

[2009 Chevrolet Express - AWD](#) | [Express, Savana \(VIN G/H\) Service Manual](#) | [HVAC](#) | [HVAC - Manual](#) | [Specifications](#) |

Document ID: 1622078

Fastener Tightening Specifications

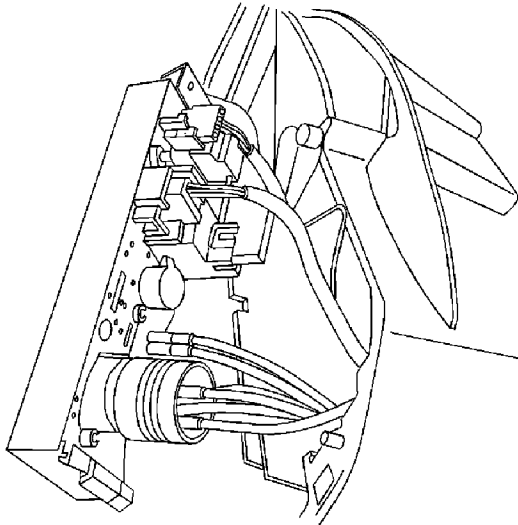
Application	Specification	
	Metric	English
All Actuator Screws	1.9 N·m	17 lb in
HVAC Control Assembly Screw	2 N·m	18 lb in
Vacuum Pump Assembly Bolts	3 N·m	27 lb in
Vacuum Tank Nuts	6 N·m	53 lb in

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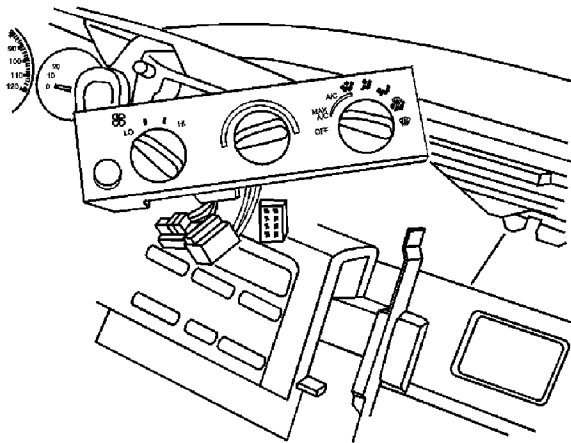
Heater and Air Conditioning Control Replacement

Removal Procedure

1. Remove the I/P cluster trim plate. Refer to [Instrument Panel Cluster Trim Plate Bezel Replacement](#).

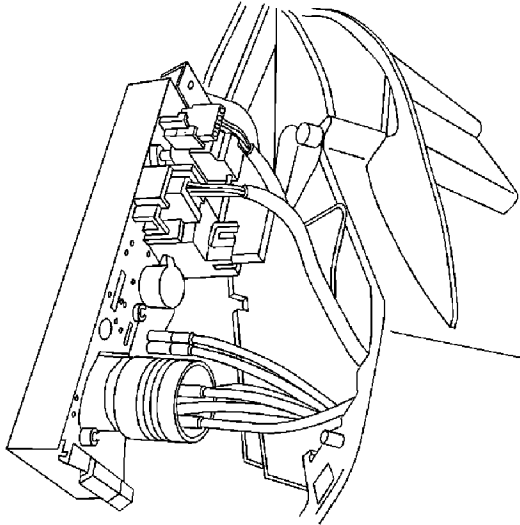


2. Remove the retaining screw from the HVAC control assembly.
3. Pivot the HVAC control assembly to disengage the locking tab on the right side.
4. Disconnect the electrical connectors.
5. Disconnect the vacuum connector.



6. Remove the HVAC control assembly.

Installation Procedure



1. Connect the vacuum connector.
2. Connect the electrical connectors.
3. Install the HVAC control assembly.

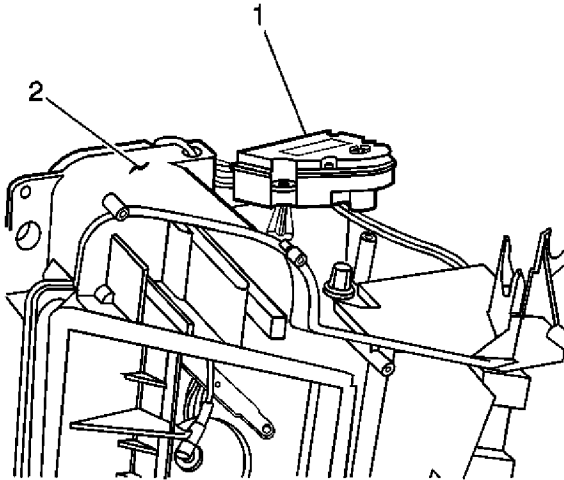
Caution: Refer to [Fastener Caution](#) in the Preface section.

4. Install the retaining screw to the HVAC control assembly and tighten to **2 N·m (18 lb in)**.
5. Install the I/P cluster trim plate. Refer to [Instrument Panel Cluster Trim Plate Bezel Replacement](#).

