"KEEPING YOUR CUSTOMERS COOL"

SERVICE REFERENCE BOOK

SESSION NO. 93

Prepared by
CHRYSLER CORPORATION
PLYMOUTH · DODGE · DE SOTO
AND CHRYSLER DIVISIONS

"CAR AIR-CONDITIONING IS INCREASING"

Customer interest in car air-conditioning is on the increase. More and more cars are being equipped with Airtemp units. Besides the increasing number in your area, you'll find more and more tourist cars so equipped. It's smart, therefore, to be sure your men are trained to handle this service.

That's why this reference book covers things that every mechanic ought to know about air-conditioning units. You'll find timely tips on what parts are involved, how they work, and what to do when one section isn't doing its full share of the job of keeping our customers cool.

Here's where you'll find this helpful information:

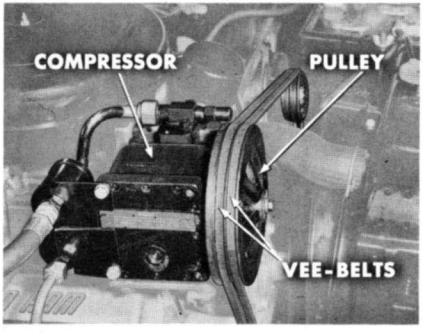
INTRODUCTION

There are two types of air-conditioners available on our cars: a standard, and a de luxe model. The standard model differs from the de luxe in that it cools the air in the car without taking in any air from the outside. It's generally called the "recirculating type" because it draws in the air from inside the car, removes heat and moisture, then recirculates the cooled and dehumidified air for the passenger's comfort. The de luxe model also conditions the air in the car. In addition, it draws a certain amount of air from the outside, conditions it, and supplies that fresh air to the interior of the car.

COMPONENTS OF THE SYSTEM

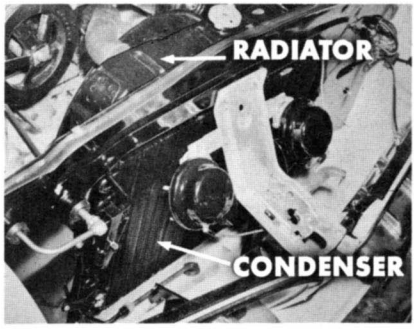
There are four main units in the air-conditioning system: a compressor, condenser, receiver-drier-strainer, and an evaporator. These are connected by copper lines and rubber hoses. A refrigerant, Freon 12, circulates through the entire system.

Compressor. The compressor, mounted on the right front corner of the engine, is driven by V-belts from the engine crankshaft. The function of the compressor is to circulate the Freon throughout the system, and also to raise the pressure and temperature of the Freon gas so the gas will condense to a liquid when cooled by the air flowing through the condenser.

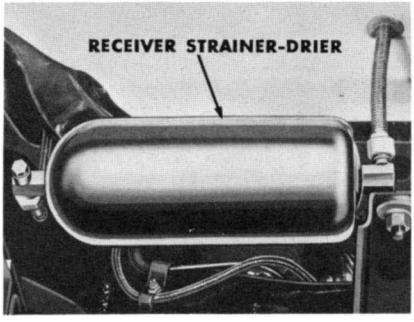


Condenser. The condenser is mounted in front of the radiator. Its function is to transfer heat units from the Freon gas to the outside air. In this process, the gas condenses and changes to a liquid state. The

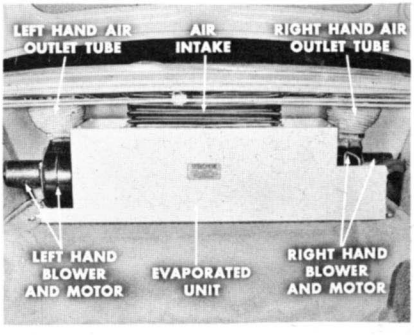
condenser is made of a continuous coil of copper tubing to which thin metal fins are attached. Air, drawn by the engine fan plus the forward motion of the car, passes through the condenser and absorbs the heat units radiated by the Freon throughout the tubes and fins.



Receiver-Drier-Strainer. This cylindrical unit, mounted below the condenser, does three jobs: it receives and acts as a reservoir for the Freon; it absorbs moisture by means of silica gel contained in the unit; and it filters out foreign particles that may be present and clog the system.



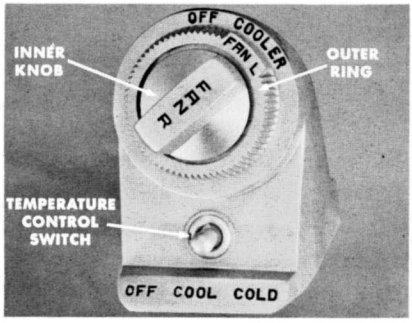
Evaporator. The evaporator, mounted in the luggage compartment of the car, consists of a metal housing containing a continuous coil of copper tubing to which the metal fins are attached. Freon flows through the tubing, vaporizes and absorbs heat units from the air drawn from the interior of the car and circulated around the tubing and fins. This is where the air drawn from the car is cooled, conditioned, and then forced back into the car by blowers at each end of the evaporator.



Other units in the system are described in the following section on operation.

