ing the vacuum unit to housing, and the one clip attaching the vacuum unit rod to the actuated unit.

VENT DEFLECTOR—REPLACEMENT

The vent deflector is held to the heater housing by three screws. This deflector should be removed whenever the radio is to be removed.

HEATER CORE—REMOVAL AND INSTALLATION

Removal

Disconnect the battery ground strap. Drain the cooling system as necessary. Disconnect the heater hoses at heater. Remove the screws attaching the heater core housing to the dash panel and remove the housing and core as an assembly.

Remove the gasket to expose rivets (if used). Remove the heater core from outer housing.

NOTE: The core is held in position in the outer housing with plastic rivets. Care should be used when pressing out these rivets to avoid damaging the housing or the rivets.

Installation

Place the heater core in the heater outer housing and install plastic rivets. Install the gasket. Position the heater housing and core assembly on the dash panel. Install all screws before tightening to insure proper alignment.

Connect the heater hoses at heater. Refill the cooling system as necessary.

INSTANT HEAT CONDITIONAIRE MODEL 805 HEATER

While the Instant Heat Conditionaire Model 805 Heater is different in construction and appearance, the operation of the heater controls is the same as that of the hot water heater. The servicing of the 1959 Instant Heat Conditionaire Model 805 is the same as that described in the 1958 Chrysler and Imperial Service Manual except for the following operation.

THERMOSTAT

If the thermostat fails to control the duct outlet temperature, it is usually an indication that the cam is loose on the helix shaft, or the end of the helix has dropped out of the slot in the control shaft. To correct this condition, adjust the thermostat as follows:

Remove the thermostat cover at blower housing. Disconnect the control cable and the two lead wires. Remove the two sheet metal screws and remove the thermostat. Inspect the helix to make sure it is crimped tightly in the end of the control shaft. Fit the helix in the slot and crimp the shaft with pliers if necessary. With the helix at room temperature, loosen the Allen set screw in the plastic cam on the base end of the control shaft, making sure the shaft is completely free to revolve and take its normal position at room temperature (about 75° to 85°F.)

With the plastic cam free on the shaft and the micro-switch down, move the control cable linkage as far as it will go to the left and hold in this position. While holding the linkage, turn the plastic cam in a counter-clockwise direction until the micro-switch just clicks, then tighten the set screw in the cam.

Section XVII

HEATER – AIR CONDITIONING

The Heater-Air Conditioning Unit (Fig. 136) on the 1959 Chrysler and Imperial Models is a dual purpose unit combining the functions of both heating and cooling the air for winter and summer air conditioning.

The new unit is controlled by vacuum actuators which are controlled by push buttons (Fig. 137). The heating and cooling cycle is similar to the 1958 Models. A water valve and capillary tube (Fig. 138) is used to control water temperature regulated by a sliding temperature control lever designed integral with the push button assembly to increase or decrease temperature.

During the operation of the new unit on the cooling cycle, 75 per cent of the air drawn in through the fresh air door, (Fig. 139), is passed around the heater core. The remaining 25 percent passes through the heater core, and is used for temperature control of the unit.

OPERATING CONTROLS

The blower switch (Figs. 140 and 141) is an integral

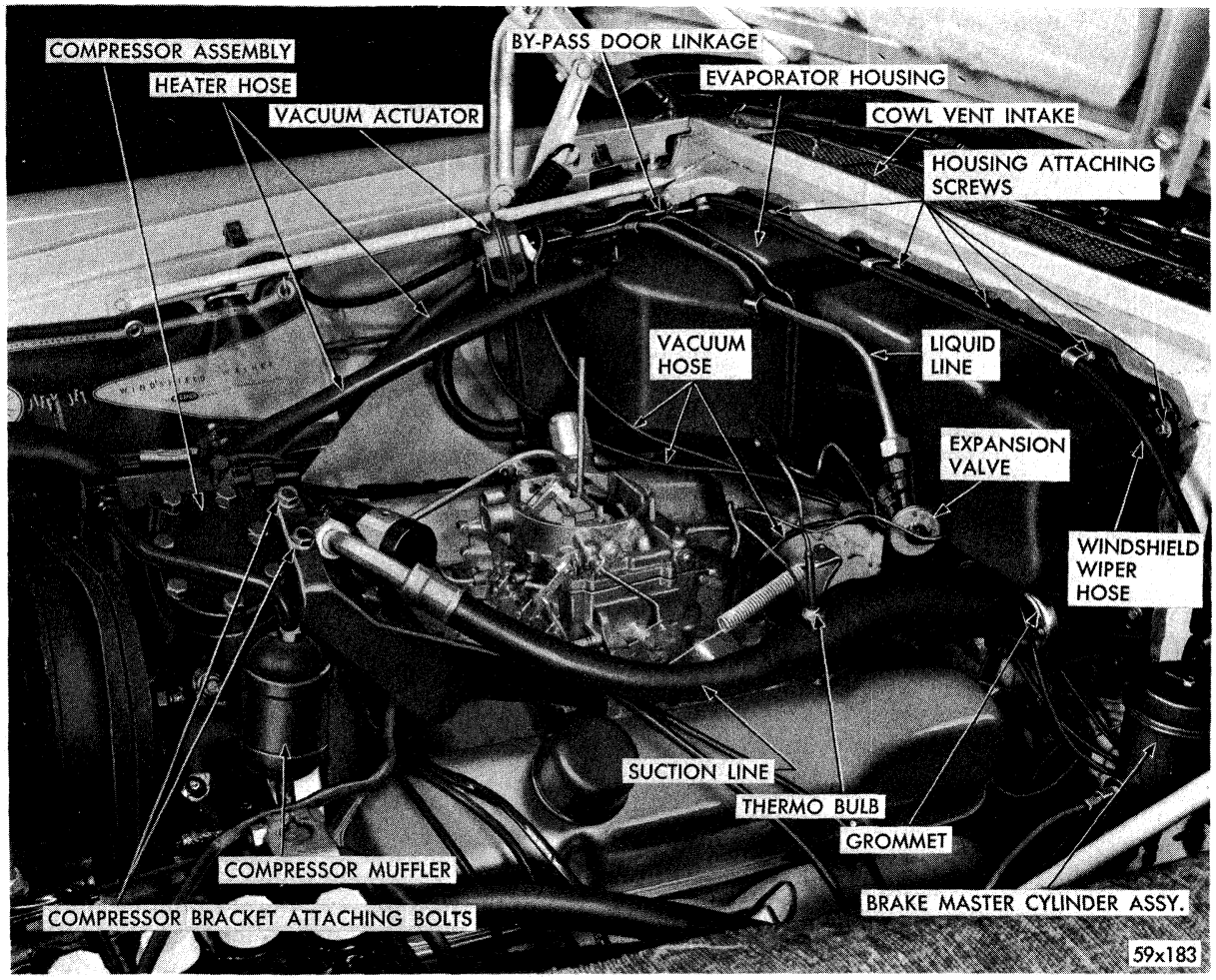

Fig. 136 — Air Conditioning Unit Installed

part of the temperature control lever. The temperature control lever is pushed in for low speed and pulled out for high speed.

