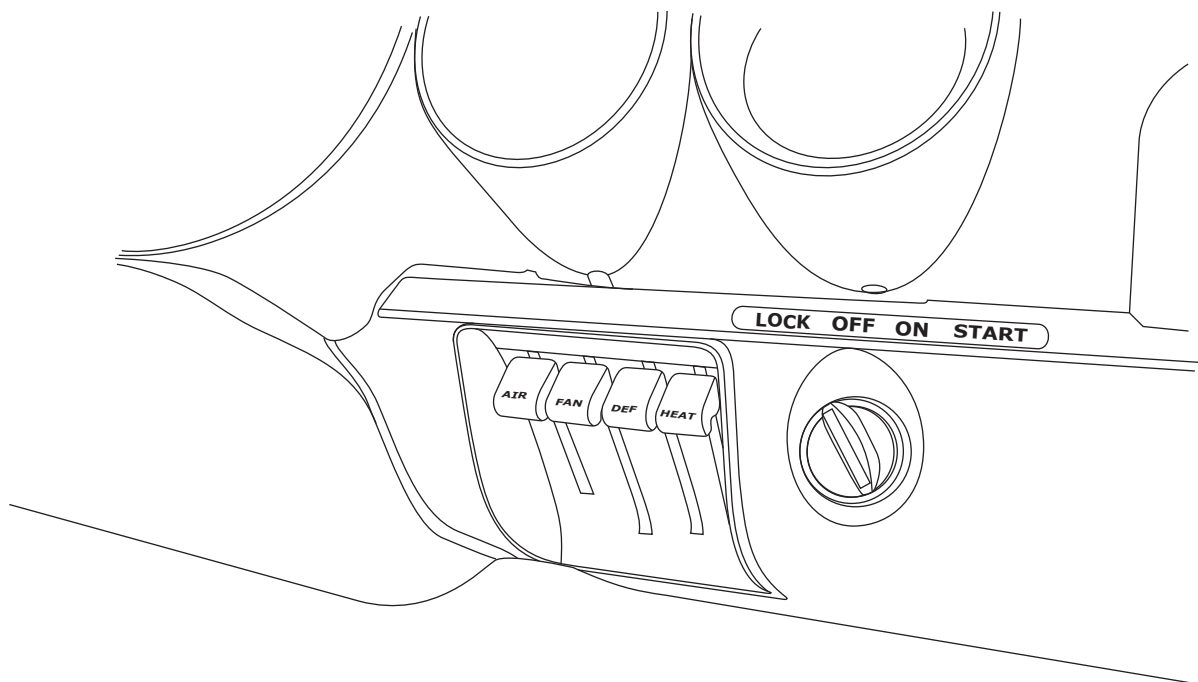




an ISO 9001: 2008 Registered Company

1959-60 Chevrolet Full-Size/El Camino

4-Lever Control Panel Conversion Kit 473159



18865 Goll St. San Antonio, TX 78266 ph: 210-654-7171 fax: 210-654-3113



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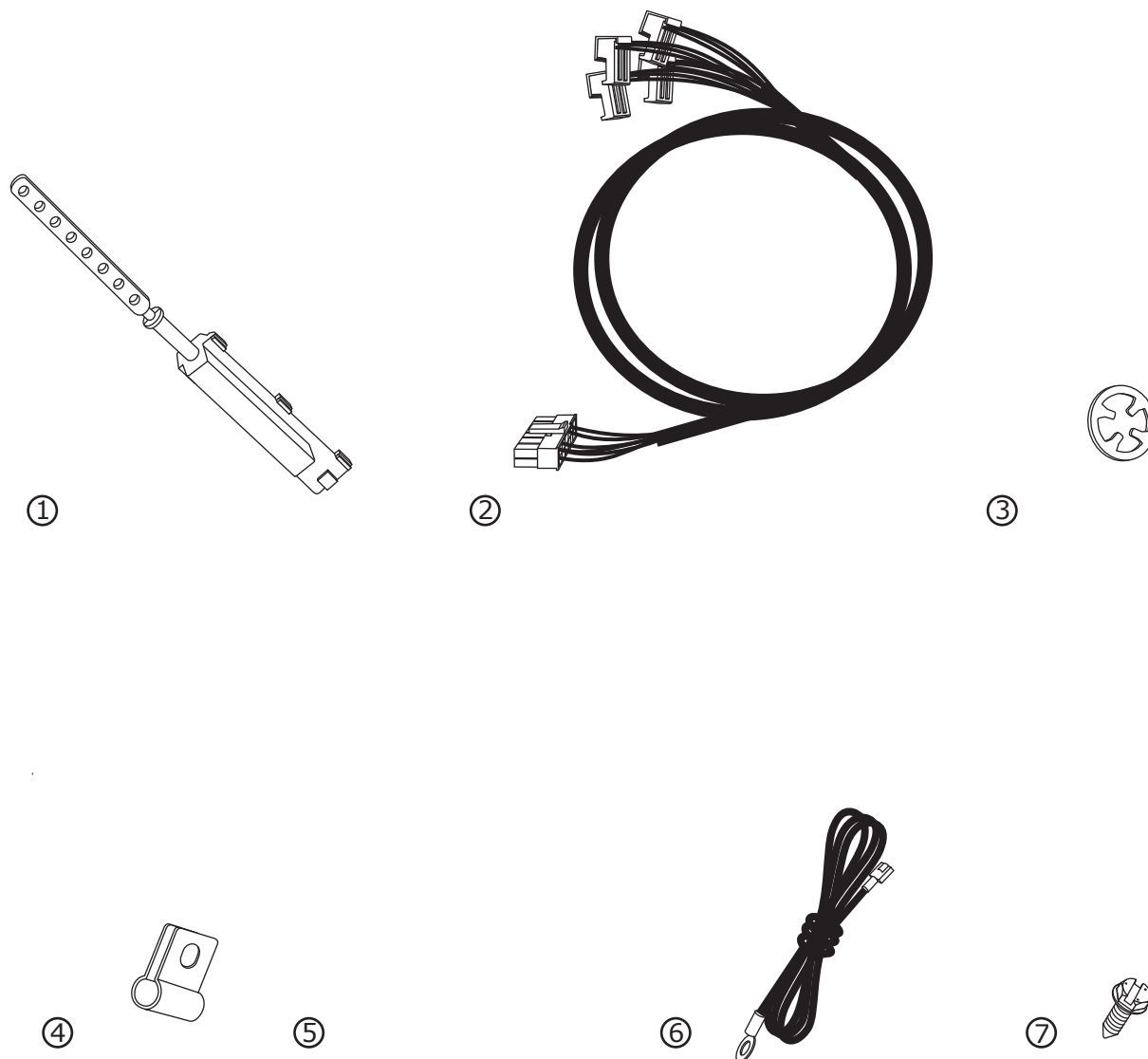
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Packing List: 1959-60 Chevrolet Full-Size/El Camino 4-Lever Control Panel Conversion Kit (473159)

No.	Qty.	Part No.	Description
1.	3	112002-SUA	Cable Converter Assembly
2.	1	232002-VUA	Gen IV Universal Control Harness
3.	3	65976-VUE	3/16" Push-on Ring
4.	3	491010-VUR	Cable Converter Clamp
5.	5	21301-VUP	4" Tie Wrap
6.	1	231520	Ground Wire
7.	3	18247-VUB	#10 x 1/2" Sheet Metal Screw

**** 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.**





Removing OEM Control Panel

1. Remove (4) OEM mounting screws from control panel (retain) (See Figure 1, below).
2. Disconnect cables and wires from back of control panel.
3. Remove the control panel.
4. Remove OEM control knobs (retain).

