

2. Next, place a container below the oil filter, 1, to catch the used oil and unscrew the oil filter. Discard the used oil and filter.
3. Coat the gasket on the new filter with a film of clean oil. Screw the filter into place until the gasket contacts its mating surface, then turn the filter approximately three-quarters of a turn by hand. Do not overtighten.
4. Add the proper type and level of new oil, then start the engine and check the filter for leaks.

Recommended Oils

Ambient Temp (°F)	Recommended Oil
+ 40-120°	SAE 30W
+ 10-120°	SAE 15W-40
- 10-120°	SAE 10W-30
- 20-60°	SAE 5W-30
NOTE: Tractors are originally shipped with 10W-30 oil.	

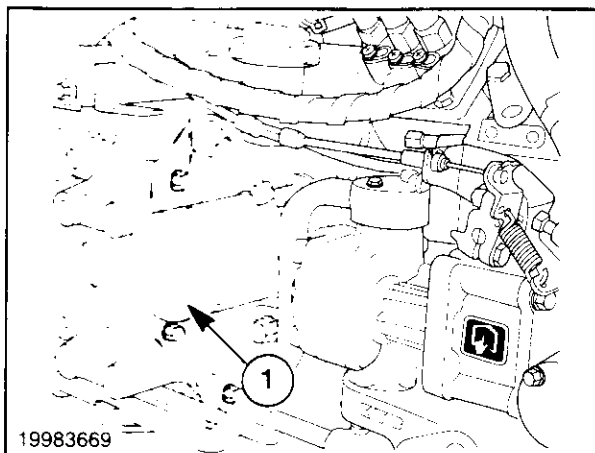


Figure 3-7

FUEL FILTER

Draining the Fuel Filter

NOTE: The fuel filter should be drained after every 100 hours of operation.

1. Make sure there is adequate fuel in the fuel tank and close the fuel shutoff valve, 1 (the handle should be pointing to the "C" position). Remove the fuel sediment bowl, 2.
2. Open the fuel shutoff valve until all water has been removed and only fuel flows from the filter base.
3. Install the fuel sediment bowl and bleed the system as outlined in "Bleeding the Fuel System."

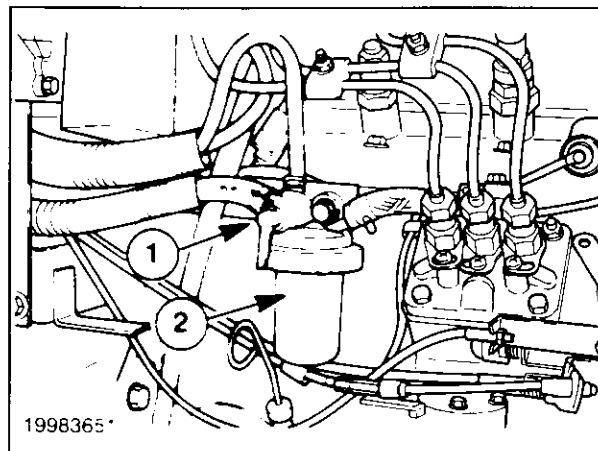


Figure 3-8

NOTE: Valve is shown in open position.

Changing the Fuel Filter

NOTE: Change the diesel fuel filter after the first 50 hours of operation, then following every 200 operating hours thereafter.

1. Close the shutoff valve (the handle should be pointing to the "C" position).
2. Remove the sediment bowl by rotating the retaining nut, 1.
3. Open the fuel shutoff valve, 2, to drain any remaining water from the tank.
4. Discard the old element, 3, and install a new element.
5. Inspect the O rings, 4 and 5, and replace if necessary.
6. Install and securely tighten the sediment bowl.
7. Open the fuel shutoff valve (the handle should be pointing to the "O" position), 2, so fuel will flow to the filter.
8. Bleed the fuel filter and injection pump as described below in "Bleeding the Fuel System."

