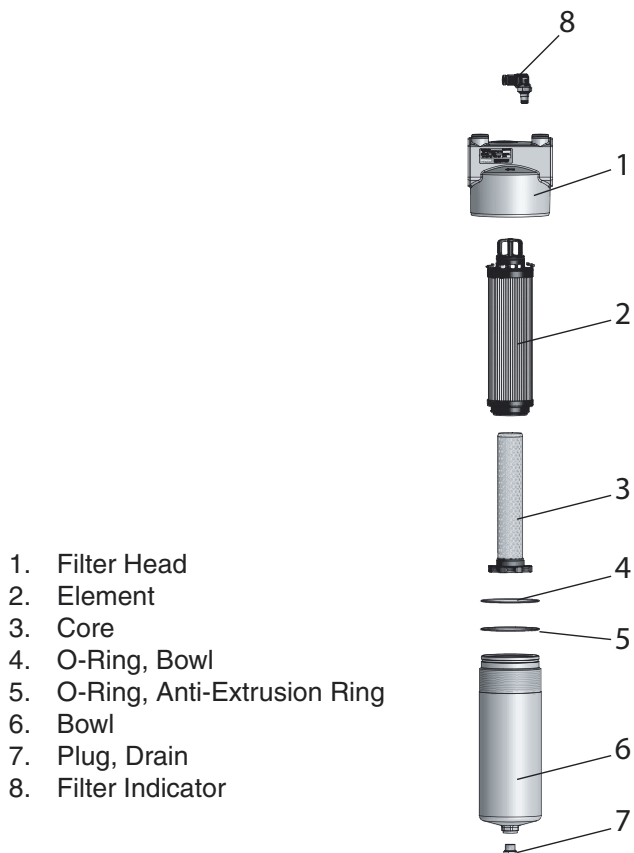


Figure 5-5-3 Parts Identification

5. Twist to remove core (see Figure 5-5-4).



Figure 5-5-5

6. Retain reusable core (see Figure 5-5-6).



Figure 5-5-6

7. Discard used element.
8. Insert reusable core into new element (see Figure 5-5-7).



Figure 5-5-7

9. Push element assembly into bowl until tangs snap (see Figure 5-5-8).



Figure 5-5-8

10. Inspect O-ring and anti-extrusion ring.
11. Install bowl with new element (see Figure 5-5-9).
12. Torque bowl (25-30 ft-lb/35-40 N-m) and drain plug (25-30 ft-lb/35-40 N-m).
13. Power up and inspect.



Figure 5-5-9

Breather Filter

Service Interval: Monthly, every 250 hours, whichever occurs first.

The breather filter is inside the engine compartment on the right side of the machine. See Figure 5-5-10.

Replacing the Breather

1. Shut down the machine and vent captive pressure by opening the petcock at the breather. See Figure 5-5-10.
2. Clean the surrounding area.
3. Remove the breather and replace with a new one.
4. Close the petcock.

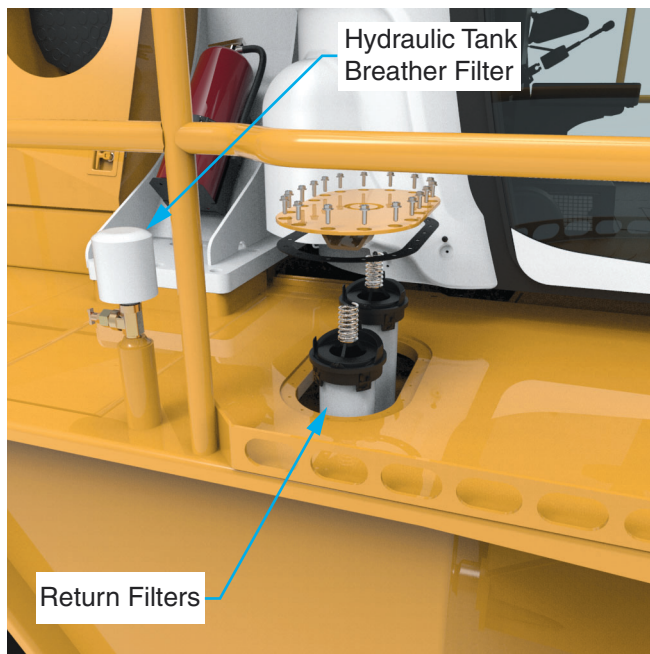


Figure 5-5-10 Return Filters and Breather Filter

Return Filters

Service Interval: Quarterly, every 500 hours, or when a warning appears on the Wagner smart screen, whichever occurs first.

