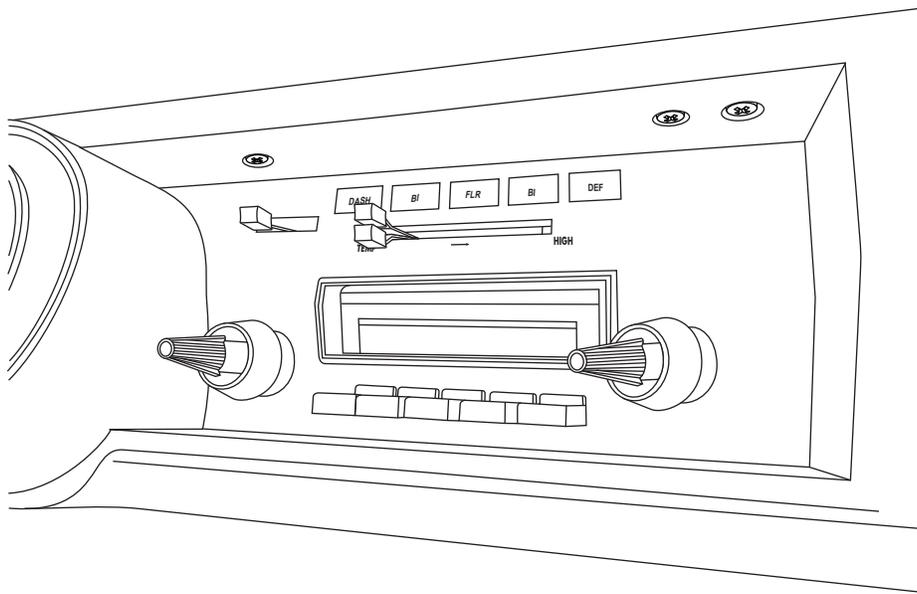




an ISO 9001:2008 Registered Company

1966-67 Dodge Charger, Coronet

with Factory Air
Control Panel Kit
474157



18865 Goll St. San Antonio, TX 78266
Phone: 210-654-7171
Fax: 210-654-3113
www.vintageair.com



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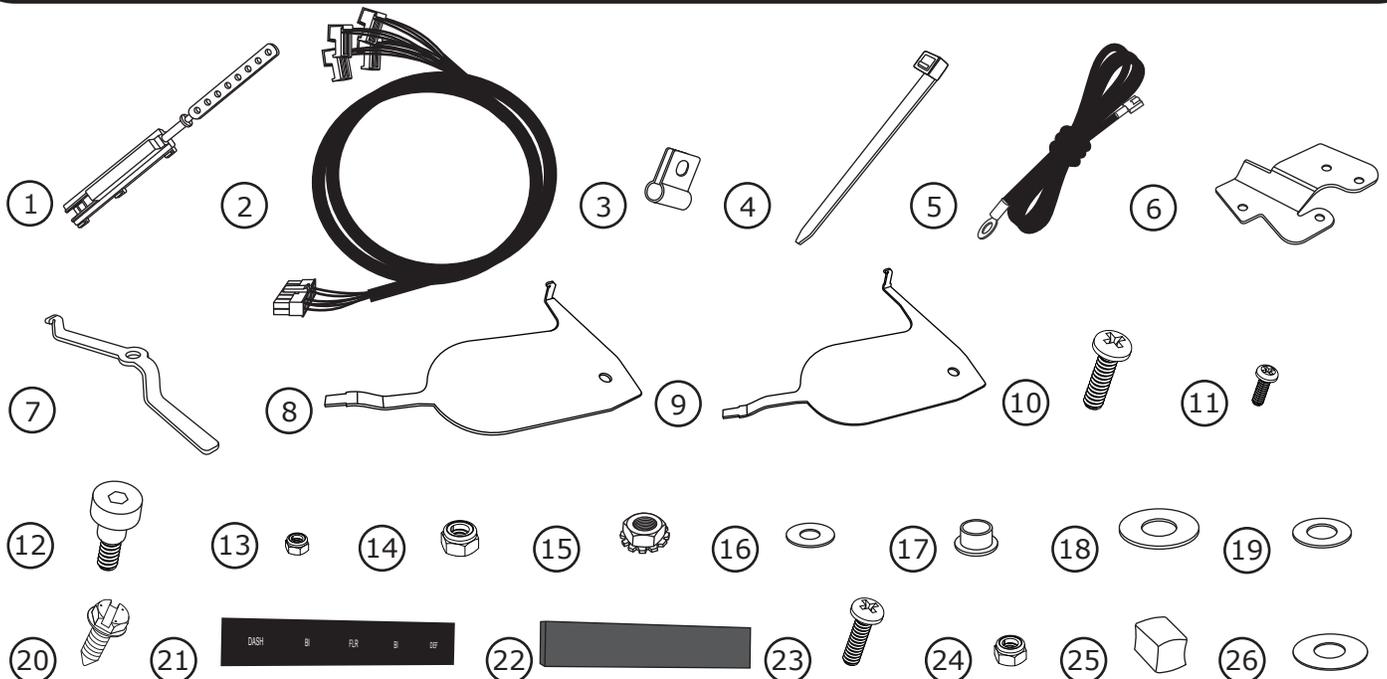


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Packing List: Control Panel Kit (474157)

No.	Qty.	Part No.	Description
1.	3	112002-SUA	Cable Converter Assembly
2.	1	232002-VUA	Control Harness, Gen IV Universal
3.	3	491010-VUR	Clamp, Cable Converter
4.	5	21301-VUP	4" Tie Wrap
5.	1	231520	Ground Wire
6.	1	640606	Bracket, Fan Switch
7.	1	640607	Lever, Fan Switch
8.	1	640609	Lever, Mode (with Dimple)
9.	1	640608	Lever, Temperature
10.	1	18249-VUB	Screw, 10-24 x 3/8", Pan Head
11.	1	18413-VUB	Screw, 4-40 x 3/8", Pan Head
12.	1	180022	Bolt, 1/4" x 1/4", Shoulder
13.	1	18412-VUB	Nut, 4-40, Nyloc
14.	1	18145-VUB	Nut, 10-24, Nyloc
15.	1	18260-VUB	Nut, 10-24, with Star Washer
16.	1	49706-VUR	Washer, #6 Nylon, Flat
17.	1	49701-VUI	Bushing, Nylon
18.	1	180381	Washer, 1/4" Fender, Flat
19.	1	186011	Washer, 1/4", Flat
20.	1	18247-VUB	Screw, #10 x 1/2", Sheet Metal
21.	1	484008	Label, Controls
22.	1	201003	Foam, 3/8" Thick
23.	2	18105-VUB	Screw, 8-32 x 3/8", Pan Head
24.	2	18602-NSR	Nut, 8-32, Nyloc
25.	3	49301-VUQ	Knobs, Cable Converter, Chrome
26.	2	180047	Washer, .020 Nylon, Flat

**** Before beginning installation, open all packages and check contents of shipment. Please report any shortages directly to Vintage Air within 15 days. After 15 days, Vintage Air will not be responsible for missing or damaged items.**



**NOTE: Images may not depict actual parts and quantities.
Refer to packing list for actual parts and quantities.**



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Removing OEM Control Panel

Perform the Following:

1. Disconnect battery ground cable.
2. Protect steering column to avoid damaging finish when removing cluster.
3. Remove heater control knobs by loosening set screws on underside of knobs.
4. Remove radio, knobs and (2) mounting nuts (retain).
5. Remove glove box door (retain) and glove box (discard).
6. Remove (7) Phillips screws from upper and lower lips of cluster bezel (retain).
7. From under instrument panel, disconnect speedometer cable. Remove wiring harness from (2) retainer clips at steering column bracket.
8. Carefully pull cluster out and to the right far enough to reach around left end of cluster to disconnect printed circuit board.
9. Remove the wires from each gauge. Remove panel lighting (white) wire.
10. Roll the top of the cluster down while working it to the right, in front of the glove box opening.
11. Remove control panel from dash by removing the (2) OEM screws, and loosen temperature cable from rear of control bracket.
12. On a workbench, remove the A/C master control switch from the control bracket (discard (2) Phillips screws). Remove and discard the fan blower switch (See Figure 2, below).
13. Remove and discard temperature control arm, pin and spring washer located on the bottom of the control bracket (retain lighting bracket).
14. At the far back side of the control bracket where the original cable was attached, trim off the rear side of the tab approximately 1/16" x 1", so the converter barrel fits in this area.

