

26 - COOLING SYSTEM

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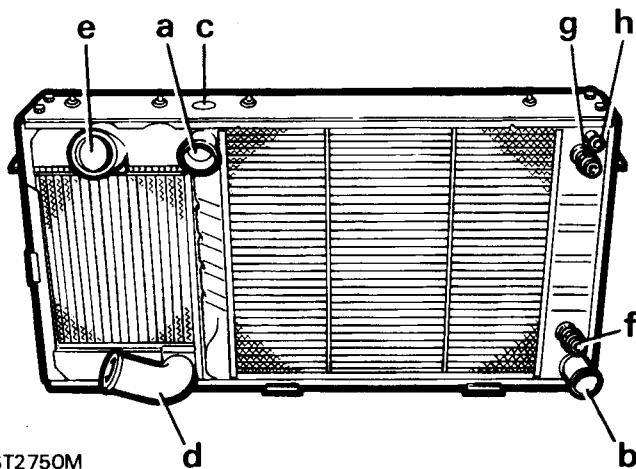


RADIATOR ASSEMBLY



NOTE: The radiator assembly comprises the engine coolant radiator, turbo-charger intercooler and the engine oil cooler.

- a. Engine coolant inlet to radiator.
- b. Engine coolant outlet to waterpump.
- c. Engine coolant filler plug.
- d. High temperature air inlet from turbo-charger.
- e. Cooled air outlet to inlet manifold.
- f. High temperature engine oil inlet to radiator.
- g. Cooled engine oil from radiator to engine.
- h. Bleed outlet to expansion tank.



Remove

1. Disconnect battery negative lead.

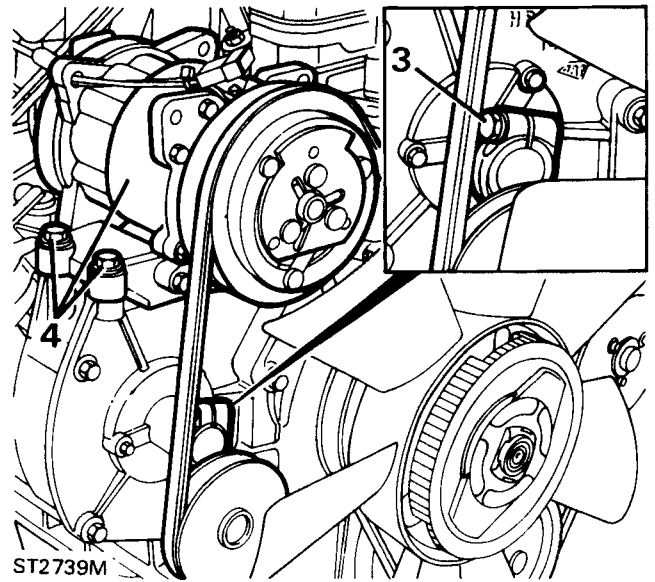


WARNING: Do not carry out the next instruction until the system is cool to avoid personal injury from scalding water.

2. Remove the expansion tank cap and radiator filler plug. Remove bottom hose from the radiator, allow coolant to drain into a suitable container.

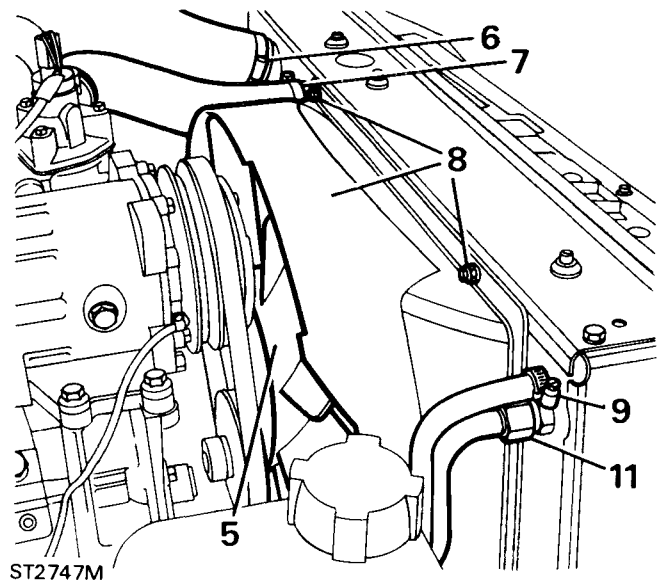
Air conditioning vehicles.