The return filters are accessed from the deck on the right side of the machine. See Figure 5-5-10.

Allow the machine to warm up. If, after the hydraulic oil is warm, the warning message shown in Figure 5-5-11 appears on the Wagner Smart Screen Display, both filter elements must be changed before returning the machine to work, even if prior to the quarterly/500 hour interval.



Figure 5-5-11 Return Filter Restriction Warning

Replacing the Filter Elements

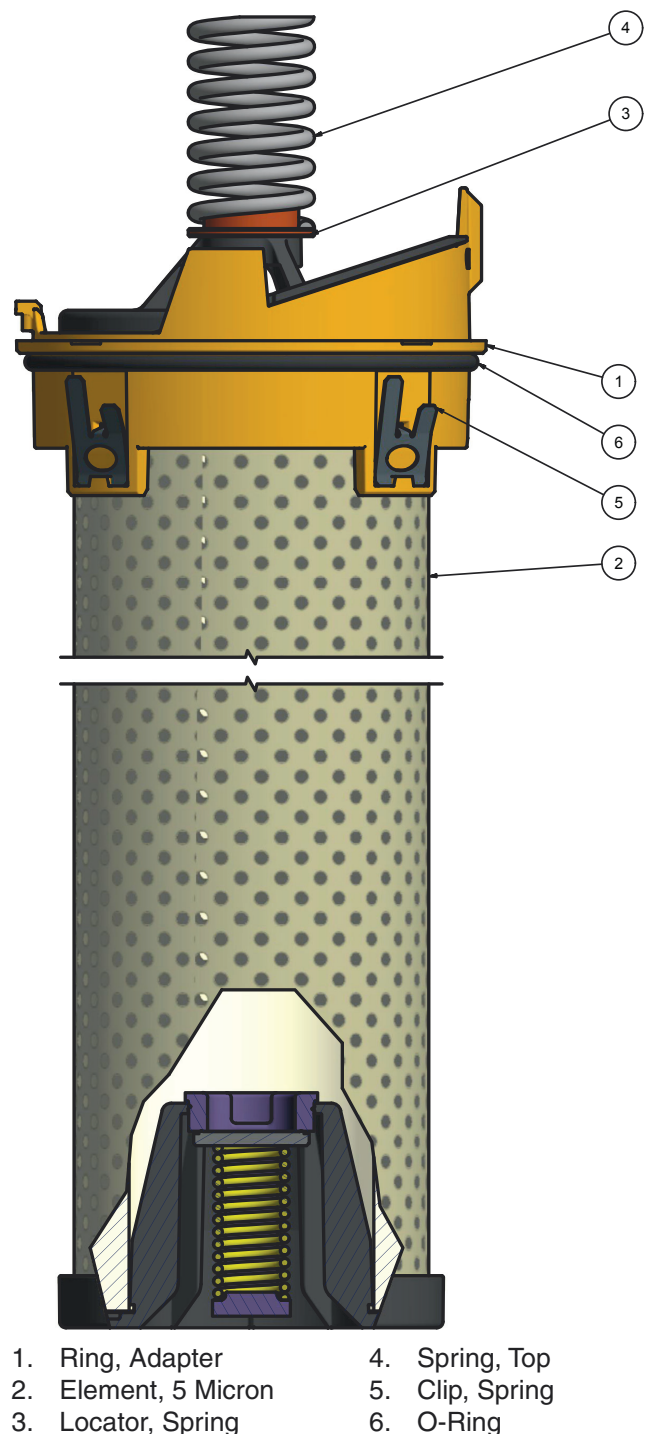
1. Shut down the machine and vent captive pressure by opening the petcock at the breather. See Figure 5-5-10.
2. Clean cover plate and surrounding area.
3. Remove cover plate and gasket.
4. Remove in-tank filter assemblies.
5. Remove contaminated cartridge with a twisting motion.
6. Discard disposable element (2).

Before Installing Cartridge

1. Check all seals and tank cover gasket and replace if necessary.

To Assemble and Install New or Cleaned Cartridge

1. Clean all components.
2. Lubricate and install all seals.
3. Insert new element.
4. Reinstall in-tank return filter into housing (make sure the top spring is secure).
5. Reinstall cover. Torque cover nuts (see 80-1057 Torque Specification Chart).
6. Close the petcock.