Temperature Valve Actuator Replacement

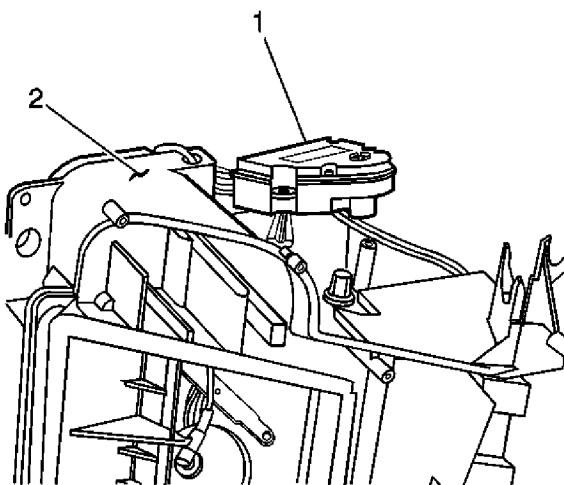
Removal Procedure

1. Disconnect the air temperature actuator electrical connector.



2. Remove the air temperature actuator retaining screws.
3. Remove the air temperature actuator (1) from the heater assembly (2).

Installation Procedure





1. Install the air temperature actuator (1) to the heater assembly (2).

Caution: Refer to [Fastener Caution](#) in the Preface section.

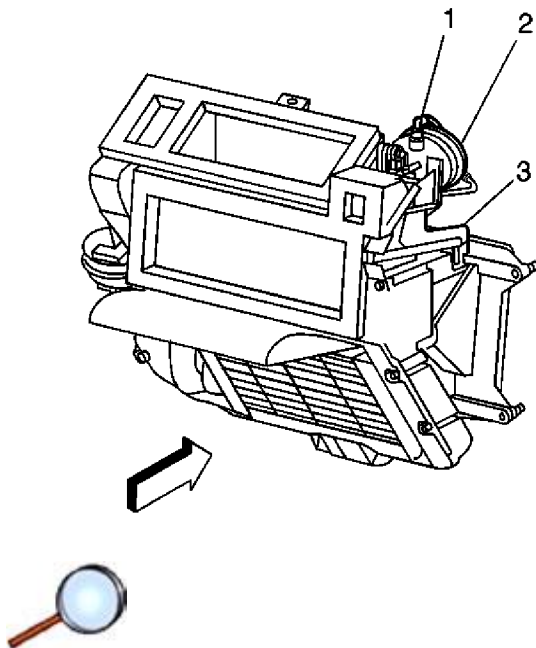
2. Install the air temperature actuator retaining screws and tighten to **1.9 N·m (17 lb in)**.
3. Connect the air temperature actuator electrical connector.

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Defroster Valve Actuator Replacement

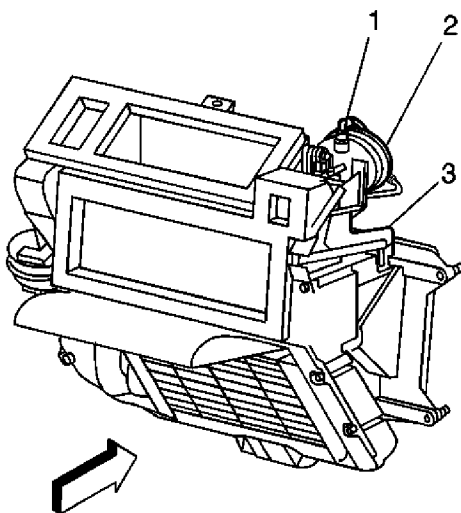
Removal Procedure

1. Remove the I/P upper trim pad. Refer to [Instrument Panel Upper Trim Pad Replacement](#).



2. Disconnect the vacuum hose (1) from the defrost actuator (2).
3. Depress the clip and remove the defrost actuator (2) from the heater assembly.

Installation Procedure





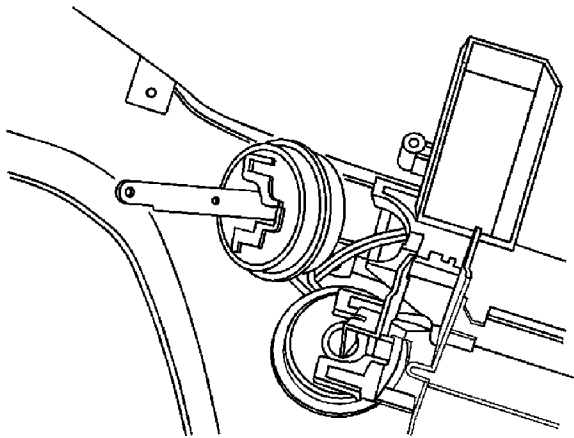
1. Install the defrost actuator (2) to the heater assembly.
2. Connect the vacuum hose (1) to the defrost actuator (2).
3. Install the I/P upper trim pad. Refer to [Instrument Panel Upper Trim Pad Replacement](#).

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Mode Valve Actuator Replacement - Upper

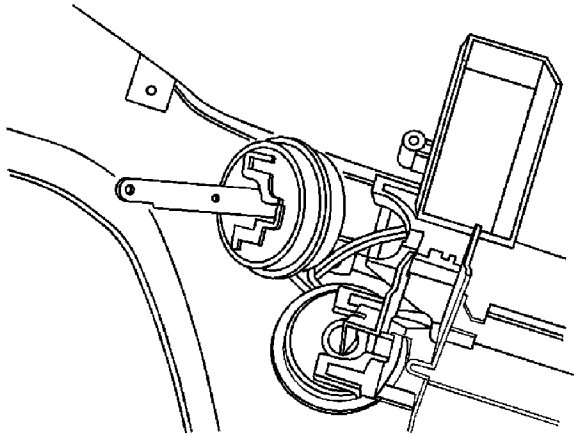
Removal Procedure

1. Rotate the instrument panel (I/P) carrier out and downward. Refer to [Instrument Panel Carrier Replacement](#).
2. Disconnect the vacuum hose from the upper mode actuator.
3. Release the tabs from the upper mode actuator.
4. Unhook the actuator from the upper mode door lever.



