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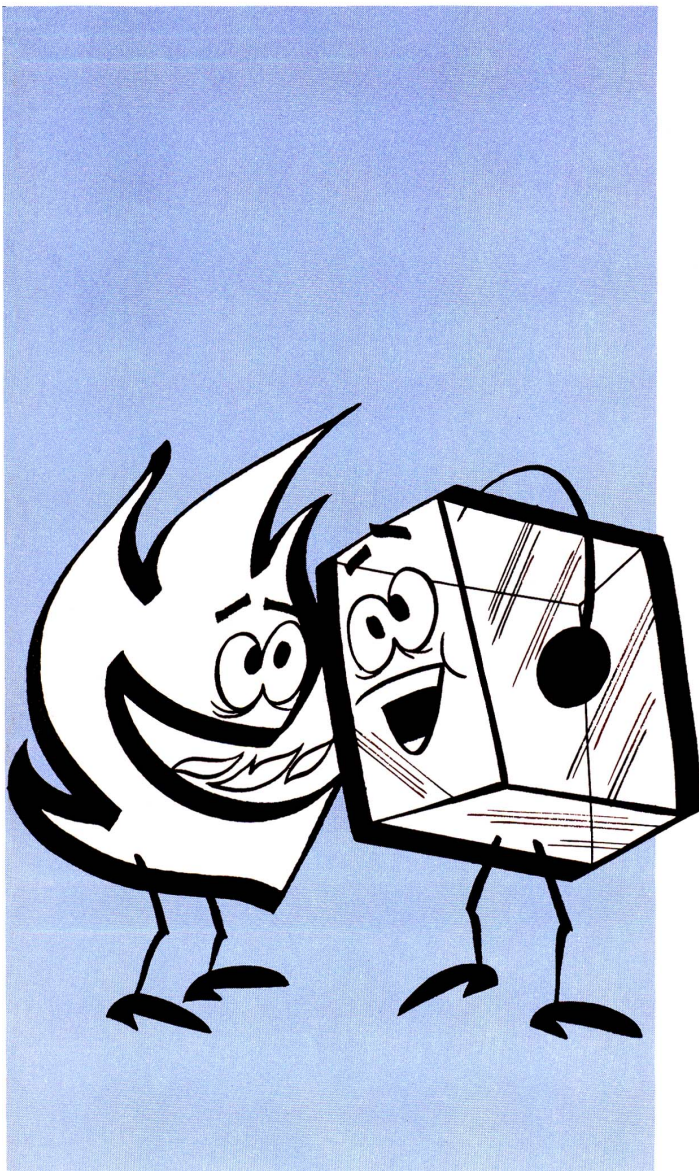
1972 AIR-CONDITIONING SYSTEMS

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HOT AND COLD SHOP TALK

It's generally known that all automotive air-conditioning systems operate on the same basic principle and that they all provide heating as well as cooling. Hot engine coolant in the heater core is the source of warm air. A refrigeration system provides the means of getting rid of unwanted heat, thus cooling the car interior.

It is much less generally known that there are several different ways of controlling the amount of heating or cooling and there are additional differences in the way the airflow and distribution is controlled. As a matter of fact, on 1972 Chrysler-built cars there are three significantly different systems . . . and that's not counting sub-compact and truck air-conditioning systems.

Specifically, there is one system for compacts, another for intermediates and still another for full-size cars. And of course, Auto-Temp II is a variation of the system found on other full-size cars. The purpose of this reference book is to explain how these three systems differ and to clarify some misunderstandings that have developed about early and later production, full-size 1972 models.

TABLE OF CONTENTS

AIR CONDITIONING FOR COMPACT CARS	1
AIR CONDITIONING FOR INTERMEDIATE CARS	4
AIR CONDITIONING FOR FULL-SIZE CARS	7



AIR CONDITIONING FOR COMPACT CARS

The refrigeration part of the air-conditioning system is fundamentally the same for all air-conditioned cars. However, there are differences in the method used to control evaporator temperature so that the evaporator will not get too cold and freeze. There are also significant differences in air-flow and distribution as well as the methods used to control the temperature of the air delivered to the car interior.

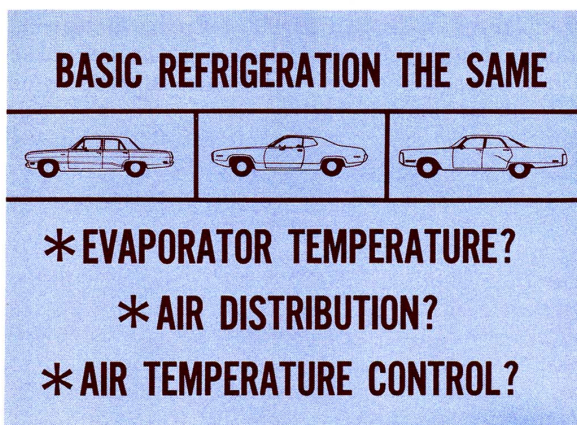


Fig. 1—All air-conditioning systems are not alike

This section explains temperature and air distribution control for compacts — Valiants and Darts. System differences for intermediate and full-size models are covered in the last two sections.

EVAPORATOR TEMPERATURE CONTROL

If the refrigeration system were allowed to run at its maximum cooling rate, the evaporator temperature could drop low enough to freeze the moisture in the air. Frost would form on the evaporator and under extreme conditions this would clog the fins and restrict airflow. On our compact models, the refrigeration system is cycled or turned off and on by engaging and disengaging the compressor clutch. A thermal-electric switch, with a sensing bulb inserted between the evaporator fins, senses the temperature. This switch is connected in series into the compressor clutch circuit.

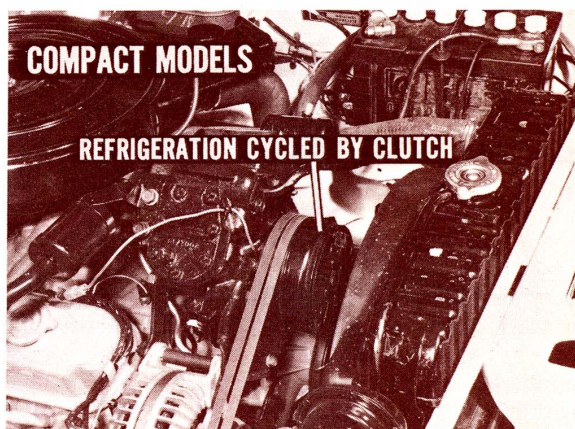


Fig. 2—Clutch cycled to prevent evaporator frosting

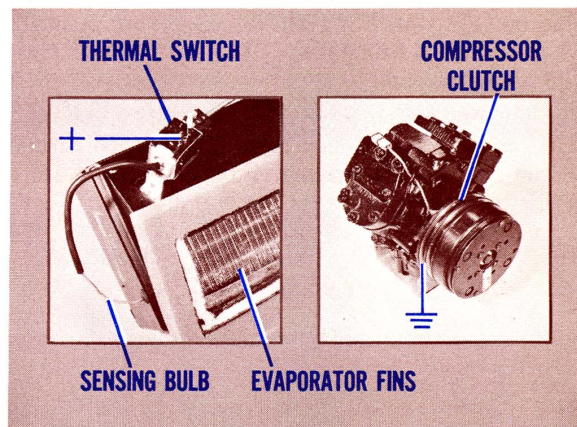


Fig. 3—Thermal switch controls compressor clutch

Before the evaporator gets so cold that it would cause frosting, the thermal switch opens, shutting off the current to the compressor clutch. When the evaporator warms up a bit, the switch closes and the clutch engages to restart the refrigeration cycle.