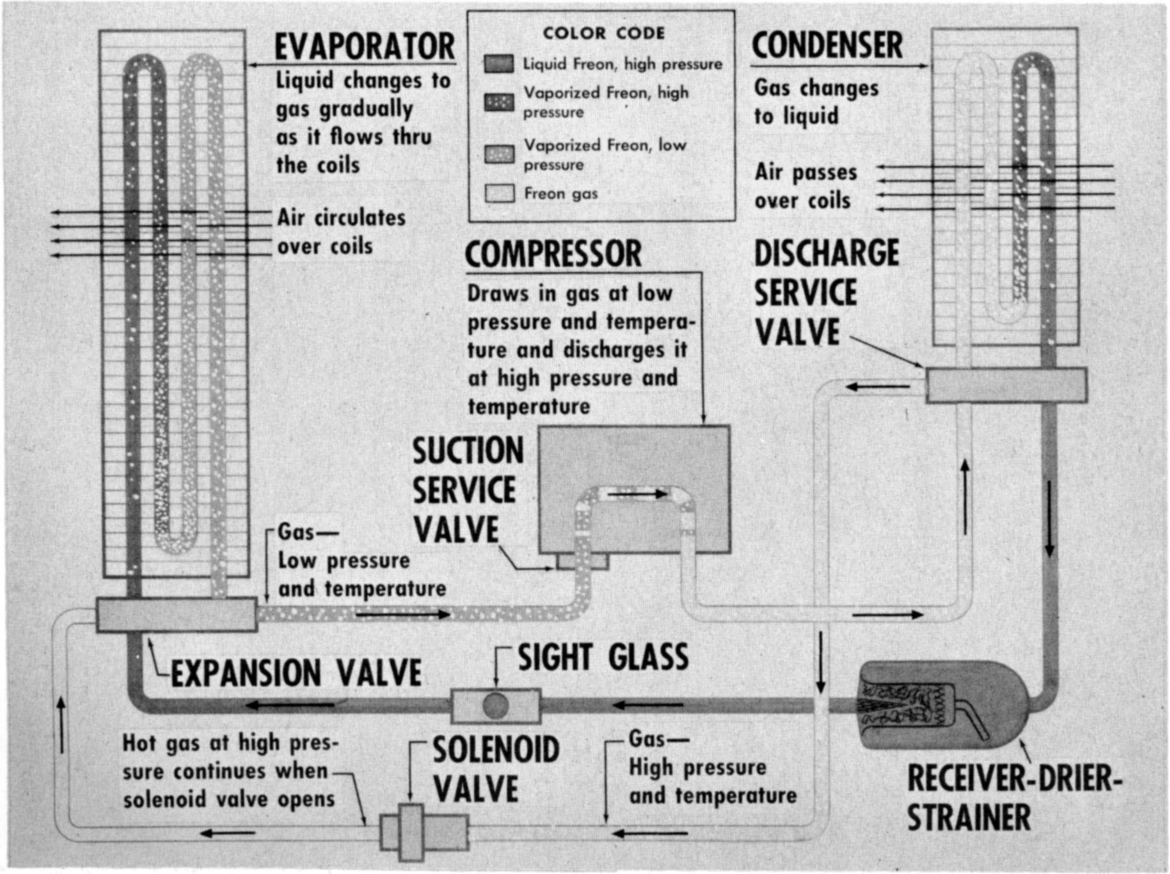
HOW THE SYSTEM WORKS

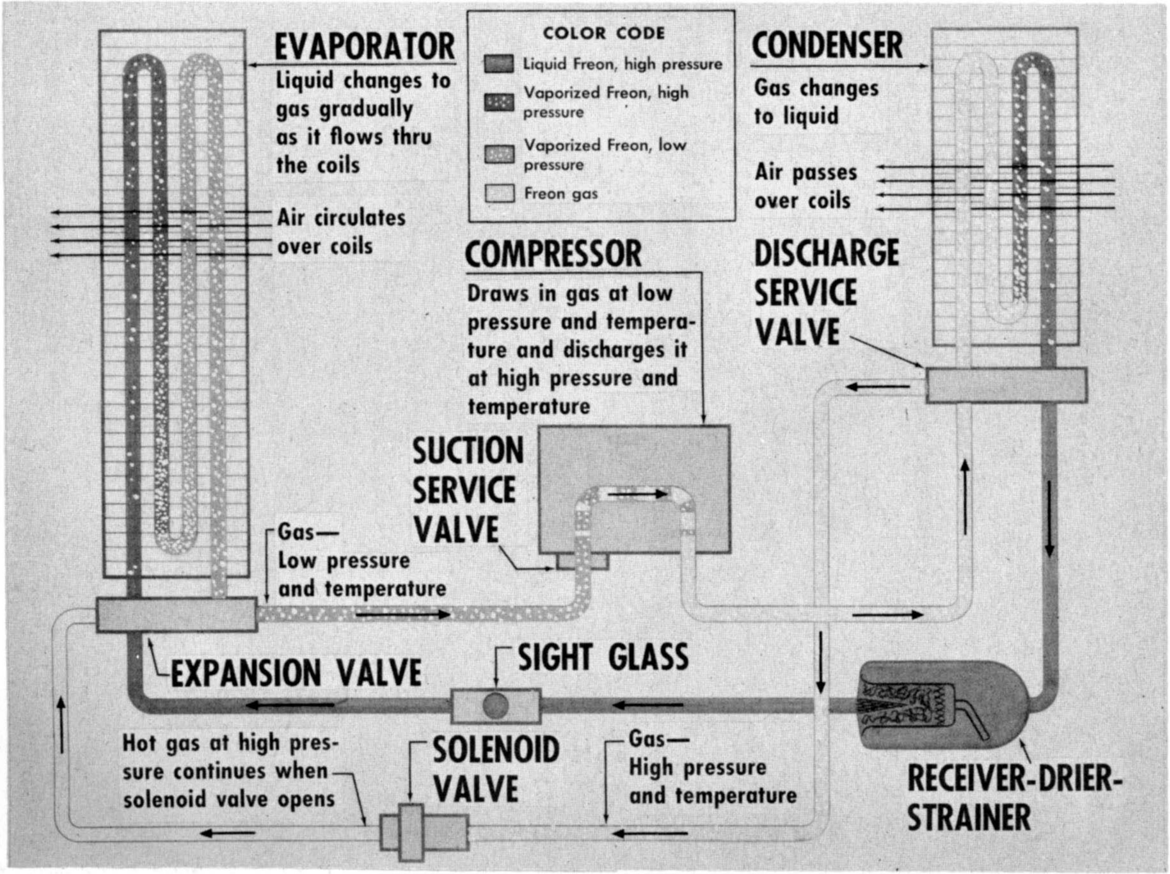
As far as the owner is concerned, operating the air-conditioning system is very simple. With the engine running, he turns the temperature control switch to "COOL" or "COLD," depending on the degree of cooling he wishes. Then he turns the blower switch on, selecting either the low or high speed. The inner knob of the blower switch controls the right blower; the outer ring of the switch controls the left blower. The owner may use either one or both blowers, again depending on how quickly he wants to cool the air in the car. Actually, there are about ten different combinations of cooling operation he can select.