5. Remove the upper mode actuator.

Installation Procedure



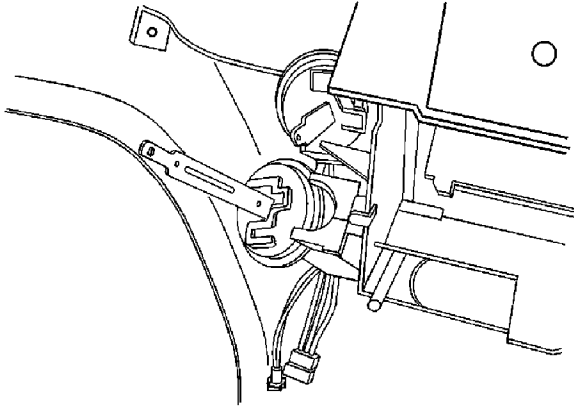
1. Hook the upper mode door actuator to the mode door lever.
2. Install the upper mode actuator.
3. Press upper mode actuator on until you hear tabs engage.
4. Connect the vacuum line to the upper mode door actuator.
5. Reposition and install the I/P carrier. Refer to [Instrument Panel Carrier Replacement](#).

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Mode Valve Actuator Replacement - Lower

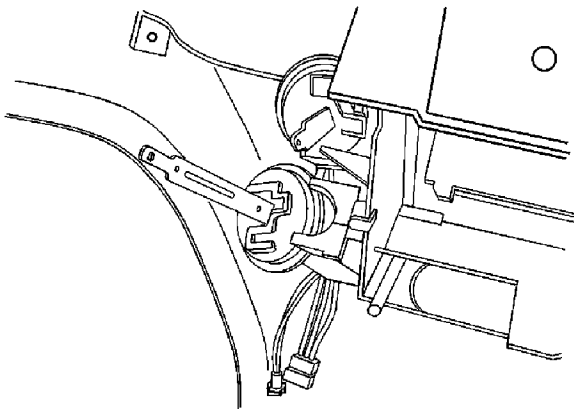
Removal Procedure

1. Remove the I/P carrier. Refer to [Instrument Panel Carrier Replacement](#).
2. Release the tabs from the lower mode actuator.



3. Remove the lower mode actuator.

Installation Procedure





1. Install the lower mode actuator.
2. Press lower mode actuator on until you hear tabs engage.
3. Install the I/P carrier. Refer to [Instrument Panel Carrier Replacement](#).

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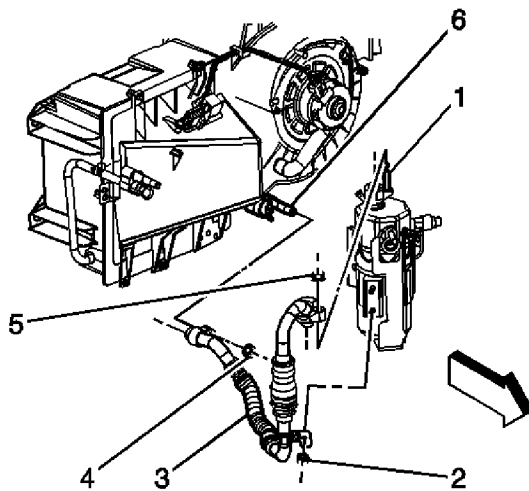
Air Inlet Valve Actuator Replacement

Special Tools

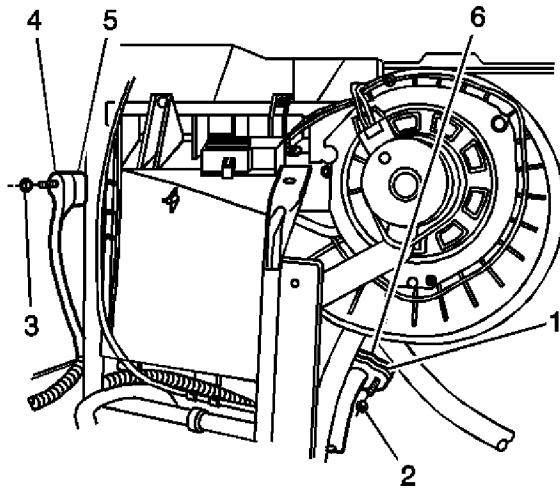
[J 39400-A](#) Electronic Halogen Leak Detector

Removal Procedure

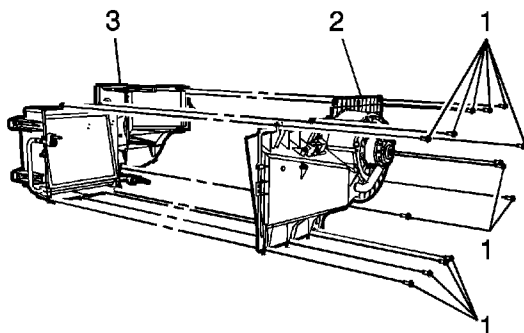
1. Remove the battery. Refer to [Battery Replacement](#).
2. Recover the refrigerant from the A/C system. Refer to [Refrigerant Recovery and Recharging](#).
3. Disconnect the low pressure sensor electrical connector.
4. Disconnect the blower motor electrical connector.
5. Disconnect the blower motor resistor assembly electrical connector.



