HEATING AND VENTILATION

HEATER

Remove and refit

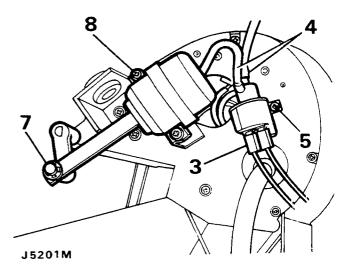
Removal

- 1. Disconnect the battery negative lead.
- 2. Disconnect the bottom hose and allow coolant to drain into a suitable container.
- 3. Disconnect the heater hoses from the bulkhead in the engine compartment.
- 4. Remove the fascia (Section 76).
- 5. Disconnect the two hoses, from the bottom of the heater, supplying the rear passenger outlet and remove the coupling outlets from the heater.
- Disconnect the four fascia vent hoses at the heater.
- 7. Disconnect the heater motor leads at the multi-plug.
- 8. Disconnect the multi-plugs from the heater controls. Identify the plugs to the controls from which they are removed to assist refitting.
- Disconnect the leads from the heater solenoid, noting the colour coding for refitment.
- 10. Remove the vacuum hose from the top of the solenoid.
- 11. Disconnect the potentiometer leads as described under Heating and Air Conditioning Controls (Air conditioned vehicles only).
- 12. Remove the four bolts securing the heater assembly and ease it from its location by withdrawing the right hand side first.

NOTE: Care must be taken when removing the heater to avoid spilling residual coolant fluid inside the vehicle.



- 13. Manoeuvre the the heater into its location and secure with the four bolts.
- 14. Fit the vacuum hose to the top of the heater solenoid.
- 15. Connect the leads to the solenoid at the locations noted during removal.
- 16. Connect the heater motor leads at the multi-plug.
- 17. Connect the potentiometer leads in reverse order to disconnecting.
- 18. Fit the coupling outlets to the bottom of the heater.
- 19. Connect the six vent hoses to their respective locations.
- 20. Connect the multi-plugs to the control switches, as identified during removal.
- 21. Connect the heater hoses in the engine compartment and secure with the jubilee clips.
- 22. Refit the fascia (Section 76).
- 23. Reconnect the bottom hose and refill the cooling system.
- 24. Reconnect the battery negative lead.
- 25. Run the engine and check the heater hose connections for leaks.

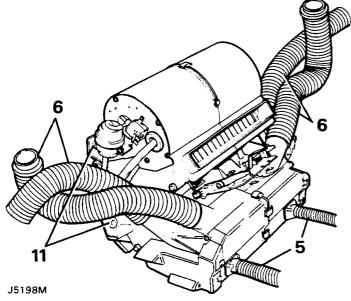


RECIRCULATING/FRESH AIR SOLENOID AND VACUUM UNIT

Remove and refit

Removal

- 1. Disconnect the battery negative lead.
- 2. Remove the fascia (Section 76).
- 3. Disconnect the leads from the solenoid, noting the colour coding for refitment.
- 4. Disconnect the two vacuum hoses from the solenoid.
- 5. Remove the two securing screws and withdraw the solenoid.



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 - 6. Remove the hose from the top of the vacuum unit.
 - 7. Remove the securing clip from the vacuum unit actuating rod.
 - 8. Remove the two retaining screws and detach the vacuum unit.

Refitting

9. Refit in reverse order to removal.

VACUUM RESERVOIR (recirculating/fresh air flap)

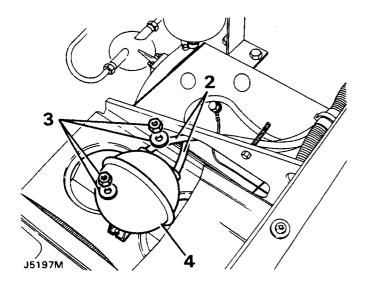
Remove and refit

Removal

- 1. Disconnect the battery negative lead.
- 2. Remove the two vacuum hoses.
- 3. Remove the nuts and washers securing the reservoir.
- 4. Withdraw the vacuum reservoir.

Refitting

 To refit the vacuum reservoir reverse the removal procedure. Note that the larger diameter hose, from the inlet manifold, fits the inlet marked VAC on the reservoir.