As far as the mechanic is concerned, however, he should know how the air-conditioning system operates to accomplish the cooling. So, let's follow the cycle.

Liquid Freon under pressure flows from the receiver-drier-strainer to the expansion valve located in the right end of the evaporator assembly. The expansion valve meters the flow of Freon to the evaporator coils and, at the same time, relieves pressure on the Freon so it will readily vaporize. As the Freon enters the evaporator coils it starts to absorb heat units from the air being circulated around the coils by the blowers. The more heat it absorbs, the more it vaporizes until, by the time it leaves the evaporator coils, it has changed from a liquid to a gas.


EVAPORATOR
Liquid changes to gas gradually as it flows thru the coils
Air circulates over coils
COLOR CODE
Liquid Freon, high pressure
Vaporized Freon, high pressure
Vaporized Freon, low pressure
Freon gas
CONDENSER
Gas changes to liquid
Air passes over coils
COMPRESSOR
Draws in gas at low pressure and temperature and discharges it at high pressure and temperature
DISCHARGE SERVICE VALVE
SUCTION SERVICE VALVE
Gas— Low pressure and temperature
EXPANSION VALVE
SIGHT GLASS
Hot gas at high pressure continues when solenoid valve opens
SOLENOID VALVE
Gas— High pressure and temperature
RECEIVER-DRIER-STRAINER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SOLENOID VALVE
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High pressure and temperature
RECEIVER-DRIER-STRAINER

This gas, carrying the heat units it has absorbed from the air, is drawn into the compressor. Here the gas is compressed, which raises its pressure and also its boiling temperature to a point higher than the temperature of the outside air.

The compressor forces the heated Freon gas into the condenser. Here the outside air, because of the forward motion of the car, plus the engine fan, is drawn through the fins of the condenser. The heat units in the Freon gas are radiated from the fins of the condenser, and absorbed by the outside air. The temperature drop, plus the pressure on the gas, causes the Freon to condense to a liquid.

Leaving the condenser, the Freon enters the end of the receiver-drier-strainer. The first compartment of this unit is the Freon reservoir for the system. Passing from the reservoir section, the Freon goes through a coarse-mesh screen. It then enters the section containing the silica gel, where any moisture is removed. Finally the Freon passes through a fine-mesh strainer and into the liquid line leading to the expansion valve in the evaporator assembly.

On its way to the expansion valve, the liquid Freon passes through a sight glass where you can check its condition. For ex-

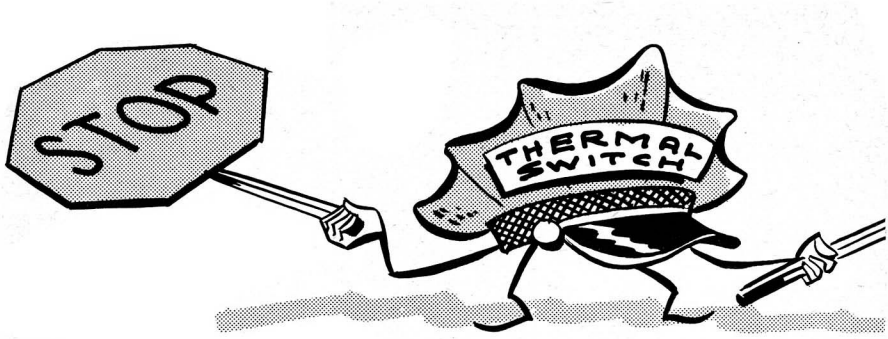
ample, after the system has been operating for about seven minutes with the temperature control switch turned to the "COLD" position, the Freon will appear as a clear, solid stream of liquid. If, however, air bubbles appear in the liquid, it means that the system needs recharging. You'll find the sight glass on the right front fender apron.

Partial Cooling. When the temperature control switch is turned to the "COOL" position, the system operates at less than full cooling capacity. This reduction in cooling capacity is brought about automatically through the use of a solenoid valve located in a by-pass line between the discharge side of the compressor and the inlet side of the evaporator. Here's how that's done.

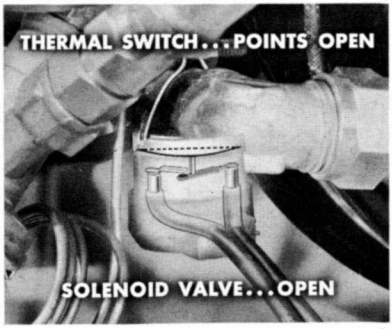
Turning the temperature control switch to "COOL" keeps the solenoid valve de-energized, and the valve open. When the solenoid valve is open, part of the high-pressure gas discharged from the compressor flows through the by-pass line and mixes with the Freon entering the evaporator coils from the expansion valve. Actually, the by-pass line is connected to the expansion valve distributor *so the hot gas will mix with the Freon and speed up the vaporization of the Freon before it reaches* the evaporator coils. Since the Freon has absorbed some heat before it reached the evaporator coils, its ability to absorb additional heat from the air surrounding the evaporator coils is reduced. Therefore, the air returned to the interior of the car by the blowers will be "cool" rather than "cold."

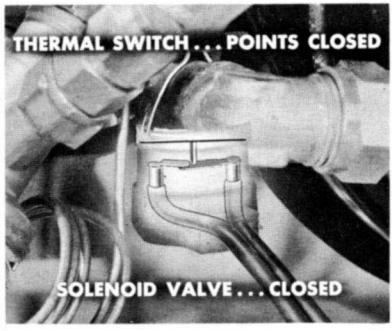
The diagram shows how the solenoid valve functions in the circuit to accomplish this reduced cooling.