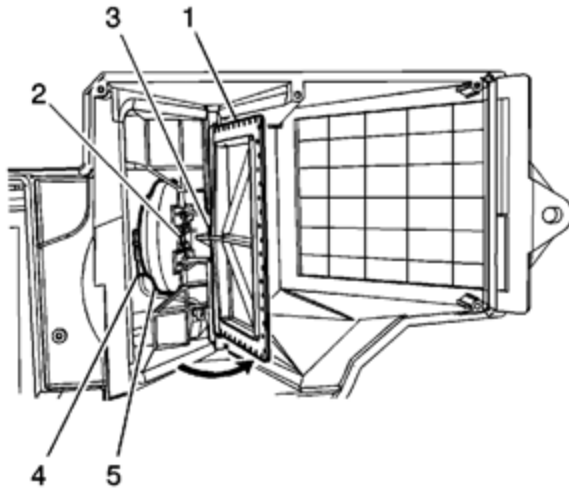
6. Remove the evaporator outlet hose retaining nuts (4, 5).



7. Remove the retaining nut (3) from the evaporator inlet tube (5).
8. Remove the evaporator inlet tube from the evaporator and position aside.
9. Remove the sealing washers.

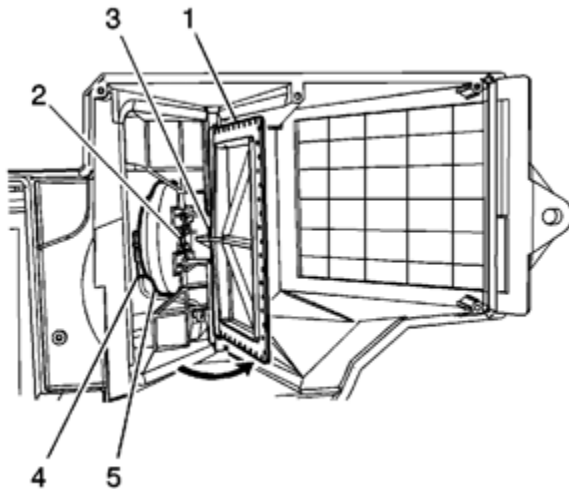


10. Remove the fourteen screws (1) from the evaporator and blower module assembly case.
11. Reposition the accumulator aside.
12. Remove the evaporator and blower module assembly front cover (2) from the evaporator case (3).



13. Grasp recirculation door seal and open (1) to gain access to actuator mounting.
14. Release actuator mounting tab (2) and slide rearward.
15. Rotate actuator 90° clockwise (rearward) to release door linkage (3).
16. Remove actuator vacuum line (4).
17. Remove recirculation actuator (5).

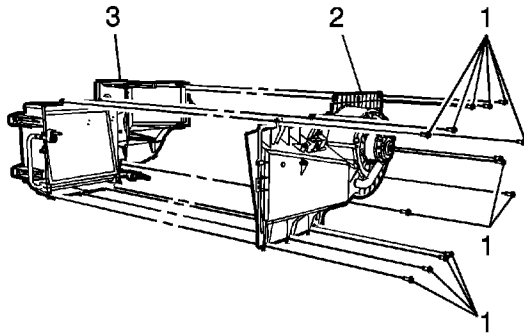
Installation Procedure



1. Install the recirculation door actuator (5) to the linkage (3).
2. Install the actuator into mounting position (2) and attach vacuum line (4).

Note: Ensure the recirculation door (1) operates without binding and seals properly.

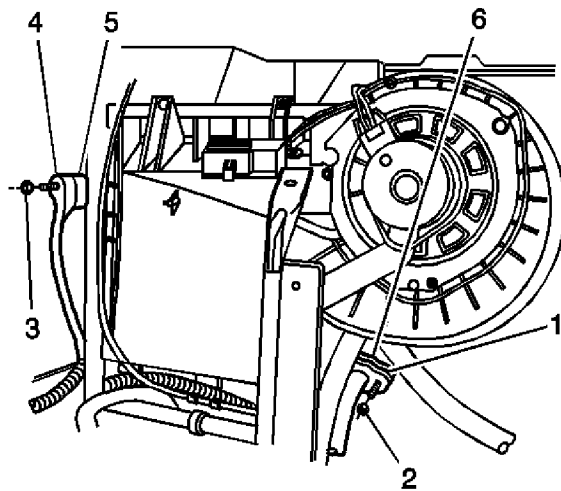
3. Reposition the accumulator for installation.



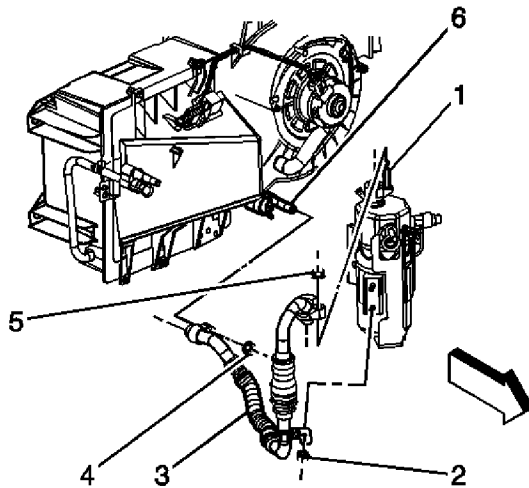
4. Install the evaporator and blower module assembly cover (2) to evaporator case (3).

Caution: Refer to [Fastener Caution](#) in the Preface section.

5. Secure cover with the fourteen screws (1) and tighten to **1.9 N·m (17 lb in)**.
6. Install new sealing washers to the evaporator inlet and outlet tubes. Refer to [Sealing Washer Replacement](#).