- | | |
|----------------------|-----------------|
| 1. Ring, Adapter | 4. Spring, Top |
| 2. Element, 5 Micron | 5. Clip, Spring |
| 3. Locator, Spring | 6. O-Ring |

Figure 5-5-12 Return Filter Assembly

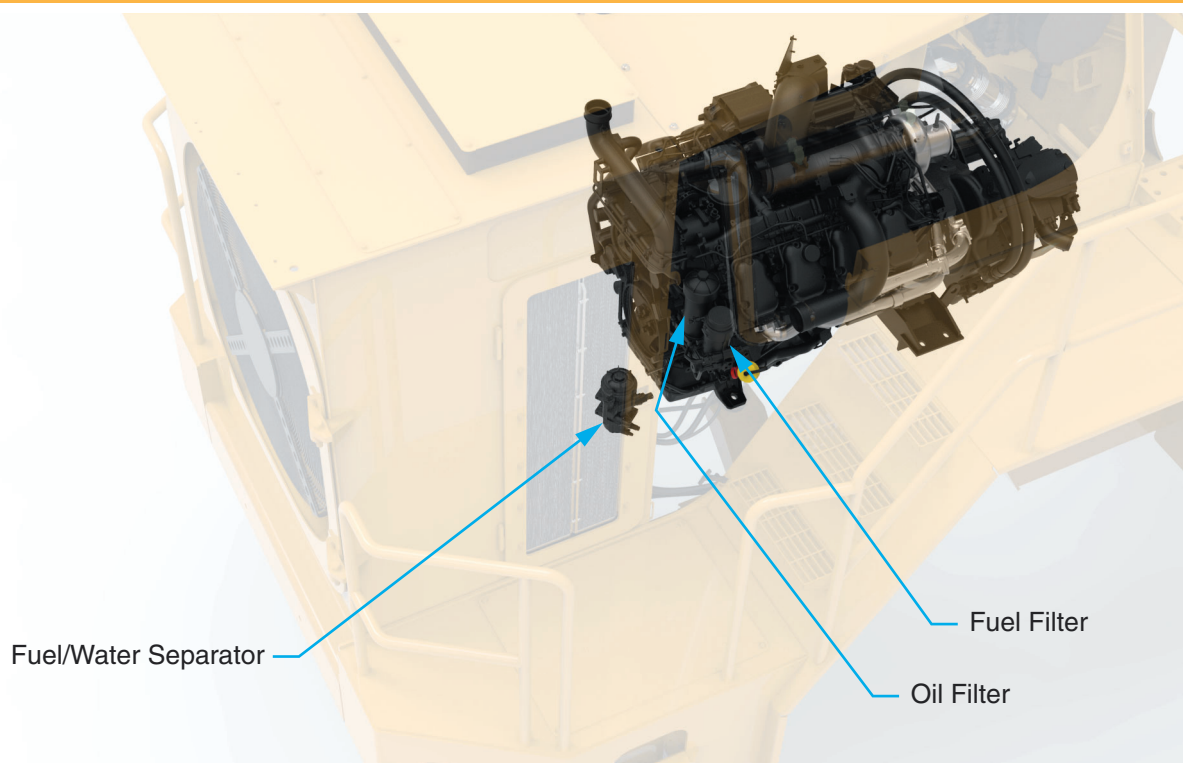


Figure 5-5-13 Engine Filters

Engine Filters

Engine filters include the engine oil filter, the fuel filter, and the fuel/water separator. See Figure 5-5-13.

Service Interval: Quarterly, every 500 hours, or as dictated by a fault code, whichever occurs first.

The normal service intervals will be sufficient in most cases. Occasionally, the engine may throw a fault code indicating that a filter element needs to be replaced sooner. The filter element must be replaced prior to returning the machine to work, even if prior to the scheduled interval.

Refer to Section 2 of your Wagner Service Manual for the fault codes for your machine.

Refer to the Operation and Maintenance Manual supplied with your engine for filter change procedures.

