HEATER AND BLOWER MOTOR

HEATER UNIT

Description

The heater unit, supplied with hot water from the engine cooling system, is located beneath the centre of the facia panel. Four studs and nuts secure the unit to the engine bulkhead. The unit comprises a fabricated sheet metal casing enclosing a twin heater matrix fitted with small bore water inlet/thermostatic valve and outlet pipes coupled to coolant pipes from the engine. The two lower corners of the casing are provided with hinged flaps which, when opened manually provide a flow of air to the windscreen or cab interior. Four large diameter stub pipes are fitted to the two upper corners of the casing for the purpose of connecting the corrugated hoses to the three demisting nozzles located at the base of the windscreen.

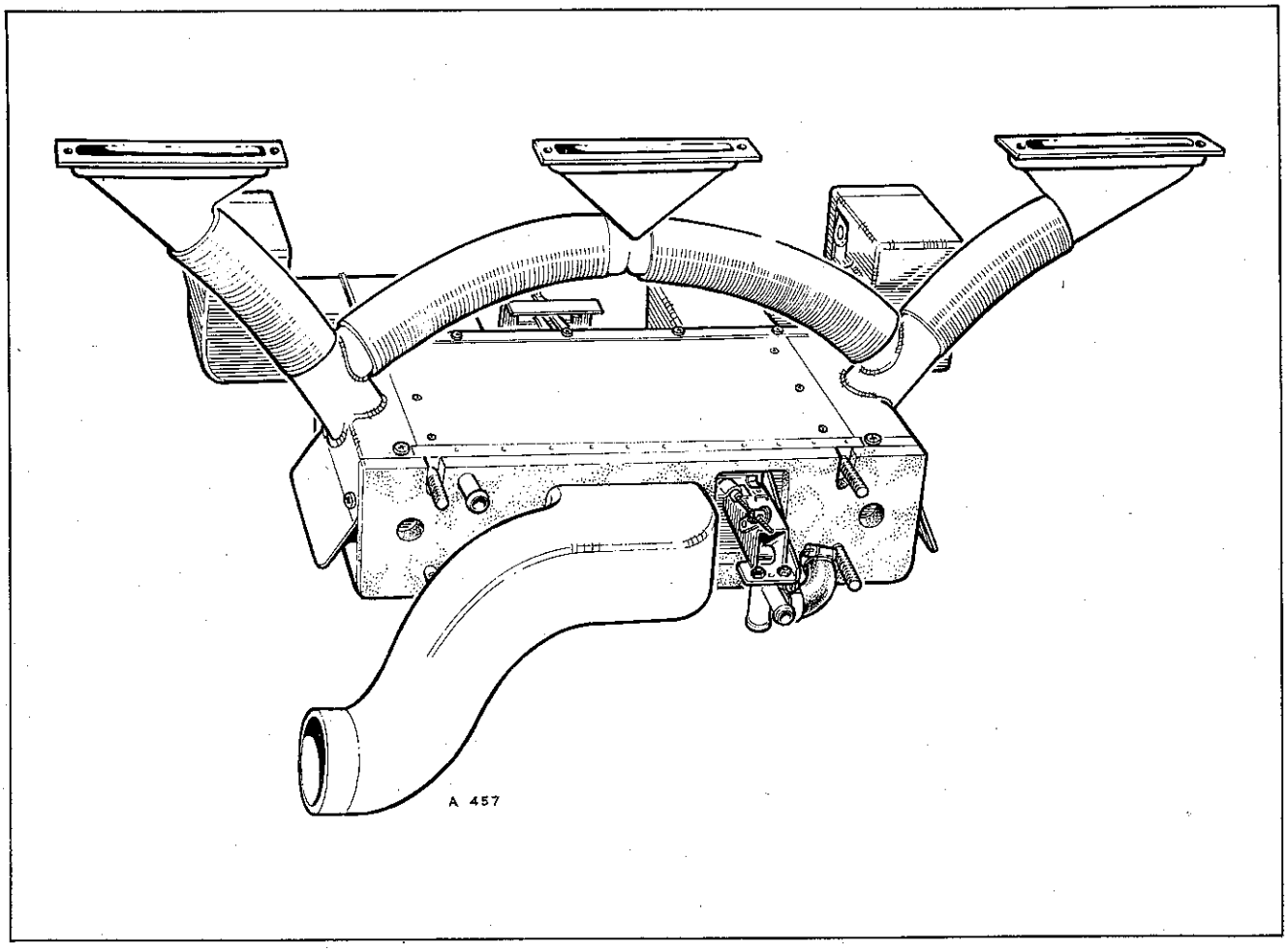

Fig. 1 *Heater and duct layout*

Heater and Blower Motor

To Remove

Disconnect the battery.

Disconnect the washer pipes at the wipers and remove wipers.

Raise and secure the bonnet.

Remove seven cross-head screws and washers securing the air intake panel, remove panel.

Note: This is to provide access to the spire nuts securing the crash roll.

Remove air intake ducting between fan and heater.

Disconnect the two heater hoses at the heater, tie the hose ends above the header tank level to retain coolant.

