

Vehicles with Rear Air

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TECH TIP

#159

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Most SUVs and more and more sedan style vehicles will have two air conditioning systems to accommodate “rear air”, a rear air conditioning system. The rear air system may be located through the roof of the vehicle or behind the center console. This second rear air system will be held in an HVAC unit and include an evaporator, blower motor, heater core, actuators, and rear expansion valve. This is typically located in the trunk area. The main A/C unit under the hood will be connected to the rear air unit by a series of lines. The compressor found in the main A/C unit will pump refrigerant to the rear evaporator, where the blower motor will blow cool air through the rear vents as assigned by the controls. Refrigerant will then continue to circulate through both A/C systems. Failures in either system may cause damage to both.



Rear Air Controls



Rear Air Console

Diagnosing Rear Air Conditioning System

It is key to assess the rear air unit for restrictions and excess debris. Because the two systems are connected, debris may travel between them causing restrictions. With the A/C on, check all vents front and rear to further pinpoint the source of the problem. If you are able to touch the lines connecting the two systems, they should feel cool to the touch when the rear A/C system is turned on.

Replacing Parts in Rear Air Conditioning System

- Vehicles with rear air will require additional oil. Keep in mind that all gpd 65 series compressors are pre-filled with oil. Excess oil will damage the system. Always refer to the manufacturer's specifications for correct charge.
- Vehicles with rear air will require a rear expansion device, mode door, and/or blend door actuator. When ordering replacement parts be sure to identify the front vs. rear expansion device/actuator. They are often not interchangeable. For an example refer to gpd Tech Tip #127)

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