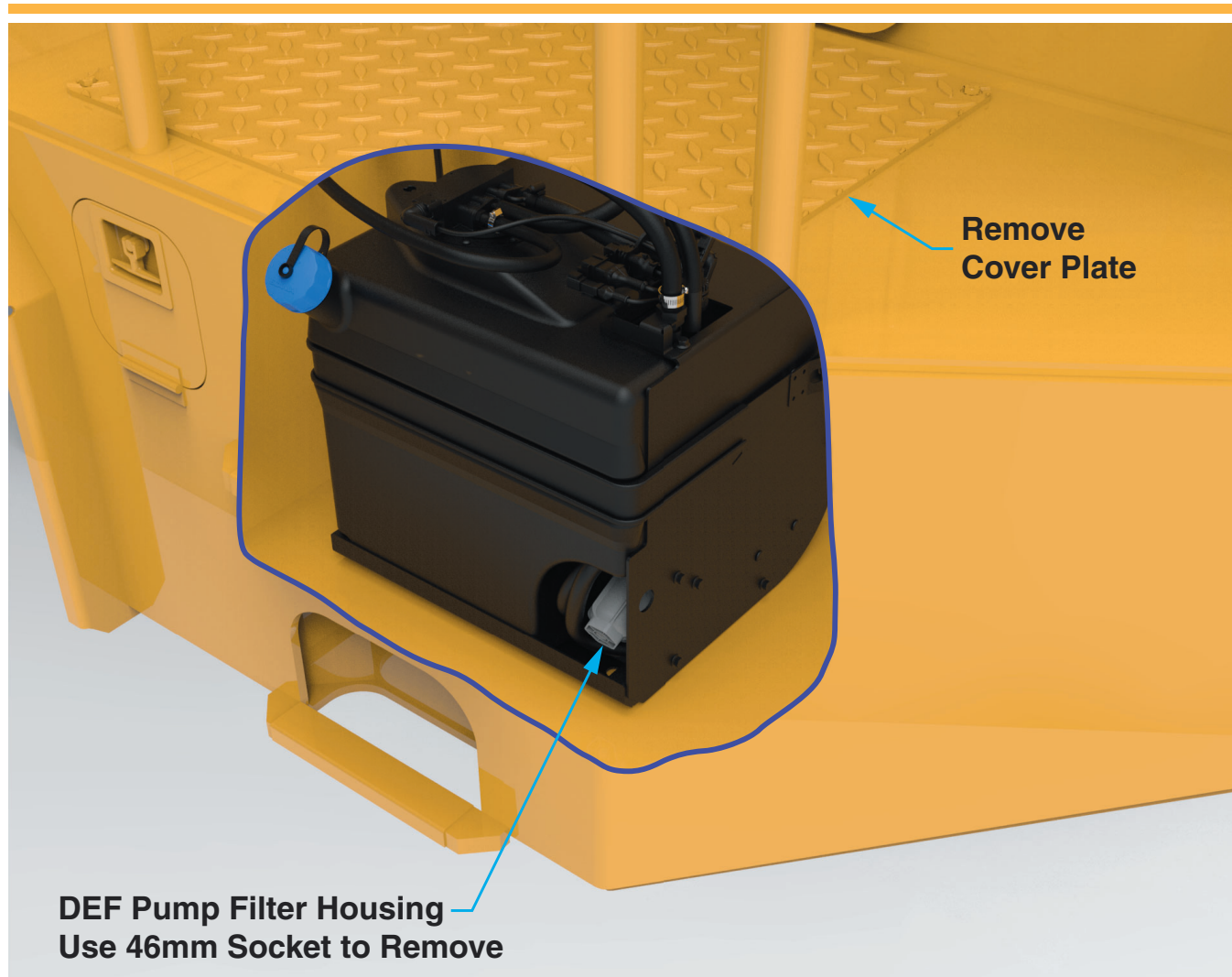


Figure 5-5-14 DEF Pump Filter Location

DEF Pump Filter

Service Interval: Semi-annually, every 1,000 hours, or as dictated by a fault code, whichever occurs first.

Order service kit 259673 before beginning.



CAUTION

Wear gloves and protective eyewear while changing the filter element.

1. Shut down the machine and employ lockout/tagout procedures
2. Clean the area around the horizontal cover plate on the left side of the chassis to prevent chips from falling into the DEF tank compartment. See Figure 5-5-14.



CAUTION

There will be DEF fluid in the housing which may spill during removal. Always rinse spillage with lukewarm water to prevent corrosion. If DEF fluid seeps into electrical connections or electrical cables, these must be replaced.

3. Remove the cover plate.
4. Wipe clean around the filter housing to prevent contamination.
5. Using a 46 mm socket, remove the filter housing.