COLD AIR TEMPERATURE CONTROL

There is a mechanical connection between the temperature control lever on the instrument panel and the thermal switch at the evaporator. As the tem-



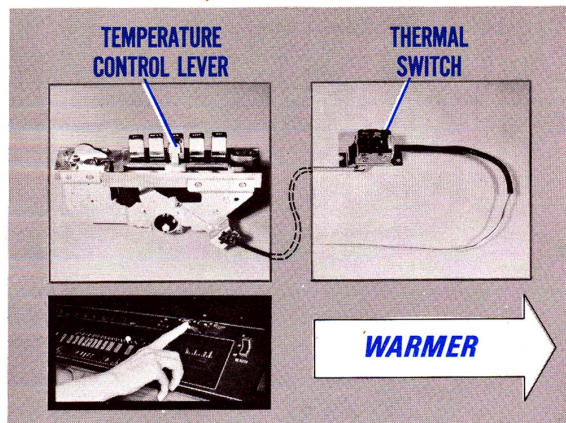


Fig. 4—The thermal switch temperature range is adjustable

perature control lever is moved to the right . . . toward warmer . . . the thermal switch operating range is changed so that it operates at a higher temperature range. Evaporator temperature control within the range selected is automatic, but since the switch opens at a higher temperature, the evaporator doesn't get as cold and cooling is reduced. Compact models are the only ones which use this method of controlling air discharge temperature when cooling is called for.

The buttons which provide cooling, MAX A/C and A/C, control the electrical input to the thermal switch and the compressor clutch circuit. In other words, the only time that the clutch circuit is activated is when one of these buttons is pushed. The clutch circuit is open when the OFF, DEFROST or HEAT BUTTONS are pushed.

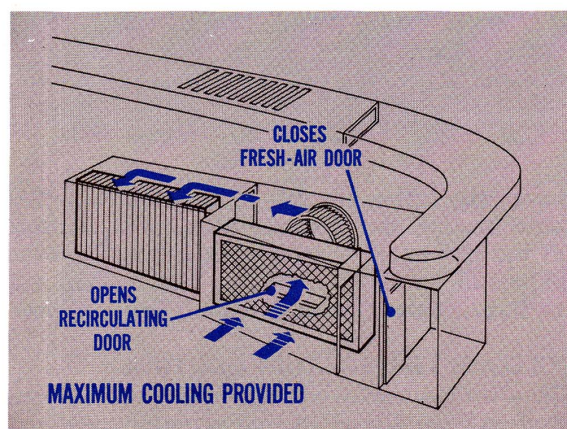


Fig. 5—Airflow for MAX A/C

INSIDE AND OUTSIDE AIR

When the MAX A/C button is pushed, the vacuum actuator system closes the outside air door and opens the recirculating air door. No outside air enters the car in MAX A/C . . . only cooler inside air. Soon the interior temperature is much lower than outside air and as this cooler air is recirculated, maximum cooling and quicker cooldown is provided.

When the A/C button is pushed, the vacuum system closes the recirculating air door and opens the outside air door. For all but the most extreme temperature conditions this is desirable since only fresh outside air is continuously being delivered to the car interior in A/C.

THE HEAT AND DEFROST BUTTONS

The HEAT and DEFROST buttons do several things. Pushing either of these buttons opens the water valve. The open water valve allows engine coolant to circulate through the heater core. This valve is a simple series valve. It is fully opened by vacuum when the HEAT or the DEFROST button is pushed. It is fully closed when the OFF, the MAX A/C or the A/C button is pushed.

The HEAT and DEFROST buttons also control the vacuum actuator for the heat-defrost door. This is an airflow control door. When the HEAT button is pushed, most of the air is directed downward to the low-level heat duct outlets. A much smaller amount of air is directed upward to the defroster outlets. In this way some airflow across the cold windshield glass is provided to minimize the possibility of condensation and frosting.

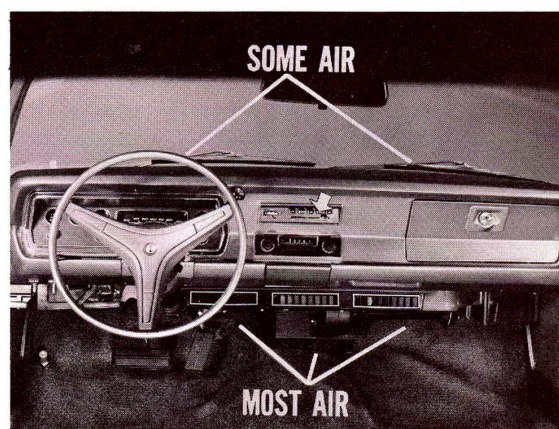


Fig. 6—The HEAT button controls air distribution



When the DEFROST button is pushed, most of the air is directed upward through the defroster outlets. A much smaller amount is directed downward to the heat outlets. Thus, some floor heat is provided even when maximum defrosting is required to clear an ice-covered windshield or to combat freezing precipitation.

AIR TEMPERATURE CONTROL

The temperature of the heater core is determined by the engine coolant temperature. Since, on compact models, the water valve does not regulate the amount of coolant flowing through the heater core, another method of controlling discharge air temperature must be used. For HEAT and DEFROST, a blend-air door is used to regulate air temperature. The position of this door determines how much outside air is directed through the heater core and how much bypasses the core without being heated.

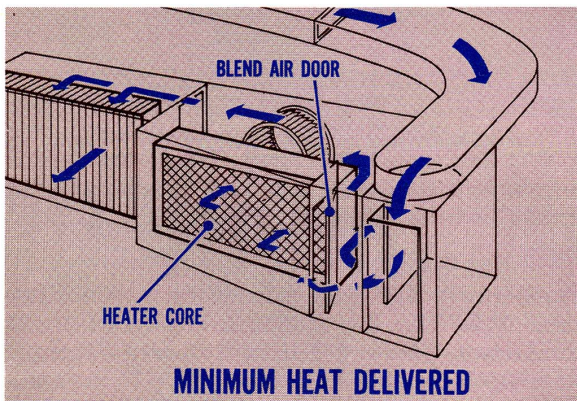


Fig. 7—Blend-air door in "Low Heat" position

The blend-air door is connected to the temperature control lever by means of a cable. When the lever is moved toward the left, the blend-air door allows a large amount of air to bypass the heater core . . . only a small amount of air is directed through the heater core. As a result, the air delivered to the car interior is warm rather than hot. Of course, with the temperature control lever all the way to the left, all air bypasses the heater core and air is delivered at outside air temperature.

As the temperature control lever is moved to the right (warmer position) the blend-air door directs much more air through the heater core and much less air bypasses it. In the full-heat position, all air passes through the heater core.