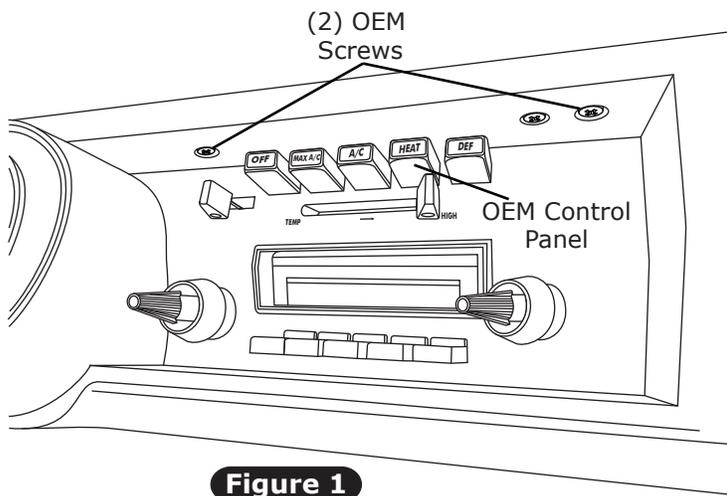


Figure 1

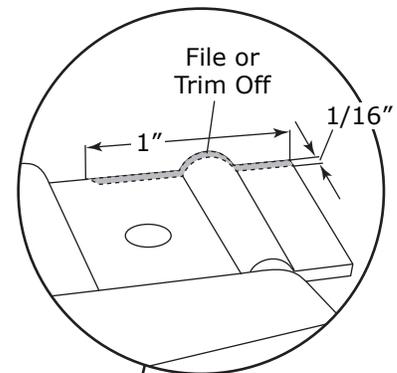


Figure 2a

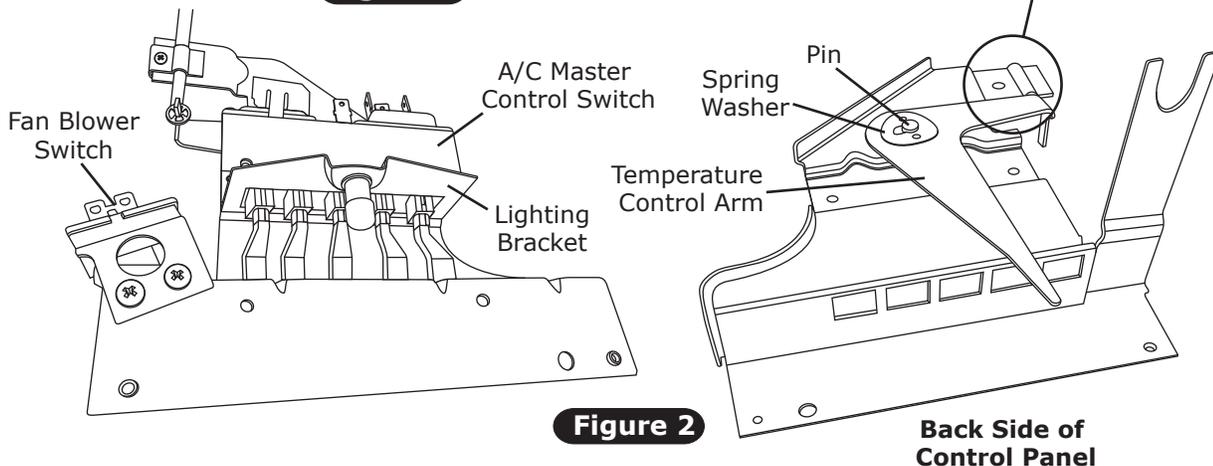


Figure 2

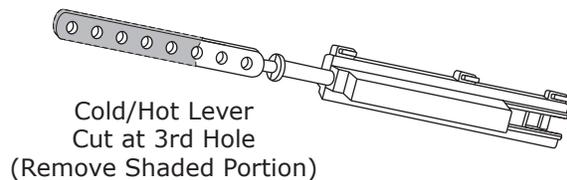
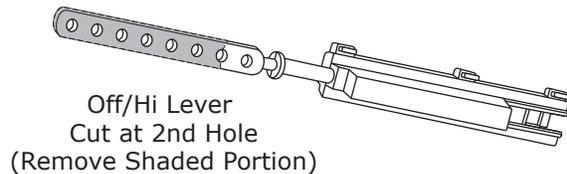
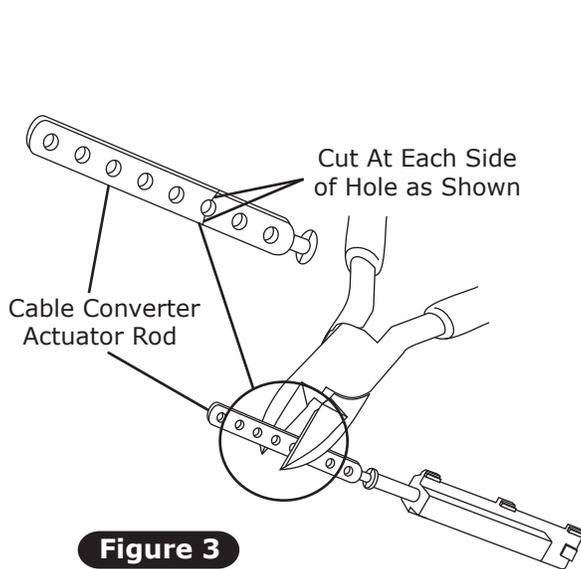
Back Side of Control Panel



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Cable Converter Assembly Modification

1. Locate the (3) cable converter assemblies. Using a pair of wire cutters, cut the cable converter actuator rods as shown in Figure 3, below.



Cable Converter Assembly Mounting Clamp Installation

1. Install cable converter assembly mounting clamps. **NOTE: Orient clamps in relation to the (3) housing snaps on the cable converter assembly.**

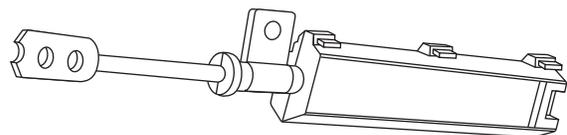
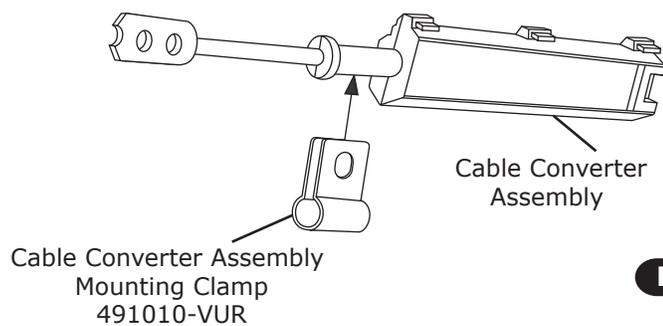
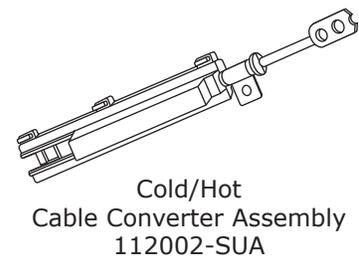
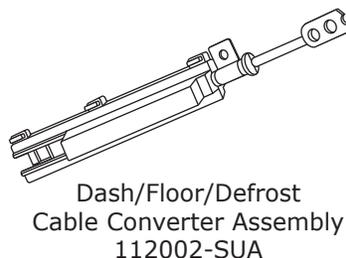