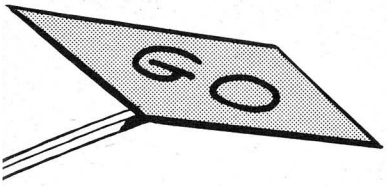
Thermal Switch. There may be an instance when the owner, on a rather cool day, may operate the system with the blower switch turned to low speed but with the temperature control switch turned to the "COLD" position. Under this operating condition, frost may form on the evaporator coils. Since frost can damage the coils, a protective thermal switch is attached to the suction line leading from the evaporator.



This thermal switch is a bimetallic-type with a set of contact points, and is connected in series with the temperature control switch and the solenoid valve. A drop to about 30 degrees in the temperature of the refrigerant gas leaving the evaporator will cause the contact points in the thermal switch to open. Breaking this circuit de-energizes the solenoid, causing the valve to open. Hot gas from the compressor can then flow through the by-pass line to the expansion valve distributor as explained previously, raising the temperature of the Freon entering the evaporator. Since the Freon will then absorb less heat from the air, frosting of the evaporator coils is prevented. When the temperature of the Freon rises to about 45 degrees, the contacts in the thermal switch automatically close, which permits the solenoid valve to close, cutting off gas flow through the by-pass line.

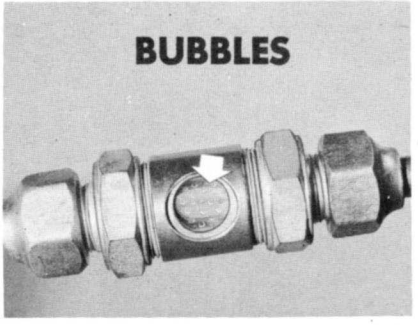




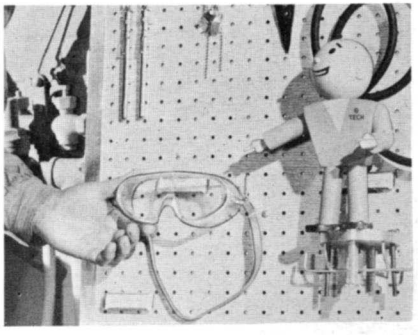


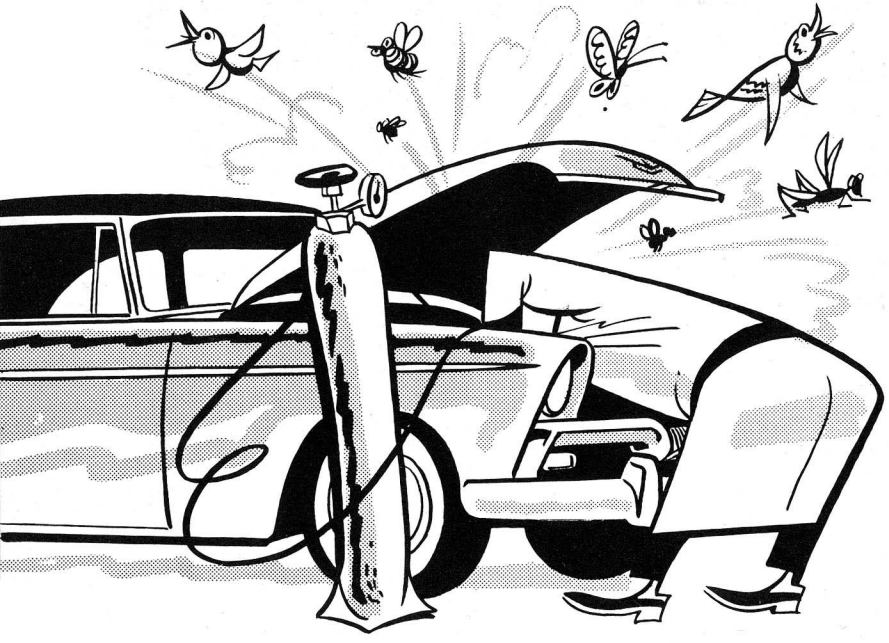
MAINTENANCE

One thing you'll find easy to do is recharge the system whenever necessary. For instance, let's say the temperature switch is on "cold" position and the unit has been running for about seven minutes. If bubbles still appear in the liquid Freon flowing through the sight glass, that means you'll have to partially recharge the system. You do that at the suction side of the compressor.

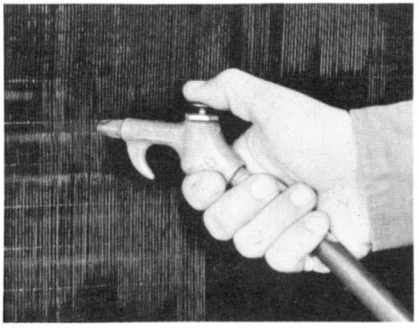


Before you handle Freon, however, always wear protective goggles. A tiny drop splashing into your eye can freeze your eyeball. Nobody needs to tell you that can hurt like blazes.





In addition to adding Freon when needed, two cleaning jobs may occasionally be required. The ability of the condenser to transfer heat depends on how freely outside air can pass through the fins. If bugs or other particles collect, they'll insulate the condenser and cut down its efficiency.



So, use compressed air—or a soft-bristle brush—to clean the condenser fins. Keep in mind that anything hard, like a stiff wire, might bend the condenser fins out of shape.

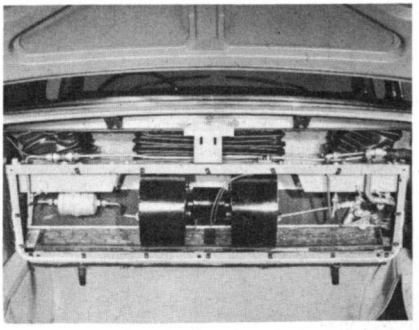
Another point to check is the air filter. Over a period of time, dust drawn into the evaporator unit will tend to clog the air filter. That, of course, would restrict the flow of cooled air into the car. So, to maintain efficiency, inspect the filter at least once a month. Replace it if it is clogged or dirty.