HEATER AND AIR CONDITIONING CONTROLS

Remove and refit

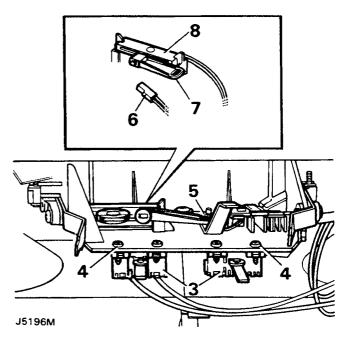
Removal

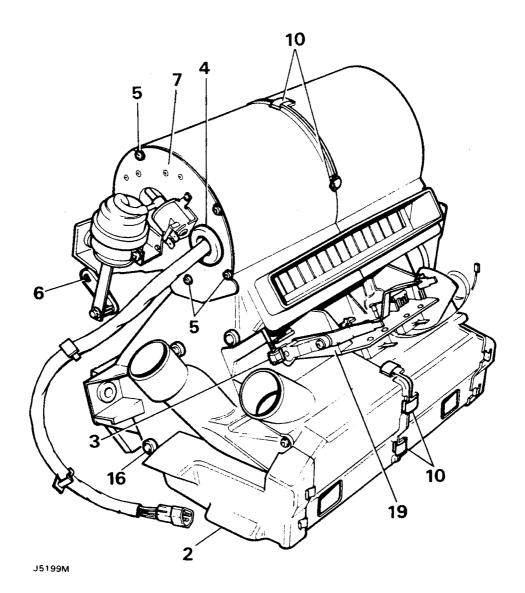
- 1. Disconnect the battery negative lead.
- 2. Remove the fascia (Section 76).
- Disconnect the multi-plugs from the heater controls. Identify the plugs to the switches from which they are removed to assist refitting.

- 4. Remove the securing screws and withdraw the switches.
- Prise the wire cable connection from the heat control lever.
- Remove the bolts securing the evaporator assembly and lower the assembly into the vehicle footwell. Disconnect the potentiometer leads from the thermostat on the evaporator assembly (air conditioned vehicles only).
- 7. Detach the potentiometer connecting arm from the heat control lever at the same time releasing the control from its location on the heater unit (air conditioned vehicles only).
- 8. Remove the potentiometer complete with connecting arm, withdrawing the attached electrical leads through the rubber grommet (air conditioned vehicles only).

Refitting

Refit the controls in reverse order to removal. Check the controls for correct fuctioning before refitting the fascia and trim panels.



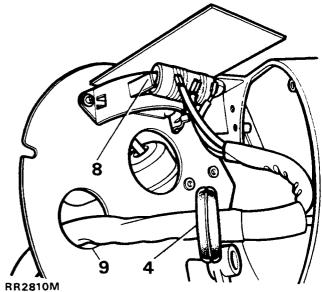


HEATER FAN MOTOR, ROTOR AND RESISTANCE UNIT

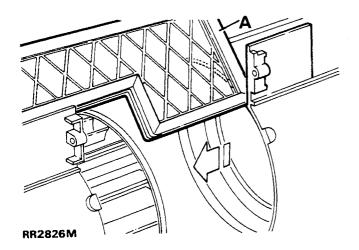
Remove and refit

Removal

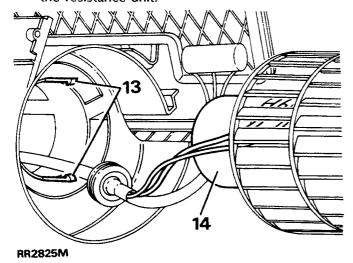
- 1. Remove the heater assembly from the vehicle.
- 2. Detach the left duct to footwell outlet.
- 3. Mark the position of the vent control rod to assist with reassembly. Disconnect the rod by carefully prising open the plastic clip.
- 4. Disengage the grommet from the side panel.
- 5. Remove the six screws retaining the side cover.
- 6. Remove the vacuum unit to air flap linkage.
- 7. Withdraw the side cover to expose the electrical leads to the fan motor and the resistance unit.
- 8. Release the resistance unit by tensioning back the metal mounting straps.
- 9. Remove the side cover, feeding the electrical leads and the multi-plug through the hole.



