

the front or rear climate controls.

The rear air distribution door actuator contains a reversible electric motor and potentiometer. The potentiometer allows the HVAC control module to monitor the position of the rear air distribution door. The potentiometer circuit consists of a 5-volt reference signal connected to one end of a variable resistor, and a signal ground connected to the other. A signal circuit is connected to a contact wiper, which is driven along the variable resistor by the actuator shaft. The signal to the HVAC control module from the contact wiper indicates the position of the rear air distribution door.

Rear Temperature Door Actuator

The rear temperature door actuator moves the rear temperature door on command from the HVAC control module based on input from either the front or rear climate controls.

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Rear Blower Motor

The rear blower motor is a variable speed motor that pulls air from the vehicle interior and forces it through the rear climate control housing and the rear climate control air distribution ducts.

Rear Blower Motor Speed Control

The blower motor speed control is a solid-state switch that uses a PWM signal from the HVAC control module to determine the desired rear blower motor speed and varies the ground feed for the blower motor to control the speed. A delay function provides a gradual increase or decrease in blower motor speed under all conditions.

Rear Climate Control Housing

The rear climate control housing directs airflow from the rear blower motor through the rear evaporator core and rear heater core. All airflow from the rear blower motor passes through the rear evaporator core. The airflow is then distributed to the selected outlet by the airflow mode doors.

Rear Evaporator

The rear evaporator core is an aluminum plate-and-fin type heat exchanger and is located in the rear climate control housing. A mixture of liquid refrigerant and oil enters the rear evaporator core through the rear evaporator core inlet tube and continues out of the rear evaporator core through the rear evaporator core outlet tube as a vapor. During A/C compressor operation, airflow from the rear blower motor is cooled and dehumidified as it flows through the rear evaporator core fins.

Rear Heater Core

The rear heater core consists of fins and tubes arranged to extract heat from the engine coolant and transfer the heat to air passing through the rear climate control housing.

Rear Heating, Ventilation and Air Conditioning (RHVAC) Control Module

The RHVAC control module is used by the rear vehicle occupants to request changes to the rear climate control system. The requests are sent to the HVAC control module over the MS-CAN.

Rear Thermostatic Expansion Valve (TXV)

The rear Thermostatic Expansion Valve (TXV) is located at the rear evaporator core inlet and outlet tubes. The rear Thermostatic Expansion Valve (TXV) provides a restriction to the flow of refrigerant and separates the low-pressure and high-pressure sides of the rear refrigerant system. Refrigerant entering and exiting the rear evaporator core passes through the rear Thermostatic Expansion Valve (TXV) through 2 separate flow paths. An internal temperature sensing bulb senses the temperature of the refrigerant flowing out of the rear evaporator core and adjusts an internal pin-type valve to meter the refrigerant flow into the rear evaporator core. The internal pin-type valve decreases the amount of refrigerant entering the rear evaporator core at lower temperatures and increases the amount of refrigerant entering the rear evaporator core at higher temperatures.

Rear A/C - Heater Inlet and Outlet Lines

The rear climate control system A/C and heater inlet and outlet lines are part of a bundle of 4 aluminum tube assemblies of various sizes bracketed together and fastened to the underbody of the vehicle.

Removal and Installation

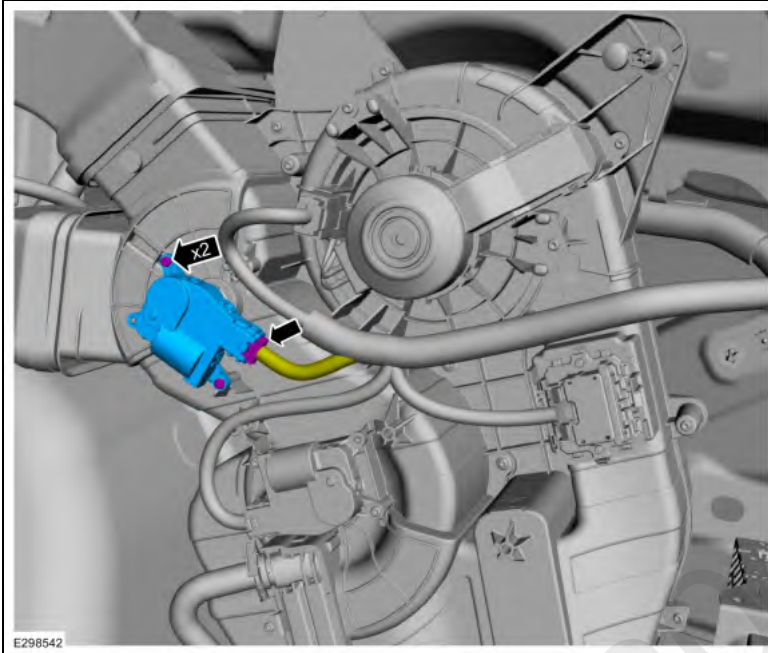
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Rear Air Distribution Door Actuator

Removal

NOTE: Removal steps in this procedure may contain installation details.

1. Remove the RH loadspace trim panel.
Refer to: Loadspace Trim Panel (501-05 Interior Trim and Oramentation, Removal and Installation).
2. Disconnect the electrical connector, remove the retainers and the rear air distribution door actuator.



Installation

1. To install, reverse the removal procedure.