Figure 4





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Cold/Hot & Dash/Floor/Defrost Bracket Lever Installation

1. Install cold/hot & dash/floor/defrost bracket lever on to OEM control panel as shown in Figure 5, below.

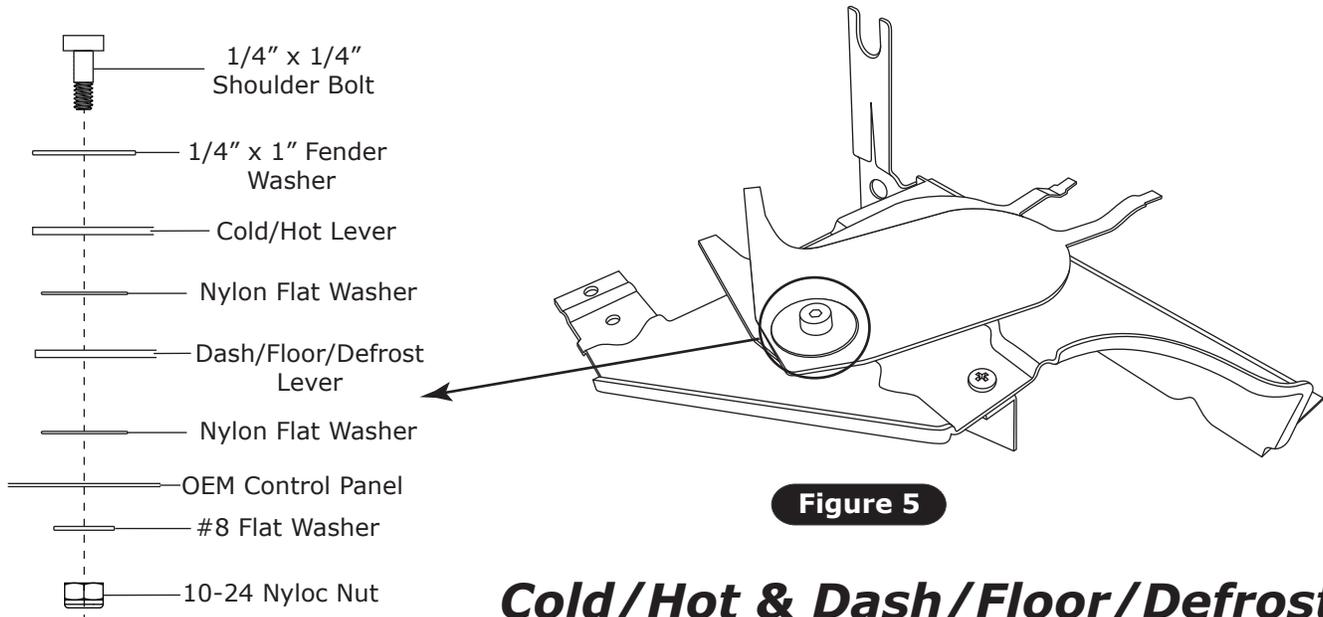


Figure 5

Cold/Hot & Dash/Floor/Defrost Cable Converter Installation

1. Enlarge the 1/8" hole in the tab to 3/16" (See Figure 6, below)
2. Install cable converter lever push rod onto Dash/Floor/Defrost lever as shown in Figure 6, below.
3. Install cable converter lever push rod onto Cold/Hot lever as shown in Figure 6, below.
4. Secure the (2) cable converters to the tab using 10-24 x 3/8" screw and 10-24 nut with star washer through both clamps, side-by-side as shown.
5. Since the cable converter assembly can slide back and forth in the clamp before the screw is tightened, position such that the flat part of the rod is as close to flush as possible with the end of the housing at the lever's innermost position.

