

Section L2

Radiator

Radiator - To remove

1. Drive the car onto a ramp.
2. Firmly apply the parking brake and remove the gear range selector thermal cut-out from the fuseboard. Disconnect the oil pressure switch situated behind the fan on the 'B' bank side of the engine. This enables the air conditioning system to operate without starting the engine.
3. Switch on the ignition and rotate the air conditioning system function switch to the DEF (defrost) position.

Ensure that the fan motors are operating at maximum speed.

Wait approximately 20 seconds for the lower servo to reach the full hot position and observe that all the air is diverted to the windscreen.

This procedure opens the heater water tap ensuring the water system can be completely drained.

4. Switch off the ignition and carefully remove the radiator filler cap.
 5. Raise the car to a convenient working height.
 6. Place containers under the car to collect the coolant. Attach a length of rubber hose from the radiator drain tap to direct the coolant into the containers.
 7. Open the radiator drain tap and drain the coolant from the radiator. Close the drain tap, cover the containers to prevent contamination of the fluid, then lower the car.
 8. Slacken the worm drive clips and remove the two top hoses and one bottom hose at the radiator.
 9. Disconnect the cables from the coolant probe in the header tank.
 10. Disconnect the two heat exchange pipes from the underside of the radiator. Fit blanking plugs to prevent ingress of dirt.
 11. Disconnect the header tank steam escape pipe and bleed hose from the header tank to the radiator.
 12. Slacken the four nuts securing the fan and viscous coupling to the water pump pulley. Slacken the tension of all drive belts then remove the four retaining nuts.
 13. Carefully withdraw the coupling and fan assembly, placing these inside the radiator cowl.
- Take care not to damage the radiator matrix.**
14. Support the radiator then remove the four setscrews securing the assembly to the bonnet hinge panels.
 15. Carefully withdraw the radiator and header tank.
 16. Remove the fan and viscous coupling assembly from the cowl.

Radiator - To fit

To fit the radiator, reverse the procedure given for removal noting the following points.

1. Examine all hoses for deterioration and renew any found to be unserviceable.
2. Fill the system with a clean coolant solution.
3. Check the level of concentration as shown in Section L1 - Coolant - To check. Correct the level of concentration as necessary.

Important

After replacement of the radiator a check must be made for possible fouling of the fan blades on the radiator cowling, using the following procedures.

4. Check that a minimum clearance of 16mm. (0.63 in.) exists between the tip of the fan blades and around most of the cowling. A clearance of 9.5mm. (0.37 in.) is acceptable at the lower section of the cowling.
5. To check that engine torque does not cause the fan to foul the cowling, apply the parking brake, set the engine onto fast idle by pressing the accelerator and then start the engine.
6. Select (D) Drive and (R) Reverse. Listen for any catching of the blades on the radiator cowling. No attempt must be made to increase engine speed above that of fast idle.
7. Choose an open stretch of dry road. When the road is free from any potential danger, accelerate the car sharply from a stand still position and listen for fouling of the blades on the cowling.

Radiator header tank - To remove (radiator in the car)

The header tank is supported on three brackets attached to the top face of the radiator.

1. Remove the radiator filler cap, open the drain tap and drain sufficient coolant to empty the header tank; approximately 2 litres (3.5 pints) into a clean container.
2. Slacken the worm drive clips and remove the hose between the header tank and the radiator.
3. Remove the header tank steam escape pipe at the header tank connection.
4. Disconnect the cables from the coolant probe.
5. Remove the three nuts, bolts and washers from the supporting brackets and remove the header tank.

Radiator header tank - To fit

To fit the header tank, reverse the procedure given for removal noting the following points.

1. Examine hoses for deterioration and ensure all worm drive clips are secure. Renew any hoses that appear to be unserviceable.

2. Replace the clean fluid drained from the system.
3. Check the concentration level of the coolant and if below the acceptable level of between 45% and 55% bring the coolant up to the acceptable level (see Section L1 Coolant - To check).

Booster fan - To remove

1. Disconnect the battery.
2. Remove the radiator grille. For details refer to Chapter S - Body.
3. Release the wiring loom attached along the upper mounting bar of the fan and unwind the adhesive tape to expose two Lucar connectors; disconnect the Lucars.
4. Remove the four setscrews attaching the mounting bars to the condenser end plates and withdraw the unit.
5. To remove the booster fan, unscrew the four bolts and self-locking nuts to dismantle the unit from the mounting bars.

Booster fan - To fit

To fit the booster fan reverse the procedure given for removal noting the following points:

1. When assembling the booster fan to the mounting bars ensure new self-locking nuts are used.
2. After connecting the wiring loom, cut away the unwrapped portion of adhesive tape. Completely cover the Lucar connections with new tape.
3. Touch in any black paint chipped or scratched from the area of the fan during removal.
4. Switch on the ignition, then test the fan by shorting the two wires from the switch of the thermostat outlet elbows to the engine casing.