The blower will be off only when the "OFF" button is depressed.

Either half of the lower distribution doors, (Fig. 142) can be operated manually to override the automatic setting of the actuator.

The main damper door is operated by a vacuum actuator. Air is directed to the upper or lower air outlets depending on whether the cooling or heating push button is depressed. In addition, the percentage of air up or down may be selected as desired by rotating the manual main damper door control knob, (Fig. 139).

On cars equipped with thumb screw main door control, the percentage of air flowing to the lower or upper outlets can be selected by changing the thumb screw location on the main-door adjusting lever (Fig. 142).

NOTE: Locating the thumb screw in number one hole will allow 10 per cent of the air to be deflected to the lower distribution door deflectors. Rotating the adjusting lever counter-clockwise will increase the percentage of air flowing through the distribution door deflectors.

"OFF" Button Depressed

"The fresh-air door will be closed.

The compressor clutch is disengaged.

The blower motor and Heater-Air Conditioner are made inoperative.

NOTE: To close the fresh-air door, the "OFF" button is depressed and it is recommended that the engine be allowed to operate for approximately ten seconds before shutting off the ignition switch to permit the actuators to complete the cycle.

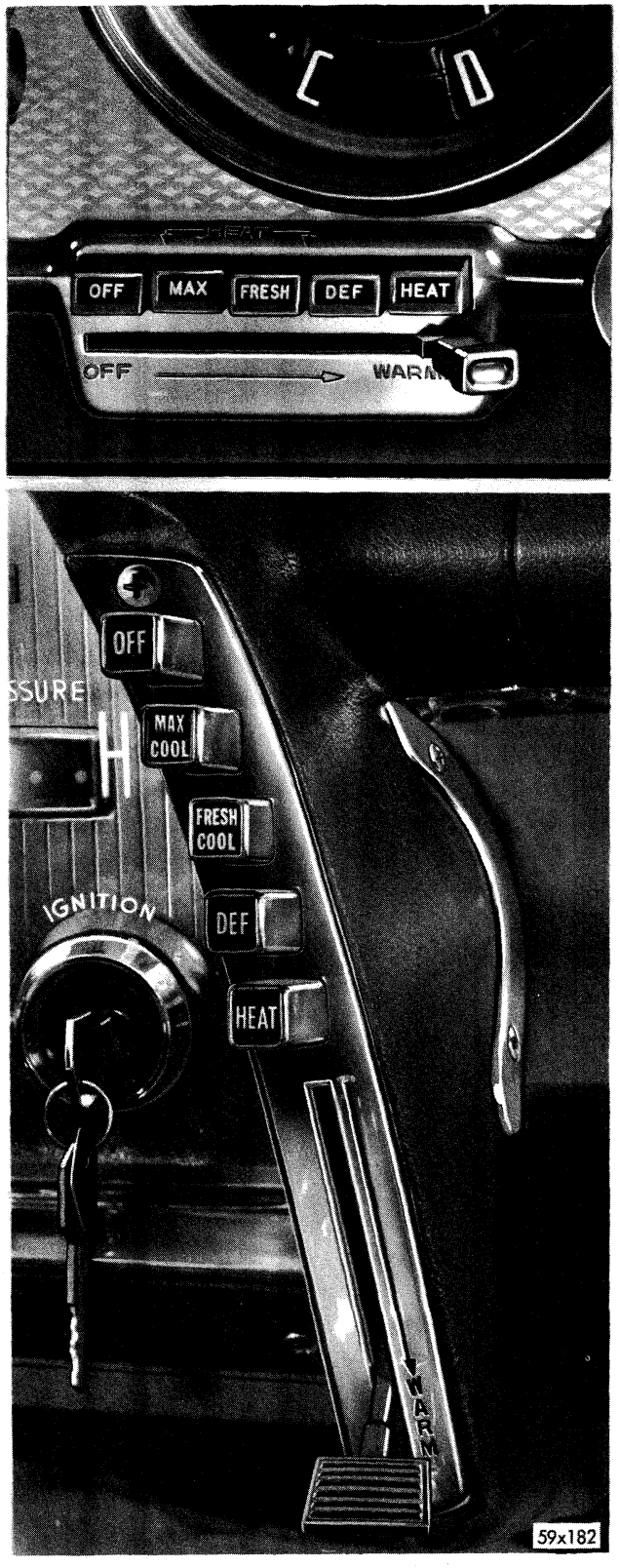

Fig. 137 — Air Conditioning Push Button Controls

Fig. 138 — Water Valve and Capillary Tube

"MAX" Button Depressed

The compressor clutch will be energized.

The blower is operating.

The fresh-air damper door is closed.

The recirculating door opens.

The main door is positioned to the preset manual control cable stop.*

The distribution door is positioned to direct the air upward in the passenger compartment.

"FRESH" Button Depressed

The temperature control lever can be adjusted to the desired temperature.

The compressor clutch will be energized.

The blower is operating.

The fresh-air damper door is open.

The recirculating door is closed.

The main door is positioned to the preset manual control cable stop.*

The distribution door is positioned to direct the air upward in the passenger compartment.

"HEAT" Button Depressed

The temperature control lever can be adjusted to the desired temperature.

The fresh air door opens and the by-pass door closes allowing outside fresh air to pass through the evaporator coils and heater core.

The main door is positioned according to the preset manual control cable stop.*

The blower is operating.

The lower distribution doors are positioned so as to direct all of the air downward.