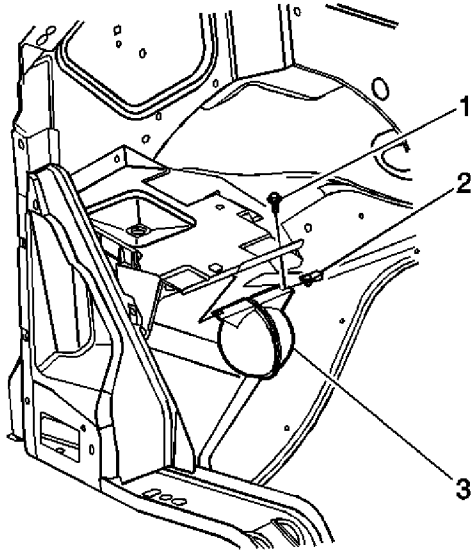
7. Install the evaporator inlet tube (4) to the evaporator (5).
8. Install the evaporator inlet tube retaining nut (3) and tighten to **16 N·m (12 lb ft)**.



9. Install the evaporator outlet hose and retaining nuts (4,5) and tighten to **18 N·m (13 lb ft)**.
10. Connect the low pressure sensor electrical connector.
11. Connect the blower motor electrical connector.
12. Connect the blower motor resistor assembly electrical connector.
13. Evacuate and recharge the A/C system. Refer to [Refrigerant Recovery and Recharging](#).
14. Leak test the fittings of the repaired or replaced component using the [J 39400-A](#).
15. Install the battery. Refer to [Battery Replacement](#).

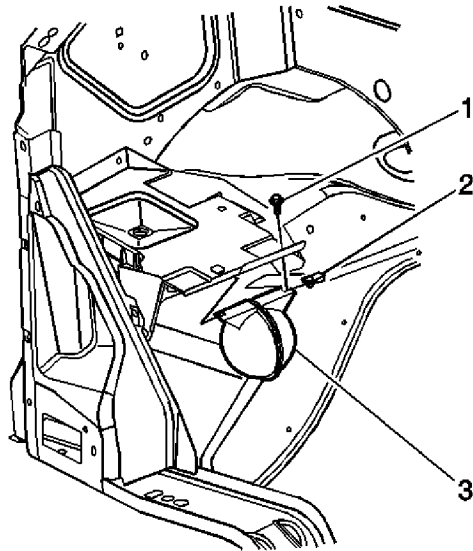
Vacuum Tank Replacement

Removal Procedure



1. Remove the primary battery tray. Refer to [Battery Tray Replacement](#).
2. Disconnect the vacuum hose from the vacuum tank.
3. Remove the screws (1) from the vacuum tank retainers.
4. Remove the vacuum tank (3) from the battery tray.

Installation Procedure



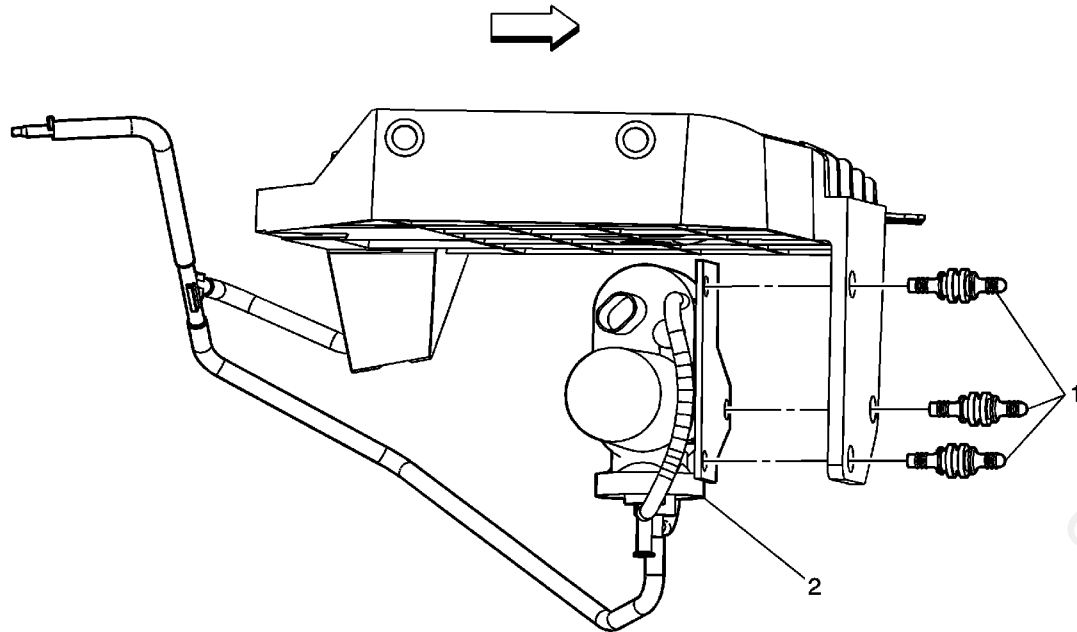
1. Install the vacuum tank (3).

Caution: Refer to [Fastener Caution](#) in the Preface section.

2. Install the screws (1) to the vacuum tank retainers and tighten to **6 N·m (53 lb in)**.
3. Connect the vacuum hose.
4. Install the primary battery tray. Refer to [Battery Tray Replacement](#).