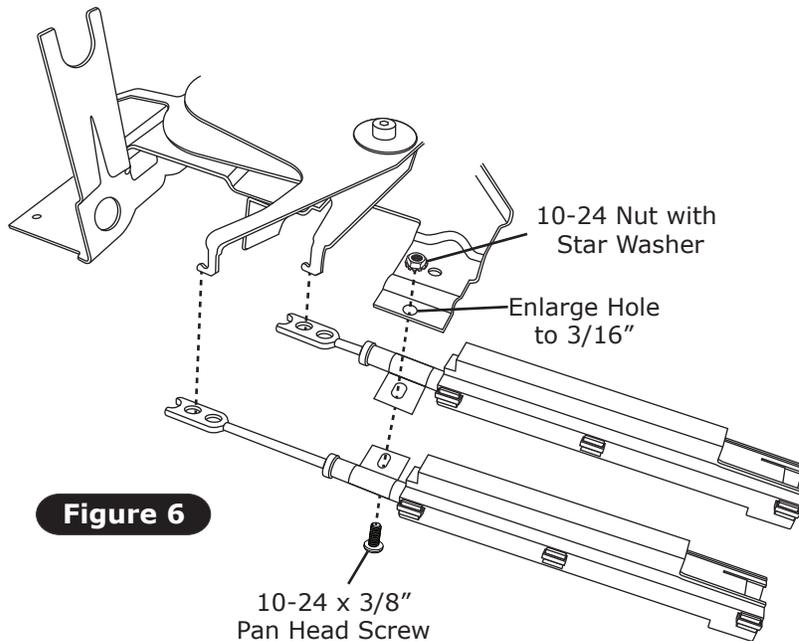


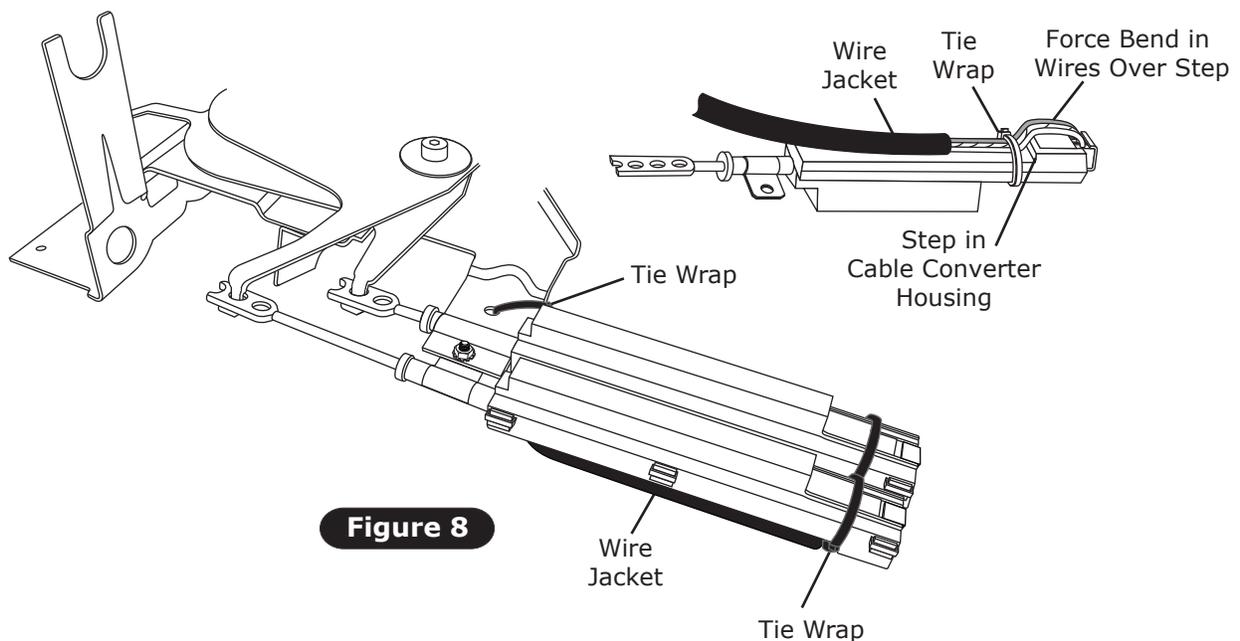
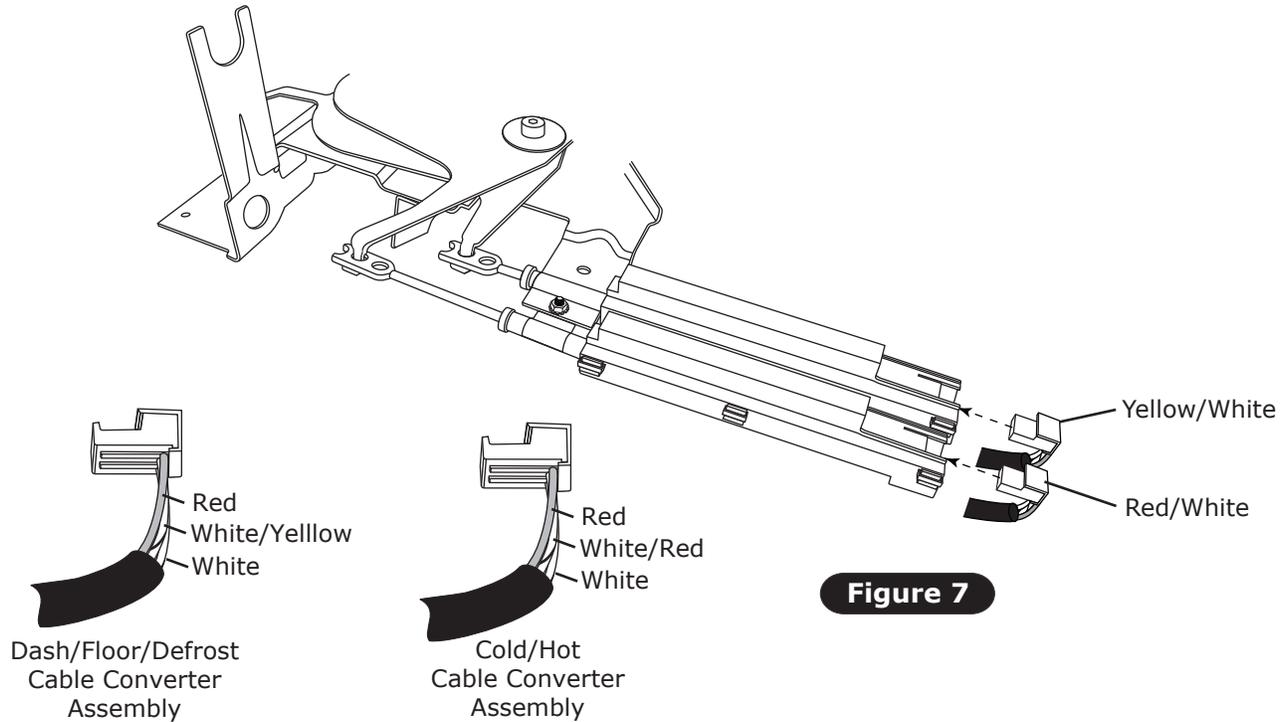
Figure 6



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Cold/Hot & Dash/Floor/Defrost Control Harness Installation

1. Locate the control panel wiring harness, and plug the corresponding wire into the correct cable converter assembly.
2. Once the wires are correctly plugged into the cable converter assembly, secure the wires to the cable converter assembly using the supplied tie wraps (See Figure 8, below). The tie wrap must be located between the end of the wire jacket and the step in the cable converter housing, forcing a bend in each wire as it passes over the step in the cable converter housing. The head of the tie wrap must fall on the edge of the housing to remain tight. Ensure that the tie wraps are tight enough that the wires cannot move.





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Off/Hi Bracket & Lever Installation

1. Install Off/Hi lever onto Off/Hi bracket as shown in Figure 9, below.
2. Install Off/Hi bracket onto OEM control panel using OEM screws as shown in Figure 9, below.

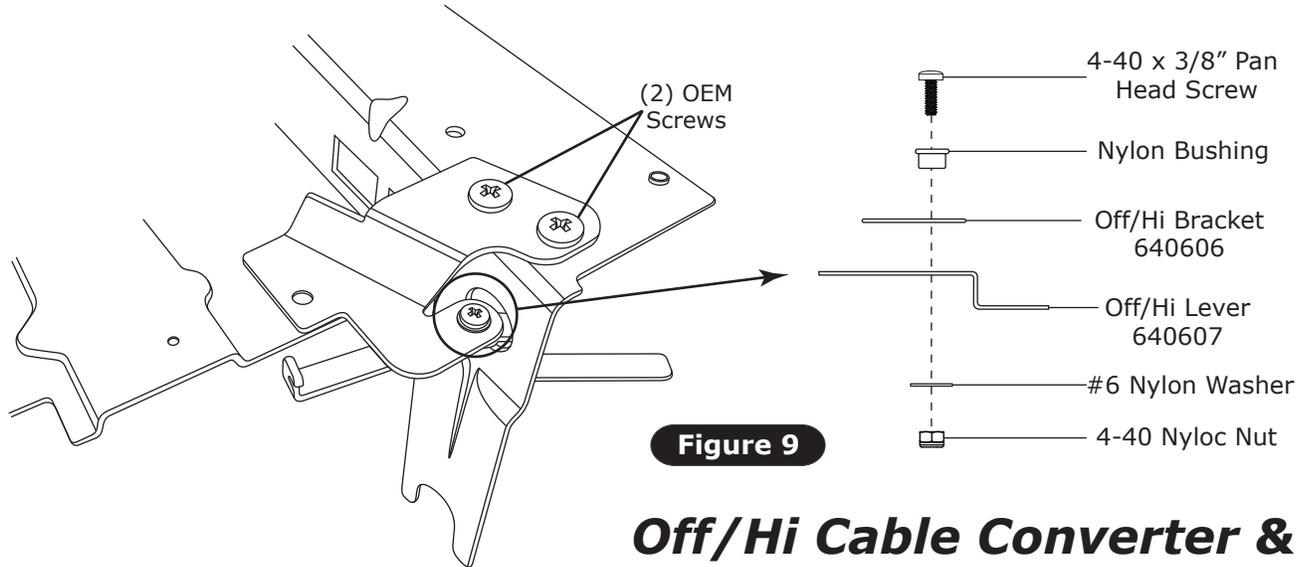


Figure 9

Off/Hi Cable Converter & Lighting Bracket Installation

1. Install cable converter lever push rod onto Off/Hi lever as shown in Figure 10, below.
2. Secure the cable converter assembly to the Off/Hi bracket using #10 x 1/2" sheet metal screw as shown in Figure 10, below.
3. Since the cable converter assembly can slide back and forth in clamp before screw is tightened, position such that the flat part of the rod is as close to flush as possible with the end of the housing at the lever's innermost position.
4. Reinstall light bracket to control panel frame using (2) 8-32 x 3/8" pan head screws and (2) 8-32 nyloc nuts as shown in Figure 10, below.