1. Pump.
2. Filter.
3. Sealing diaphragm.
4. O-ring.
5. Antifreeze protection.
6. Filter housing.

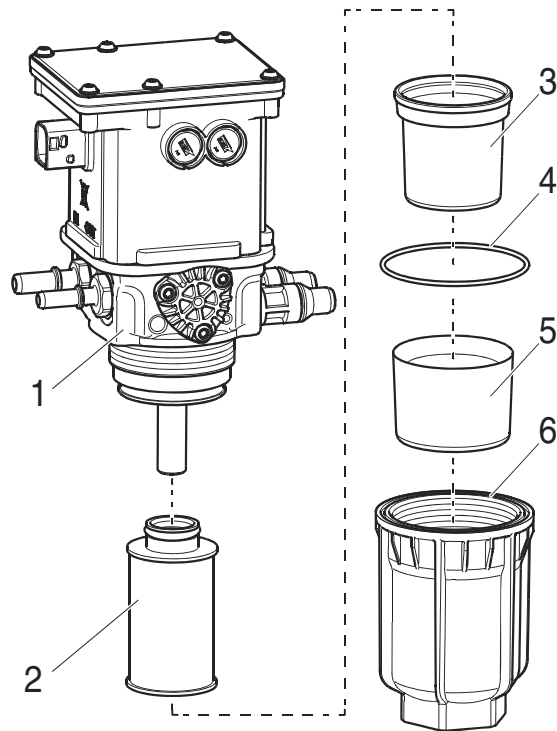


Figure 5-5-15 DEF Pump Filter

6. Remove the sealing diaphragm. See Figure 5-5-15.
7. Remove the filter and discard in accordance with local regulations.
8. Install the new filter. See Figure 5-5-16.
9. If the anti-freeze protection in the filter housing comes loose, wipe both the anti-freeze protection and filter housing thoroughly so that they are completely dry before they are assembled again.
10. Wipe the sealing diaphragm and fit it over the filter.
11. Ensure that the edge of the diaphragm is sitting in the groove. See Figure 5-5-17.