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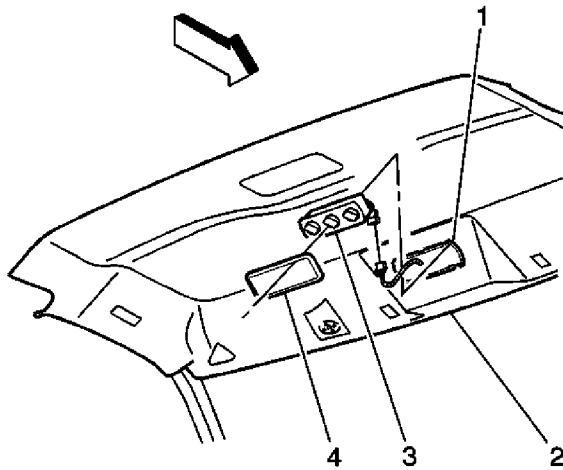
Vacuum Pump Assembly Replacement



Callout	Component Name
Preliminary Procedure	
Remove the primary battery tray. Refer to Battery Replacement .	
1	Rubber Retainers (Qty: 3)
2	Vacuum Pump Assembly

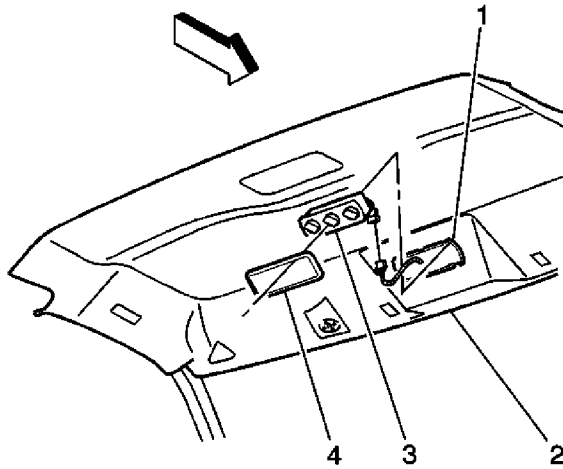
Auxiliary Heater and Air Conditioning Control Replacement - Front

Removal Procedure



1. Remove the front control switch bezel (4) from the headliner.
2. Remove the front control switch (3) by unsnapping the retainers from the headliner.
3. Disconnect the electrical connector.

Installation Procedure

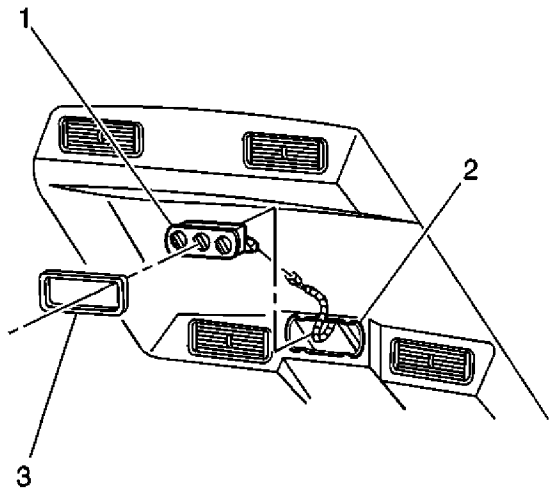


1. Connect the electrical connector.
2. Install the front control switch (3) by snapping the retainers to the headliner.
3. Install the front control switch bezel (4) to the headliner.

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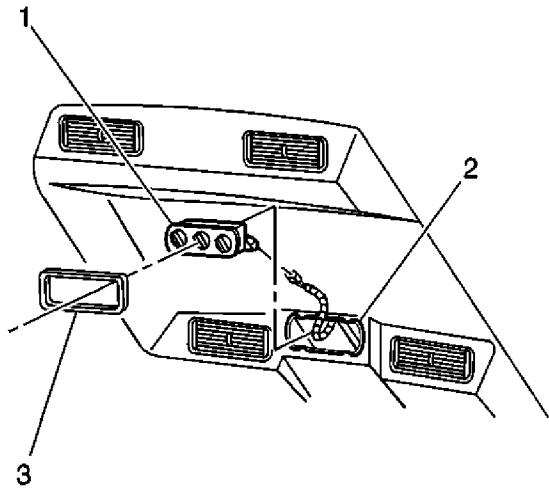
Auxiliary Heater and Air Conditioning Control Replacement - Rear

Removal Procedure



1. Remove the HVAC control assembly bezel (3) from the headliner (2).
2. Lower the front headliner to access the rear of the HVAC control assembly (1). Refer to [Headlining Front Trim Panel Replacement](#).
3. Disconnect the electrical connectors.
4. Remove the HVAC control assembly from the front headliner.

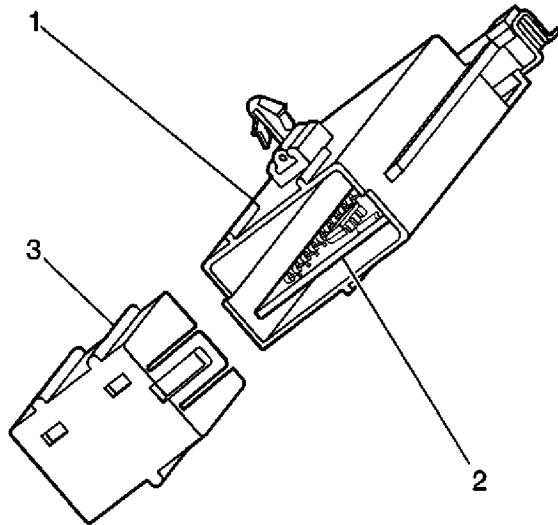
Installation Procedure



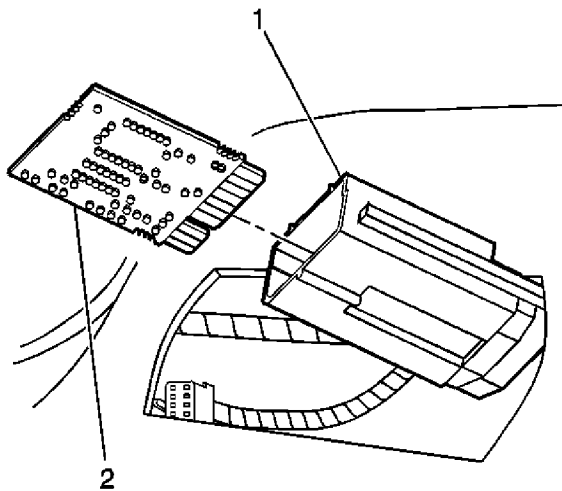
1. Install the HVAC control assembly (1) in the front headliner and attach the bezel (3).
2. Connect the electrical connectors.
3. Install the front headliner (2). Refer to [Headlining Front Trim Panel Replacement](#).