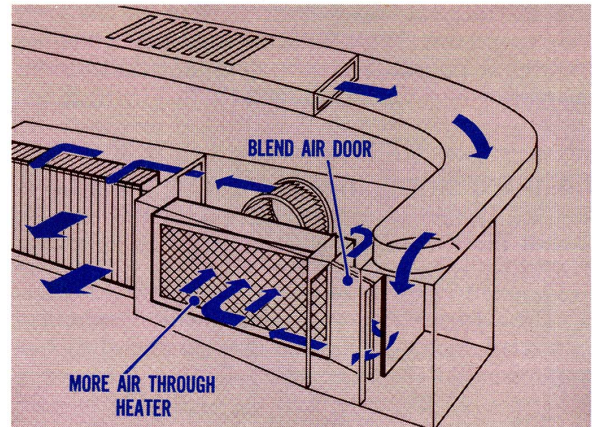


Fig. 8—Blend-air door in "Three-Quarter Heat" position

BLEND-AIR DOOR AND THERMAL SWITCH CONTROL

Both the thermal switch and the blend-air door are connected to the temperature control lever. However, the thermal switch controls temperature for cooling only and the blend-air door only affects heating. That's because when the MAX A/C or A/C button is pushed the compressor operates and the water valve remains closed so there is no coolant flow through the heater core. As a result, the heater core is cool and blend-air door position doesn't affect discharge air temperature one way or the other. Temperature is controlled entirely by the thermal switch.

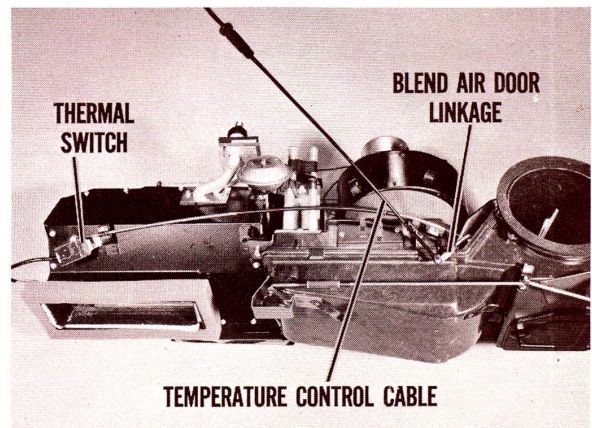


Fig. 9—Temperature control and thermal switch cable detail

On the other hand, when the HEAT or DEFROST button is pushed, the circuit to the compressor clutch is open so the evaporator does not get cold



and the thermal switch has no effect on discharge air temperature. With the water valve open and hot coolant in the core, the blend-air door controls discharge air temperature.

COMPACT MODEL OPERATIONAL SUMMARY

- This system provides either heating or cooling but the two functions are entirely independent of each other.
- The refrigeration system is turned on and off or cycled by engaging and disengaging the compressor clutch.



AIR CONDITIONING FOR INTERMEDIATE CARS

This is the system used on Barracuda and Challenger as well as Satellite, Charger and Coronet models. Although the operating controls on the instrument panel are different in appearance, the operation and the temperature control is the same for all of these models. The clutch is engaged and the compressor runs continuously on A/C and MAX A/C. Unlike the compacts, temperature is controlled by regulating the pressure of the refrigerant gas leaving the evaporator.

PRESSURE AND TEMPERATURE ARE FIRST COUSINS

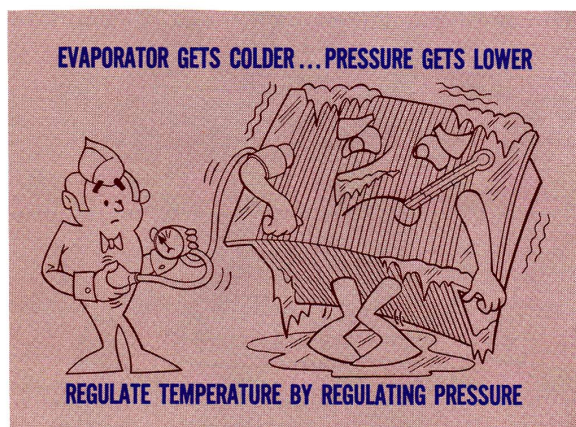


Fig. 10—Refrigerant pressure and temperature are related

- A thermal-electric switch controls clutch cycling so that the evaporator won't frost up. Since the temperature control lever adjusts this switch, it determines the temperature of the air delivered to the car interior when cooling is called for.
- The water valve is fully open when either the HEAT or the DEFROST button is pushed. Discharge air temperature is controlled by the blend-air door which determines how much air bypasses the heater core and how much is directed through it before being delivered to the car interior.

There is a direct relationship between evaporator pressure and evaporator temperature. As the evaporator gets colder, the pressure of the refrigerant gas leaving the evaporator is lower. Therefore, evaporator temperature can be regulated by regulating the pressure of the refrigerant leaving the evaporator.

Evaporator pressure is regulated by a modulating valve located in the suction or inlet side of the compressor. This is called an **Evaporator Pressure Regulator** or simply *EPR* valve. It is pressure sensitive and its operation is entirely automatic.

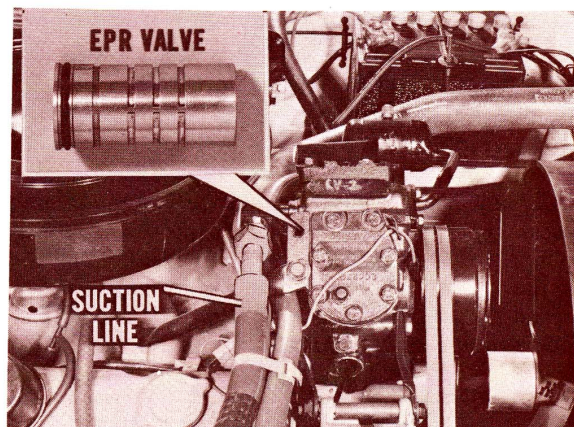


Fig. 11—The EPR valve is located in the compressor inlet



As the temperature of the evaporator approaches the frosting point, refrigerant pressure gets progressively lower. A pressure-sensitive bellows in the valve reacts to this reduced pressure and the EPR valve begins to close. The valve never closes completely . . . just enough to modulate refrigerant flow. Restricting the flow of refrigerant gas slows down the cooling process so that moisture on the evaporator will not freeze.

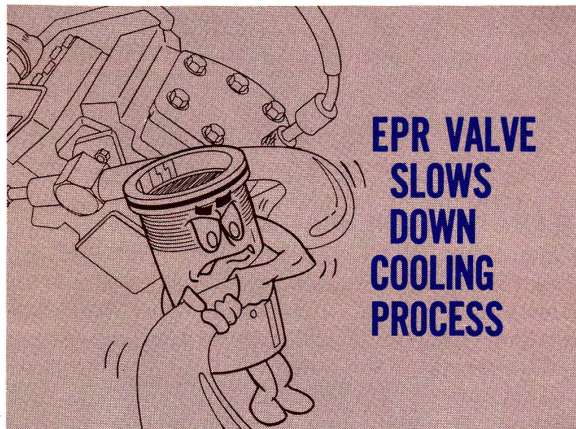


Fig. 12—The EPR valve modulates the cooling rate

REHEAT PRINCIPLE OF TEMPERATURE CONTROL

This system functions as a dehumidifier as well as a heater and a cooler. The incoming air passes between the fins of the evaporator where it is cooled to the lowest possible temperature . . . short of freezing. Chilling the incoming air wrings out excess moisture. This cool, dry air is then sent

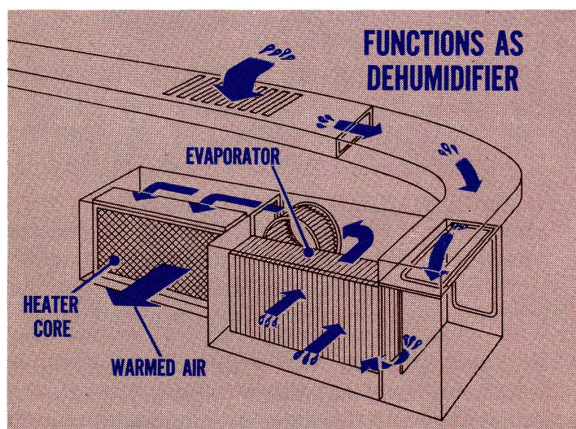


Fig. 13—System operates on the reheat principle

through the heater core and warmed . . . providing of course that there is hot water in the heater core. This method of controlling temperature when cooling is called for, is called the *reheat principle*.