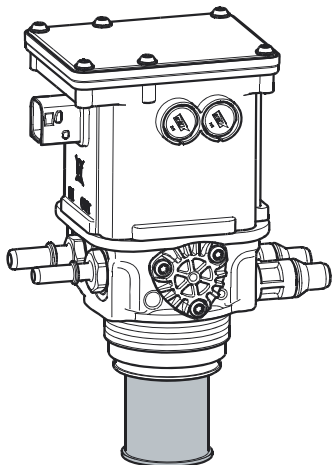


Figure 5-5-16 Install New Filter

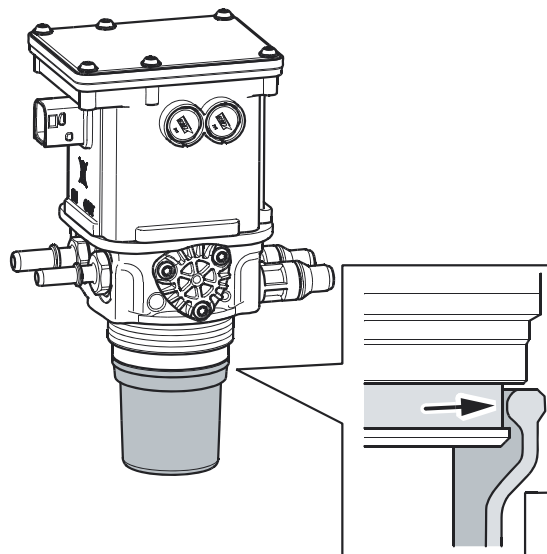


Figure 5-5-17 Sealing Diaphragm

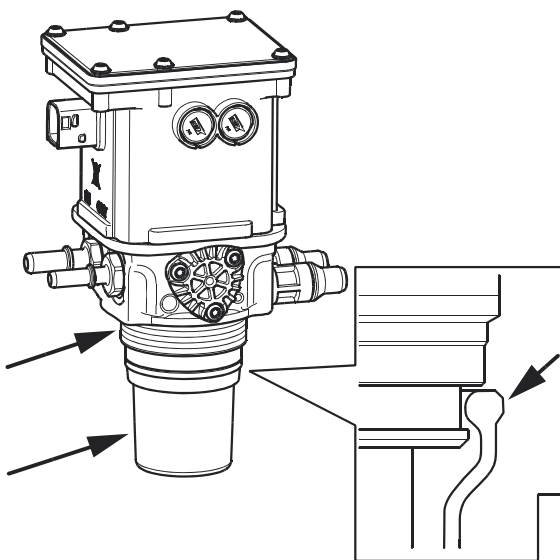


Figure 5-5-18 Lubricate Diaphragm and Threads

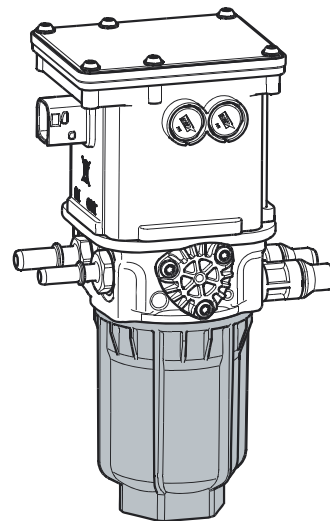


Figure 5-5-20 Replace Filter Housing

12. Lubricate the sealing diaphragm and threads with the accompanying spray. See Figure 5-5-18.
13. Replace the O-ring in the filter housing. See Figure 5-5-19.

14. Reinstall the filter housing. See Figure 5-5-20. Use a 46 mm socket. Tighten to 59 lb-ft (80 Nm).

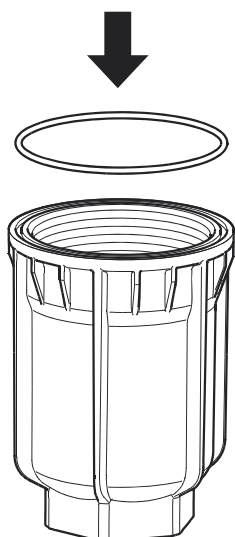


Figure 5-5-19 Replace O-Ring

Transmission Filters

Service Interval: Quarterly or every 500 hours, whichever occurs first.

The transmission filters are accessed from the left chassis walkway, behind the LH Hood Door. See Figure 5-5-21.

Service Instructions

1. Shut down the machine.
2. Clean the area around the filter elements before removing them.
3. Remove the transmission filter elements with a filter wrench and discard.
4. Clean the mating surface of the filter head before installing the new filter elements.
5. Install the new transmission filter elements with a filter wrench.

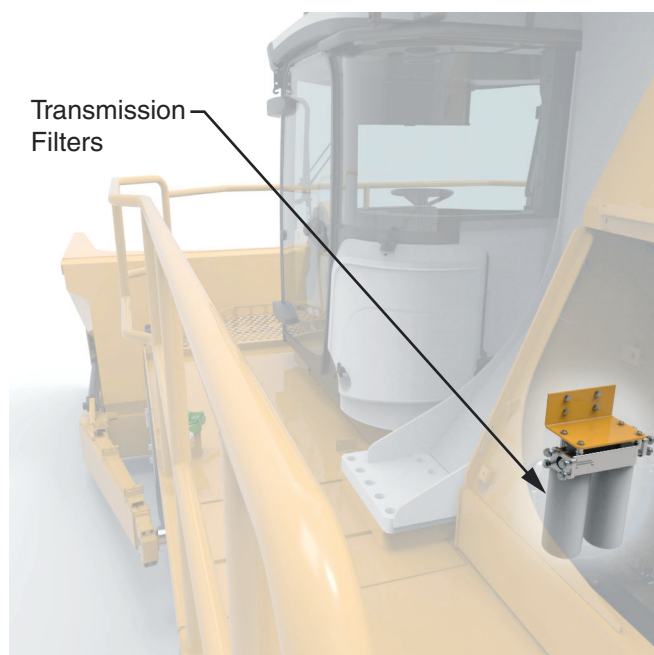


Figure 5-5-21 Transmission Filters

Brake Cooling Return Filter

Service Interval: Quarterly or every 500 hours, whichever occurs first.

The brake cooling return filter is accessed from behind the left hand cooling package door. See Figure 5-5-22.

Service Instructions

1. Shut down the machine.
2. Open vent on hydraulic tank to relieve residual pressure
3. Clean the area around the filter element before removing.
4. Using a filter wrench, remove the brake cooling filter element and discard.
5. Clean the mating surface of the filter head before installing the new filter element.
6. Using a filter wrench, install the new brake cooling filter elements.
7. Close vent on hydraulic tank before starting vehicle.

