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Dorman Products A/C Blend Door Repair Tool

For 2006 Chevrolet Equinox / Pontiac Torrent

Installation Instructions

902-600

Parts Included

- 1. Plastic Replacement Sleeve
- 2. Mounting Plate
- 3. Saw
- 4. Drill Bit

CAUTION: This repair applies only to an air temperature door control shaft that has cracked or separated at the actuator driven end of the door shaft. Attempting this procedure on a vehicle that does not have this condition (as verified by the evaluation below) may damage the temperature control door to the point that door replacement becomes mandatory.

Disassembly and Evaluation

Adjust the HVAC Control Module temperature setting to the midpoint of the range. This enables easier installation of the temperature actuator.

- 1. Remove the right sound insulator panel. Refer to *Instrument Panel Insulator Panel Replacement Right Side* in your GM service procedures manual.
- 2. Remove the instrument panel compartment. Refer to *Instrument Panel Compartment Replacement* in your GM service procedures manual.
- 3. Detach the yellow airbag connector. Pull the connector off the slide mount from the HVAC module.
- 4. Remove the driver knee bolster panel. Refer to Knee Bolster Replacement in your GM service procedures manual.
- 5. Remove the left side insulator/closeout panel. Refer to *Instrument Panel Insulator Panel Replacement Left Side* in your GM service procedures manual.
- 6. Remove the communication interface module, if equipped. Refer to *Communication Interface Module Replacement* in your GM service procedures manual. If the vehicle is not equipped with OnStar, continue with Step 8.
- 7. Remove the center trim bezel. Refer to *Instrument Panel Accessory Bezel Replacement* in your GM service procedures manual.
- 8. Remove the accelerator pedal assembly from the brake pedal bracket. Refer to *Accelerator Pedal Position Sensor Replacement* in your GM service procedures manual.



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Figure 1 - Heater Core Cover

- 9. Remove the heater core cover screws (Qty 3) from the driver's side of the HVAC module. Move the cover down 2 to 4 cm (0.8 to 1.6 in) (Fig. 1).
- 10. Examine the driver's side HVAC case temp shaft support hole to verify the temp shaft is visible (Fig. 2).



Figure 2 – Temp Shaft Support Hole w/Temp Shaft Visible (Repairable)

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Figure 3 – Door Dislodged From Pivot (Un-repairable)

Note: If vehicle has the shaft present as shown in Figure 2, go to Step 11. If the vehicle has the end of the shaft missing from the case as shown in Figure 3, then refer to *HVAC Temperature Valve Replacement* in your GM service procedures manual to make the repair and discontinue use of this bulletin.

Caution: The procedure below must be followed exactly. Slowly engage the easy-out to the door shaft to prevent dislodging the shaft from the hole prior to the easy-out engagement.



Figure 4 – Installing Easy-Out

- 11. Carefully install the easy-out at the driver's side pivot point by slowly turning counter-clockwise until firmly engaged (approximately 1/4 turn).
- 12. On the passenger's side, remove the air temperature actuator screws (Qty 3) from the HVAC module.
- 13. Remove the air temperature actuator from the HVAC module.
- 14. Inspect the end of the temperature door shaft. Remove any loose door shaft pieces and discard. Confirm that the end of the shaft has in some part weakened or completely separated from the temperature control door. Gently rotating the end of the shaft should confirm this condition.

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Caution: This procedure effectively repairs an air temperature door control shaft that has separated at the actuator driven end of the control shaft. Attempting this procedure on a vehicle that does not have this condition may damage the temperature control door to the point that door replacement becomes mandatory.



Figure 5 – Assembling Hole Saw



Figure 6 – Assembled Saw

15. Assemble the precision hole saw. Reference Figures 5 and 6.



Figure 7 – Areas of Hole Saw to Lubricate

- 16. Using Synthetic Lubricant with Teflon, generously grease:
 - a. inside of the toothed area of the precision hole saw
 - b. outside of the toothed area of the precision hole saw as indicated in Figure 7.