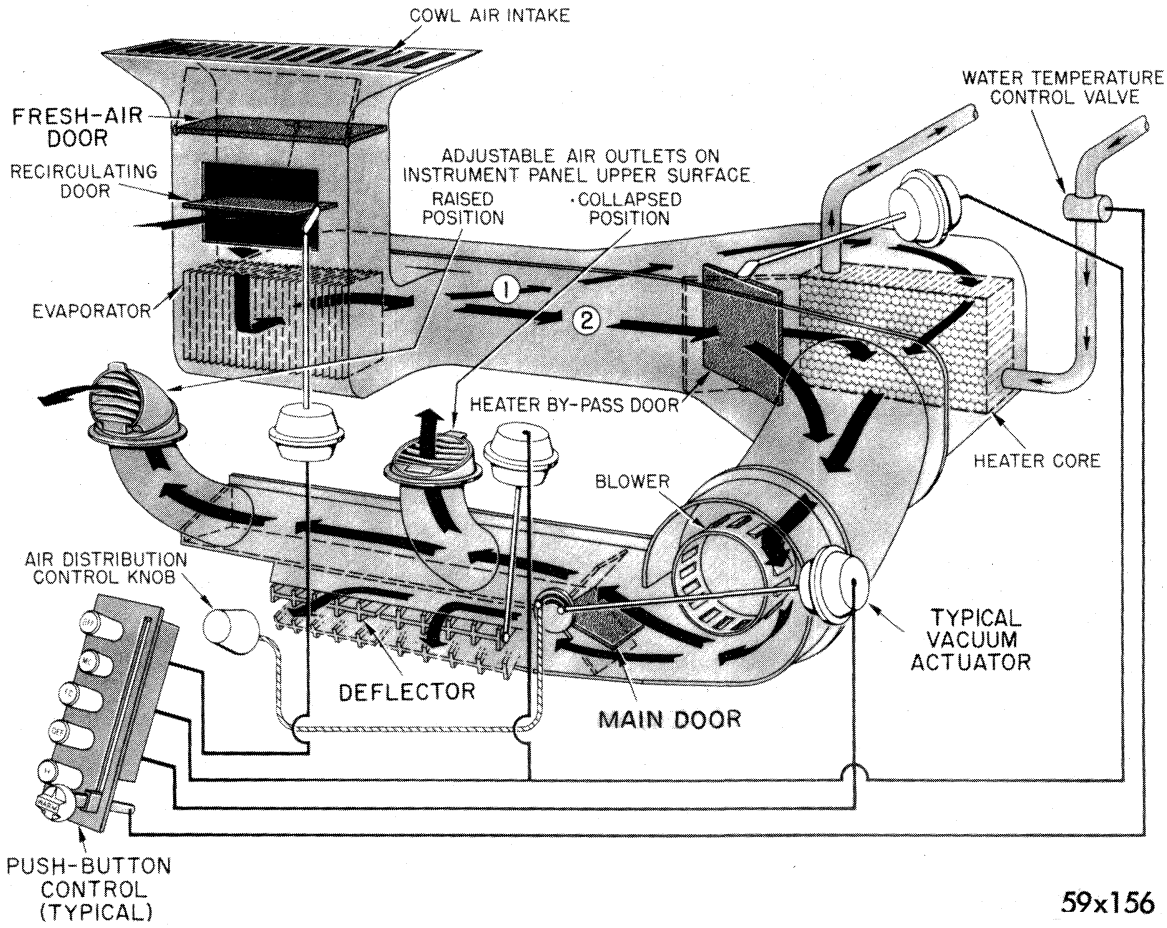

Fig. 139 — Heater Air Conditioning Air Circulation

"DEF" Button Depressed

The fresh-air door opens.

The by-pass door is closed.

The air passes through the heater core.

The main door will direct air to the upper defroster outlets according to the preset manual control cable stop.*

On cars not equipped with manual main door control, 90 per cent of the air is directed through the upper control outlets and 10 per cent through the lower outlets. The opposite condition exists during the heating cycle.

On cars with the thumb screw main door control (Fig. 142) selects a percentage of air between the upper defroster outlets and the lower distribution door, by locating the thumb screw in one of the four holes of the defroster door adjusting lever.

DEHUMIDIFYING THE PASSENGER COMPARTMENT

"FRESH" Button depressed:

The temperature control lever is set to the temperature desired.

NOTE: The heater by-pass door is designed to allow approximately 25 per cent of the incoming air to pass through the heater core in the "Maximum Cooling" and "Fresh Cooling" position of the push buttons.

Outside air dehumidifies as it passes over the evaporator coil. Cool air from the evaporator coils passes through the heater core, which raises the temperature to the desired comfort condition by decreasing the dampness of the air inside the vehicle.

REMOVAL, INSTALLATION AND SERVICING

The procedures for servicing of the unit including discharging, charging, removal and installation of the engine side housing, evaporator coils, expansion valve, refrigerant strainer drier, condenser and other components remain the same as outlined in the 1958 Chrysler and Imperial Service Manual. How-

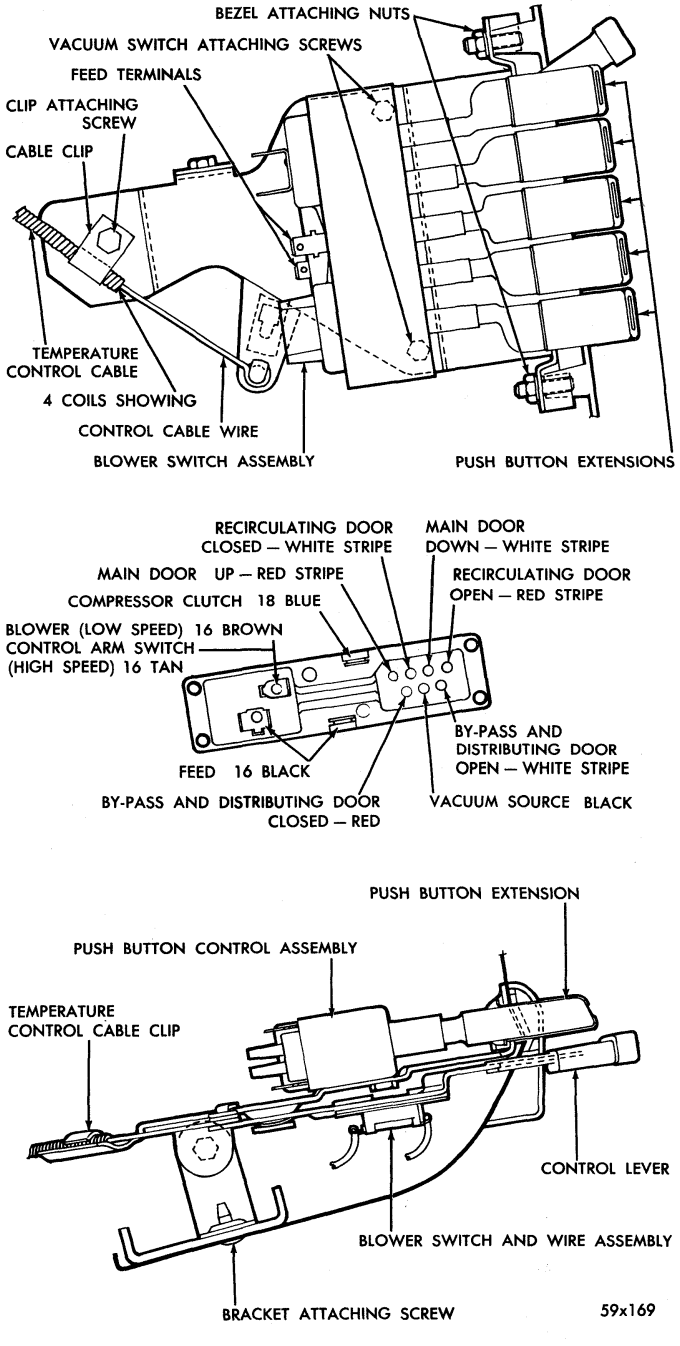

Fig. 140 — Blower Switch and Push Button Assembly (Windsor) (Schematic)

ever, caution must be emphasized when making a compressor capacity test not to exceed a total of five minutes of continuous compressor operation tests to avoid damage to the compressor from overheating.

WARNING

When replacing compressor assembly, the crankshaft should be rotated at least two complete revolutions, to clear oil accumulation from compressor head before the clutch is energized to avoid damaging the compressor reed valves.

Whenever it is necessary to add refrigerant 12 to the system, the refrigerant should be added while operating at a head pressure of 225 to 250 psi until the sight glass in the dry-eye unit is completely clear of bubbles, then add an additional ½ pound (EXACTLY) of refrigerant 12 to complete the charging operation.

