**High Pressure Filter Service** 

## 1.1 Element Service Procedure

1. Place a suitable container under the filter to catch any spillage.

## **A** WARNING

Use caution when working around hot oils. Always allow lubricating and hydraulic oil to cool before draining. Burns can be severe.

- 2. Unscrew filter bowl using wrench flats on bottom of bowl.
  - Remove bowl and drain fluid into container. If bowl cannot be completely removed, use the procedure in steps 11 through 15.

- 3. Pull element off adapter.
- Remove head to bowl seal and element seal.
  Clean seal surfaces with a lint-free cloth. Install new seals, taking care not to cut new seals.

IMPORTANT: Do not discard or damage the " $\Delta$ " section back-up ring. It is not included in the element kit. Also, be sure that the element seal and " $\Delta$ " ring are installed as shown in Fig. 2. The filter will leak if these parts are incorrectly installed.

- 5. Lubricate head and bowl mating surfaces with clean hydraulic fluid.
- 6. Install new element onto element adapter boss.

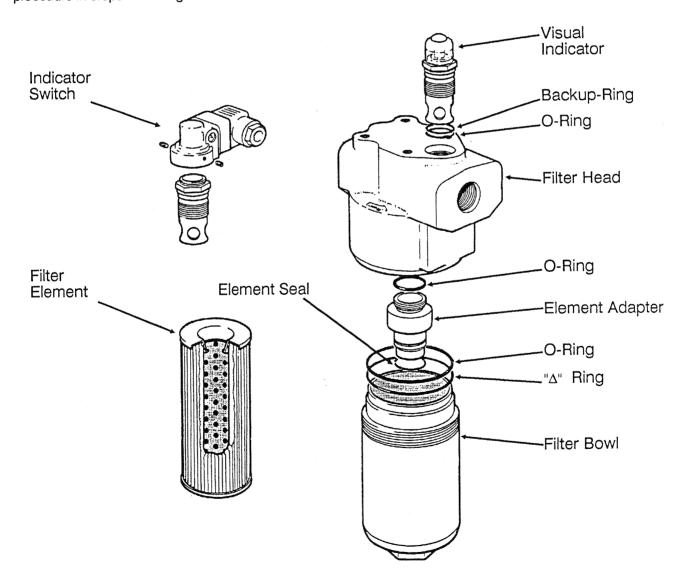


Fig.1 High Pressure Filter

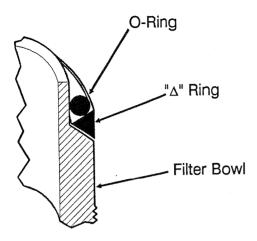


Fig. 2 Bowl Seal Orientation

- 7. Thoroughly clean filter bowl and fill half full with clean hydraulic fluid.
- 8. Screw bowl onto head and tighten to 100 lb-ft (136 N<sub>•</sub> m).

CAUTION: Do not over-tighten.

9. Operate system to expel any entrapped air and immediately check for fluid leaks at filter.

IMPORTANT: If the filter leaks after installation, do not over-tighten. Disassemble the filter, and check that the seal orientation is correct. See Fig. 2. Check the seals and sealing surfaces for damage.

10. Check reservoir level and fill as required.

# Procedure for service if the bowl cannot be removed while the filter element remains attached to the filter head:

- 11. Lower the bowl as far as possible.
- 12. Using a suitable tool, carefully pry the element off the adapter and into the bowl.

- 13. Complete steps 4, 5 and 7 above.
- 14. Install the element into the bowl and carefully position bowl and element under the filter head. Push the element onto the element adapter and screw bowl onto the head.
- 15. Continue from step 8 above.

IMPORTANT: Cleanliness is essential for proper element service.

# 1.2 When to Change Element

### **Filters Without Indicators**

Without indicators, filters can only be serviced on a time basis. Experience has shown that the first element should be serviced after 10 hours of operation and the second element serviced after 100 hours of operation. Thereafter, 500 hour service intervals are recommended.

NOTE: If your application has high initial contamination levels or large amounts of break-in debris, a shorter initial service interval is recommended. If the system is operated in harsh environments, more frequent servicing may be required.

## Visual Indicators

Inspect the visual indicator when the system is operating at normal operating temperature and under normal flow conditions. When red starts to enter the indicator window, element service is required. If the element is changed in the early stages of restriction, the bypass valve will not have opened.

#### **Electrical Indicators**

The electrical indicator is used to operate a warning light. When this occurs at normal operating temperature, the element should be changed.



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