Incidentally, you will notice in the accompanying illustration that the heater core and the evaporator are separated by the blower. The blower pulls air through the evaporator and then blows it through the heater core. This arrangement virtually eliminates the possibility of moisture from the evaporator being blown onto the heater core where it would evaporate and could then condense out on the cold windshield. This is called to your attention at this time so that you will have a better understanding of design differences in the full-size models where the evaporator and heater core are located back-to-back.

HEATER CORE TEMPERATURE CONTROL

The temperature of the heater core is controlled by a water valve which varies the amount of water flowing through the heater core. The water valve is manually controlled by a cable connection to the temperature control lever.

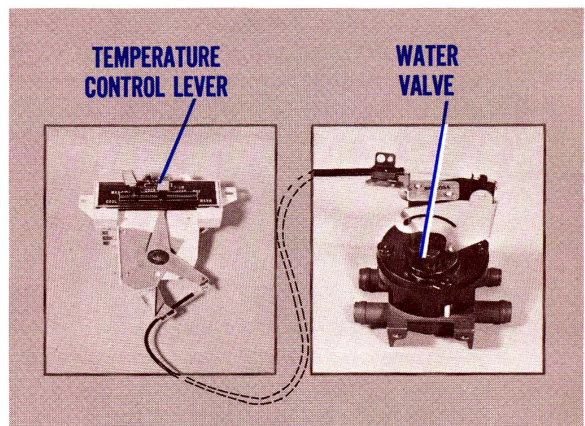


Fig. 14—Water valve controlled by temperature lever

The water valve used on these models is a combination bypass and flow valve. The flow part of the valve is fully closed by moving the temperature control lever all of the way to the left. This shuts off flow through the heater core. The bypass part of the valve is a spring-loaded poppet. When the flow valve is closed, coolant pressure opens the bypass and coolant returns to the engine without going through the heater core. The pressure-operated bypass valve automatically compensates for

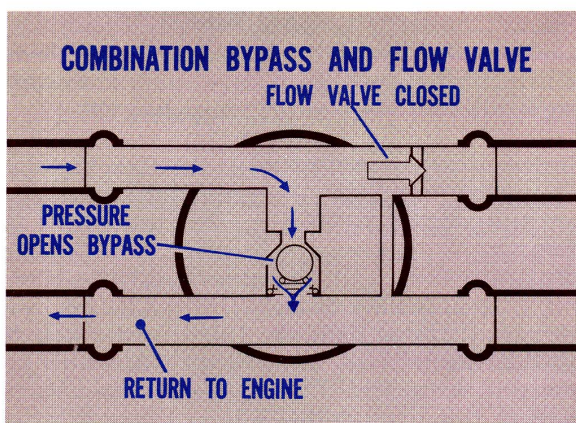


Fig. 15—Temperature control lever in "No Heat" position

changes in engine speed and coolant pressure. This bypass feature results in very good coolant volume and temperature control.

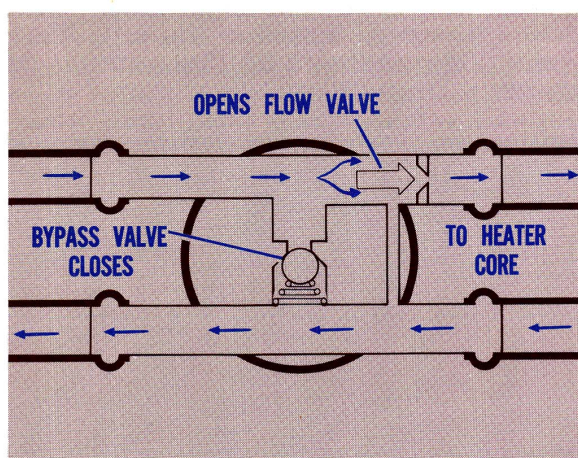


Fig. 16—Bypass valve opened by coolant pressure

OPERATION FOR MAX A/C AND A/C

When MAX A/C is selected, the control system positions an air door so that it closes off all outside air and uncovers an opening which permits recirculation of inside air. Soon the car interior is cooler than the outside air, so recirculating this cooler air provides maximum cooling.

When A/C is selected, the control system positions the air door so that it closes off all recirculated air and the system operates on outside air. Temperature control and final air distribution is the same for both MAX A/C and A/C.

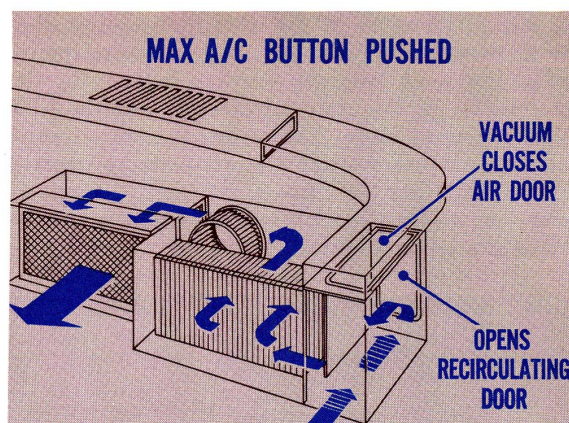


Fig. 17—Recirculating air provides maximum cooling

OPERATION FOR HEAT AND DEFROST

When either HEAT or DEFROST is selected, airflow through the evaporator and heater core is the same as it is for A/C operation. In other words, the air door closes off inside or recirculated air and the system operates on outside air. Airflow through the evaporator and heater core is the same as for cooling. However, since the compressor clutch is not energized, the compressor does not operate so there is no cooling. Temperature is controlled by the water valve . . . just as it is for cooling.

In the HEAT position some of the air is delivered to the windshield for defrosting but most of it is discharged through the low-level heat outlets. On DEFROST, most of the air is directed upward to the windshield and much less to the heat outlets. Of course no air is delivered from the A/C outlets for either HEAT or DEFROST.

INTERMEDIATE MODEL OPERATIONAL SUMMARY

- The compressor clutch is engaged when either MAX A/C or A/C is selected. The EPR valve controls the refrigeration system to keep the evaporator from getting too cold and frosting.
- On both MAX A/C and A/C this system operates on the reheat principle. The evaporator operates at the minimum controlled temperature to get rid of the moisture in the air. The air is then reheated to the temperature selected.
- For both heating and cooling, the adjustable water valve controls coolant flow through the heater core and this determines the temperature of the air delivered to the car interior.





