VENTILATOR FASCIA OUTLET (CENTRE)

Remove and refit **80.15.24**

Removing

Before carrying out the above operations it will be necessary to remove the fascia as detailed in operation 76.46.01.
Disconnect the battery earth lead.
Withdraw the four retaining screws and remove the outlet assembly.

Refitting

Refit the outlet assembly and secure with the four retaining screws.
Refit the fascia.
Reconnect the battery earth lead.

FRESH AIR INTAKE

NOTE: With air conditioning fitted but inoperative, fresh air will not be available at fascia adjustable outlets with fans switched ON.
Fascia outlets will only deliver air at the selected temperature.

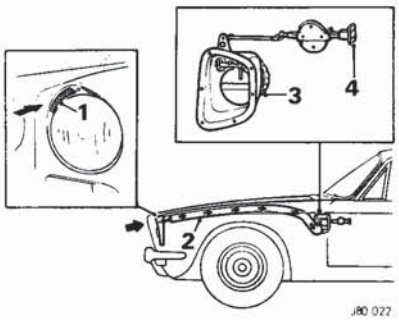

Fig. 15

An additional fresh air supply is available to driver and passenger. A grille located in the outer headlamp embellisher (1) admits air which is ducted via the wings (2) to outlets in the scuttle side panels (3) beneath the parcel tray. These outlets are controlled by a three-position lever marked 'PULL AIR' (4). The louvre outlets can be rotated to direct air as required.
Airflow will depend upon the speed at which the car is moving and position of selector level.

FRESH AIR INTAKE

Remove and refit Scuttle **80.15.29**

Removing

Insert screwdriver under edge of intake and carefully lever away from nylon friction bush. Take care not to damage the paintwork.
Disconnect windscreen washer capillary tube from washer jet.

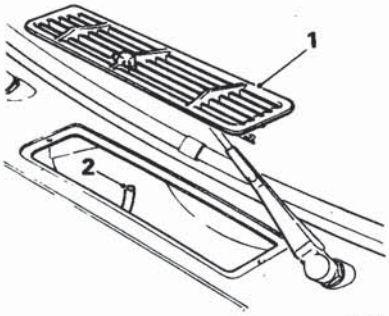

Fig. 16

Refitting

Reconnect the windscreen washer capillary tube from the washer jet and carefully replace the grille.

FRESH AIR INTAKE

Remove and refit **80.15.29**

Removing

Remove the headlamp as detailed in operation 86.40.02.
Withdraw screw (1, Fig. 17) retaining intake grille.
Clear grille of road dirt, insects etc.

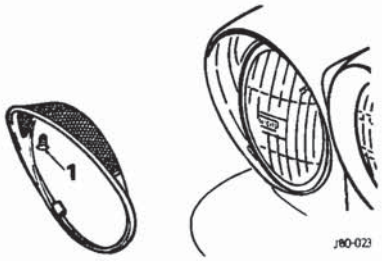

Fig. 17

Refitting

Refit headlamp embellisher and secure with retaining screw.

HEATER UNIT

Remove and refit **80.20.01**

Removing

Disconnect the battery.
Drain the coolant from system.

NOTE: Conserve the coolant if anti-freeze is in use.

Remove the fascia crash roll, and fascia.
Remove the driver's and passenger's dash casings.
Remove the glove compartment liner.
Remove the centre parcel shelf and centre console assembly.
Disconnect the coolant hoses at heater matrix bulkhead connectors in engine compartment.

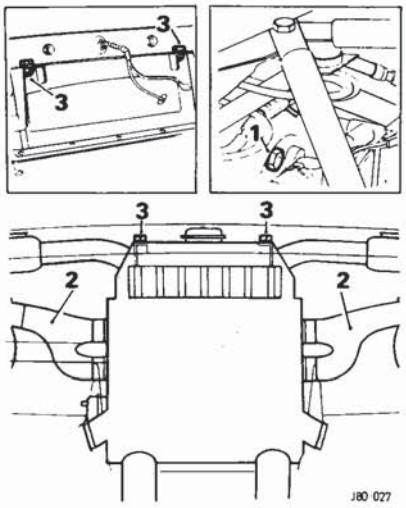

Fig. 18

NOTE: Retain the sponge collars from the stub pipes.

Remove the two nuts securing unit to the bulkhead (1, Fig. 18).
Locate the vacuum connectors and mark clearly before disconnecting.
Remove the flexible ducting from the heater unit (2, Fig. 18).
Disconnect the cable harness multi-pin connectors.
Remove the bolts securing the unit to the fascia rail. Ease the unit forward and lift from car (3, Fig. 18).

NOTE: Transmission selector should be in '1' position on automatic cars, or 4th, 2nd or Reverse gear on manual gearbox cars.
CAUTION: Great care must be exercised when lifting unit not to damage relay box. The unit must not be supported on these components.

Refitting

Offer unit up to mounting position and ease heater connectors through bulkhead apertures.

NOTE: Ensure sponge backing is in position.