UNIT DOESN'T COOL...OR DOESN'T COOL PROPERLY

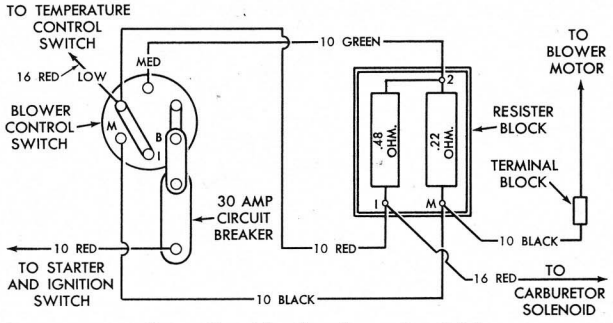
Any other service that might come up once in a great while is usually one of two kinds: The unit either doesn't cool . . . or it doesn't cool properly. So, see if the blowers are working first. Next, see if the solenoid valve or the thermal switch are in good operating order.

If Blower Motors Don't Run—If the blower motors don't operate when the switches are turned on, check them like you'd check any electrical unit. Look for loose or corroded connections first. Use a test light, or jumper wire, to check for a faulty switch, or circuit breaker. The circuit breaker is on the cowl panel under the kickpad at the left of the front compartment.

Checking Blower Operation—De Luxe Model—In this case, a single blower motor operates both blowers. Since it has three speeds – low, medium, and high–check for definite three-speed operation. If the medium and low speeds are about the same, you may have to reverse the red and black wires of the blower motor resistor assembly.



The blower motor resistor assembly is mounted on the left cowl outer side panel. You get at it from beneath the car at the rear of the front fender.

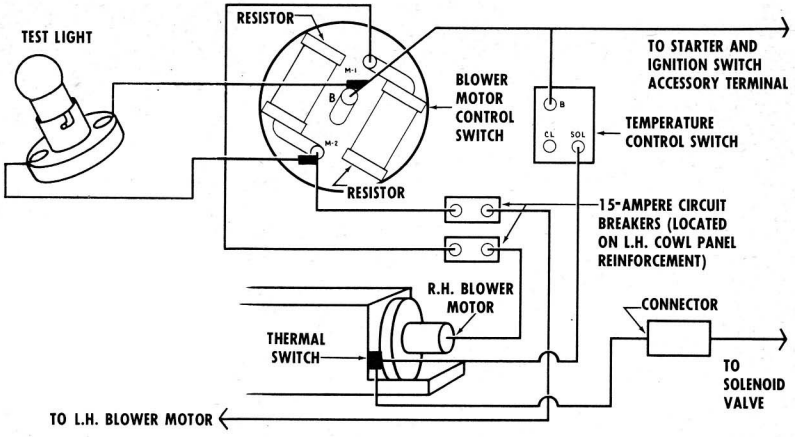


For proper operation, the *black* wires should be connected to the terminal of the high resistance resistor having the *large number of turns of small wire*. The *red* wires should be connected to the terminal of the low resistance resistor having a *small number of turns of large wire*.

Blowers Don't Operate—De Luxe and Early Type Standard Models—If the blowers don't run when the switch is on, the trouble could be in the circuit breaker or wiring. To test the circuit breaker, connect a test light across the circuit breaker from the red wire on the circuit breaker to the B terminal on the switch. If the blowers operate with this hook-up, replace the circuit breaker.

After this, if needed, check the blower circuit for voltage drop. There should not be more than a .2 voltage drop from the battery to the blower motor. Make this test with the blower switch on high position and with a fully charged battery.

Blower Inoperative—Later Type Standard Model—Test both motor terminals separately. To test the left-hand motor side of the switch, connect a test light between the red wire (B) terminal on the back side of the switch and the M-2, green wire terminal. If the blower then operates, the switch is faulty and should be replaced.



But, if the blower doesn't operate, the circuit breaker might be at fault. So, change the connection to the motor side of the circuit breaker. If the motor now operates, replace the circuit breaker.

To test the right-hand motor side of the switch, the test light should be connected between the red wire (B) terminal and M-1, black wire terminal.

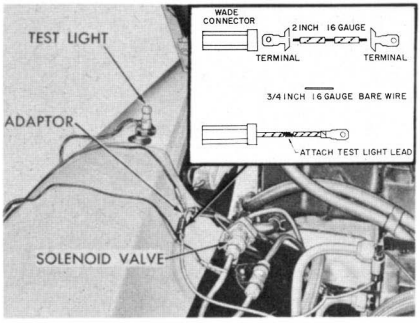
Air Flow Restricted—De Luxe Model—If blower speeds seem to be okay but the flow of cool air to the car interior appears to be restricted, check the insulation in the evaporator. Remove the air inlet grilles on the package shelf and see if the insulation worked itself loose and is resting on the evaporator coils.

If it is, re-cement it in place with a good grade of rubber cement. Use several sheet metal screws and washers to further secure it in place.

Partial Cooling, Blowers Operating—An additional check for partial cooling involves the solenoid valve. For example, when the temperature switch is in "cold" position, and the system has been running about seven minutes, clear liquid should be seen flowing through the sight glass.

At the same time, the evaporator side of the by-pass line should be *cooler* than the condenser side. If it is as warm as the condenser side, the solenoid valve isn't closed as it should be. So, you should check operation of the solenoid valve and thermal switch. There might be a loose or corroded connection, or a faulty solenoid valve or thermal switch. Both of these units, remember, are in the system to provide automatic operation of the by-pass line.

Testing the Solenoid Valve and Thermal Switch—To test these units, first disconnect the Wade (black) connector at the solenoid valve. Insert a special adapter in series with the disconnected connector and Wade terminal. This special adapter may be made by using two terminals (Part No. 903895), one Wade connector (Part No. 1310489), and a 2″ piece of 16-gauge copper wire, stripped at the ends and in the center.



In addition, use a ¾″ length of 15-gauge wire to wrap around the bare center section of the length of wire and solder it in place. Fasten the terminals on the ends of the wire and solder.