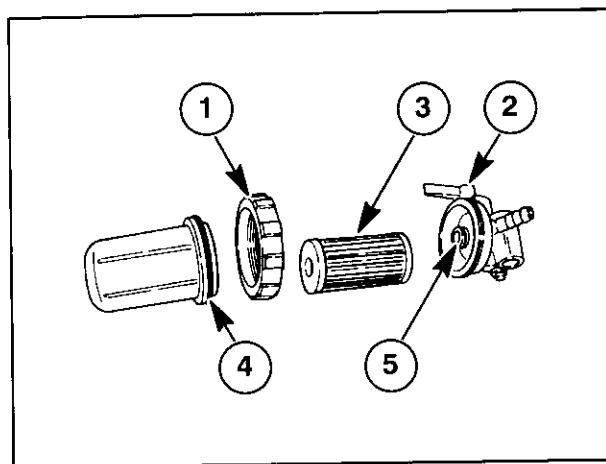


Figure 3-9

Bleeding the Fuel System

Bleed the fuel system if:

- it has been drained.
- a new filter element has been installed.
- the tractor has run out of fuel.
- the lines leading to or from the filter have been disconnected.
- the injection pump has been removed and reinstalled.



WARNING: FUEL OIL IN THE INJECTION SYSTEM IS UNDER HIGH PRESSURE AND CAN PENETRATE THE SKIN. UNQUALIFIED PERSONS SHOULD NOT REMOVE OR ATTEMPT TO ADJUST A PUMP INJECTOR, NOZZLE, OR ANY PART OF THE FUEL INJECTION SYSTEM.

- **DO NOT USE YOUR HAND TO CHECK FOR LEAKS. USE A PIECE OF CARDBOARD OR PAPER TO SEARCH FOR LEAKS.**
- **IF ANY FLUID IS INJECTED INTO THE SKIN, OBTAIN MEDICAL ATTENTION IMMEDIATELY OR GANGRENE MAY RESULT.**

FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN SERIOUS INJURY.

To bleed the fuel system:

1. Make sure there is adequate fuel in the fuel tank.
2. Open the fuel shutoff valve, 1.

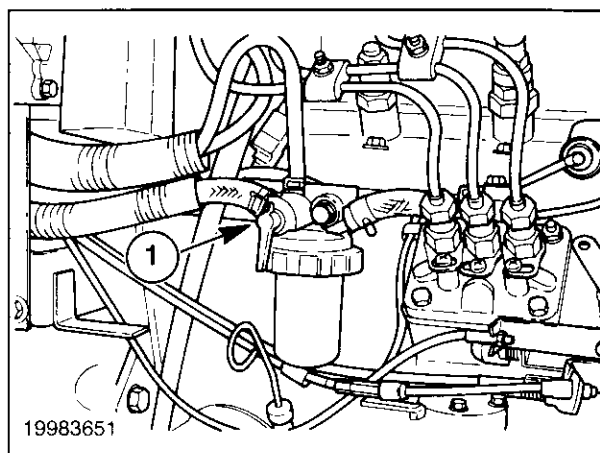


Figure 3-10

3. Open the bleed screw, 1, at the pump, then close the bleed screw when air-free fuel flows.
4. Push the hand throttle to the high speed position. Turn the engine over for a few seconds to bleed the high pressure fuel tubes.

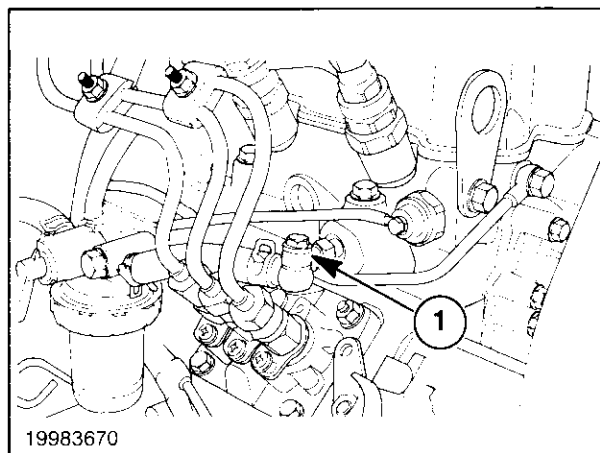


Figure 3-11

Bleeding the Injector Lines

Bleed the injector lines if:

- the tractor has run out of fuel.
- new injectors have been installed.
- the injection pump has been removed for service repairs.