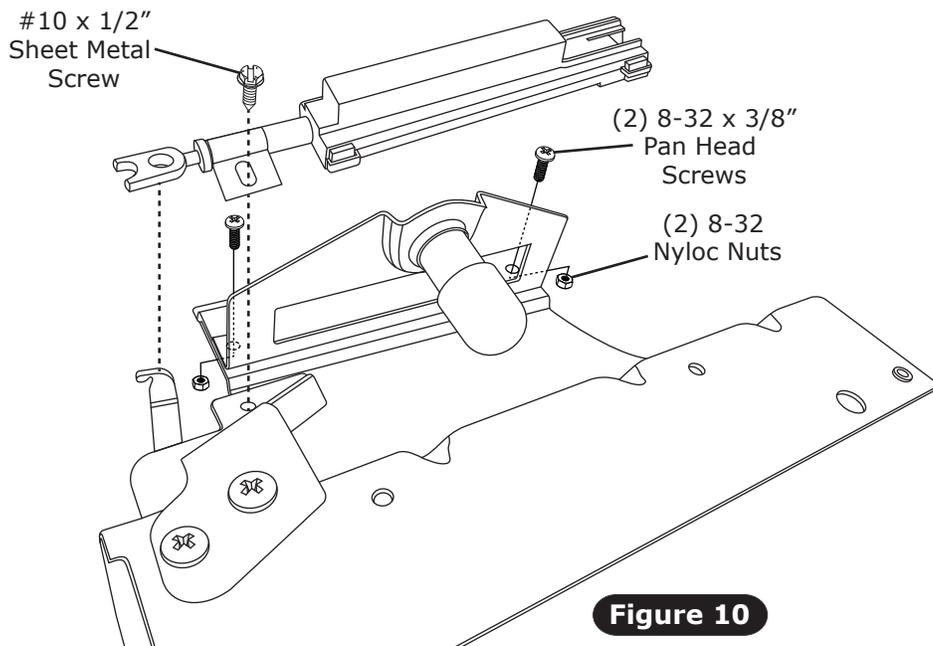


Figure 10



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Off/Hi Control Harness Installation

1. Locate the control panel wiring harness, and plug the corresponding wire into the correct cable converter assembly.
2. Once the wires are correctly plugged into the cable converter assembly, secure the wires to the cable converter assembly using the supplied tie wraps (See Figure 11, below). The tie wrap must be located between the end of the wire jacket and the step in the cable converter housing, forcing a bend in each wire as it passes over the step in the cable converter housing. The head of the tie wrap must fall on the edge of the housing to remain tight. Ensure that the tie wraps are tight enough that the wires cannot move.

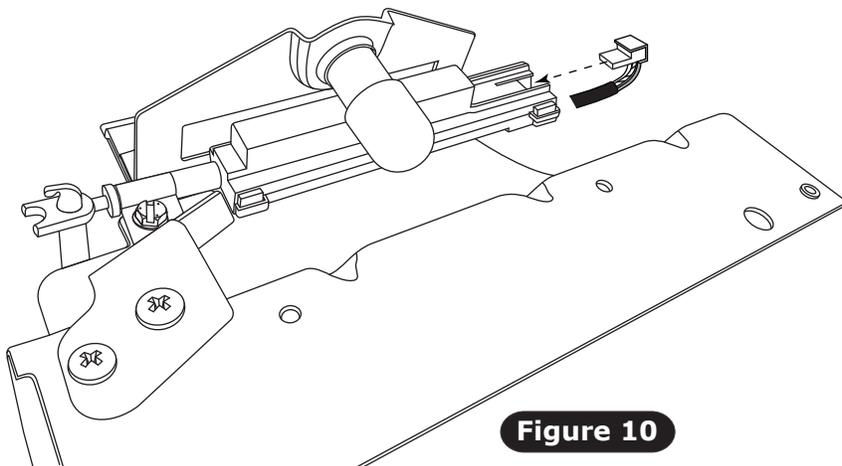


Figure 10

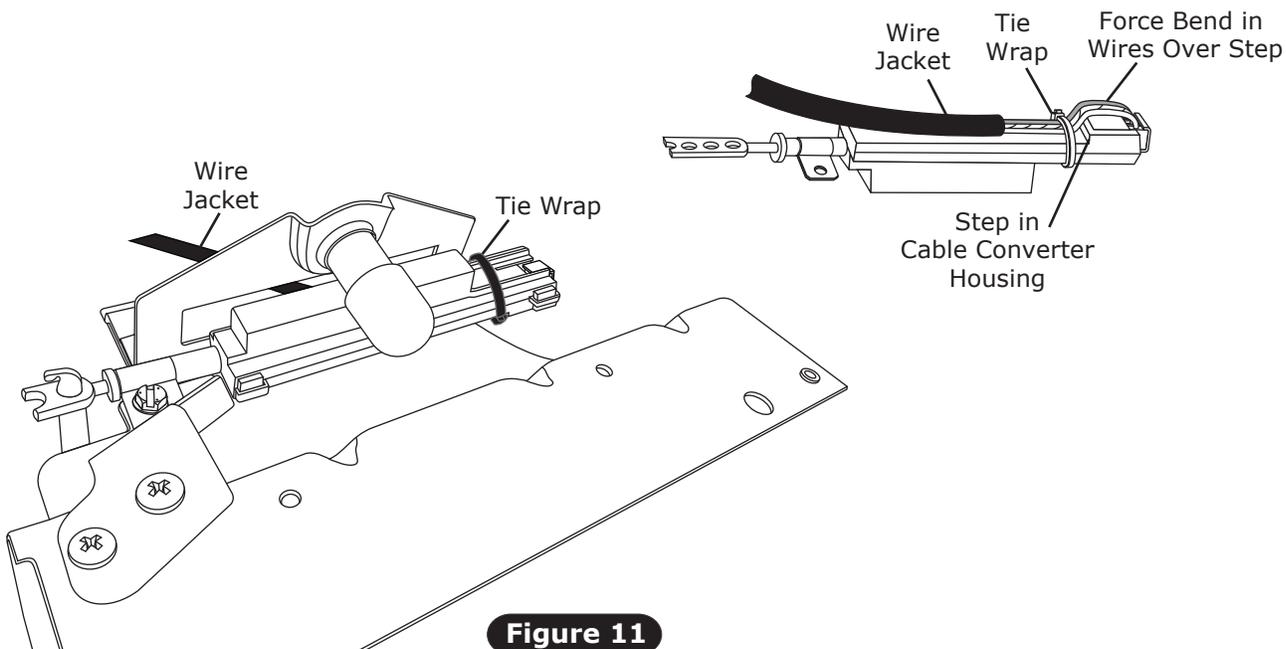
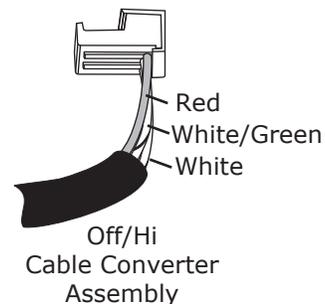


Figure 11



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Control Panel Lever Slot Modification