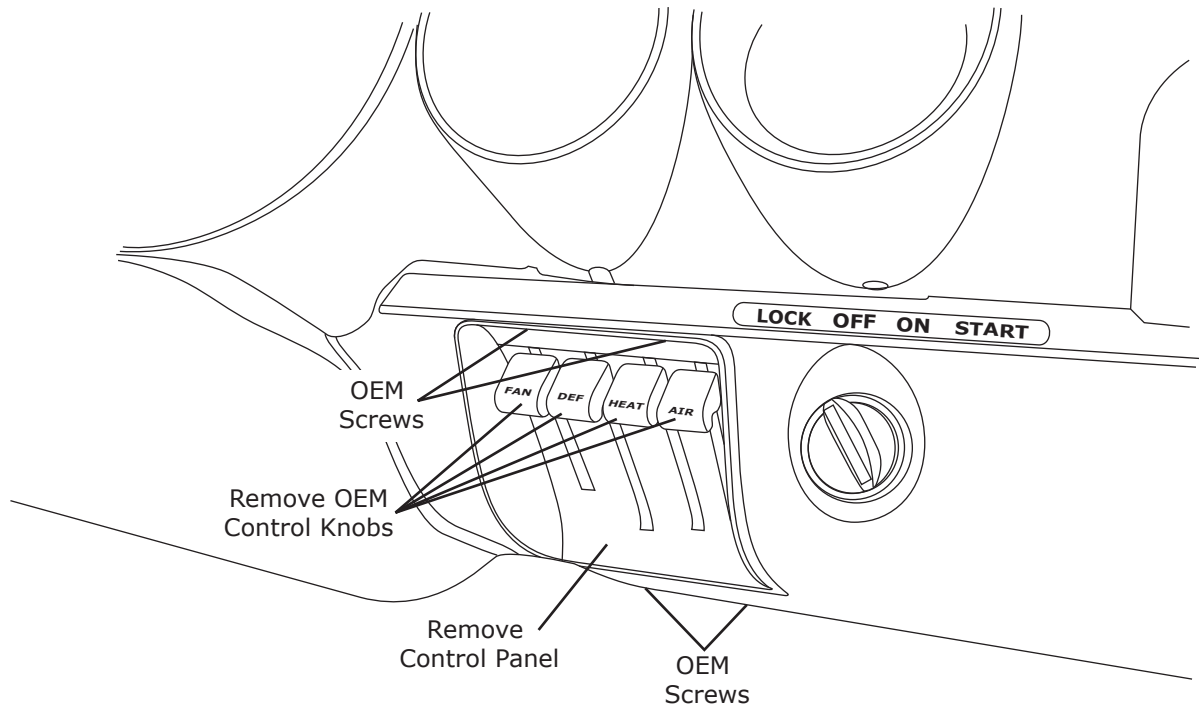
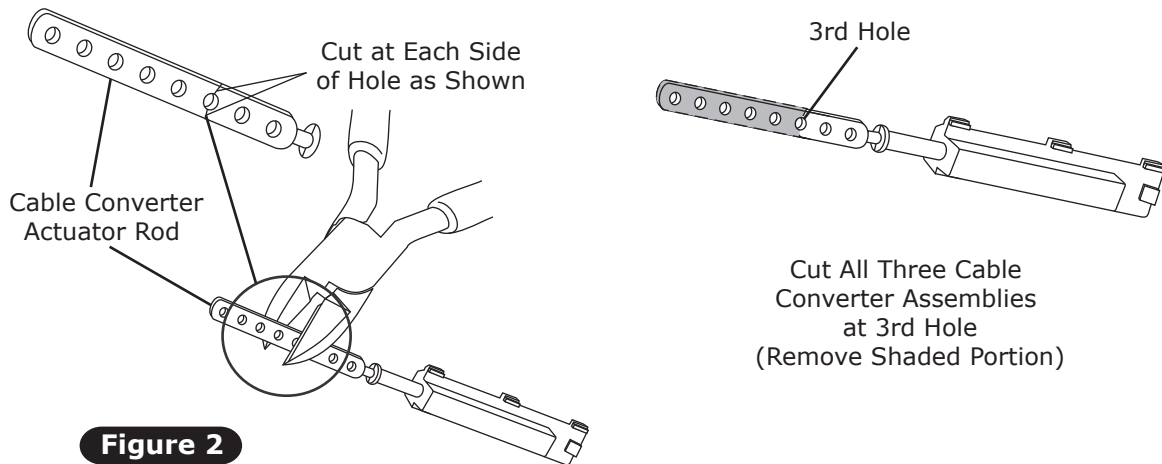