Auxiliary HVAC Control Processor Replacement

Removal Procedure



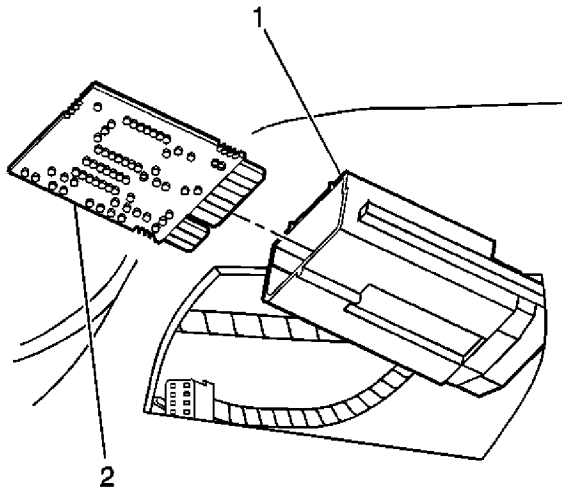
1. Lower the front headliner to access the HVAC control processor. Refer to [Headlining Front Trim Panel Replacement](#).
2. Remove the HVAC control processor from the roof panel.
3. Remove the HVAC control processor access cover (3).



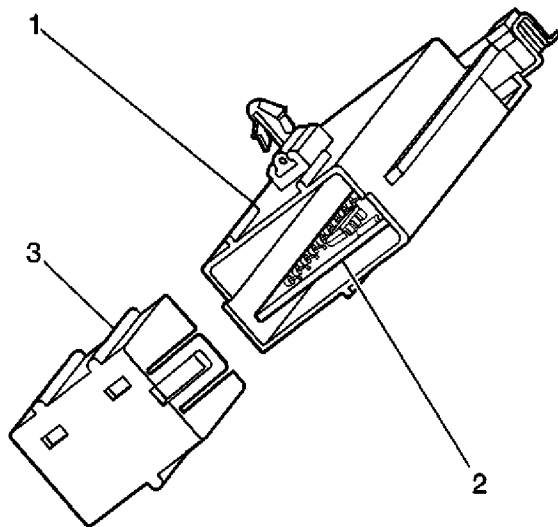
4. Remove the HVAC control processor (2) from the HVAC processor case (1).

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Installation Procedure

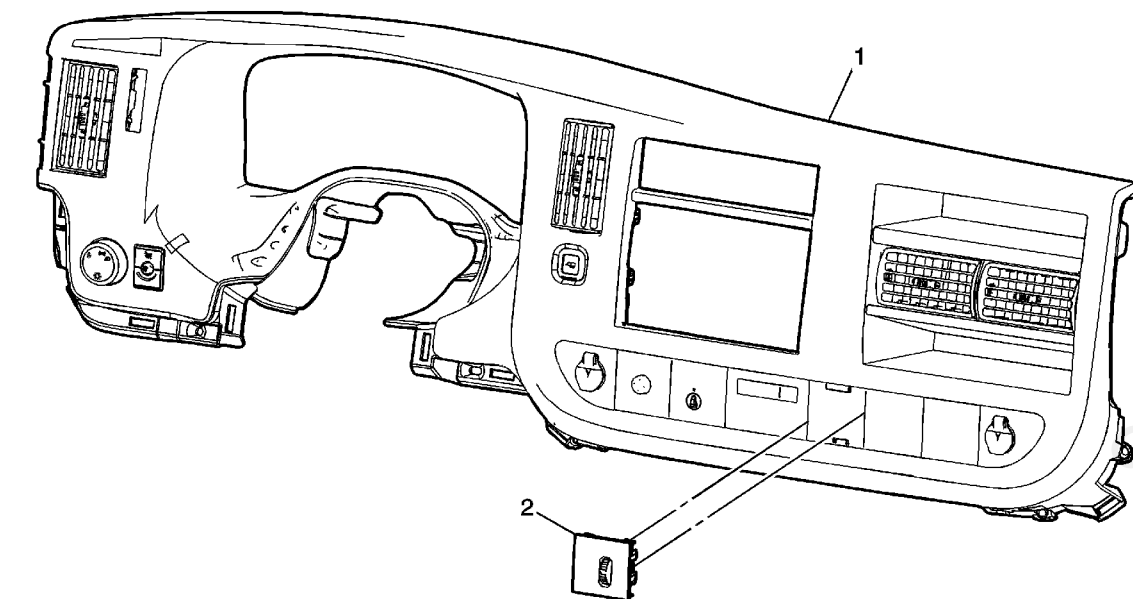


1. Install the HVAC control processor (2) to the HVAC processor case (1).



2. Install the HVAC control processor access cover (3).
3. Install the HVAC control processor to the roof panel.
4. Install the front headliner. Refer to [Headlining Front Trim Panel Replacement](#).