WARNING

Compressor head pressures should not exceed 225 to 250 psi when charging the unit.

NOTE: Individual refrigerant 12 containers have been developed and are available for servicing the air-conditioning unit and can be interconnected or used individually, as shown in Figure 143.

In the new Air Conditioning Unit it will not be necessary to remove the engine side housing except to seal or replace the evaporator coil assembly. The heater core can be removed from the engine side housing by removing the heater core housing attaching bolts and remove the assembly, as shown in Figure 144.

NOTE: The core is assembled and held in the housing by two plastic rivets which must be removed before the core can be removed from housing.

Refer to the Heater Section for removal and installation of the heater assembly.

NOTE: When replacing the evaporator coil, extreme care must be taken to see that the fresh air door (Fig. 145) is completely closed before any attempt is made to remove or install the unit. Damage to the door seal and the distortion of vent and recirculating doors may result if this precaution is not taken.

Servicing of the centrifugal fan assembly can be accomplished by the removal of the distribution duct assembly as shown in Figure 146.

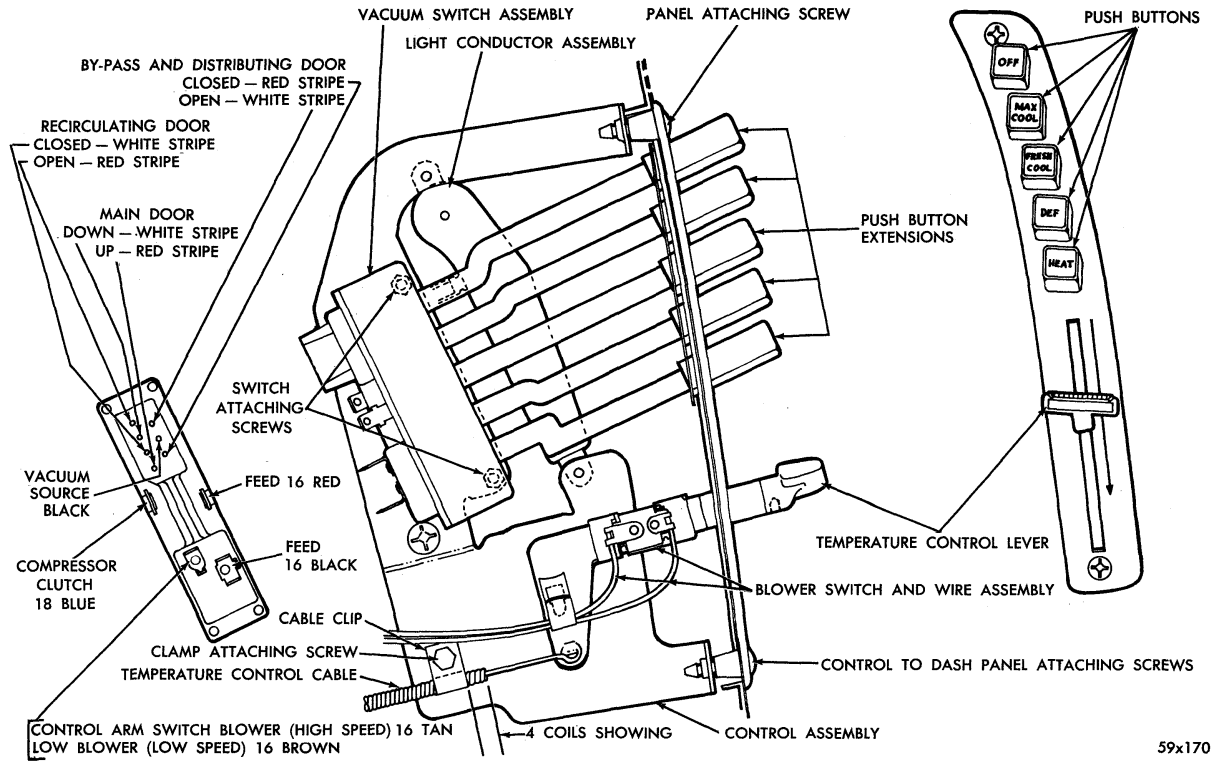

Fig. 141 — Vacuum Actuator and Push Button Assembly (Imperial) (Schematic)

REMOVAL AND INSTALLATION OF PUSH BUTTON CONTROL ASSEMBLY

Remove the vacuum line plug, clutch and blower motor leads from the control assembly. Disconnect the water valve control cable. Remove the push button assembly attaching screws from the push button bracket and remove the assembly.

NOTE: Whenever the push-button control unit is replaced, care must be taken to align the assembly properly within the instrument panel opening so that buttons will operate without binding. The vacuum hoses must be aligned and protected, so they will not be pinched or damaged by clips or other movable attachments.

ADJUSTING VACUUM ACTUATED DOORS

Recirculating Door (Fig. 147)

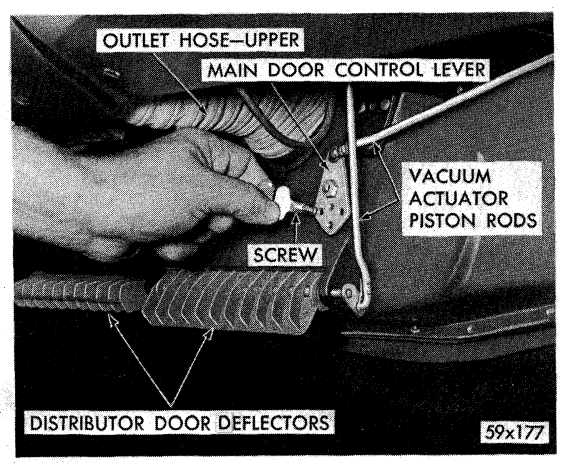

Fig. 142 — Locating Main Door Adjusting Screw (Imperial)

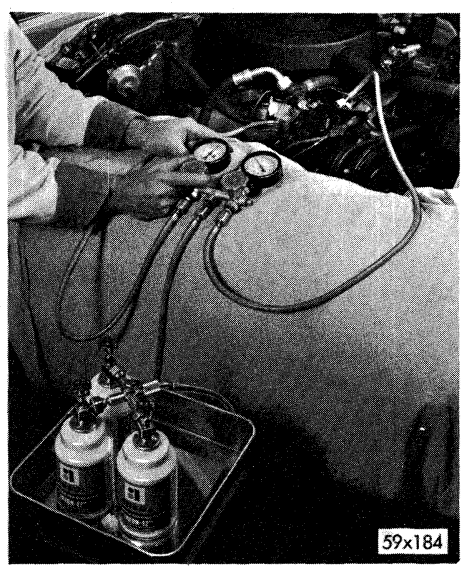

Fig. 143 — Servicing the Air Conditioning System

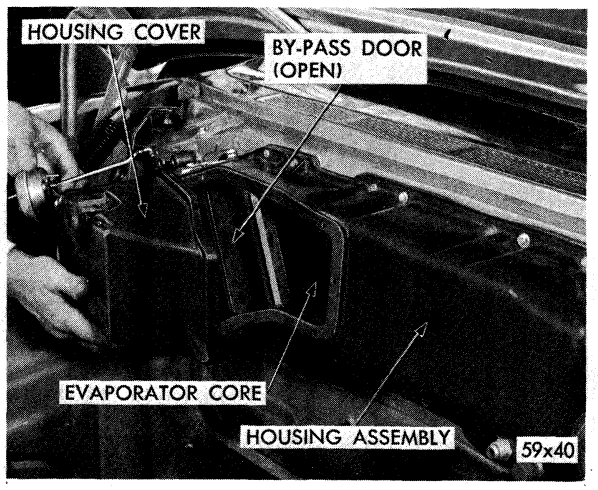

Fig. 144 — Removing or Installing Heater Core Housing Assembly

NOTE: These recirculating and fresh air doors are interconnected for unified operation and should be adjusted accordingly.