Figure 1



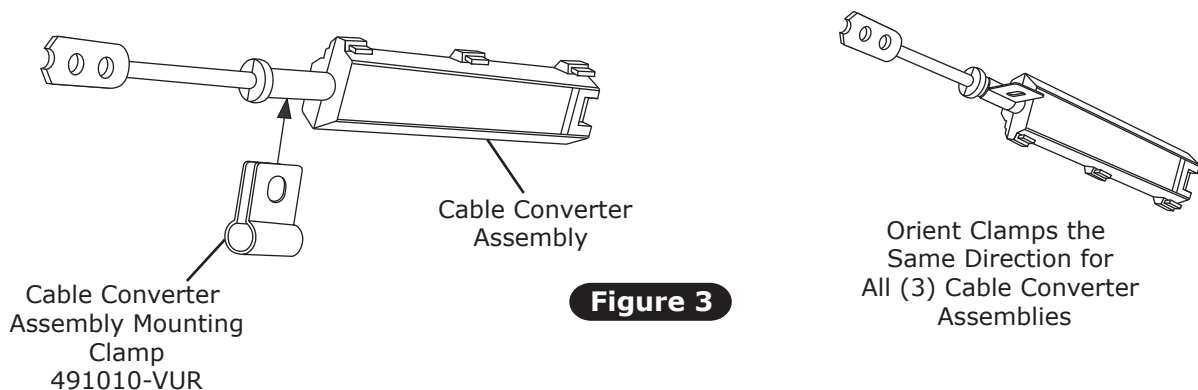
Cable Converter Assembly Modification

1. Locate the three cable converter assemblies. Using a pair of wire cutters, cut cable converter actuator rods as shown in Figure 2, below.



Cable Converter Assembly Mounting Clamp Installation

1. Install cable converter assembly mounting clamps (See Figure 3, below).



Orient cable converter assemblies as shown, and install mounting clamps as shown.

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



Cold/Hot Cable Converter Assembly Installation

1. Install cable converter assembly onto the Cold/Hot lever (See Figure 4, below).
2. Install cable converter lever push rod onto the OEM cable mounting stud on lever (See Figure 4, below).
3. Secure the cable converter assembly onto the OEM control panel using a #10 x 1/2" sheet metal screw as shown in Figure 4, below.
4. Since the cable converter assembly can slide back and forth in the clamp before the screw is tightened, position the cable converter assembly 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 (See Figure 4, below).
5. Secure the cable converter lever push rod onto the OEM cable mounting stud using a 3/16" push-on ring as shown in Figure 4, below.

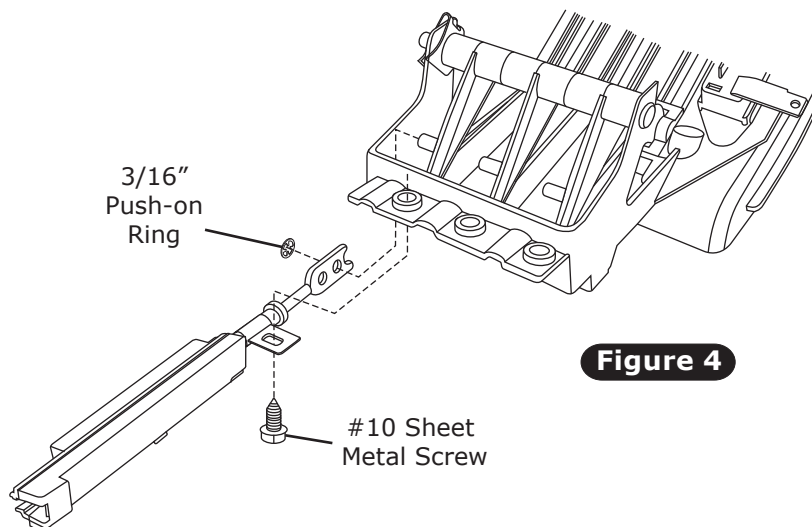
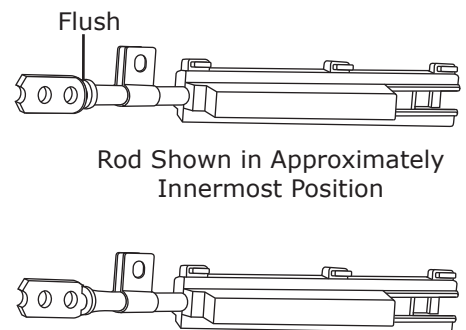


Figure 4



Rod Shown in Approximately Innermost Position

NOTE: Do Not Allow Rod to Separate Housing When Rod Is in Innermost Position.

Cold/Hot Control Harness

1. Locate the control panel wiring harness, and plug the corresponding wire into the correct cable converter assembly as shown in Figure 5, below.