Auxiliary Blower Motor Switch Replacement

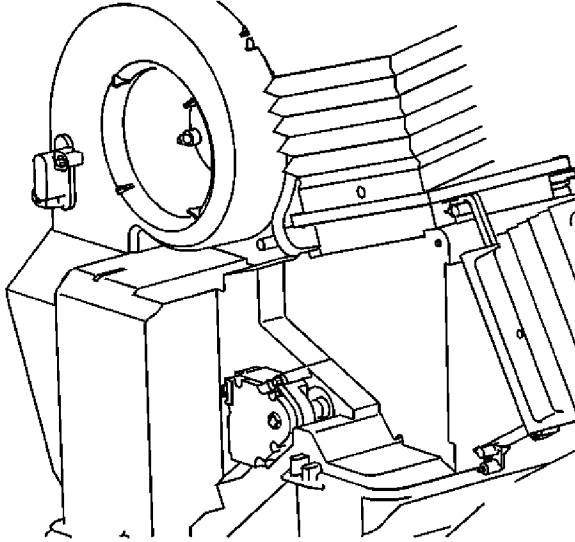


Callout	Component Name
1	Instrument Panel Cluster Trim Plate Bezel Assembly Refer to Instrument Panel Cluster Trim Plate Bezel Replacement .
2	Auxiliary Blower Motor Switch Assembly Procedure Squeeze the retaining tabs on the back of the switch and push the switch out of the cluster trim bezel assembly.

Auxiliary Temperature Valve Actuator Replacement

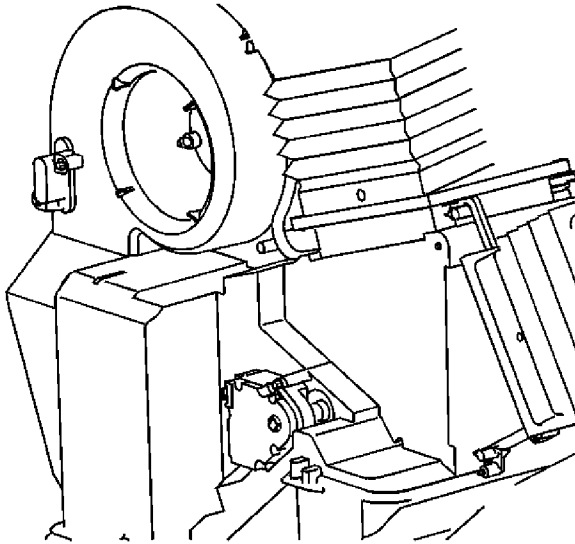
Removal Procedure

1. Remove the left rear quarter trim panel. Refer to [Body Side Trim Panel Replacement - Left Side](#).
2. Disconnect the electrical connector from the air temperature actuator.
3. Remove the retaining screws from the air temperature actuator.



4. Remove the air temperature actuator.

Installation Procedure



1. Install the air temperature actuator.

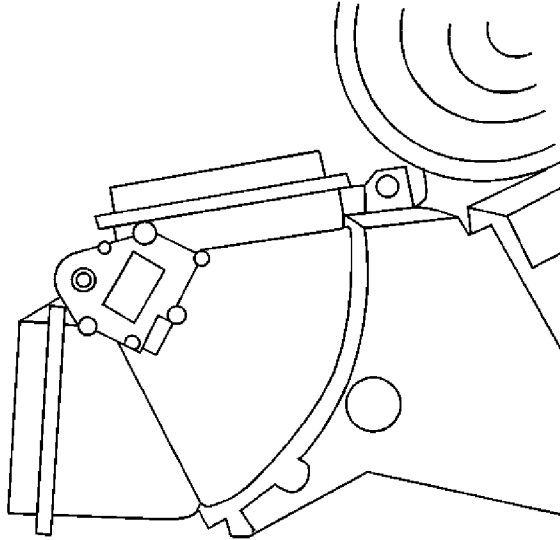
Caution: Refer to [Fastener Caution](#) in the Preface section.

2. Install the retaining screws to the air temperature actuator and tighten to **1.9 N·m (17 lb in)**.
3. Connect the air temperature electrical connector to the actuator.
4. Install the left rear quarter trim panel. Refer to [Body Side Trim Panel Replacement - Left Side](#).

Auxiliary Mode Valve Actuator Replacement

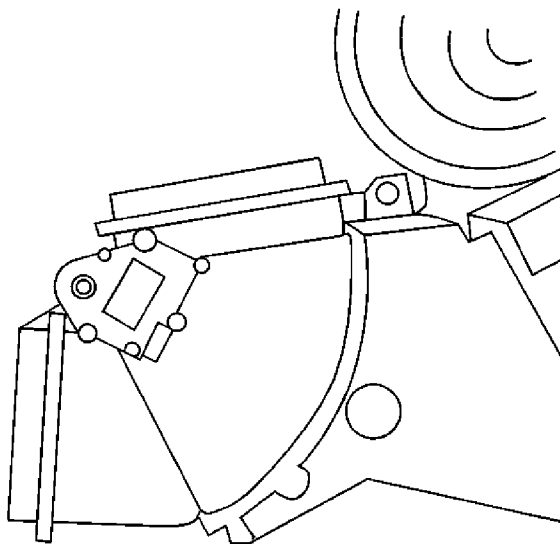
Removal Procedure

1. Remove the auxiliary HVAC module assembly. Refer to [Auxiliary HVAC Module Replacement](#).
2. Remove the retaining screws from the auxiliary mode actuator.



3. Remove the auxiliary mode actuator.

Installation Procedure





1. Install the auxiliary mode actuator.

Caution: Refer to [Fastener Caution](#) in the Preface section.

2. Install the retaining screws to the auxiliary mode actuator and tighten to **1.9 N·m (17 lb in)**.
3. Install the auxiliary HVAC module assembly. Refer to [Auxiliary HVAC Module Replacement](#).

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