AIR CONDITIONING FOR FULL-SIZE CARS

The system found on full-size cars — Fury, Polara, Monaco, Chrysler and Imperial — has a lot in common with the system for intermediate models. Both systems use an EPR valve to regulate minimum evaporator temperature, both operate on the reheat principle to provide dehumidification and the same type water valve is used to control discharge air temperature. However, there are also some significant differences which should be understood by owners as well as technicians. For example, the compressor runs at all times . . . even when the OFF button is pushed. But let's explain the "likenesses" and the "differences".

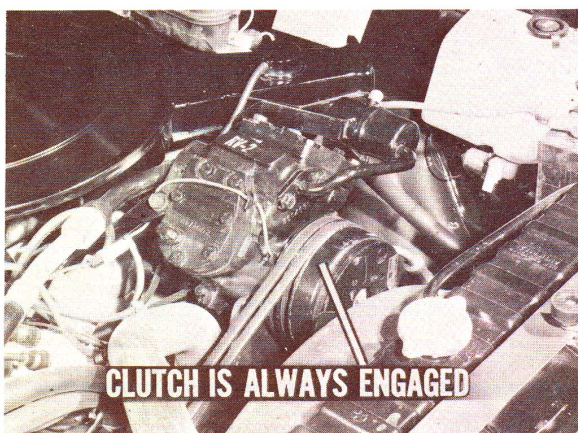


Fig. 18—Clutch is engaged when "OFF" button is pushed

THE AIRFLOW PATTERN IS DIFFERENT

Although this system also operates on the reheat principle, the airflow and the arrangement of the blower, evaporator and heater core is different.

The blower is located at the far right side of the car and pushes the air through the system. Airflow is through the evaporator, where the air is cooled and dehumidified, then through the heat core before being delivered to the interior of the car. The temperature of the heater core is controlled by the water valve which regulates the flow of coolant through the heater core. This combination bypass and flow valve is connected by cable to the tem-

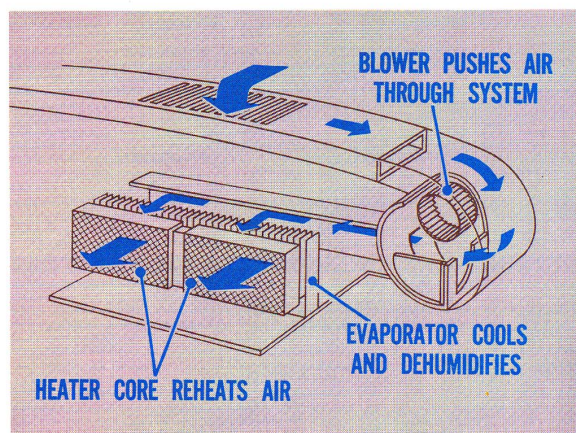


Fig. 19—This system also operates on the reheat principle

perature control lever. The water valve and this part of the system is just like the intermediates.

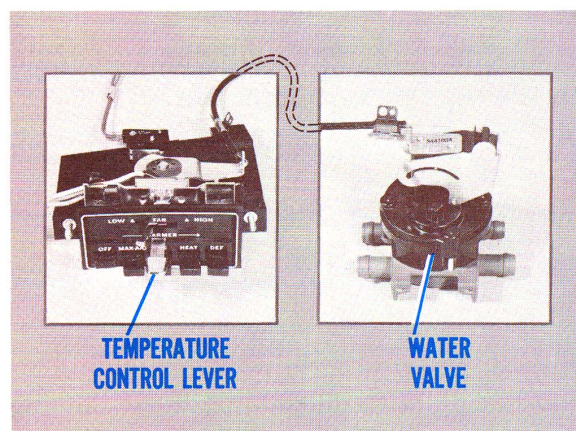


Fig. 20—Temperature lever regulates coolant flow

BACK-TO-BACK HEATER AND EVAPORATOR

Notice that the evaporator and heater are very close together and mounted back to back. This arrangement allows the body designer to fit a lot of cooling and heating capacity into the front compartment without sacrificing "people room" or legroom. However, it does present some potential problems that have been considered in designing



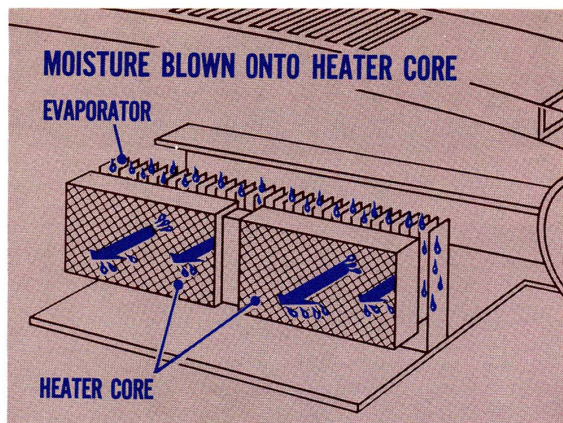


Fig. 21—Evaporator and heater mounted back-to-back

the complete system. For example, if moisture has collected on the evaporator fins it may be blown onto the heater core. If the heater core is warm, this moisture will evaporate rapidly and humid air will be delivered to the windshield when the heat or defrost button is pushed. If the windshield is colder than the humid air, moisture will condense on the cool glass.

Several things have been done to minimize this condition on past and present models. Incidentally, it was pointed out earlier that on intermediate models the heater core and evaporator are separated . . . not back to back. This arrangement virtually eliminates the likelihood of moisture from the evaporator being blown onto the heater core.

PAST MODEL FULL-SIZE CARS

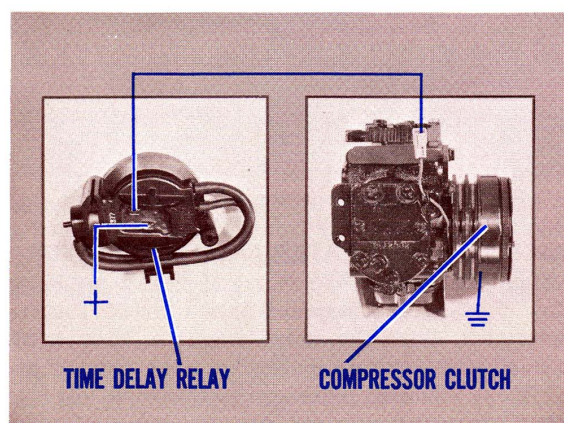


Fig. 22—Time-delay relay used on past-model cars

On past model full-size cars, a time delay relay was added to the compressor clutch circuit. This relay energizes and engages the compressor clutch when either the HEAT or the DEFROST button is pushed. The compressor operates long enough to cool the evaporator and dehumidify the air passing through it.

Drying the air before it is delivered to the windshield minimizes the possibility of moisture condensing on the cool glass. As an added precaution, an orifice in the vacuum system delays the opening of the defroster door. As a result, when the HEAT or DEFROST button is pushed, the first blast of air is delivered from the air-conditioning outlets instead of the defroster outlets. This further reduces condensation on the windshield.