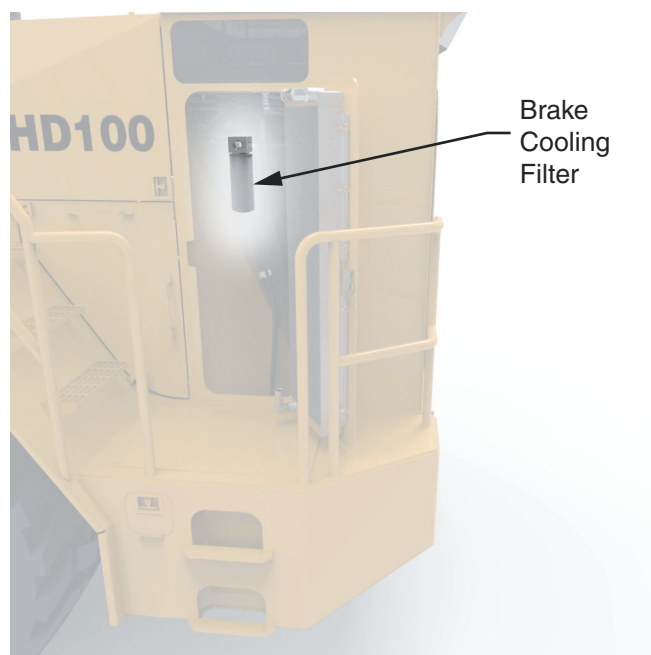


Figure 5-5-22 Brake Cooling Return Filter

Air Cleaner

Service Interval: Annually, every 2,000 hours, or when indicator dictates, whichever occurs first.

Variations in environmental conditions may affect the service interval. Obviously, dustier environments will require more frequent element changes.

Therefore, the indicator must be checked at least once per shift, and the elements replaced if necessary, even if before the annual interval. This indicator is mounted on the front left side of the hood assembly (see Figure 5-5-23).

General

The air cleaner is critical to the life of the engine. It prevents dust and debris from entering the engine air system, causing premature engine wear and possible failure. It is accessed from the right chassis walkway, behind the RH hood door. See Figure 5-5-24.

Air Filter Service Indicator

This gauge indicates filter element condition without filter disassembly. The service sight gauge indicates filter contamination by showing “red” or “green” in the sight gauge. The visible amount of red on the indicator will increase as the dust in the element increases.

For maximum engine performance, the filter should be changed or cleaned immediately after the “red” signal locks in full view.

To reset the service gauge, press the button on the top of the gauge.

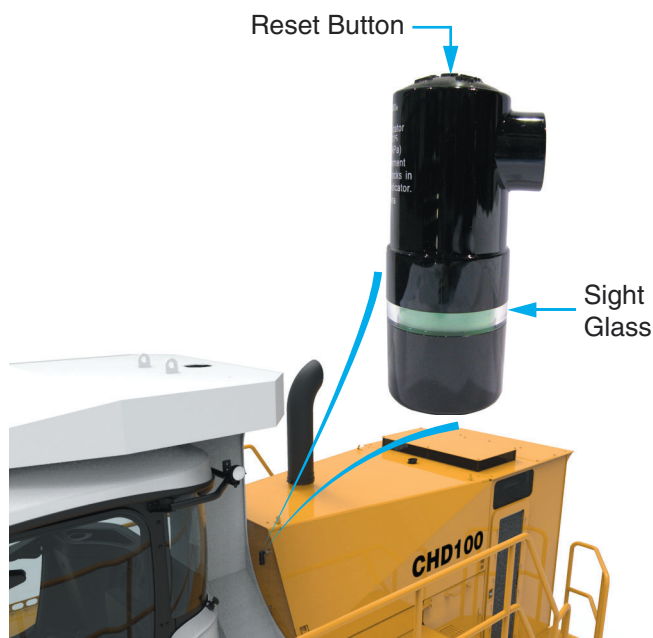


Figure 5-5-23 Air Cleaner Indicator



Figure 5-5-24 Air Cleaner Location

Air Cleaner Connections

Check the intake tubes between the air cleaner outlet and the turbocharger for cracks or wear, and that all clamps are in place and are tight.

Replace any worn or damaged tubes and tighten any loose clamps.

Service Instructions

1. Shut off engine. Unlatch the 8 metal latches around the filter service cover.



Figure 5-5-25 Unlatch 8 Places

2. Remove the filter service cover.



Figure 5-5-26 Remove Service Cover

3. Remove the two primary filter elements. Discard in accordance with local regulations.



Figure 5-5-27 Remove Primary Elements

4. Remove the two secondary filter elements. Discard in accordance with local regulations.



Figure 5-5-28 Remove Secondary Elements

5. Clean the inside of the housing with a damp cloth.
6. Replace the two secondary and two primary filter elements with new elements.
7. Replace the filter service cover and close the metal latches.

