

COOLING SYSTEM

Passenger Comfort - Air Conditioning - Continued

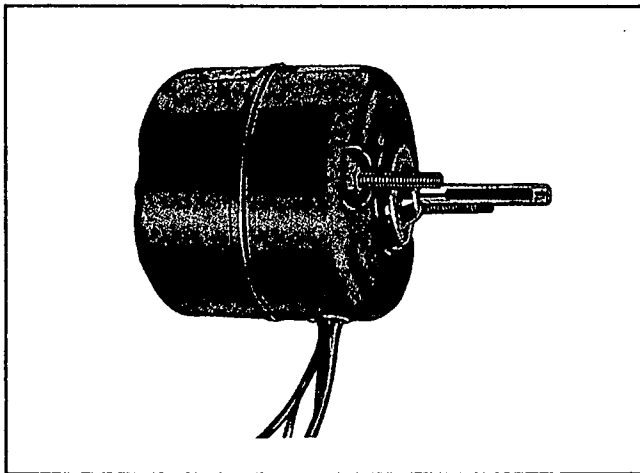
Causes of Heater Hose Deterioration and Failure

There are 4 agents that can cause heater hose deterioration and lead to eventual failure: (1) AIR, (2) HEAT, (3) COOLANT, and (4) OIL. These 4 agents work against hoses in two ways: by causing hardening and cracking (which destroys flexibility and causes leakage) and by softening and swelling (which causes lining failure, rupturing and clogging).

Another agent which contributes to hose deterioration is OZONE, an air agent. OZONE deterioration causes hardening, splitting, and eventual hose failure. HEAT stress from under hood temperatures of up to 270° F. can cause standard grades of heater hose to soften, swell, and burst.

COOLANT heat and PRESSURE combined often cause the inside of standard grades of heater hose to soften and flake. These flakes can clog heater valves and heater core passages if not found early and repaired. OIL also causes hose softening which may lead to swelling and bursting.

Blower/Fan & Motor



The blower/fan that forces air through the heater core and into the passenger compartment is located in the heater housing. The blower requires little service but the motor occasionally need replacing.

SERVICE NOTE: If it is necessary to cut the output shaft of a replacement motor in order to complete an installation, always vise-clamp the shaft. Vise-clamping the motor housing will destroy the motor.

Heating Distributor System

A heating distributor system should really be considered as an "air" distributor system for "passenger comfort". It will be described from this point of view.

The function of the air distributor system is to direct air within an automobile passenger compartment to provide maximum passenger comfort and to balance the amount of air directed to each side of the passenger compartment. Air to be distributed comes from:

1. Inside the car.
 2. Outside the car.
- Air to be distributed may be:
1. Unheated and uncooled.
 2. Heated.
 3. Cooled
 4. Heated and cooled.

Basically, the air distributor system is a duct system. Outside air enters the system through a grill, usually located directly in front of the windshield. Air enters a "plenum" chamber where rain, snow, and some dirt is separated from the air.

Air from the "plenum" is directed through the car's heater core, or through the air conditioner evaporator (or through both) into a duct which runs across the fire wall of the car. Outlets in the duct direct airflow in desired directions for passenger comfort.

Air is routed through the distributor system by doors inside the system according to whether passengers desire to recirculate air inside the compartment or to circulate outside air, or both. Doors also route air inside the system through or around the heater or air conditioner as desired. Air can also be routed to the windshield defroster. The doors which control the route that air takes can be automatically operated or manually operated by the passenger, depending on the design of the particular system.

An additional distributor system is installed in some cars. Air enters intakes located forward in the engine compartment and is carried by ducts to side vents located in the sidewall of the passenger compartment near the front seat passenger's feet. Airflow through these vents is controlled manually.

Air Duct and Defroster Hose

This hose is made of rubber impregnated fabric reinforced with a spiral wire insertion to insure it retaining its shape and flexibility.