3. Release compressor drive belt tension, remove belt from the pulleys.
4. Remove the four bolts securing the compressor mounting bracket to the engine, move the compressor aside.

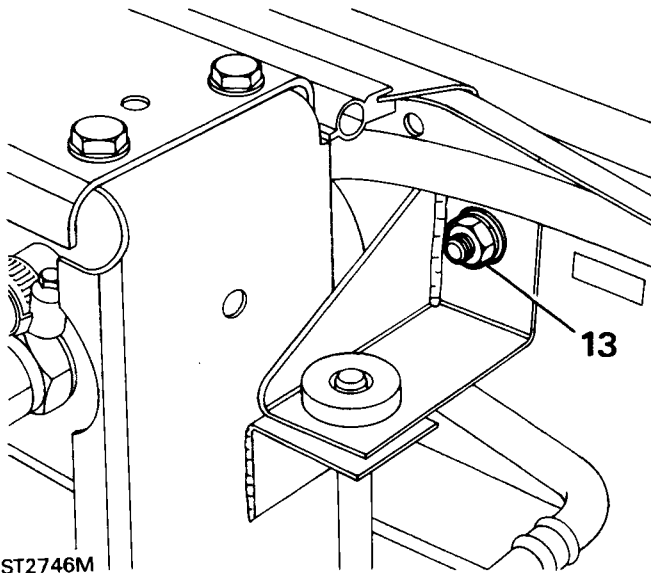


All vehicles.

5. Remove the viscous coupling and fan assembly from the water pump, note that coupling has a left hand thread.
6. Remove the hose, intercooler to manifold.
7. Remove radiator top hose.
8. Release two nuts securing fan cowl to radiator, remove the cowl.
9. Disconnect expansion tank bleed hose from radiator.
10. Disconnect turbo-charger hose at the intercooler.
11. Place a container beneath the oil cooler to catch escaping oil. Disconnect oil pipe connections. Cover, do not plug, ends of pipes to prevent entry of dirt.



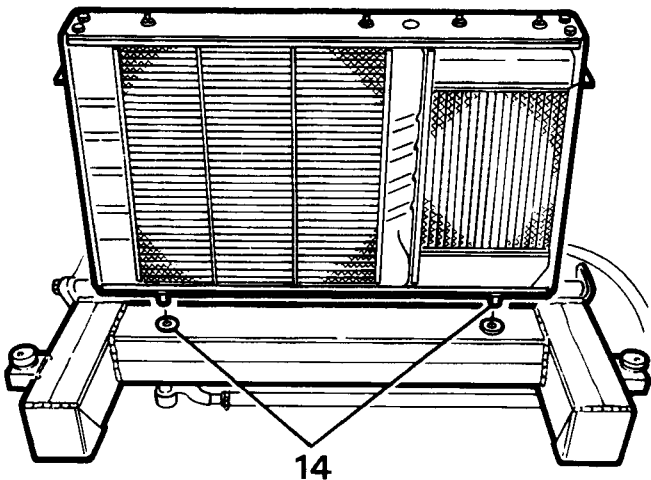
12. The radiator assembly is secured with two bolts and nuts. Viewing the radiator from the front, remove right hand nut and bolt, move the bracket, with the PAS reservoir attached, aside.
13. Remove left hand nut and bolt. Remove radiator assembly from vehicle.



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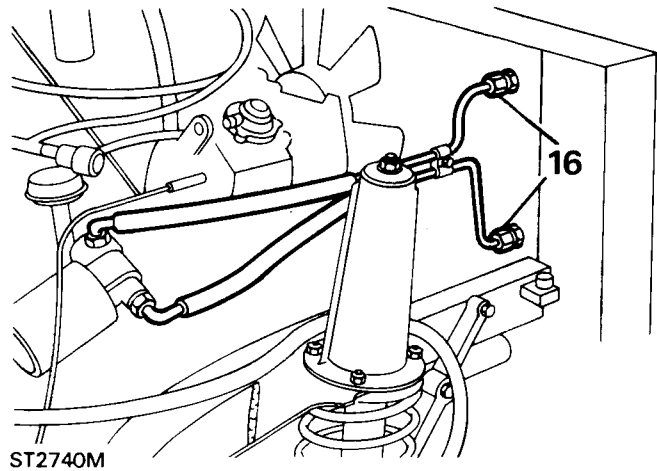
Refit

14. Lower radiator assembly into position. Ensure that the two pegs at the base of radiator locate through the two corresponding grommets in the chassis cross member.