(a) Cycle the opening and closing of doors several times to make sure that the door hinges are not sticking and that the doors are operating freely without binding.

(b) Remove the operating rod to recirculating door bracket clip.

(c) Remove the rod from the bracket. Check the actuator rod for full travel against the full travel of the recirculating door bracket.

(d) Close the recirculating door by hand and make sure the (overcenter) toggle force of the links exert enough pressure on the door to completely close and seal the door. If the door is not sealing, loosen the "L" bracket adjusting screws. Adjust and tighten the screws. Recheck the rod to linkage travel and install the rod and clip. Recheck the door seal.

Fig. 145 — Removing or Installing Evaporator Assembly

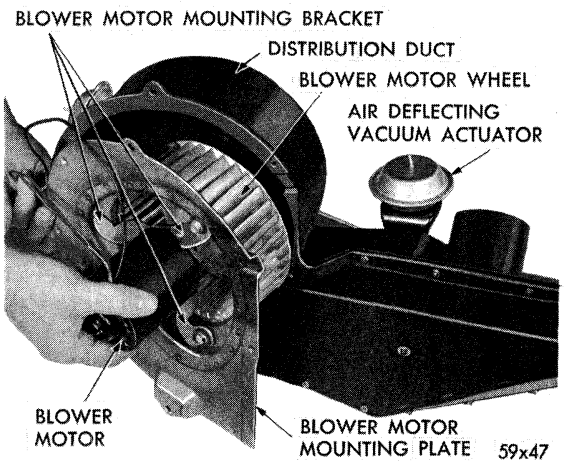

Fig. 146 — Removing or Installing Blower Motor Assembly

Fresh Air Door

(e) Cycle the opening and closing of the doors several times to make sure the hinges are not sticking and that doors are operating freely without binding.

(f) Check the recirculating door for proper sealing and adjust if necessary as outlined in a, b and c.

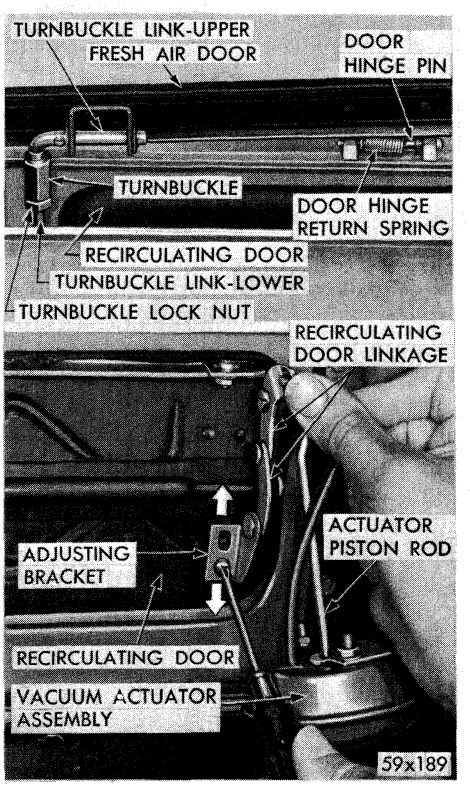

Fig. 147 — Adjusting Fresh Air and Recirculating Door

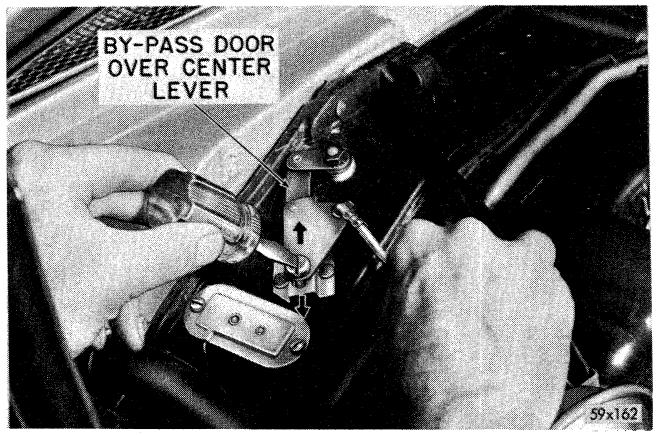

Fig. 148 — Adjusting By-Pass Door

(g) With the engine operating and with a beam of light projecting through the cowl opening, look up through the recirculating door opening carefully to see if light is showing through the seal around the door.

NOTE: The rear edge of fresh air door will not seal completely without vacuum source.

(h) If adjustment is to be made, remove the cowl vent intake screen and adjust the fresh air door link turnbuckle through the intake screen opening, so that the door will completely close with engine operating.

Adjusting Heater By-Pass Door

Refer to Figure 148 and proceed as follows:

Remove the vacuum actuator piston rod clip and rod from by-pass actuator lever assembly. Operate the engine. Remove vacuum lines from the actuator. Check the vacuum source and for proper actuator operation. Check the by-pass door for full travel by moving the levers to open and closed position without vacuum.

Install the actuator rod and clip assembly to the by-pass door. Adjust the door and tighten screw in closed position, as shown in Figure 148.

Adjusting Main Door on Cars Equipped with Manual Control

Refer to Figure 142 and proceed as follows:

