

ACCESSORIES

AUTOMATIC HEATING SYSTEM

GENERAL DESCRIPTION

The 1955 Cadillac Automatic Heating System is basically the same as the 1954 system. Service procedures covering the dual heater units remain unchanged. Operations covering removal and installation, however, are somewhat simplified due to modifications in the cowl-to-instrument panel braces and the heater defroster adapters.

A single thermostatic control valve, which is located centrally on the inside of the front cowl panel, is used on all 1955 series cars. The control valve has two capillary tubes, located in the heater outlet duct on each side of the car to obtain im-

proved regulation of interior temperatures. In addition, the thermostatic control valve is equipped with an over-ride mechanism which holds the control valve fully open when the "Defr." lever is all the way down, regardless of the "Heat" lever position. This permits maximum heat for de-icing even when the "Heat" lever is in the "off" position.

Only service information affected by design changes in the 1955 system is contained in this manual. For other service information, refer to Section 16-B of the 1954 Shop Manual.

SERVICE INFORMATION

(1) Water Flow

The flow of water through the Automatic Heating system is illustrated in Fig. 16-B-1. The water flows from the upper right side of the water pump to the thermostatic control valve, from the control valve to the right and left heater cores, and then to the water pump intake. On cars equipped with transmission oil coolers, coolant is taken from the right rear of the engine block, flows through the cooler and returns to the intake side of the water pump through a "T" connection at the pump.

(2) Operation of "Heat" and "Defr." Control Levers

a. Warm Up

1. Both control levers should be left in the "OFF"

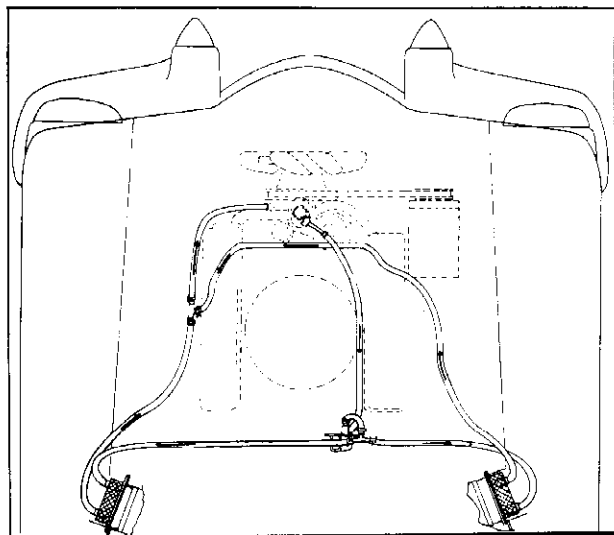


Fig. 16-B-1 Water Flow

position until the engine has warmed sufficiently to furnish hot water to the heater cores.

2. If it is necessary to defog before the water is warm, push the "Defr." lever to "ICE" position.

b. Ice Removal

1. Leave "HEAT" lever in "OFF" position and depress "DEFR." lever to "ICE" position to get maximum air temperature with high blower speed. See Fig. 16-B-2.

c. Summer Ventilation

1. "Heat" and "Defr." levers in "OFF" position.
2. Pull out both ventilator knobs at right and

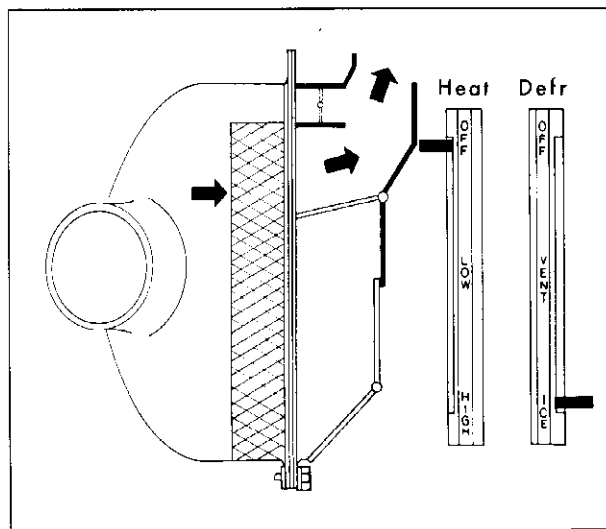


Fig. 16-B-2 Control Lever Position (Ice Removal)

AUTOMATIC HEATING SYSTEM

left of steering column below instrument cluster. These knobs operate the right and left fresh air intake valves on the lower inner cowl panel.

d. Winter Ventilation

1. Upper level ventilation is possible during winter operation of the heater by depressing the "Defr." lever no further than the "VENT" position. This will allow fresh, unheated air to bypass the heater core and circulate at breath level.

e. Summer Defogging

1. Depress "Defr." lever to vent position.

(3) Adjustment of "Defr." Control Lever

1. Remove right and left heater grilles and cowl kick pads.

NOTE: While it is not necessary to disconnect the capillary tubes from the heater grilles, caution must be exercised when moving the grilles to one side, to prevent kinking of the capillary tubes.