Loosely fit retaining nuts, ensuring that pipes, speedometer cables and electrical harness are not trapped before tightening.
Refit the flexible ducting to the heater unit.
Reconnect the vacuum pipes as marked when dismantling.
Reconnect the electrical multi-pin connectors.
Ensure drain tubes from the unit are located through the grommets in side of transmisssion tunnel.
Refit the centre parcel tray.
Refit the glove compartment liner.
Refit the dash casings.
Refit the fascia and the fascia crash roll.
Reconnect the coolant hoses to the heater matrix bulkhead connectors in the engine compartment.

NOTE: Ensure sponge collars and metal washers are in place before connecting coolant hoses.

Refill with coolant.
Reconnect the battery earth lead.

HEATER MOTOR ASSEMBLY

Remove and refit
Right-Hand Unit 80.20.15

The blower fans are heavy duty motors with metal impellers attached. Speed variation is controlled by resistance units wired in series. Air flow control flaps are operated by a vacuum actuator mounted on the side of the inlet duct.

Removing

Disconnect the battery earth lead.
Remove the right-hand footwell trim pad, dash liner and console side pad as detailed in operation 76.46.11.
Remove the bulb failure unit from component panel.
Remove nuts securing component panel to blower assembly, and ease the panel clear.
Disconnect pliable trunking from the heater unit stub pipes.
Withdraw two screws securing fresh-air pull mounting bracket.
Remove two nuts retaining assembly from mounting posts.
Disconnect vacuum tube from actuator.
Disconnect electrical harness at snap connectors.
Ease fan motor assembly from car.

Refitting

Locate fan motor unit to its mounting positions.
Reconnect the electrical wiring harness.
Fit and tighten securing nuts.
Remove wedge holding the recirculation flap open.
Reconnect the pliable trunking to the stub pipes and the vacuum tube to the actuator.
Locate component panel to mounting studs and secure with securing nuts.
Refit the fresh-air pull mounting bracket.
Refit the bulb failure unit.
Refit the console side pad, dash liner and footwell trim pad.
Reconnect the battery earth lead.

NOTE: To refit assemblies successfully it is necessary to apply vacuum to the actuator, closing the top air flap. This simplifies insertion of the top flap and flange into its aperture and seal.

HEATER MOTOR ASSEMBLY

Remove and refit
Left-Hand Unit 80.20.15

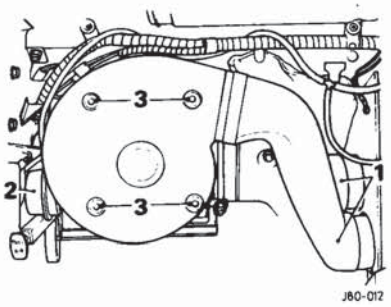

Fig. 19

Removing

Disconnect the battery earth lead.
Remove left-hand side footwell trim pad, dash liner, console trim pad, and glovebox as detailed in operation 76.46.11.
Remove nuts securing component panel to blower assembly, and ease the panel clear.
Disconnect the electrical feed to blower motor.
Disconnect the pliable trunking from the heater unit (1, Fig. 19), and the vacuum pipes from the actuator (2, Fig. 19).
Remove the motor assembly securing nuts and ease assembly from car (3, Fig. 19).

Refitting

Locate assembly to its mounting positions and secure with nuts.
Reconnect the pliable trunking and vacuum pipes.
Reconnect the electrical wiring harness.
Locate component panel to mounting studs and secure with the fixing nuts.
Refit the glovebox, dash liner, console trim pad, and footwell trim pad.
Reconnect the battery earth lead.

MOTOR RESISTANCE UNIT

Remove and refit
Left-Hand-Drive Cars 80.20.17

Removing

Disconnect the battery earth lead.
Remove the driver's side dash liner, and centre console side casing as detailed in operation 76.46.11.
Note position of cables at the resistance unit and disconnect (3, Fig. 20).
Withdraw the three retaining screws (1, Fig. 20) and remove resistance unit from the heater unit case (2, Fig. 10).

Refitting

Locate resistance unit into heater unit case and secure with the retaining screws.
Reconnect the electrical cables.
Refit the centre console side casing and dash liner.
Reconnect the battery earth lead.

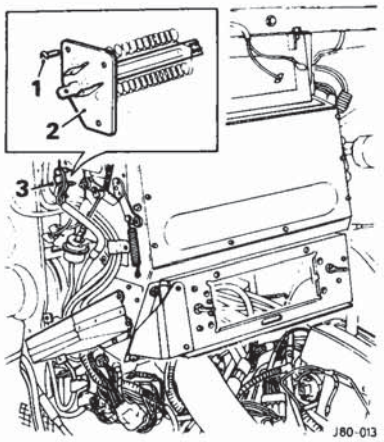

Fig. 20

MOTOR RESISTANCE UNIT

Remove and refit
Right-Hand-Drive Cars 80.20.17

Removing

Disconnect battery.
Remove glove compartment liner.
Note position of cables at the resistance unit and disconnect.
Withdraw the three retaining screws; and remove the resistance unit from the heater unit case.