The lubricant aids in cutting and helps trap the shavings that result from drilling.

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Figure 8 – Hole Saw Installed

17. Install the precision hole saw tool using the temperature actuator screws (Qty 3) (Fig. 8).

Caution: The procedure below must be followed exactly. DO NOT use power tools. Using power tools could cause unexpected damage to the temperature door.



Figure 9 – Rotating Hole Saw

- 18. Rotate the hole saw clockwise without power tools (i.e. by hand with a ratchet or wrench Fig. 9). You will feel resistance as you cut the case. Continue to rotate until saw socket cuts through the HVAC case.
- 19. Remove the screws (Qty 3) holding the hole saw tool.
- 20. Remove the hole saw from the HVAC module.

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Figure 10 – Breaking Door Shaft

Figure 11- Removing Door Shaft

21. Inspect the temperature door shaft. If the end of the shaft is still firmly attached to the door, break the shaft with pliers using a back and forth motion. Remove the end of the shaft from the HVAC module and discard.



Figure 12- Shaft Sleeve Lubrication Points

- 22. Using Synthetic Lubricant with Teflon, generously apply grease/lubricant to the areas of the shaft sleeve as indicated in Figure 12:
 - c.) inner surface of the shaft sleeve near end
 - d.) outer surface of the shaft sleeve at the base of the slot.

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6

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Figure 14 - Semi-transparent View of the HVAC Case with Views of Sleeve Alignment

23. Using an assistant to hold and align the temperature door from the driver's side pivot point easy-out, align and install the shaft sleeve to replace the passenger's side of the shaft removed using the hole saw.

Note: To align shaft sleeve to temp door, hold the sleeve with the slot pointing toward the front of vehicle (3 o'clock position) to find the proper alignment to the temperature door shaft. Reference Figure 14 to visualize the engagement of the shaft sleeve onto the temp door shaft.

- 24. Align the air temperature actuator with the door shaft and rotate into position.
- 25. Install the air temperature actuator screws (Qty 3) to the HVAC module.

Tighten the screws to 1.5 N·m (13 lb in).

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26. Connect the electrical connector to the air temperature actuator.

Note: Any time an actuator or the HVAC control module is replaced, the HVAC control module must be calibrated to ensure proper air distribution.

- 27. Connect the yellow airbag connector. Slide the yellow connector mount onto the HVAC module.
- 28. Remove the easy-out from driver's side pivot point.
- 29. Calibrate the actuators by simultaneously pushing the A/C and RECIRC buttons on the HVAC control module three times each, within two seconds of initial push.
 - The A/C and RECIRC button LED's will flash while this calibration is taking place.
 - The calibration will take anywhere between 10 to 30 seconds depending on battery voltage.
 - The LEDs will quit flashing when the calibration is complete.
- 30. Verify the repair by testing the temperature control while the temperature door shaft pivot point can still be seen from the driver's side footwell. Run the vehicle check for warm and cool air from the HVAC outlets.
- 31. Install the instrument panel compartment. Refer to *Instrument Panel Compartment Replacement* in your GM service procedures manual.
- 32. Install the right sound insulator panel. Refer to *Instrument Panel Insulator Panel Replacement Right Side* in your GM service procedures manual.
- 33. Move the heater cover up into position. Install the heater cover screws (Qty 3).

Tighten the screws to 1.5 N·m (13 lb in.)

- 34. Install the communication interface module, if equipped. Refer to *Communication Interface Module Replacement* in your GM service procedures manual.
- 35. Install the accelerator pedal assembly to the brake pedal bracket. Refer to Accelerator Pedal Position Sensor Replacement in your GM service procedures manual.
- 36. Install the left side insulator/closeout panel. Refer to Instrumentation Panel Insulator Panel Replacement Left Side in your GM service procedures manual.
- 37. Install the driver knee bolster panel. Refer to Knee Bolster Replacement in your GM service procedures manual.
- 38. Install the center trim bezel as necessary.

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9