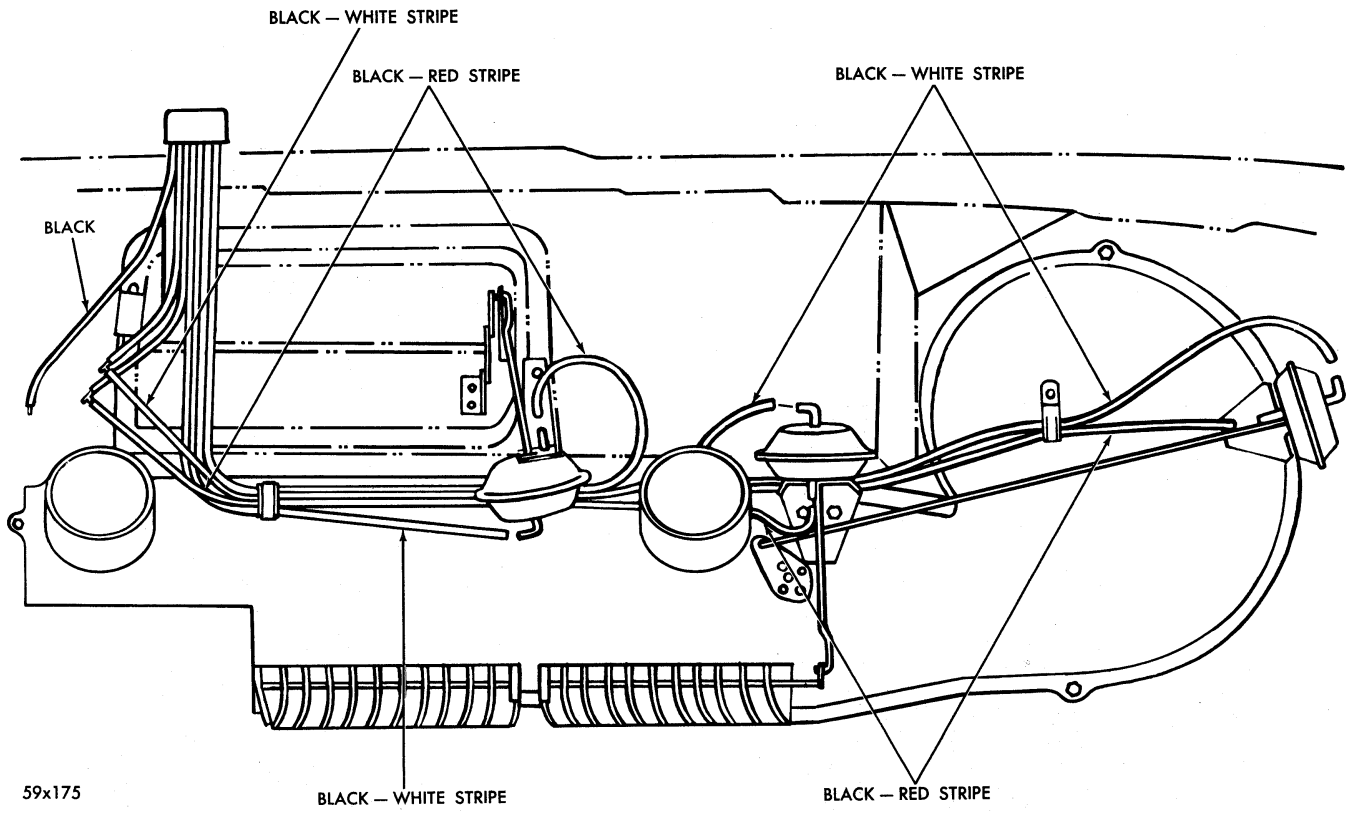

Fig. 149 — Vacuum Hose Alignment (Passenger Compartment)

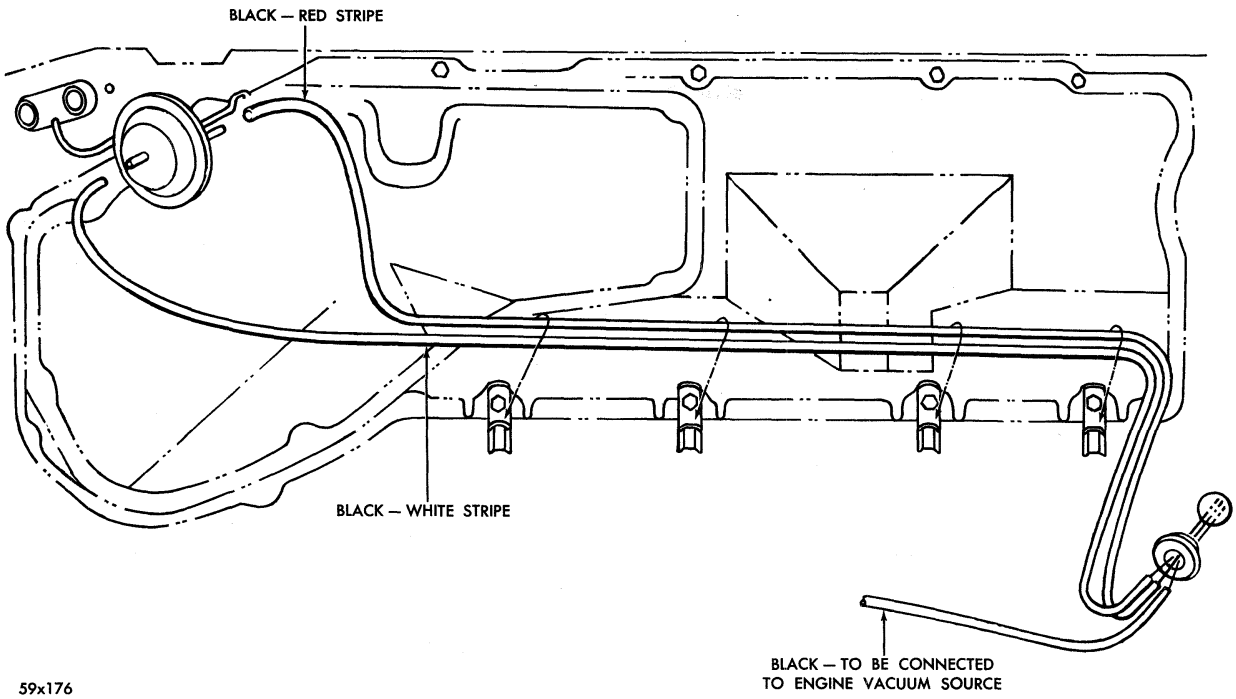

Fig. 150 — Vacuum Hose Alignment (Engine Compartment)

Remove the control cable, actuator rod clip (and thumb screw if so equipped) from the main door control lever assembly.

Remove the vacuum actuator and distributor door rods from the lever control assembly. Check for proper operation of the main door by cycling lever to full open and closed positions.

Rotate the control knob to the closed position. Adjust control cable to full travel of defroster door in the closed position. Reinstall the actuator rods. Tighten lever screw, and check for proper operation.

Adjusting Distribution Door

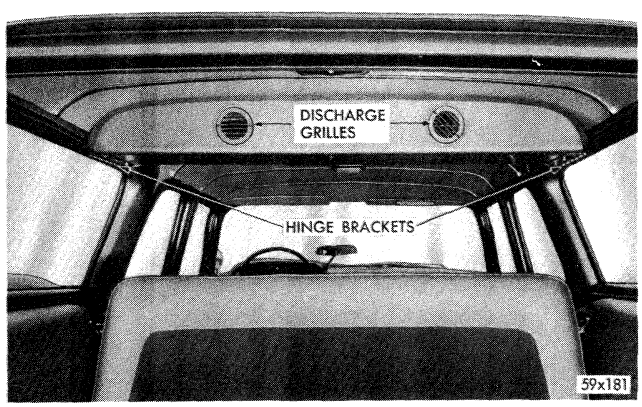

Fig. 151 — Roof Air Conditioning Unit Installed.