1. File 1/16" from top and bottom of control panel lever slot on instrument panel as shown in Figure 12, below.

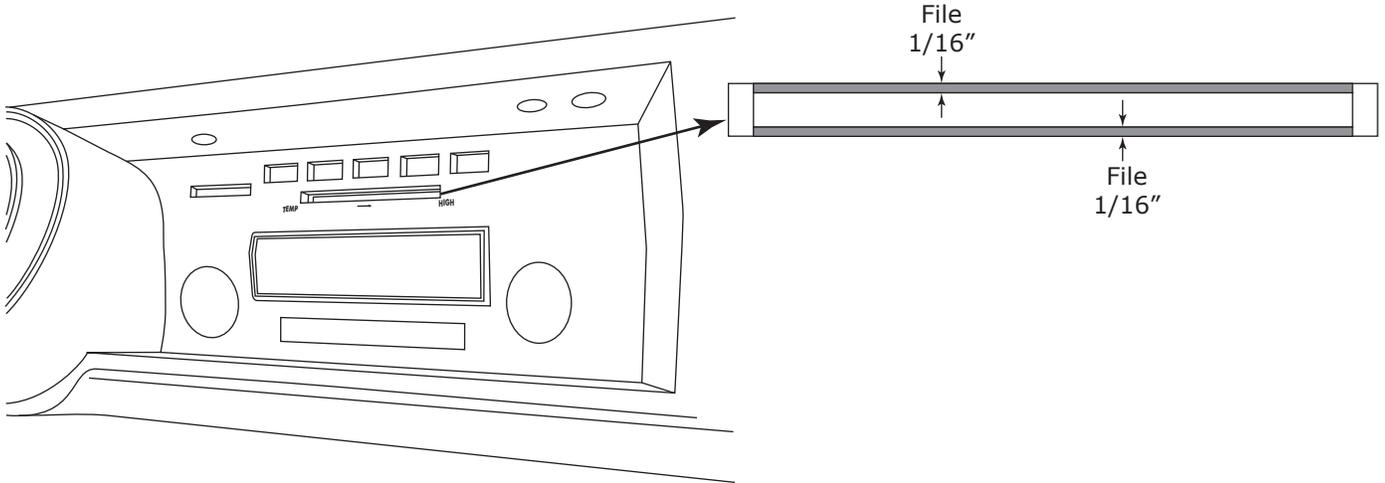


Figure 12

Label Installation

1. Install label onto foam as shown in Figure 13, below.
2. Install label assembly onto control panel as shown in Figure 14, below.

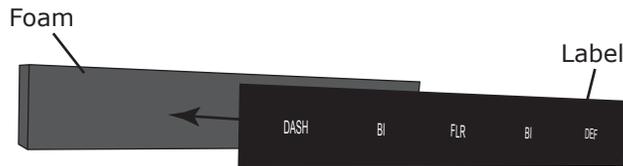


Figure 13

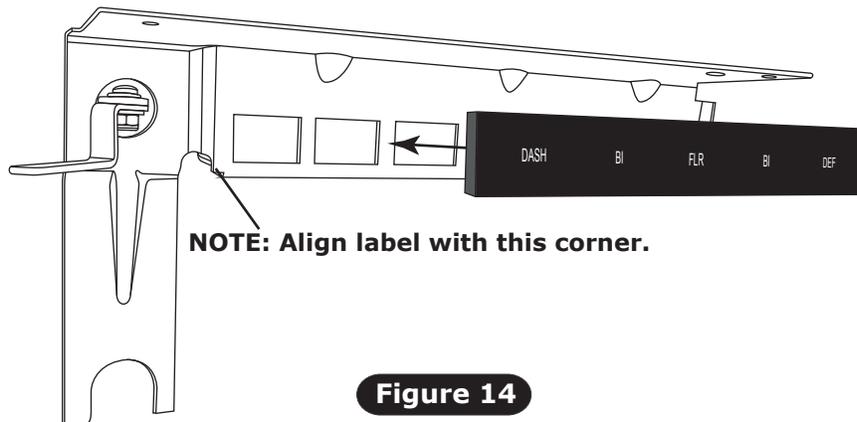


Figure 14



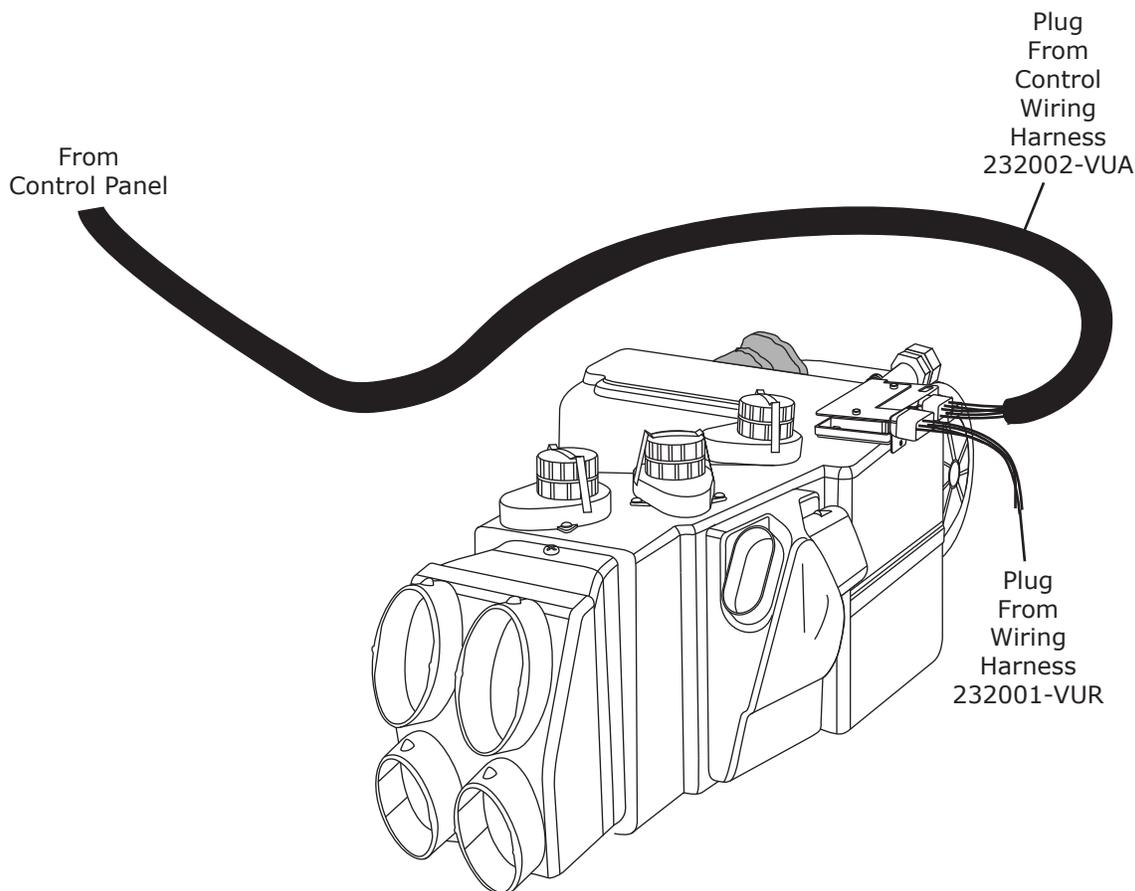
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Control Panel & Instrument Panel Reinstallation

1. Reinstall control panel and instrument panel using OEM screws.
2. Reinstall control panel knobs.

Final Steps

1. Plug the wiring harnesses into the ECU module on the sub case.
2. Wire according to the wiring diagram on Page 14.
3. Calibration procedure and operation instructions:
 - A. Calibrating the control panel will set the range of travel for the cable converters connected to the OEM control panel levers. Performing this procedure will set the limits of the cable converters at their highest and lowest points.
 - B. Locate the gray wire with an unused connector in the wiring harness near the cable harness relay. This wire is labeled PROGRAM on the wiring diagram.
 - C. It will be necessary to ground the gray wire for approximately five seconds while moving the controls, so it is sometimes helpful to attach one end of the white jumper to the vehicle's ground (for example, the chassis) and have the other end ready to connect to the gray PROGRAM wire when the procedure requires it.
 - D. To calibrate the control panel, follow the calibration procedures on Pages 12 & 13.