Remove the four nuts and washers securing the heater to the engine bulkhead.

Note: According to engine type, pipe clips and earth connections may also be fitted to heater studs.

Remove the front and rear engine covers inside the cab.

Remove the two air ducts from the heater to the facia level vents.

Using a small probe, compress the spring retainer and remove the heater control knobs.

On 4.236 engines remove air intake elbow at engine.

Remove the four cross-head screws securing the heater control panel trim, withdraw trim and disconnect the two connections to the cigar lighter.

Remove the two cross-head screws securing the heater control unit to the crash roll.

Remove the steering column shroud.

Remove the six cross-head screws securing the instrument panel to the case. Disconnect speedometer cable.

Withdraw the instrument panel sufficiently to provide access to the four nuts and washers securing the instrument panel case to the crash roll. Remove nuts and washers.

Remove five cross-head screws securing crash roll to structure, second person required to hold spire nuts.

Remove two cross-head screws securing crash roll to engine bulkhead bracket.

Ease crash roll upwards and support.

Withdraw heater control unit from crash roll.

Withdraw two illumination lights from control unit.

Disconnect the demisting ducts from the heater.

Withdraw heater unit and control panel and remove through passenger door taking care not to spill coolant from the heater matrix.

Inspection and Overhaul

Check the heater unit for obvious damage.

Check operating cables and rods for security of attachment and correct operation.

Check the water valve springs for damage.

Operate the temperature control level to open the water valve. Check that there is an unimpeded flow of water through the heater matrix.

To Refit

Refitment is a reversal of the removal procedure.

Set the heater temperature to maximum and top up the cooling system.

Run the engine to operating temperature and check for leaks, if necessary top up the cooling system.

HEATER MATRIX AND WATER VALVE

To Remove

Remove the heater as previously described and place on workbench.

Remove four cross-head screws securing each demist outlet assembly, remove outlets.

Disconnect water valve control cable. (Inner and outer cable).

Remove connecting hose, water valve to matrix.

Remove four cross-head screws securing matrix to heater casing. (Outer screws around water valve).

Remove sixteen cross-head screws securing control panel to casing. Remove panel complete with flaps.

Remove matrix complete with water valve from casing.

Withdraw capillary tube from matrix, detach six clips from tube.

Remove three cross-head screws securing water valve assembly to matrix, remove valve assembly. If a new water valve is fitted the capillary must be formed as shown in Fig. 2.

Remove setscrews and nuts securing valve to mounting bracket.

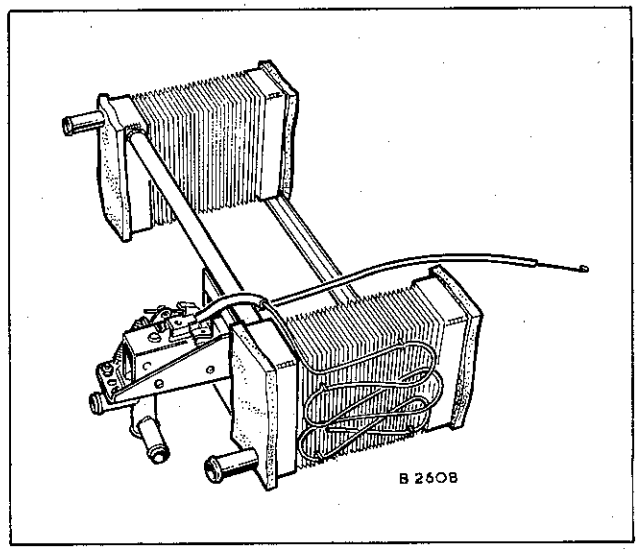

Fig. 2 *Water valve, matrix and capillary*

To Refit

Refitment is a reversal of the removal procedure.

Control Cable Adjustment

The control cables are correctly adjusted in production, normally adjustment should not be necessary. If adjustment is required proceed as follows:-

Air distribution to screen

Remove the front and rear engine covers inside the cab.

Operate lever (1) Fig. 3 to the closed position.

Slacken the inner cable clamping bolt on the operating lever.

Switch on ignition/starter switch and operate the blower switch to the high boost position.

Adjust the control inner cable until only a negligible amount of air flows from the screen vents. Tighten the inner cable clamp bolt, check operation of control lever.

Switch off blower switch and ignition/starter switch.

Refit front and rear engine covers inside the cab.

Air distribution to cab interior

Remove the front and rear engine covers inside the cab.

Operate lever (2) Fig. 3 to the closed position.

Slacken the inner cable clamping bolt on the operating lever.

Adjust the control inner cable until the flaps on each side of the heater are fully closed, tighten the inner cable clamp bolt, check the operation of control lever.

Refit front and rear engine covers inside the cab.