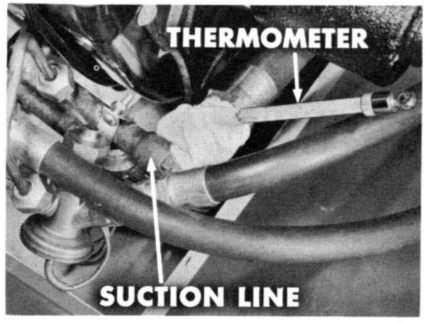
Connect a lead from the test lamp (C-744) to the adapter and ground the remaining test lamp lead to a good clean ground. Place the test lamp suction cup on the fender so the light is visible from the right rear of the car.

Start the engine. Run it at 1200 r.p.m. Turn the blower switch to "low" and the temperature switch to "cold." Close all car windows and the cowl vent.

Install a thermometer clip (C-3421) on the evaporator suction line outlet fitting. Place a thermometer (C-3356) in the clip and wrap the clip and bulb with a rag. Check temperature reading at the evaporator suction pressure outlet.

If the temperature is 45° F. (plus or minus 5°), or higher . . . the test lamp should light. Continue this test and when the temperature of the suction line at the evaporator drops to 30° (plus or minus 5°), the test light should go out.

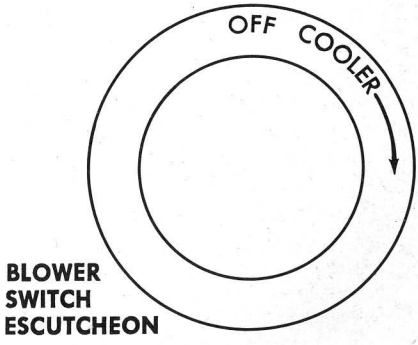
With the temperature of the suction pressure evaporator outlet at 45° F., or above, the thermal switch contacts should be closed and the electrical circuit to the solenoid complete, thus closing the valve.



If you get these test results, the solenoid valve is working properly, or the temperature wouldn't change. If the light goes off and on, the thermal switch is also working. If it isn't, replace the switch.

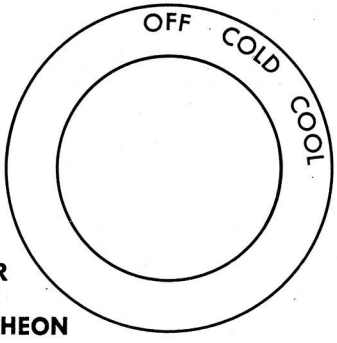
Switch and Escutcheon Plate Installation—De Luxe Models. There have been occasional cases where switches have been installed with the incorrect escutcheon plate. This has resulted in incorrect selection of temperature settings. In general, the condition shows up as a report of insufficient cooling. Here's how you can check for this possibility.

If the escutcheon has markings OFF and COOLER, followed by a clockwise arrow, connect a test light at the solenoid valve with the switch in the first position to the right. Then, turn on the blower switch. The test light should be off. With the switch in the second position to the right, the test light should be on.



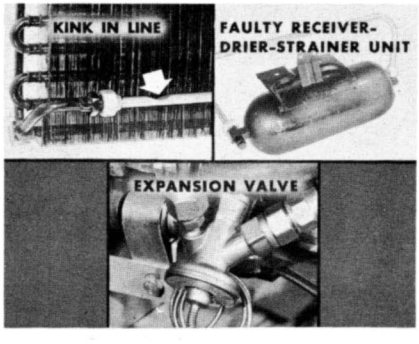
If the test light comes on when the switch is in the first position, change the escutcheon plate with one that has the wordings, OFF, COLD, and COOL.

If the test is made on a switch with the escutcheon plate reading: OFF, COOL, and COLD, make the test in this manner. With the test light connected to the solenoid and the blowers on, turn the switch to "COLD." The test light should be on. If it is off, install the escutcheon plate with the wording: OFF, COOLER, and clockwise arrow.



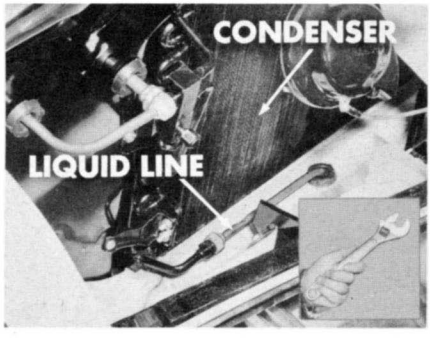
BLOWER SWITCH ESCUTCHEON

With the switch in the COOL, or second position, the light should be off.



Now, if the blowers and compressor operate – and there's still no cooling, it usually means the flow of refrigerant through the system is restricted. Three things can restrict the flow of Freon: a kink in the lines . . . a faulty receiver-drier-strainer unit . . . or an expansion valve that's not working properly.

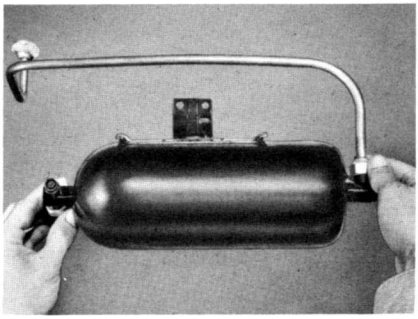
Checking for Kinked, Collapsed Sections—Check for kinks in the lines first, as that's the easiest thing to do. If you find a kinked or collapsed section, for instance, a kink at the liquid line leaving the condenser . . . the easiest way to correct it is to use a crescent wrench to bend the fitting nearest the kink. In this case, bend the fitting downward about 45°. That will round out the line.



NOTE: Use only this type wrench. If you try to round a line out by crimping it with pliers, you may fracture the line and cause a leak.

Checking the Receiver-Drier-Strainer—To check for a restriction in the receiver-drier-strainer, start the engine and turn the temperature switch to "cold," and the blowers on high speed. With a tachometer, set engine speed at 1200 r.p.m. Let the engine run for several minutes so the compressor can heat up and circulate the refrigerant.