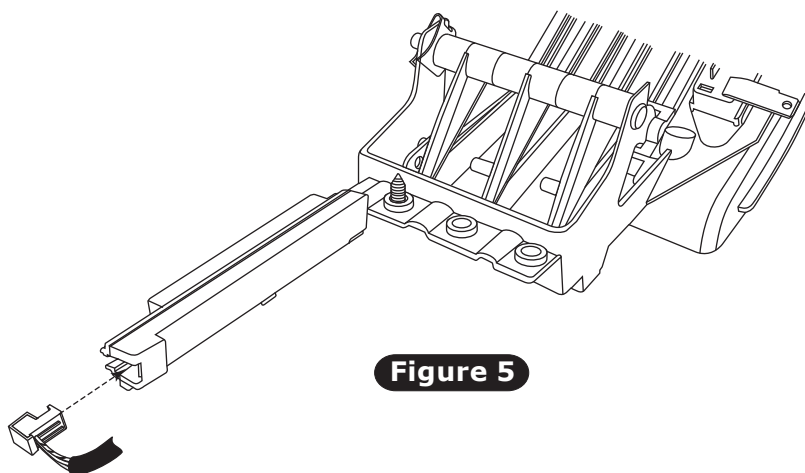
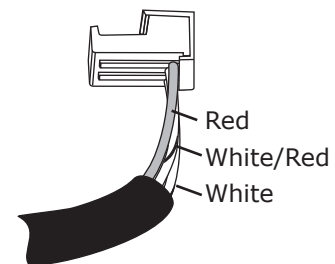


Figure 5



Cold/Hot Cable Converter Assembly



Cold/Hot Control Harness (Cont.)

1. Once wires are correctly plugged into cable converter assembly, secure wires to cable converter assembly using tie wraps (supplied) (See Figure 6, 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, as shown, to remain tight. Ensure that the tie wraps are tight enough that the wires cannot move (See Figure 6, below).

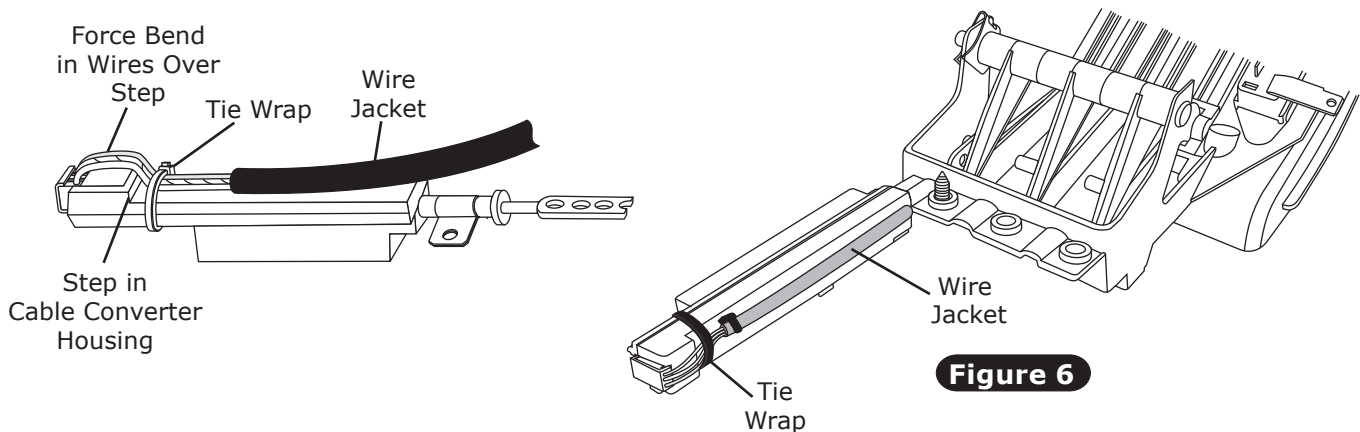


Figure 6

Dash/Floor/Defrost Cable Converter Assembly Installation

1. Install cable converter assembly onto the Dash/Floor/Defrost lever (See Figure 7, below).
2. Install cable converter lever push rod onto OEM cable mounting stud on lever (See Figure 7, below).
3. Secure the cable converter assembly onto OEM control panel using a #10 x 1/2" sheet metal screw as shown in Figure 7, below.
4. Since the cable converter assembly can slide back and forth in the clamp before the screw is tightened, position the cable converter assembly such that the flat part of the rod is as close to flush as possible with the end of housing at the lever's innermost position (See Figure 7, below).
5. Secure cable converter lever push rod onto OEM cable mounting stud using a 3/16" push-on ring as shown in Figure 7, below.