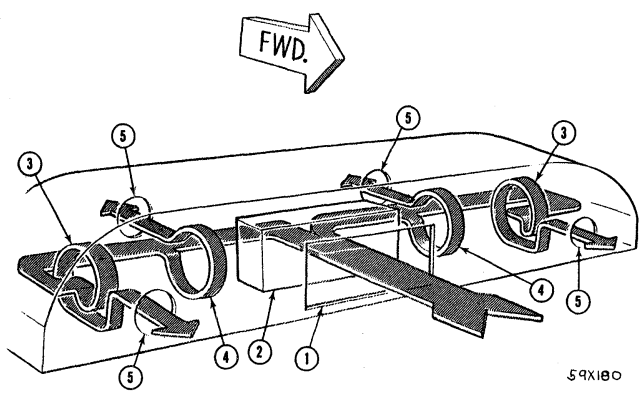

Fig. 152 — Air Conditioning Unit Air Flow (Roof Unit)

NOTE: The distribution door will automatically adjust itself by the travel of vacuum actuators to distribute the air flow to passenger compartment as desired.

Deflector Removal

Remove the vacuum actuator rod clip and rod from control lever. Remove the deflector shaft lock screw. Remove shaft from lower distribution duct housing. Remove the deflectors.

Deflector Installation

Install the deflectors, shaft, lock and screw. Install

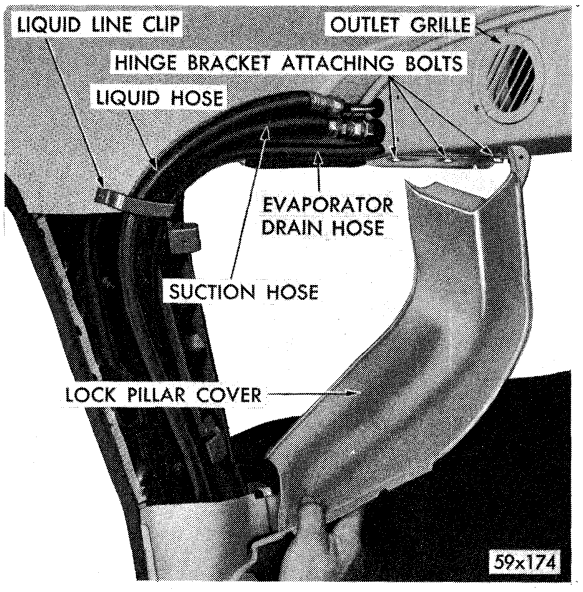

Fig. 153 — Removing or Installing Pillar Cover

actuator rod and clip. Check the assembly for individual deflector operation. Adjust the deflector control lever for full travel of vacuum actuators.

DISTRIBUTION DUCT

Removal

Remove the deflector outlet tubes. Remove manual control cable to duct attaching clip. Remove the cable wire from main door control bracket. Disconnect the vacuum hoses from actuators.

Disconnect the blower motor ground and feed wires. Remove the duct to dash attaching bolts and remove the duct.

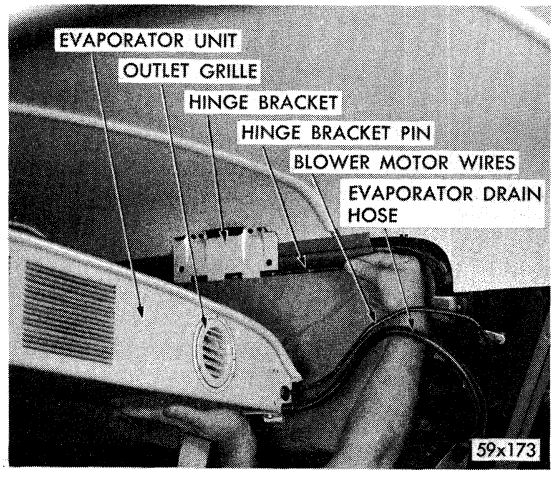

Fig. 154 — Removing or Installing Air Conditioning (Roof Unit)

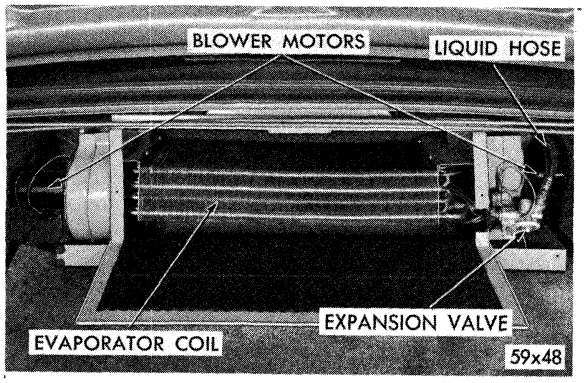

Fig. 155 — Rear Deck Compartment Unit Installed

Installation

Install the distribution duct assembly. Make sure the assembly is located properly up against the dash panel and that the tubes, cables, and electrical wires will not be pinched between the duct and dash panel, before completely tightening the assembly. Install the attaching bolts, ground wires and clips (Figs. 149 and 150).

TOWN AND COUNTRY ROOF MOUNTED AIR CONDITIONING UNIT (FIG. 151)

A new roof mounted evaporator has been developed and is available for Town and Country Models. This unit employs centrifugal cage type blowers to draw air through the evaporator (Fig. 152) for distribution through adjustable discharge grilles. A switch located on the instrument panel controls the two speed blower motor.

Removal (Refer to Fig. 153)

Discharge the refrigerant in the system (preferable in open area). Remove the pillar cover garnish mouldings. Remove liquid lines and clips. Remove the drain hoses. Disconnect the blower motor wires. Remove the hinge pins and remove assembly.

Installation (Fig. 154)

Mount the roof unit to one side of the hinge bracket, and install hinge pin. Raise the assembly up to the contour of roof panel and install the other hinge pin.

Install the refrigerant lines, drain hoses, and connect the blower motor wires. Recharge the unit. Check the entire system for leaks.

REAR COMPARTMENT AIR CONDITIONING UNIT (FIG. 155)

A combination rear air conditioning unit is avail-

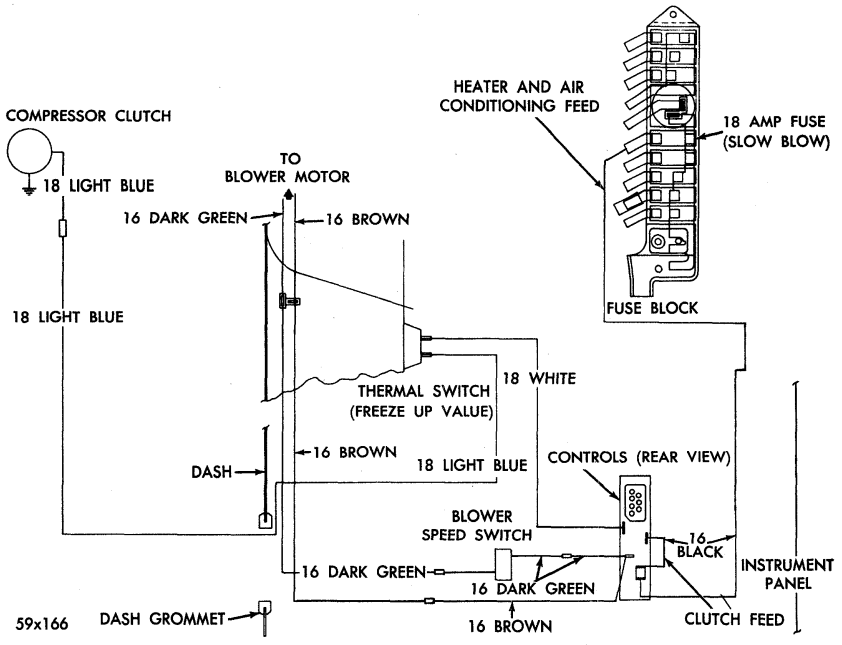

Fig. 156 — Heater Air-Conditioning Wiring Diagram (Dash Unit)