2. Loosen "Defr." lever cables at both heater units and at control lever.

3. Loosen thermostatic valve manual control cable at valve and at "Defr." lever.

4. Move control lever to full "OFF" position

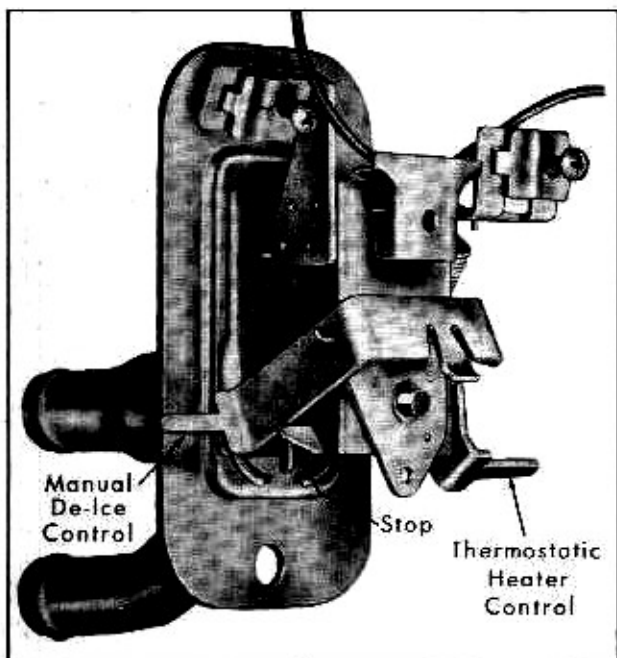


Fig. 16-B-3 Thermostatic Control Valve

and in line with "OFF" position of "HEAT" lever (1/8" from top of slot).

5. Slide "Defr." lever cables in sheaths until defroster valves and fresh air by-pass valves in heaters are completely closed.

6. Tighten cables in place without interfering with the pre-set position of the "Defr." valves, manual control valve, or defroster control lever. Check to see that air valve is closed and blower switch is turned off.

7. Move "Defr." control lever to "ICE" position at full extent of travel. Adjust manual control on thermostatic valve against stop, Fig. 16-B-3, and tighten clamp.

8. Run engine till water is hot. Move lever to "ICE" position and check to see that blowers are on high speed and air is hot at windshield.

9. Install cowl kick pads and heater grilles.

(4) Removal and Installation of Heater Unit (Right or Left)

The procedure outlined in the 1954 Shop Manual may be followed for this operation. Care should be exercised, however, when removing the heater outlet grilles and cowl trim panels to prevent damaging the capillary tubes. There have also been modifications in the defroster adapter to facilitate removal. It will no longer be necessary, therefore, to remove the instrument panel-to-cowl brace.

(5) Removal and Installation of Thermostatic Control Valve

1. Disconnect and plug water hoses from the valve at the engine firewall, using special pliers to remove the spring type hose clamps.

2. Remove heater outlet grilles from cowl trim panels and disconnect right and left capillary tubes.

3. Loosen control cable clamps on thermostatic valve and slide cables out of clamps and off of control arms on the valve.

4. Remove valve to cowl panel retaining screws and remove valve using caution to prevent damage to the capillary tubes.

5. To install, reverse the above procedure and adjust control cables.

AUTRONIC EYE

GENERAL DESCRIPTION

The Autronic Eye unit, which is available as an accessory on all 1955 Cadillac cars, operates in the same manner as that used on 1954 cars. The units used in the early 1955 cars may be adjusted and serviced as explained in the 1954 Shop Manual.

Later in production, however, changes in the circuit and relocation of the "Dim" sensitivity adjusting screw, from the Phototube unit to the Amplifier unit, necessitate a change in the sequence of adjustment operations as explained below.

SERVICE INFORMATION

(1) Hold Sensitivity Test

CAUTION: The "Autronic-Eye" develops 800 volts. Turn headlamps OFF before removing cover from the Phototube unit.

1. Install aiming device and adapter on Phototube unit.

2. Turn headlamps ON and wait at least four minutes for amplifier to stabilize. Set standard foot dimmer switch to "Automatic" position.

3. Turn zero corrector on face of meter until meter pointer is on zero set line.

4. Turn intensity rheostat of tester counter-clockwise.

5. Insert tester connector into cigar lighter receptacle.

CAUTION: Push straight in.

6. Check car battery voltage. If less than 12 volts, operate engine at fast idle when making sensitivity tests and adjustments.

7. Turn selector switch to "Dim" position. (Be sure to use proper "Dim" position for clear or tinted windshield.)

8. Turn intensity rheostat all the way clockwise to end of adjustment to obtain a lower beam.

9. Turn tester selector switch to "Hold" position.

10. Slowly turn intensity rheostat counter-clockwise just to point where headlamps switch to upper beam. The meter pointer should now read in the HOLD SENSITIVITY ADJUSTMENT BAR on the meter scale.

If Hold Sensitivity is not properly adjusted, proceed with HOLD SENSITIVITY ADJUSTMENT. Note 2.

(2) Hold Sensitivity Adjustment

Both the "Hold" and "Dim" sensitivity adjust-

ments may be made on the amplifier unit by turning the knurled control screws located on the bottom of the amplifier unit. Each adjusting screw is identified by a stamp on the side of the amplifier cover. See Figure 16-C-1. THE DIM SENSITIVITY ADJUSTMENT MUST NOT BE MADE UNTIL AFTER THE HOLD SENSITIVITY IS CORRECTLY ADJUSTED.

1. Turn Hold Adjustment clockwise to end of adjustment.

2. Rotate intensity rheostat all the way clockwise.

3. Turn selector momentarily to "Dim" position to switch lights to lower beam, then switch back to "Hold" position.

NOTE: If lights do not switch to lower beam, the "Dim" control must be turned clockwise to end of adjustment and then readjusted after "Hold" adjustment is correct.

4. Adjust tester intensity rheostat until meter pointer is in center of HOLD SENSITIVITY BAR.



Fig. 16-C-1 Sensitivity Adjusting Screws