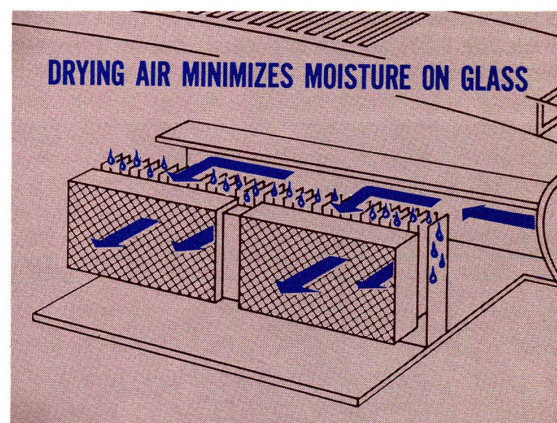


Fig. 23—Cold evaporator dehumidifies incoming air

NEW COMPRESSOR CIRCUIT FOR 1972

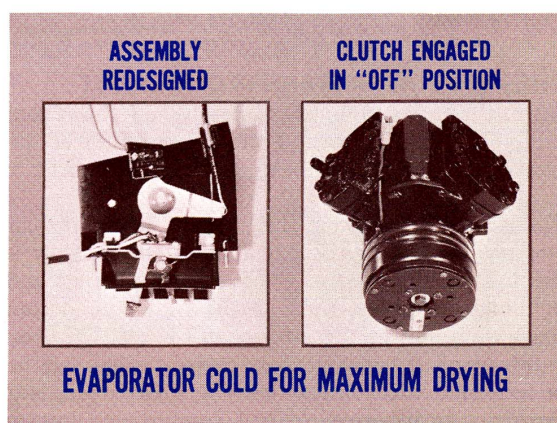


Fig. 24—1972 Push-button assembly redesigned



Beginning with the 1972 models, the time-delay relay was eliminated from the clutch circuit. Instead, the push-button control unit was redesigned so that the clutch is energized . . . *even when the OFF button is pushed*. As a result, the evaporator is always cold and this provides full-time drying of the air, which minimizes the condensation of moisture on the windshield.

DOESN'T THIS WASTE A LOT OF GASOLINE?

Owners have asked the question, "Doesn't running the compressor all the time waste a lot of power and gasoline?" The answer is, "No". As a matter of fact, it takes very little power to run the compressor when the heat load on the evaporator is light, so the increase in fuel consumption is very slight.

Consider these facts. When the OFF button is pushed, it's because outside air temperatures are moderate and you don't need heat or cooling. Since the heat load on the evaporator is very light, it cools down quickly and the EPR valve takes over to control the system and maintain minimum evaporator temperature. Under this condition, it takes very little power to operate the compressor.

When the HEAT or DEFROST button is pushed it's because the outside air is already cool. Under this condition the heat load on the evaporator is even less, so very little power is required to run the compressor. In fact, when it is quite cool out, the *amount* of moisture in the air is quite low, even when the relative humidity is up. That's because cold air simply does not contain as much moisture as warm air at the same relative humidity. So when it is cold out, there is usually less need to dehumidify the incoming air.

LOW-PRESSURE CUT-OFF SWITCH

For all practical purposes, the compressor does not operate unless cooling or dehumidification is required. Here is why. A low-pressure cut-off switch, located on the receiver drier, is wired in series with the magnetic compressor clutch. It opens the clutch circuit when liquid refrigerant pressure drops below the control point of the switch. The primary purpose of this switch is to protect the compressor in case the refrigerant is lost from the system. If refrigerant is lost and the compressor continues to operate, the compressor could be damaged because of inadequate circulation of the refrigerant oil.

However, the low-pressure cut-off switch also opens the clutch circuit when it is cold out. That's because there is a direct relationship between refrigerant pressure and temperature. (Remember, this was pointed out when we were explaining that the EPR valve controlled temperature by regulating pressure.) So, as the outside temperature approaches freezing, refrigerant pressure will be low enough to open the low-pressure cut-off switch and stop the compressor.

IN HEAT OR DEFROST, THE DRIVER CAN STOP THE COMPRESSOR

Earlier it was pointed out that the push-button assembly was redesigned for 1972. As a result of this change, a direct circuit to the low-pressure cut-off switch and the compressor clutch is completed when the OFF, the MAX A/C or the A/C button is pushed. When the HEAT or the DEFROST button is pushed, these buttons route the clutch circuit through a new switch which is built into the push-button assembly. This switch is controlled by the temperature control lever. When the lever is in the "cool" position, the switch is closed and the circuit to the low-pressure cut-off switch and compressor clutch is completed. Moving the temperature control lever to the right . . . toward warmer . . . opens the switch and the clutch circuit.



Fig. 25—Moving temperature lever to stop compressor

If it is cool out but the temperature and refrigerant pressure are above the point at which the low-pressure cut-off switch opens, the driver can stop the compressor by moving the temperature control lever approximately one-quarter of its travel to the right . . . toward WARMER. This opens a clutch circuit switch built into the control unit. From this



you can see that the compressor does not waste fuel or power, because it does not operate when it is not needed.

FACTS ABOUT FULL-TIME BLOWER OPERATION

Since it is virtually impossible to make a car absolutely airtight, it is generally considered desirable to pressurize the car interior so that all air leaks will be from the inside-out rather than outside-in. At the beginning of the 1972 model year two things were done to provide a positive inside pressure condition.



Fig. 26—It is desirable to pressurize the car interior

To insure positive interior pressure at low speeds or when standing still, a blower circuit which bypasses the blower speed control switch was provided. This

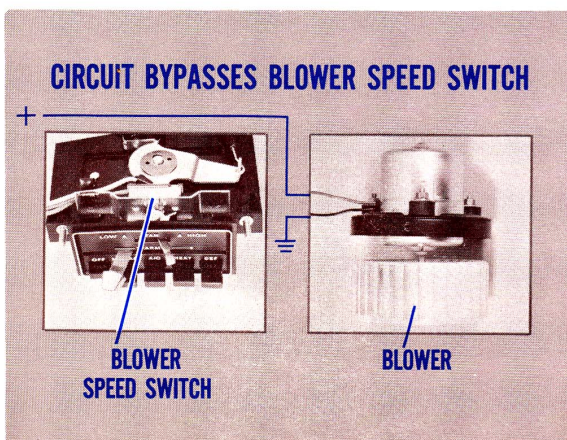


Fig. 27—Blower runs when ignition is turned on

circuit is connected to the ignition so that the blower runs at very low speed when the ignition is turned on.

Also at the beginning of 1972 production, a bracket was added to the opening for the outside air door so that the door remains open about 20%. With this opening to the outside, ram air maintains a positive pressure inside the car under highway driving conditions. With windows closed, the volume of air is not very great . . . just enough to insure that all leakage will be from the inside-out.

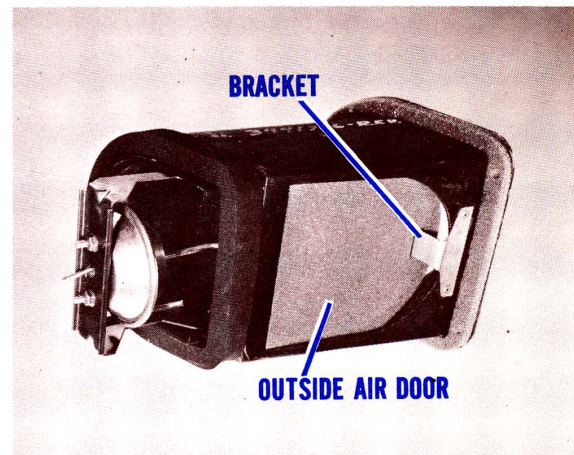


Fig. 28—Ram air maintains positive pressure inside car

IN ANSWER TO CUSTOMER REQUESTS

Some owners of early production cars objected to the blower running continuously when the system was in the OFF position. Because of these objections, both the outside air door bracket and the full-time blower circuit were eliminated in later production. If an owner of one of these later models wants to pressurize the interior, all he has to do is push one of the heat or cool buttons to turn the blower on.