Refitting

Locate resistance unit into heater unit case, and secure with the retaining screws.
Reconnect the electrical cables.
Refit the glove compartment liner.
Reconnect the battery.

continued

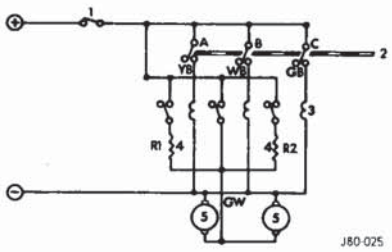

Fig. 21

KEY TO WIRING DIAGRAM

1. Ignition switch
2. Cam operated switches
3. Relays—motor speed
4. Resistors—motor speed
5. Fan motors

MOTOR RELAYS

Remove and refit **80.20.19**

Removing

Disconnect the battery earth lead.
Remove the left-hand centre console side casing.
Withdraw the retaining screws and remove the footwell air outlet duct.
Note and mark the position of cables at the connectors on relay box, and remove the cables (1, Fig. 22).
Remove the nuts and washers securing the relay box, and remove relay box (2, Fig. 22).

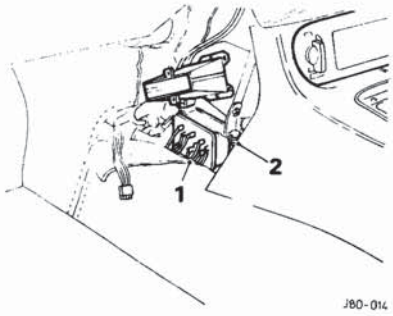

Fig. 22

Refitting

Fit and secure relay box with the retaining nuts and washers.

NOTE: Ensure earth strap tag is replaced under relay box securing unit.

Reconnect the electrical cables.
Refit the footwell air outlet duct, and left-hand centre console side casing.
Reconnect the battery.

BLOWER ASSEMBLY

Overhaul **80.20.20**

Dismantling

Remove blower motor assembly as detailed in operation 80.25.13/14.
Pull down air recirculation flap for access to flap box securing screw, and remove screw.
Remove screws securing flap box at top of motor housing (1, Fig. 23).
Disconnect motor electrical connections (2, Fig. 23)
Remove the flap box.

NOTE: It is recommended at this stage that the positions of various components are marked either with paint or a scriber. This will facilitate reassembly.
One cable Lucar has a raised projection which matches the aperture in the motor casing. This ensures that the connections are replaced correctly and the rotation of the motor is not altered.
Remove the bolts securing the motor mounting bracket to fan housing (3, Fig. 23).
Remove the motor and fan assembly from the fan housing.
Remove the mounting bracket from the motor.
Using the appropriate Allen key, remove the impeller fan from the spindle.

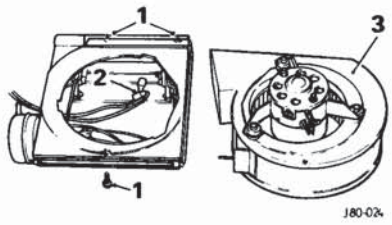

Fig. 23

Reassembling

Refit fan to the motor and secure to spindle.
Refit mounting bracket to motor.
Locate fan and mounting assembly into the fan housing
Fit and tighten bolts securing the assembly to fan housing
Place flap box assembly to fan housing and reconnect electrical connections.
Fit and tighten screws securing the flap box to the housing
Raise the recirculation flap, fit and tighten the remaining screw.
Refit the blower motor assembly.
Reconnect the battery.

HEATER MATRIX

Remove and refit **80.20.29**

Removing

Remove the heater unit as detailed in operation 80.20.01.
Using scriber or a thin brush and white paint mark the positions of all control rods, knobs and cams.
Disconnect tensioning springs from the heater matrix control flap operating arms.
Disconnect the operating rods.
Remove the two clips securing the inlet and outlet pipes to the heater unit case.
Withdraw six screws securing matrix cover-plate.
Withdraw one screw securing the cam and operating arm to footwell outlet flap shaft and remove arm.
Withdraw the heater matrix from side of heater unit with a steady straight pull. Care must be taken not to damage the inlet and outlet pipes.

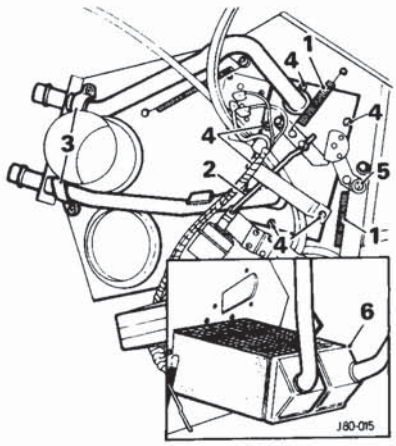

Fig. 24

Refitting

NOTE: Ensure that the sponge shock-absorbing pads are refitted correctly when replacing the matrix.
Refit the matrix into heater unit, taking care not to damage the inlet and outlet pipes.
Secure the cam and operating arm to footwell outlet flap shaft with the retaining screw.
Refit the matrix cover-plate and secure with the fixing screws.
Secure the inlet and outlet pipes to the heater unit with clips.
Reconnect the operating rods.
Reconnect the tensioning springs to the heater matrix control flap operating arms.
Refit the heater unit.