



The heater assembly heats and distributes air as directed by selections made on the control panel. The assembly is installed on the vehicle centre-line, between the fascia and the engine bulkhead.

The heater assembly consists of a two-piece plastic casing containing a blower, resistor pack, heater matrix and control flaps. Integral passages guide the air through the casing from the inlet to the distribution outlets. A wiring harness connects the blower and resistor pack to the blower switch on the control panel.

Blower

The blower controls the volume of air being supplied to the distribution outlets. The blower is installed in the driver's side of the casing and consists of an open hub, centrifugal fan powered by an electric motor. The open end of the fan surrounds the air inlet, which is on the passenger's side of the casing. The blower switch and the resistor pack control the operation of the blower, which can be selected to run at one of four speeds.

Resistor Pack

The resistor pack supplies reduced voltages to the blower motor for blower speeds 1, 2 and 3. For blower speed 4, the resistor pack is bypassed and battery voltage drives the motor at full speed. The pack is installed in the RH side of the casing, in the air outlet from the blower fan, so that any heat generated is dissipated by the air flow.

Heater Matrix

The heater matrix provides the heat source to warm the air being supplied to the distribution outlets. It is installed in the LH side of the casing behind a protective cover. The matrix is a copper and brass, two pass, fin and tube heat exchanger. Engine coolant is supplied to the matrix through two brass tubes that extend through the bulkhead into the engine compartment. When the engine is running, coolant is constantly circulated through the heater matrix by the engine coolant pump.

Control Flaps

Four control flaps are installed in the heater assembly to control the temperature and distribution of air. A blend flap controls the temperature by directing air inlet flow through or away from the heater matrix. Two distribution flaps control the air flow distribution to the selected vents, and an extra flap closes the air path from the off side of the heater matrix to the blend chamber to reduce heat pick-up causing a rise in temperature at the foot and defrost outlets in comparison to the temperature at the face vent outlets.

Blend Flap: The blend flap regulates the flow of air through the heater matrix to control the temperature of the air leaving the heater assembly. It consists of a hinged flap between the cold air bypass and the heater matrix. The flap hinge is connected to a lever mechanism on the LH side of the casing. A control cable is installed between the lever mechanism and the temperature knob on the control panel to operate the flap. Turning the temperature knob turns the flap and varies the proportions of air going through the cold air bypass and the heater matrix. The proportions vary, between full bypass no heat and no bypass full heat, to correspond with the selection on the temperature knob. When the flow is split between the cold air bypass and the heater matrix, the two flows are mixed downstream of the heater matrix to produce an even air temperature at the individual outlets.

A flap on the air outflow side of the heater matrix is used to close off the path of cold air flowing around the bypass route from picking up heat from the matrix in the blend chamber and so prevent an increase in air temperature when the airflow is diverted to the foot or defrost outlets. The flap hinge is connected to a lever mechanism on the LH side of the casing. A control cable is installed between the lever mechanism and the temperature knob on the control panel to operate the flap. Turning the temperature knob turns the flap. When unheated air is required and the temperature control is at its minimum setting, the 'close-off' flap is completely shut to prevent thermal pick-up. As the temperature control knob is turned up to select a higher ambient temperature, the 'close-off' flap is opened to allow the passage of air flow through the heater matrix to the blend chamber.