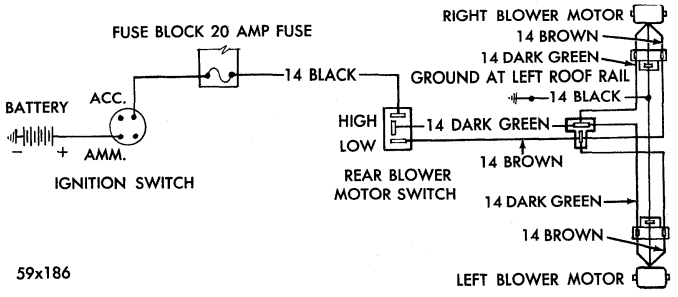

Fig. 157 — Heater Air-Conditioning Wiring Diagram (Roof Unit)

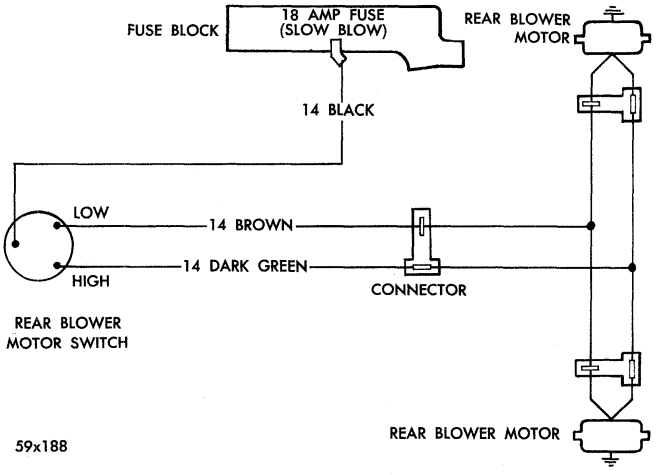

Fig. 158 — Heater Air Conditioning Wiring Diagram (Rear Deck Unit)

able for all models except the Town and Country. This unit operates in conjunction with the front unit. In addition, the rear unit air conditioning is available with a heater only at the front.

The rear air conditioning unit operates exclusively on the recirculation principle. The rear unit utilizes the same compressor and condenser as is used by the front unit.

Refer to figures 156, 157, and 158 for wiring diagrams applicable to the dash, roof, and rear deck mounted unit installation.

The rear unit is mounted in the luggage compartment on the stepped up area above the rear axle, with the liquid lines located along the left side of car.

Figure 159 shows the newly developed tools required to service the 1959 Air Conditioning Unit.

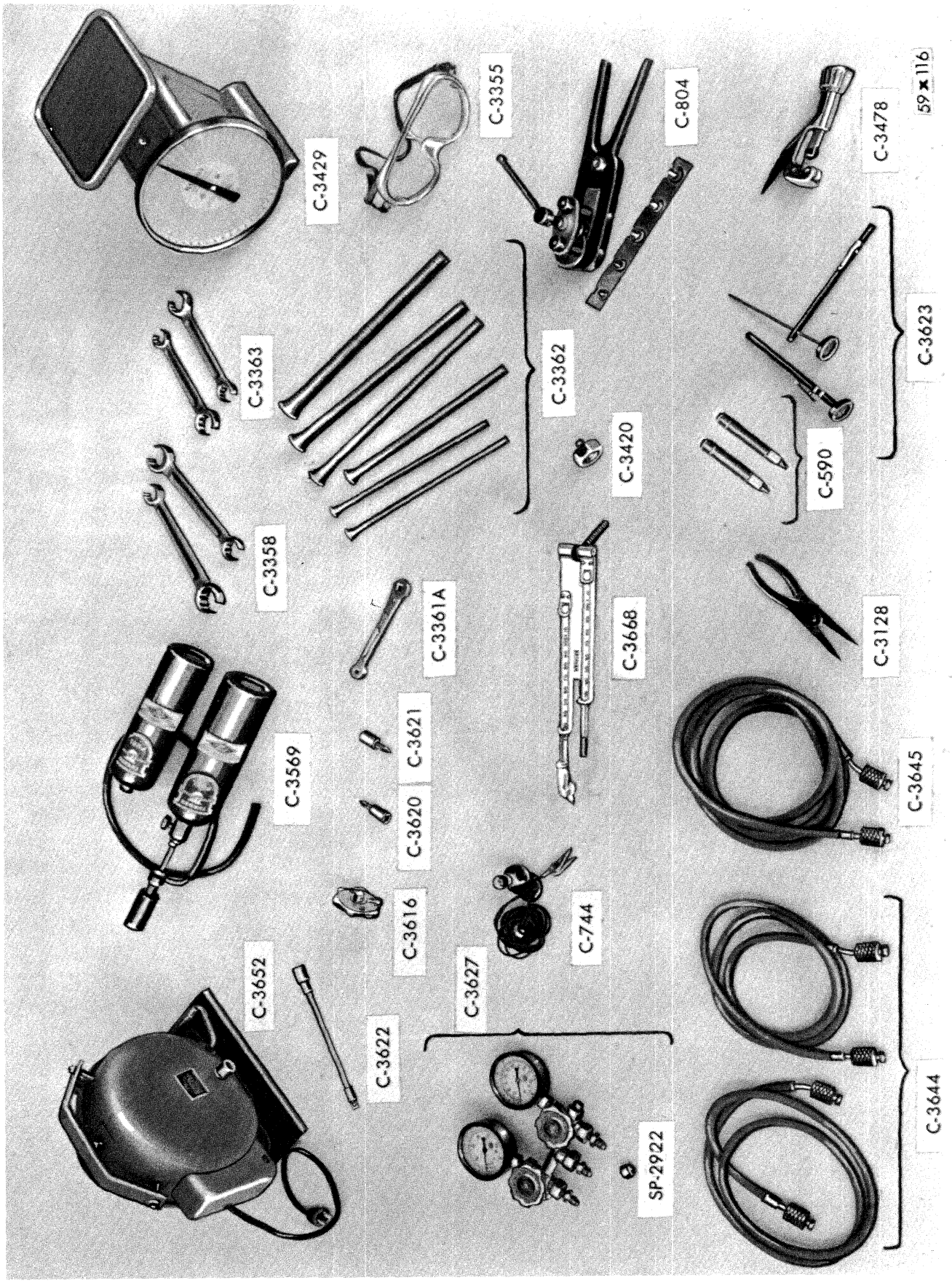

Fig. 159 — Heater Air Conditioning Tools