To bleed the injector lines:

1. Loosen the injector line fittings, 1, at the injectors.
2. Move the hand throttle control lever to its wide open position.
3. Crank the engine until air-free fuel flows from each connection, then tighten the fittings to 24-29 N·m (18-22 ft. lbs.).

IMPORTANT: If air is not purged from the system, repeat the above procedures.

Do not crank the engine continuously for more than 30 seconds as this may cause starting motor failure.

AIR CLEANER

The air cleaner, 1, is accessed by opening the tractor hood.

The air cleaner assembly contains two elements: an outer primary element and an inner safety element.

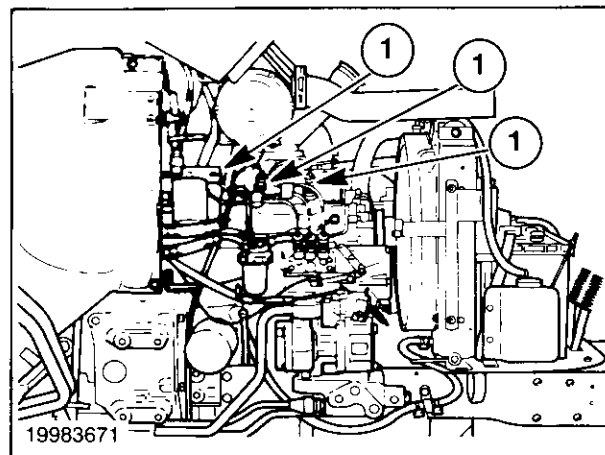


Figure 3-12

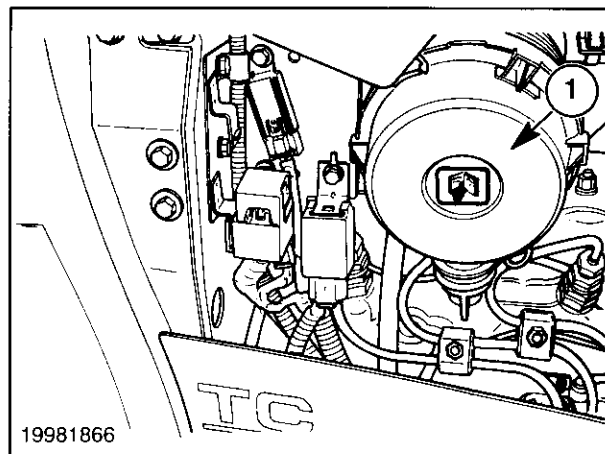


Figure 3-13

To remove the primary element, loosen the spring clamps and remove the end cap from the air cleaner body to expose the primary element.

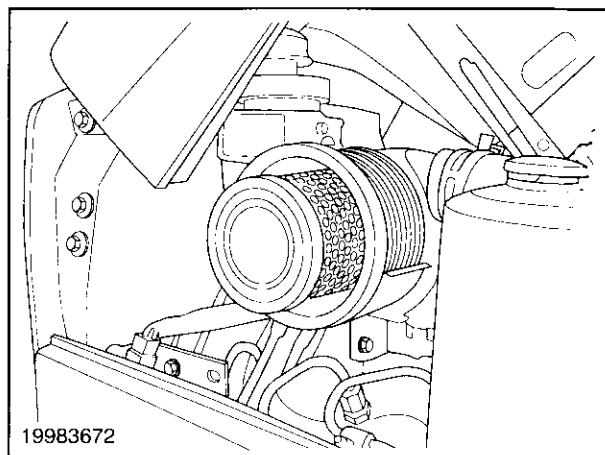


Figure 3-14