Use both hands next to check the temperature of the fittings at both ends of the receiver-drier-strainer. If the temperature is the same, the unit is okay. But if the fitting on the evaporator side is cooler than that on the condenser side, the receiver-drier-strainer is partially plugged and must be replaced. Remember, wear protective goggles if a replacement is called for. That's because you'll have to discharge the system to make this installation.



If your tests up to this point indicate everything is okay, then the trouble may be with the expansion valve. Replace the valve with a new one out of stock. Replacing the valve also requires discharging the system. So, again, wear the goggles every time you disconnect the lines.

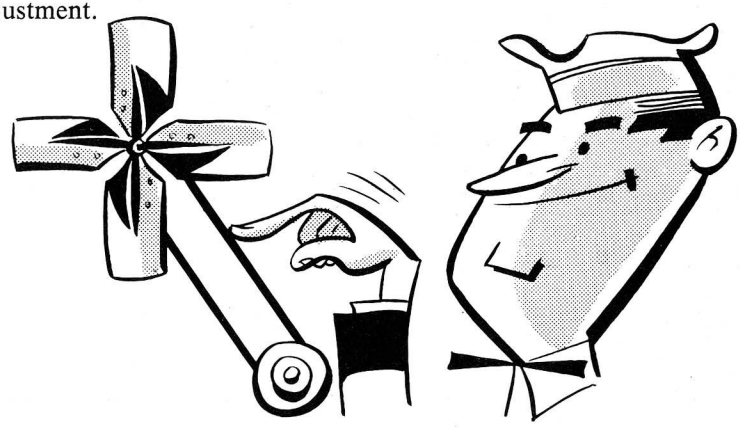
CHECK FAN AND COMPRESSOR BELTS

Proper tension on the fan and compressor belts is necessary for proper engine cooling and adequate drive for the air-conditioning compressor. Any slippage can overheat the engine cooling system and cause improper Freon compression.

Compressor belts, by the way, are matched sets and when needed should always be replaced in pairs. The belt arrangement, also, is identical for all models, but there is one difference in dimension when adjustment is required.

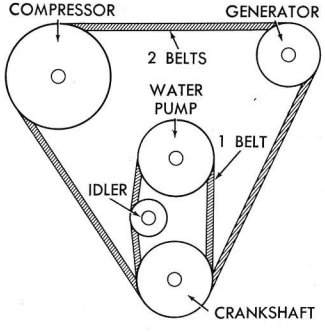
Adjusting the Fan Belt—All Models—Place a straightedge across the widest span between the fan and crankshaft pulleys, and rest it on the pulley edges. Hook a spring scale over the belt at the center of the span and see if you can deflect the belt ¼″ with a 10-lb. pull on the scale.

If you get that deflection, the adjustment is okay. If not, loosen the fan belt idler bracket bolt enough to permit moving the idler pulley. Moving this pulley out increases tension. Moving it in, decreases tension. Retighten the bracket bolt when you get the specified adjustment.



Adjusting Compressor Belts—Plymouth and Dodge—Check the belts one at a time. Lay the straightedge across the widest span, between the compressor and generator pulleys, and rest it on the pulley edges. See if you can deflect the belt ½″ at the center of the span with a 10-lb. pull on the spring scale.

If you get a difference in deflection on the two belts, replace them with a matched set. If you get the same deflection but not as specified, you can adjust tension very easily. Just loosen the generator strap bolt enough to permit moving the generator in or out for the correct tension. Moving it out increases tension, moving it in decreases tension. Tighten the bolt when you get the proper tension.



Adjusting Compressor Belts—De Soto—Do this the same way as above with one exception. Deflection of the belts should be ¼" with a 10-lb. pull on the spring scale.

TESTING COMPRESSOR VALVES

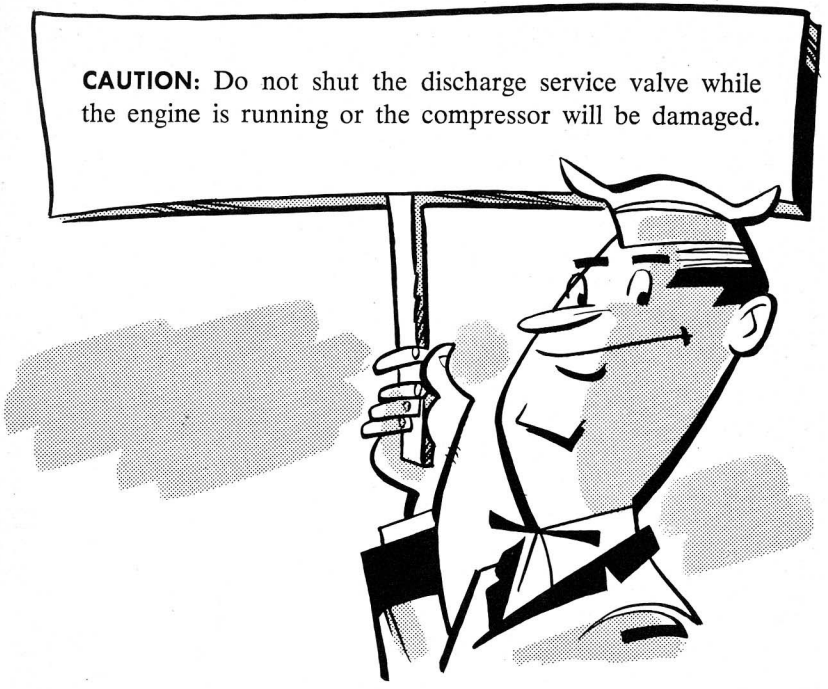
In addition to the earlier reasons given for partial cooling when the blowers are turned on high, there might be faulty compressor valves, too much Freon (as well as too little), a kinked line, or a dirty condenser.

To check these valves, remove the valve stem protective cap from the compressor discharge service valve at the upper right corner of the condenser. Remove the suction valve cap at the left side of the compressor. Use the ratchet wrench (C-3361) and completely back-seat both valves by turning them counterclockwise.