MODIFYING EARLY PRODUCTION MODELS

If the owner of an early-production car insists on eliminating blower operation in the OFF button position, the modification is very easily made. Figure 29 shows the original bypass circuit connections at the blower resistor block. The tan wire is a blower feed circuit connection and is essential to normal operation of the blower speed control switch. The brown-wire is in the circuit that feeds the blower when the OFF button is pushed.



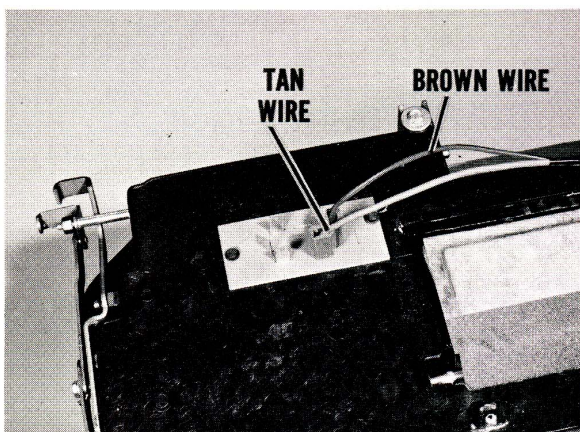


Fig. 29—Early production connections at resistor block

Figure 30 illustrates the field modification. The two-wire connector at the blower resistor block has been removed, turned 180 degrees and reinstalled so that the tan wire is reconnected to the same terminal as before but the brown wire has been disconnected.

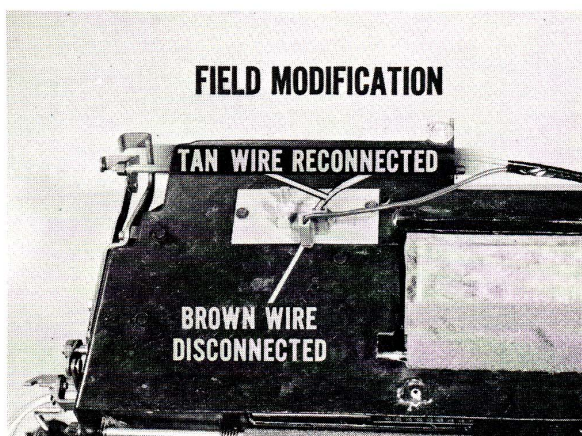


Fig. 30—Field modifications of A/C blower circuit

In addition, the exposed brown-wire terminal of the resistor block must be insulated to prevent accidental shorts. This is easily done by slipping a short piece of rubber or plastic hose over the terminal.

It is not practical nor is there any need to modify or remove the outside air door bracket on early production cars. There have been no objections to the small amount of ram air delivered after the car is on the highway and moving fast enough to pro-

duce a pressure differential. The only objection has been to that first cold breeze delivered by the blower when the ignition is first turned on.

EVAPORATOR HOUSING CONDENSATE LEAKAGE

On early production cars, the front and rear halves of the evaporator housing are fastened together by screws and “J” nuts. If these screws are loose, any moisture collected on the evaporator may drip down onto the front compartment carpet. So, the first step in curing an evaporator housing leak is to tighten the screws. However, do not overtighten them or you could crack the evaporator housing.

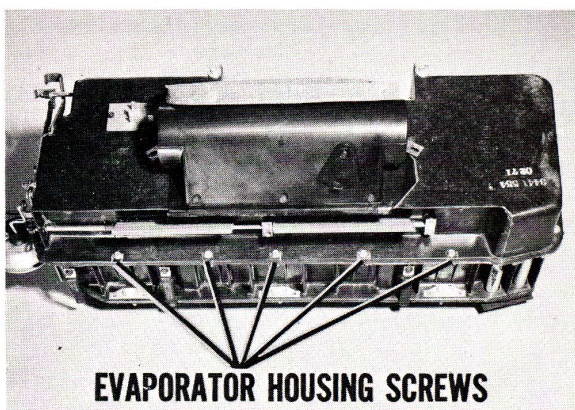


Fig. 31—Loose screws can allow condensate leak

If tightening the housing screws does not correct the leak, it may be necessary to reposition or even replace the evaporator housing seal. Any small leaks which persist after tightening the screws can usually be corrected by applying mastic sealer to the evaporator housing joint.

GOODBYE SCREWS . . . HELLO SPRING CLAMPS

In current production the evaporator housing screws have been replaced by spring clamps which literally squeeze the two halves of the housing together to insure a good seal. The clamps have virtually eliminated the condensate leak problem.

When the spring clamp fasteners entered production, the screw holes were not eliminated from the evaporator housing. So, when you run into one of the late production jobs with clamps, don't jump to the conclusion that someone forgot the screws . . . the holes are still there but the screws aren't needed.



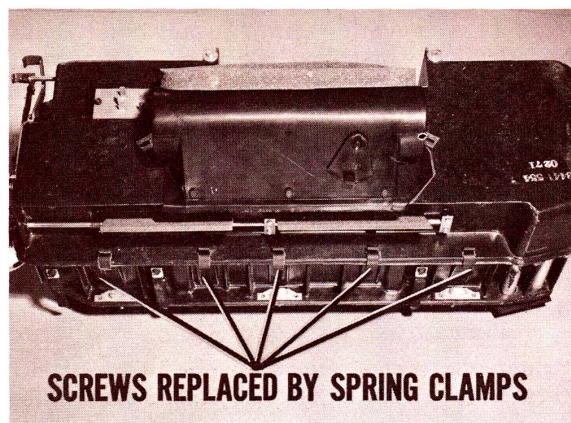


Fig. 32—Spring clamps squeeze housing halves together

SPRING CLAMP TOOL

Those spring clamps are mighty stiff to remove and install unless you have the right tools to spread them. Figure 33 illustrates how the tool is used.

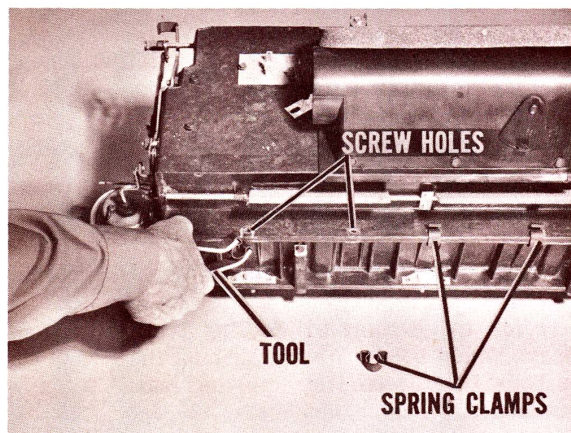


Fig. 33—Fabricated tool used to install spring clamps

As you can see, the tool actually consists of two pieces which fit into the “ears” of the spring clamp. Figure 34 provides all of the dimensional information you’ll need to make this tool. The material used is two pieces of 3/16” x 1/2” x 4” steel or strap iron which is readily available. Simply bend one of these pieces 45 degrees and the other 60 degrees. These angles are specified because the evaporator housing is very close to the dash panel and the floor pan and working room is restricted. The angles specified allow you to install and remove the clamps without removing the evaporator assembly from the car.

