Radiator - Remove and Install

SMCS - 1353-010

Removal Procedure

Start By:

A. Remove the counterweight. Refer to Disassembly and Assembly, "Counterweight - Remove and Install".
B. Remove the fuel transfer pump. Refer to Disassembly and Assembly, "Fuel Transfer Pump - Remove and Install".
C. Remove the engine enclosure group. Refer to Disassembly and Assembly, "Engine Enclosure Group - Remove and Install".
D. Remove the Hydraulic Oil Cooler. Refer to Disassembly and Assembly, "Hydraulic Oil Cooler - Remove and Install".
E. Remove the air cleaner. Refer to Disassembly and Assembly, "Air Cleaner - Remove and Install".
F. Remove the fan guard. Refer to Disassembly and Assembly, "Fan Guard - Remove and Install".

**WARNING**

Pressurized system: Hot coolant can cause serious burn. To open cap, stop engine, wait until radiator is cool. Then loosen cap slowly to relieve the pressure.

**NOTICE**
Care must be taken to ensure that fluids are contained during performance of inspection, maintenance, testing, adjusting and repair of the product. Be prepared to collect the fluid with suitable containers before opening any compartment or disassembling any component containing fluids.

Refer to Special Publication, NENG2500, "Caterpillar Tools and Shop Products Guide" for tools and supplies suitable to collect and contain fluids on Caterpillar products.

Dispose of all fluids according to local regulations and mandates.

Note: Put identification marks on all hoses and on all tubes for installation purposes. Plug all hoses and all tubes. This will help to prevent fluid loss and this will help to keep contaminants from entering the system.

Note: It is not necessary to remove the engine enclosure group on the left side of the machine in order to remove the radiator.

Note: It is not necessary to completely remove the hydraulic oil cooler from the machine. It is not necessary to drain the hydraulic tank for this procedure. The hydraulic oil cooler can be set aside.

1. Drain the coolant from the radiator into a suitable container for storage or disposal. Use the drain valve. The radiator contains 5.7 L (1.5 US gal). Refer to Operation and Maintenance Manual, "Cooling System Coolant (ELC) - Change" for the proper procedure.

Illustration 1

2. Disconnect fuel hoses (1) and (2). Install plugs in the fuel lines in order to prevent spillage and contamination.

3. Remove bolt (3) and the clamp.
4. Loosen hose clamp (6). Remove lower radiator hose (4) .

5. Remove hose clamp (5) .

6. Pull fuel hoses (1) and (2) through the bottom of the radiator.

7. Remove bolts (9).

8. Loosen hose clamp (7). Remove hose (8) .
9. Remove bolt (10).


12. Remove bolts (15).

13. Remove cotter pin (17) and the washer. Remove arm (16).


15. Pull hose (12) through the top of the radiator.
16. Remove bolts (21).

17. Remove radiator (20) from the machine. The weight of the radiator is approximately 22 kg (48 lb).

18. Remove bolts (22).

19. Remove fan shroud (23) from radiator (20).

**Installation Procedure**

**NOTICE**

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before opening any compartment or disassembling any component containing fluids.

Refer to Special Publication, NENG2500, "Caterpillar Tools and Shop Products Guide" for tools and supplies suitable to collect and contain fluids on Caterpillar products.

Dispose of all fluids according to local regulations and mandates.

1. Install fan shroud (23) onto radiator (20). Secure the fan shroud to the radiator with bolts (22).

2. Place radiator (20), and fan shroud (23) into position in the machine. The weight of the radiator, the fan shroud, and the radiator support bracket is approximately 22 kg (48 lb).
Note: The radiator and the fan shroud can be installed into the machine without a lifting device.

3. Install bolts (21).

4. Place hose (12) through the top of the radiator.


6. Install arm (16) into position. Install the washer and cotter pin (17) onto arm (16).

7. Install bolts (15).

8. Install hose (14). Secure hose (14) with hose clamp (13).


10. Install bolts (10).

12. Install bolts (9).

13. Place fuel hoses (1) and (2) through the bottom of the radiator.


15. Install lower radiator hose (4). Secure lower radiator hose (4) with hose clamp (6).
16. Install the clamp and bolt (3).

17. Connect fuel hoses (2) and (1).

18. Fill the radiator with coolant. The radiator contains 5.7 L (1.5 US gal). Refer to Operation and Maintenance Manual, "Cooling System Coolant (ELC) - Change" for the proper procedure.

End By:

a. Install the fan guard. Refer to Disassembly and Assembly, "Fan Guard - Remove and Install".
b. Install the air cleaner. Refer to Disassembly and Assembly, "Air Cleaner - Remove and Install".
c. Install the Hydraulic Oil Cooler. Refer to Disassembly and Assembly, "Hydraulic Oil Cooler - Remove and Install".
d. Install the engine enclosure group. Refer to Disassembly and Assembly, "Engine Enclosure Group - Remove and Install".
e. Install the fuel transfer pump. Refer to Disassembly and Assembly, "Fuel Transfer Pump - Remove and Install".
f. Install the counterweight. Refer to Disassembly and Assembly, "Counterweight - Remove and Install".