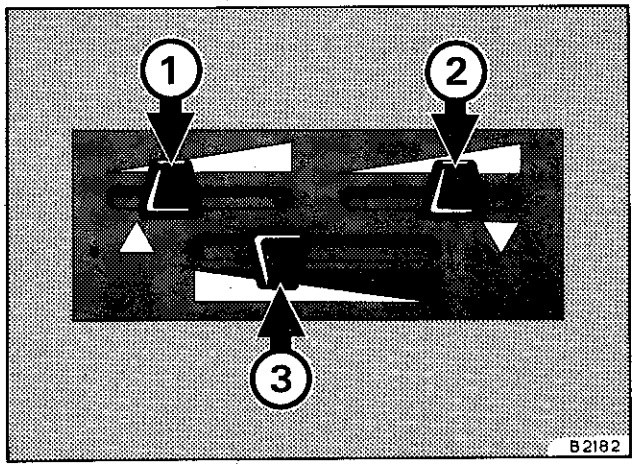

Fig. 3 *Heater-temperature and air controls*

Air temperature control

Operate lever (3) Fig. 3 to the cool or OFF position.

Open and secure bonnet in raised position.

Slacken the inner cable clamp screw on the water valve.

Adjust the control inner cable to fully close the water valve, tighten the inner cable clamp screw, check the operation of control lever.

Close the bonnet.

Note: To ensure efficient operation of the controls the outer cables must be correctly clamped.

BLOWER MOTOR

The blower motor assembly is mounted in the right hand inner wing valance and is used to induce a forced air flow to the heater, particularly when the vehicle is stationery or when operating at low speeds.

To Remove

Disconnect battery.

Open and secure bonnet in raised position.

Remove right hand headlamp surround to gain access to one water container setscrew.

Remove the motor to heater air ducting.

Detach cables and pipes from screen/headlamp motor/s in water container.

Remove two setscrews securing water container, displace spring clip at bottom of container, remove container.

Vacuum servo brake models

Pull out brake servo hose adaptor and displace.

Remove two nuts securing brake master cylinder to servo unit and displace master cylinder.

From inside cab, remove brake pedal clevis pin to release push rod.

Remove four nuts securing servo unit, displace wiring harness above servo unit and withdraw unit.

Air hydraulic brake models

From inside cab, remove brake pedal clevis pin to release push rod.

Remove four nuts and bolts securing the mounting plate to the engine bulkhead and displace valve.

Remove four bolts and washers securing fan housing duct to inner wing valance, disconnect three wires at snap connectors, displace the two earth wires.

Withdraw the blower motor assembly taking care not to damage the motor resistor located forward of the motor.

To Dismantle

Remove the four cross-head screws and washers, displace the rubber grommet. Separate the motor from the duct threading the cables through the duct face.

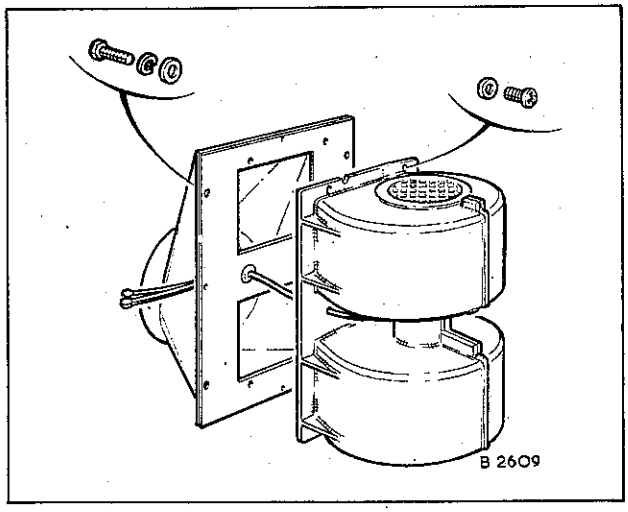

Fig. 4 *Blower mounting details*

Inspection and Overhaul

Thoroughly clean the two units, including the sealant from the flange faces.

The motor is a non serviceable item, and if defective must be renewed.

Test the motor by connecting the green/yellow and green/slate cables to a 12 or 24 volt battery, whichever is applicable. If the motor is sluggish on initial rotation, or noisy when running, it should be renewed.

To Re-assemble

Re-assembling is a reversal of the dismantling procedure, ensuring the duct face is coated with a suitable sealant.

To Refit

Refitting is a reversal of the removal procedure.

Check the operation of the motor.

DESCRIPTION AND MODIFICATIONS

This may seem a little out of place but I have heard about problems with people stealing work and selling it - for example on eBay.

If you're reading this and you bought this manual anywhere then you have been ripped off.

Please contact me via my email mikejamson@hotmail.com Otherwise I can be found on the dodge50 facebook page, if not then get in contact with Greg and he can pass the message on to me.

I have note done this pdf manual for my own personal gain and wish to see the community of 50 series owners benefit from the information here, and I do not want to see the community get taken advantage of and somebody else gain from it unfairly.

The information in pdf format will hopefully allow more of these wonderful trucks to stay on the road by providing information to everybody.

This has been quite a long and involved process to scan the manual and to convert it into a pdf format. I do aplogise as I have used several different scanners and several different computers to do it, so there are no doubt some errors hidden throughout, as well as some editing errors.

I have aimed to balance quality and file size and hope that this balance meets to everybody's approval.

If you see an error please let me know and I will fix it as soon as I can.