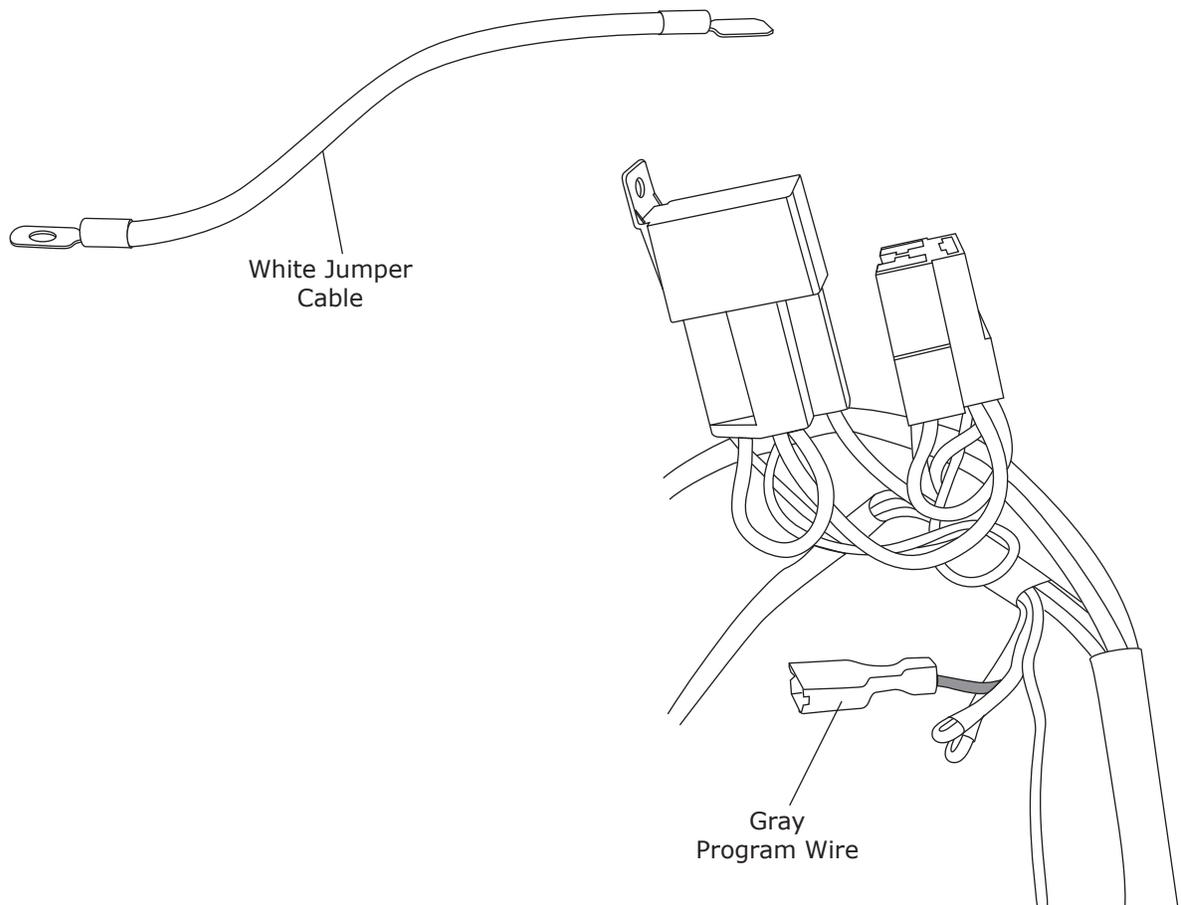


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Control Panel Calibration Procedure

On Vintage Air Gen IV systems using factory controls, it is necessary to calibrate the system to your specific control panel. This procedure ensures that the stroke of your control panel levers or knobs is translated into precise control of the fan speed, temperature blend and mode door position. Please carefully read and understand these procedures before beginning. The procedure may be repeated as many times as necessary to get it right.

In preparation for calibration, you will need to attach the supplied white ground jumper wire to a suitable chassis ground. This jumper wire must be easily connected to the gray programming wire located in the main Gen IV wiring harness next to the relays. During the calibration procedure, you will connect the white jumper to the gray program wire, which will "teach" the Gen IV ECU the upper limits of the control levers or knobs. The blower will momentarily change speeds, signaling that the upper limits have been "learned". You will move the levers or knobs to opposite extreme positions of their travel and then disconnect the white jumper. The blower will again change speeds, signaling that the lower limits have been learned and that the calibration procedure is complete.

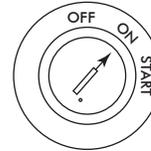




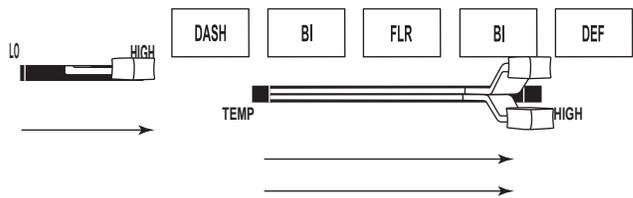
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Control Panel Calibration Procedure (Cont.)

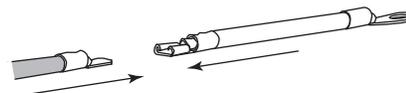
1. Turn on the ignition switch (Do not start the engine).



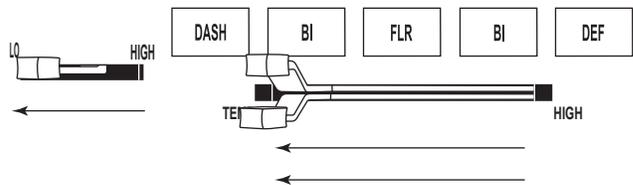
2. Move the control levers/knobs to the position shown.



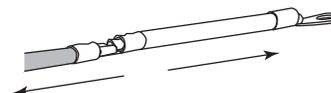
3. Connect the white jumper wire to the gray program wire. Wait for the blower speed to change (Approximately 5 seconds).



4. Move the control levers/knobs to the positions shown.



5. Disconnect the white jumper wire from the gray program wire. The blower speed will change, indicating completion of the calibration procedure.



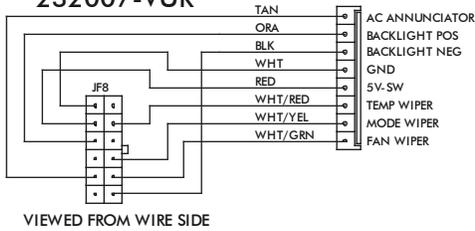
6. Confirm proper operation of controls. Repeat procedure if necessary. When finished, tape over program wire connector with electrical tape to prevent accidental contact with chassis ground.