Cab Air Intake Filter

The cab air intake filter is mounted on the back left side of the cab. See Figure 5-5-29.

Service Interval: Inspect every two weeks, every 100 hours, or when a noticeable drop in cab pressure occurs, whichever occurs first.

Service Instructions

1. Remove the cover.
2. Inspect the filter for dust and debris. If the filter is dirty, unscrew the knob screw in the center of the filter.



Figure 5-5-29 Cab Air Intake Filter Location

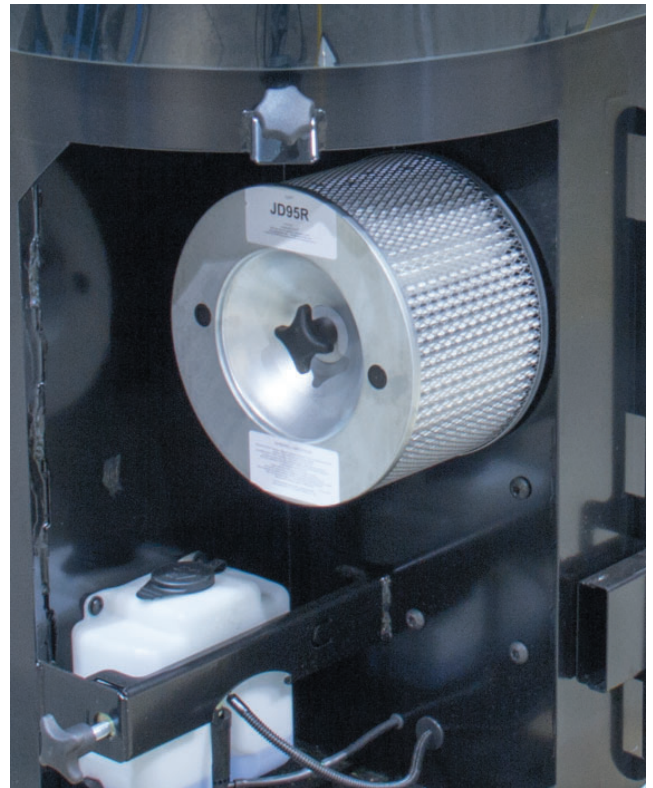


Figure 5-5-30 Cab Air Intake Filter

3. Remove the filter. The filter is held firmly by the rubber gasket and will require gentle but firm pressure to remove.
4. Bag and seal the used filter element and dispose of according to local regulation.
5. Remove all loose debris using a suitable vacuum unit and clean rags - never use compressed air.
6. Replace the filter with a new filter. Reinstall the knob screw.
7. Replace the cover.



CAUTION

Inhalation hazard.

Reusing filter elements may cause contaminants to be inhaled.

Never clean or reuse air intake filter elements. Replace with new elements only.



Figure 5-5-31 Cab Air Intake Filter Element

Cab Recirculation Filter

The cab filter is located on the floor under the operator's seat on the right side of the cab. See Figure 5-5-32.

Service Interval: Every two weeks, every 100 hours, or when noticeable dirt has accumulated, whichever occurs first.

Service Instructions

1. Remove the knob screws. Remove the filter from the frame.
2. Rinse with clean water, and allow to dry. Replace with a new filter element if necessary.
3. Replace the filter in the frame and secure with knob screws.

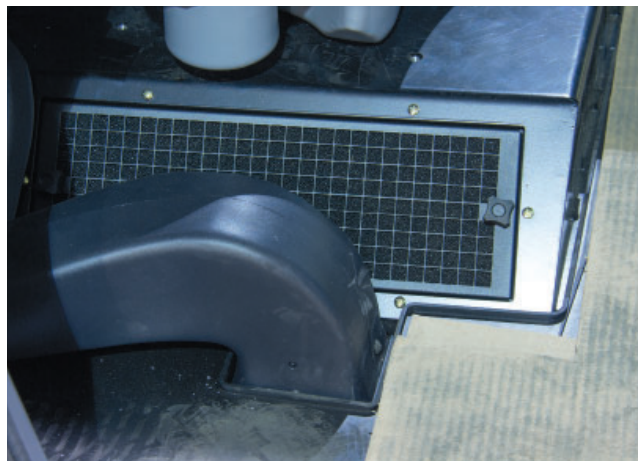


Figure 5-5-32 Cab Filter Element