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15. Secure radiator brackets to body brackets. Fit PAS reservoir to right hand bracket.
16. Fit oil cooler pipes to radiator connections.

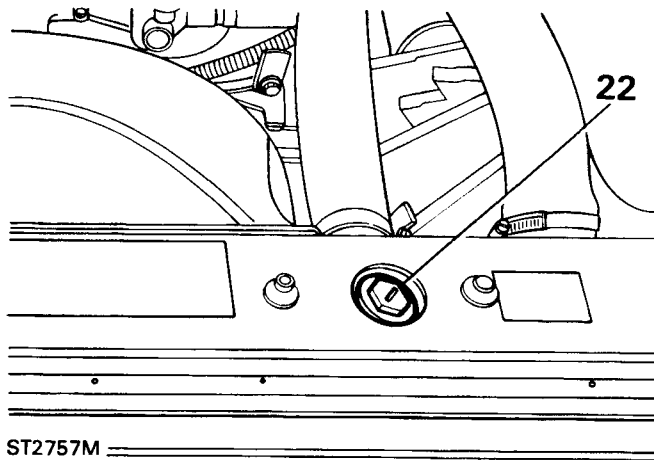


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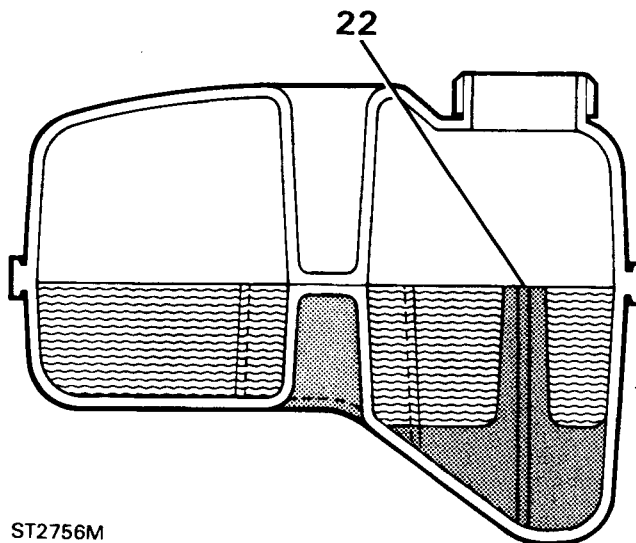
17. Connect expansion tank hose to radiator.
18. Connect turbo-charger to intercooler bottom hose. Connect engine coolant bottom hose.
19. Fit fan cowl. Secure with the two screws to the top of the radiator. Connect intercooler to inlet manifold hose. Connect engine coolant top hose.
20. Fit fan and viscous coupling, note that it has a left-hand thread.
21. Secure the compressor and bracket to the engine, tighten the four bolts to Tighten to **45 Nm**. Fit and tension the drive belt **See SECTION 10, Maintenance , 200Tdi Engines.**



Filling Cooling System



ST2757M



ST2756M

22. Remove radiator filler plug. Fill system with a 50% solution of water and anti-freeze. Fit and tighten the plug. Check that expansion tank level is up to the level indicator. Connect the battery, start the engine and run for about five to ten minutes until the thermostat has opened. Also check for oil and coolant leaks while the engine is running. Stop the engine and allow to cool and the oil to drain back into the sump.
23. When cold, check oil level, top up as necessary.
24. Remove radiator filler plug, top up as necessary. Check coolant level in expansion tank. Fit radiator plug. Tighten to **5 Nm**.
25. Check air conditioning drive belt tension.
26. Reconnect battery negative lead.