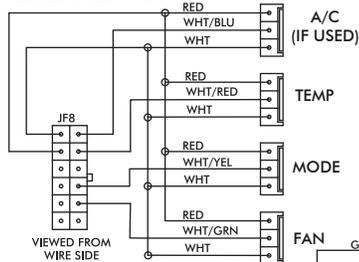
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Wiring Diagram

232007-VUR

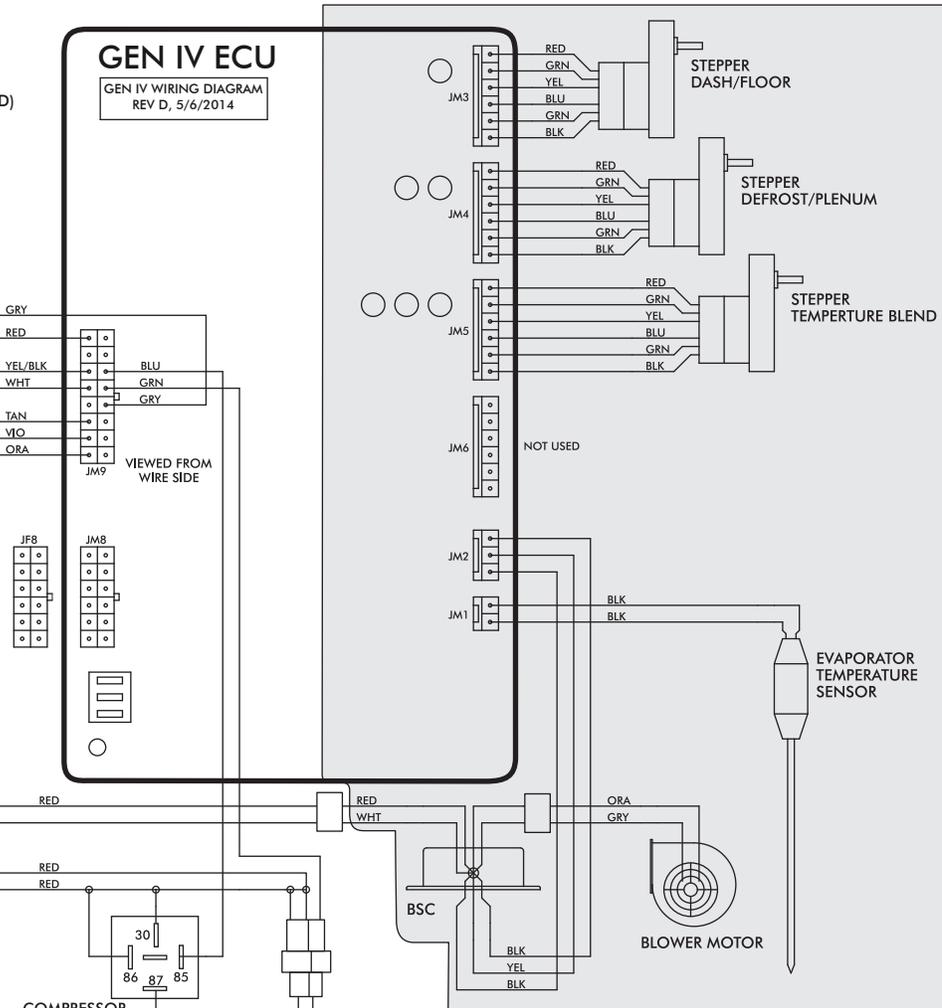


232002-VUA



GEN IV ECU

GEN IV WIRING DIAGRAM
REV D, 5/6/2014



PROGRAM

N/A
* DASH LAMP
(IF USED)

*** WIDE OPEN
THROTTLE SWITCH
(OPTIONAL)

WHT



WHT

RED

NOTE: = CHASSIS GROUND

- Dash Lamp Is Used Only With Type 232007-VUR Harness.
- **Warning:** Always Mount Circuit Breaker As Close to the Battery As Possible. (NOTE: Wire Between Battery and Circuit Breaker Is Unprotected and Should Be Carefully Routed to Avoid a Short Circuit).
- Wide Open Throttle Switch Contacts Close Only at Full Throttle, Which Disables A/C Compressor.



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Operation of Controls

On Gen IV systems with three lever/knob controls, the temperature control toggles between heat and A/C operations. To activate A/C, move the temperature lever/knob all the way to cold and then back it off to the desired vent temperature. For heat operation, move the temperature lever/knob all the way to hot and then adjust to the desired vent temperature. The blower will momentarily change speed, each time you toggle between operations, to indicate the change.

Blower Speed

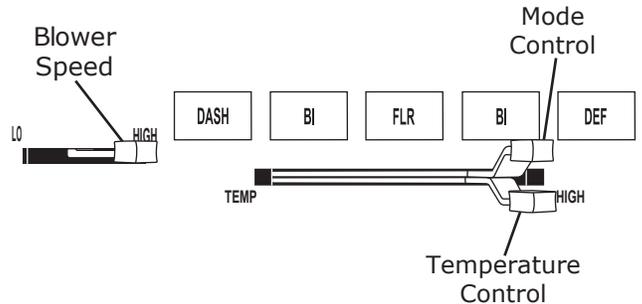
This lever/knob controls blower speed, from OFF to HI.

Mode Control

This lever/knob controls the mode positions, from DASH to FLOOR to DEFROST, with a blend in between.

Temperature Control

This lever/knob controls the temperature, from HOT to COLD.



A/C Operation

Blower Speed

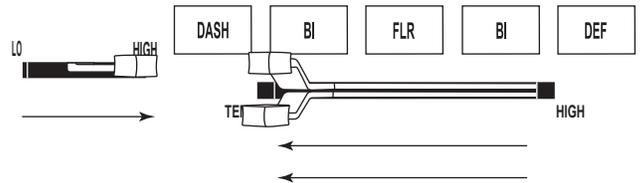
Adjust to desired speed.

Mode Control

Adjust to desired mode position (DASH position recommended).

Temperature Control

For A/C operation, adjust to coldest position to engage compressor (Adjust between HOT and COLD to reach desired temperature).



Heat Operation

Blower Speed

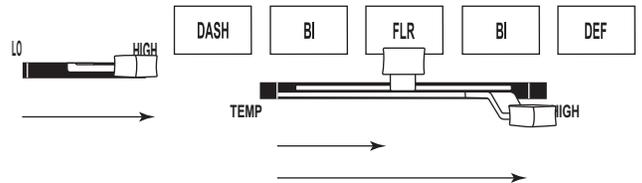
Adjust to desired speed.

Mode Control

Adjust to desired mode position (FLOOR position recommended).

Temperature Control

For maximum heating, adjust to hottest position (Adjust between HOT and COLD to reach desired temperature).



Defrost/De-fog Operation

Blower Speed

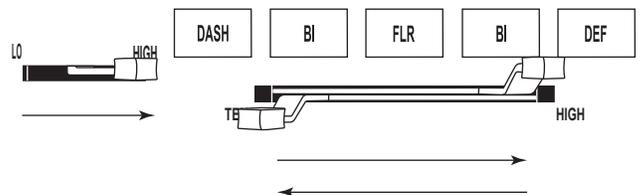
Adjust to desired speed.

Mode Control

Adjust to DEFROST position for maximum defrost, or between FLOOR and DEFROST positions for a bi-level blend (Compressor is automatically engaged).

Temperature Control

Adjust to desired temperature.





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Packing List: Control Panel Kit (474157)

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6.	1	640606	Bracket, Fan Switch
7.	1	640607	Lever, Fan Switch
8.	1	640609	Lever, Mode (with Dimple)
9.	1	640608	Lever, Temperature
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11.	1	18413-VUB	Screw, 4-40 x 3/8", Pan Head
12.	1	180022	Bolt, 1/4" x 1/4", Shoulder
13.	1	18412-VUB	Nut, 4-40, Nyloc
14.	1	18145-VUB	Nut, 10-24, Nyloc
15.	1	18260-VUB	Nut, 10-24, with Star Washer
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17.	1	49701-VUI	Bushing, Nylon
18.	1	180381	Washer, 1/4" Fender, Flat
19.	1	186011	Washer, 1/4", Flat
20.	1	18247-VUB	Screw, #10 x 1/2", Sheet Metal
21.	1	484008	Label, Controls
22.	1	201003	Foam, 3/8" Thick
23.	2	18105-VUB	Screw, 8-32 x 3/8", Pan Head
24.	2	18602-NSR	Nut, 8-32, Nyloc
25.	3	49301-VUQ	Knobs, Cable Converter, Chrome
26.	2	180047	Washer, .020 Nylon, Flat

Checked By: _____
 Packed By: _____
 Date: _____