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- 10. Remove the ten spring clips, three circlips and the two screws securing the heater casing halves together.
- 11. Position the flap 'A' as shown, prise and slide its lower edge through the gap between the motor housing and outer case, at the same time separating each half of the heater casing.



- 12. Note the location of the air flap pivots, to assist with reassembly.
- 13. Release the two plastic tabs securing the fan motor in the left half of the casing.
- 14. Note for reassembly the layout of the electrical wiring; then withdraw the motor assembly, complete with attached leads and the resistance unit.



Refitting

- 15. Feed the leads and resistance unit through the motor housing. To avoid contact with the rotor, ensure the leads are positioned as noted during removal, and that the plastic tabs locate correctly to secure the motor.
- 16. To assist with correct location, mark a white spot on the air flap pivots to be assembled into the heater casing.

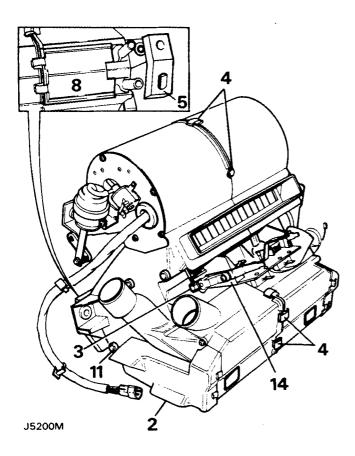
- 17. Offer the heater casing halves together, ensuring that flap 'A' is positioned to reverse instruction 11.
- 18. Point the remaining air flap pivots in the direction of their locations.
- 19. Slot the heater control panel assembly into its location in the left casing half, ensuring both fixings engage and slide into their housing.
- 20. Slowly and firmly push the casing halves together checking that all components are aligning. Any solid resistance felt suggests a component is not locating correctly, should this be encountered, rectify and continue until the casing halves are together.
- 21. Refit the spring clips, circlips and screws to secure the casing halves together.
- 22. Reverse removal instructions 4 to 9 to refit the resistance unit and the side panel.
- 23. Connect the rod to the vent control lever to its marked position.
- 24. Check that all controls operate and all flaps seal against the heater casing.
- 25. Refit the left duct to footwell outlet.
- 26. Refit the heater assembly to the vehicle.
- 27. Run the engine and check coolant connections to heater for leaks.

HEATER CORE

Remove and refit

Removal

- 1. Remove the heater assembly from the vehicle.
- 2. Detach the left duct to footwell outlet.
- Mark the position of the vent control rod to assist with reassembly. Disconnect the rod by carefully prising open the plastic clip.
- 4. Remove the ten spring clips, three circlips and the two screws securing the heater casing halves together.
- Position the flap 'A' as shown, prise and slide its lower edge through the gap between the motor housing and outer case, at the same time separating each half of the heater casing.
- 6. Note the location of the air flap pivots, to assist with reassembly.
- 7. Remove the pad from around the two coolant hose connections.
- 8. Slide out the separate panel adjacent to the coolant connections.
- 9. Withdraw the heater core complete with the sponge packing.



Refitting

- 10. Fit the heater core to the left half of the casing. Slide in the separate panel adjacent to the coolant connections.
- 11. To assist with correct location, mark a white spot on the air flap pivots to be assembled into the heater casing.
- 12. Offer the heater casing halves together, ensuring that flap 'A' is positioned to reverse instruction 5.
- 13. Point the remaining air flap pivots in the direction of their locations.
- 14. Slot the heater control panel assembly into its location in the left casing half, ensuring both fixings engage and slide into their housing.
- 15. Slowly and firmly push the casing halves together checking that all components are aligning. Any solid resistance felt suggests a component is not locating correctly, should this be encountered, rectify and continue until the casing halves are together.
- 16. Refit the spring clips, circlips and screws to secure the casing halves together.
- 17. Connect the rod to the vent control lever to its marked position.
- 18. Check that all controls operate and all flaps seal against the heater casing.
- 19. Renew the pad around the two coolant hose connections.
- 20. Refit the left duct to footwell outlet.
- 21. Refit the heater assembly to the vehicle.
- 22. Run the engine and check coolant connections to heater for leaks.