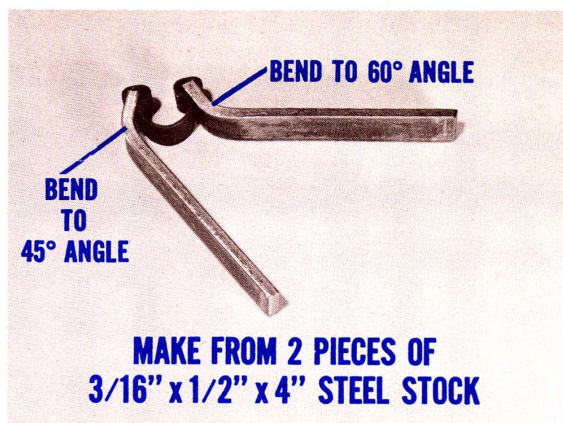


Fig. 34—You can easily fabricate this spring clamp tool

A FEW WORDS ABOUT AUTO TEMP II

The Auto Temp II air-conditioning and air-distribution system is basically the same as the standard air-conditioning system for full-size cars. Of course, with Auto Temp the driver simply selects the temperature desired and the system then delivers the required amount of cooling or heating to maintain this temperature.

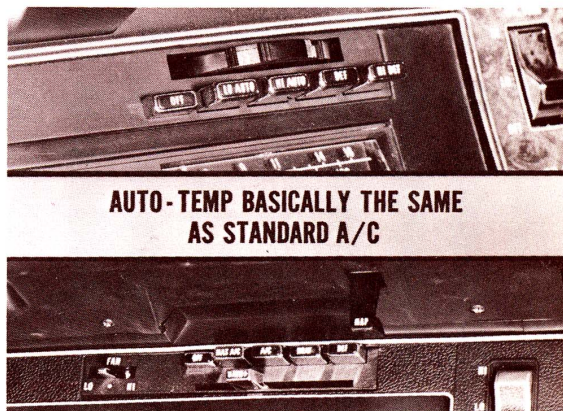


Fig. 35—Refrigeration and airflow are same for both systems

In the Auto Temp system the method of controlling minimum evaporator temperature is different. The Evaporator Pressure Regulator (EPR) valve has been replaced by an Evaporator Temperature Regulator (ETR) valve. Both valves accomplish the same thing: they control refrigerant flow so that the evaporator won’t get too cold and frost up.

In operation there is one minor difference. The EPR valve modulates refrigerant flow . . . the ETR

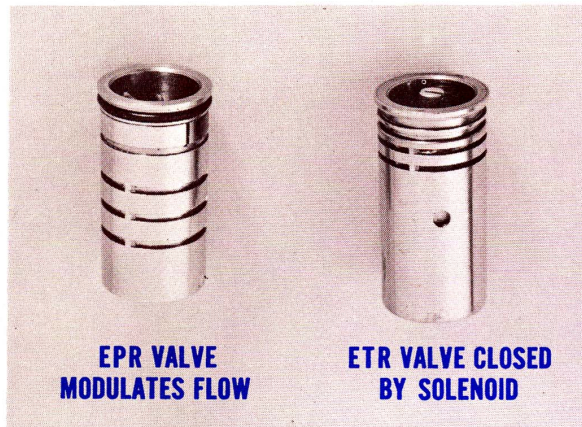


Fig. 36—Both valves control refrigerant flow

valve is an ON or OFF valve. In other words, it is normally fully open and it is closed by a solenoid built into the valve.

THE EVAPORATOR TEMPERATURE REGULATOR SWITCH

Frost control starts with an ETR switch mounted on the evaporator housing. This is a thermal electric switch having a temperature-sensing capillary tube inserted between the fins of the evaporator.

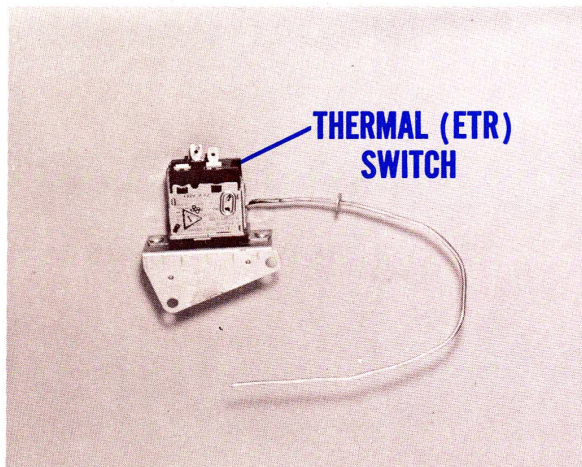


Fig. 37—Thermal electric switch controls ETR valve

The thermal (ETR) switch contacts close when evaporator temperature approaches the frost point. This energizes the ETR valve solenoid and restricts refrigerant flow. Except for the ETR valve, the refrigeration part of the system is the same as for standard air conditioning.

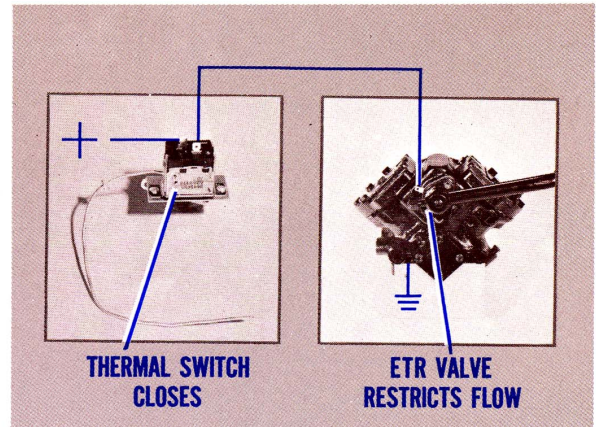


Fig. 38—Contacts close before frosting occurs

FULL-SIZE MODEL SUMMARY

- The compressor clutch circuit is activated or “turned on” for all push-button positions ... even OFF. However, the Low-Pressure Cut-Off switch opens the clutch circuit when refrigerant pressure and temperature are reduced to a pre-determined point.
- The driver can stop the compressor from operating in the HEAT and DEFROST button positions by moving the temperature selector lever to the right.
- The EPR valve controls the refrigeration system to keep the evaporator from getting too cold and frosting up. On Auto Temp-equipped cars, an ETR valve performs this same function.
- On both MAX A/C and A/C the system operates on the reheat principle. The evaporator operates at minimum controlled temperature to dry the air. The air is then reheated to the temperature selected.
- For both heating and cooling, the adjustable water valve controls coolant flow through the heater core and this determines the temperature of the air delivered to the car interior.
- On early production models the blower runs at low speed to pressurize the interior ... even with the OFF button pushed.
- On later production cars this full-time blower circuit was eliminated. Early production cars can easily be modified to eliminate this blower circuit so that the blower will not operate when the OFF button is pushed.



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