Next, remove the protective caps from both the discharge and suction service ports on the condenser and compressor. Install the 4′ test hose from the 600-lb. (right-hand) gauge of the manifold gauge set to the discharge service valve port. Install the 4′ hose from the 300-lb. compound gauge to the suction service valve port.

Turn both valve handles of the gauge clockwise as far as they will go. This completely seals the valves and cuts off the gauge set manifold outlet from the test hoses. To admit pressure to the gauges, rotate valve stems of both suction and discharge service valves one-half turn clockwise.

Start the engine next. Turn blower switches to high position, and the temperature switch to "cold." Use a tachometer to set the engine at a normal idle speed of 475-500 r.p.m. open. With the ratchet wrench (C-3361), close the suction service valve by rotating the valve stem clockwise until it is tightly sealed.



Notice the suction pressure on the compound gauge. The reading should decrease steadily. In fact, if the suction valves are in good condition, the pressure should drop within one minute from 15 to 20 inches of vacuum. If you don't get 15 to 20 inches of vacuum, first check the suction valve to be sure it is fully seated before you condemn and replace the valve plate assembly.

Now, shut off the ignition and watch the suction (compound) gauge. The vacuum should hold without dropping for two minutes if the discharge valve is in good condition. Return the suction valve stem to full counterclockwise position. But remember, the valve plate assembly in the compressor must be replaced if the tests do not meet these test conditions.

CAUTION: Do not operate the system with the suction valve closed any longer than absolutely necessary.

CHECKING THE FREON LEVEL

Increase engine speed to 1200 r.p.m. as shown by the tachometer. Turn the blower control switches to high and the temperature switch to "cold." Open the car windows. Let the engine operate at 1200 r.p.m. to clear the sight glass of bubbles.

The sight glass should be perfectly clear of bubbles after the engine has been running about seven minutes. If it's not clear of bubbles, the system will have to be partially recharged to remove the bubbles.

If the 600-lb. gauge shows high pressure, and the suction pressure is normal for the area where these tests are being made, it means there's too much Freon in the system. So, bleed off Freon until bubbles appear in the sight glass and then recharge enough to remove the bubbles.

NOTE: A system that's low on Freon should be tested for leaks. Correct any you might find and then recharge the system.

PARTIALLY RECHARGING THE SYSTEM

You may sometimes have to add Freon 12 to provide cooling without weighing the Freon as is normally required. Be sure to wear the safety goggles and also, use only Freon 12. You'll get a wide variation in temperature to pressure relationship if the system is charged with any other type of Freon.

Install the gauge set as described earlier and turn off the ignition. Next, connect the six-foot test hose to the center fitting of the gauge and to the connection of the Freon 12 tank. Make sure that both gauge manifold valves are turned clockwise until fully closed.

Open the discharge and suction service valves one turn clockwise. When the discharge gauge hand flutters when the engine is running,

close the discharge valve slowly, counterclockwise, until the gauge hand steadies. Then, open the Freon tank valve one-quarter turn.

Now, open the suction valve on the gauge manifold slightly, counterclockwise. Control the Freon entering the system with this valve.

CAUTION: Do not allow suction pressure to exceed 90 psi.

Watch the sight glass carefully. Close the manifold suction valve, clockwise, as soon as the sight glass is clear of bubbles. *This is very important. Too much Freon in the system can cause damage.*

Run the system for about five minutes and again check the sight glass for bubbles. If there still are bubbles, continue to charge the system carefully until the sight glass runs clear. Then, repeat the five-minute run.

When no bubbles are visible after five minutes of operation, charge the system with Freon an extra ten seconds. Then, close the Freon tank valve. Loosen the hose connection at the tank to gradually release Freon from the hose. Disconnect the hose after the Freon has escaped.

Back-seat the suction and discharge service valves, counterclockwise. Remove the gauge set and install the service port protective caps. Stop the engine and you're done.

TIGHTENING COMPRESSOR HEAD BOLTS

There have been some reports that after the compressor has been in use a short time, the head bolts tend to loosen slightly. If this condition continues, it can cause a blown head gasket and loss of Freon from the system.

To prevent this condition, play it safe and check these bolts for tightness at the 1000-mile inspection period. Tighten them to 20 foot-pounds torque.

CAUTION: Do this only when the compressor is cold.

A FINAL NOTE

With the increasing numbers of air-conditioned cars, plus all the tourist trade every dealer normally gets, knowing how to service these units becomes more and more important. So, make sure you've got all the special tools required, plus an ample supply of replacement parts in stock. If you do, you'll be all set to keep our customers comfortably cool—and happy with our product.

RECORD YOUR ANSWERS TO THESE QUESTIONS ON QUESTIONNAIRE NO. 93

Inside the evaporator coils, the liquid Freon vaporizes as it picks up heat units.	RIGHT	1	WRONG
When the system runs about seven minutes, the temperature switch on "cold," you should see a clear stream of Freon flowing through the sight glass.	RIGHT	2	WRONG
The expansion valve meters the flow of liquid Freon and relieves the pressure.	RIGHT	3	WRONG
The solenoid valve opens and closes off the by-pass line to regulate the amount of cooling called for.	RIGHT	4	WRONG
When hot gas is by-passed at the condenser it enters the expansion valve distributor and cuts down the amount of heat that will be absorbed by the evaporator.	RIGHT	5	WRONG
The function of the thermal switch is to prevent frosting of the evaporator coils.	RIGHT	6	WRONG
The ability of the condenser to transfer heat depends a lot on how freely outside air can pass through the fins.	RIGHT	7	WRONG
If the blower motors don't run when the switches are turned on, check for loose or corroded connections, then use a test light to check the switch or circuit breaker.	RIGHT	8	WRONG
When the system runs, the temperature of the fittings at both ends of the receiver-drier-strainer should be the same.	RIGHT	9	WRONG
If the fitting on the evaporator side is cooler than that on the condenser side, the receiver-drier-strainer is restricted and must be replaced.	RIGHT	10	WRONG

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