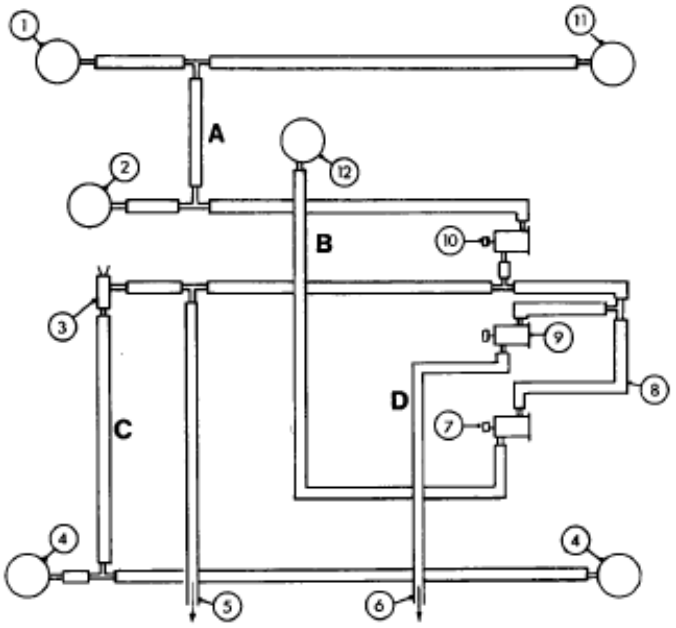
AIR CONDITIONING VACUUM SYSTEM



KEY TO VACUUM SYSTEM DIAGRAM

1. Demist flap actuator (LH)
2. Lower heater flap actuator
3. Vacuum controlled solenoid
4. Blower case flap actuator
5. To vacuum supply
6. To water valve
7. Face level vacuum switch
8. Vacuum switches on servo unit
9. Water valve actuator
10. Screen vent actuator (for defrost only) on RH switch
11. Demist flap actuator (LH)
12. Face level front grille

VACUUM SYSTEM

Description

Off

When the system is in the off position, the engine is running and vacuum is available there is no heating or cooling effect from the system, but the following functions have however taken place.

1. The vacuum solenoid is energised so that air input flaps are closed to ambient air intake, i.e. it is in the recirculation mode.
2. The blower motors are switched off.
3. The compressor clutch is disconnected so that refrigeration does not take place.
4. Vacuum allows hot water to flow to the heater matrix, demist/defrost flaps open, the front face level grille flap closes and there is no output to the front or rear footwells.

Maximum cooling (Auto)

1. The centre face level flap opens by camshaft opening the vacuum switch.
2. Vacuum is applied to the water valve closing the valve thus preventing the flow of water to the heater matrix.
3. High speed recirculation switch is operated by the camshaft. A voltage is fed to the solenoid operated vacuum switch which applies vacuum to the fan motor flaps. The flaps move into a recirculating mode.
4. As the right hand control is at auto then vacuum will be applied to the screen flaps to keep them closed.

Maximum heating (Auto)

1. The camshaft now at full heating will close the vacuum switch to the centre flap which will relax to the closed position.
2. The camshaft will also have closed the vacuum switch controlling the water valve. The water valve opens to allow water to flow to the heater matrix.
3. The electrical supply to the solenoid vacuum switch is broken closing the vacuum switch. This action removes the vacuum supply to the blower motor casing flaps allowing ambient air to enter the car.
4. The screen flaps are kept closed and the lower heater flap is allowed to stay open by applying vacuum to their respective actuators.

Defrost

1. The camshaft will also have closed the vacuum switch controlling the water valve. The water valve opens to allow water to flow to the heater matrix.
2. No vacuum to the centre flap allowing the flap to close.
3. No vacuum to the screen vents allowing them to open, no vacuum to lower heater flap actuator closing the lower flap to allow 90% of air to the screen.
4. The electrical supply to the solenoid vacuum switch is broken closing the vacuum switch. This action removes the vacuum supply to the blower motor casing flaps allowing ambient air to enter the car.

NOTE: In the defrost position no vacuum is supplied to any actuator.