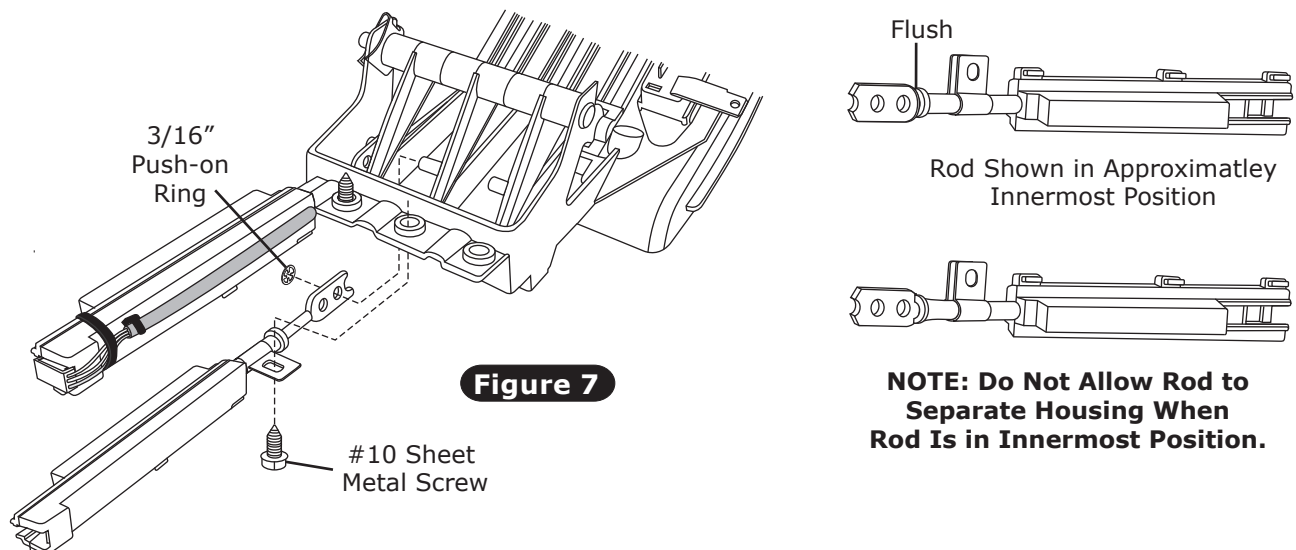


Figure 7

NOTE: Do Not Allow Rod to Separate Housing When Rod Is in Innermost Position.



Dash/Floor/Defrost Control Harness

1. Locate the control panel wiring harness and plug the corresponding wire into the correct cable converter assembly as shown in Figure 8, below.

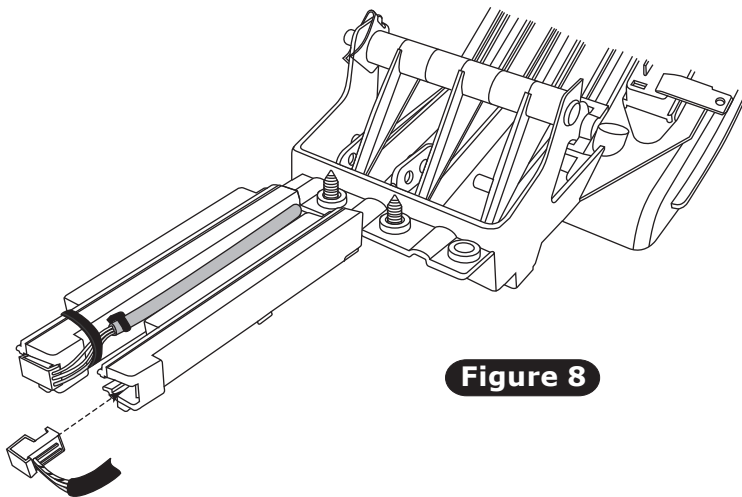
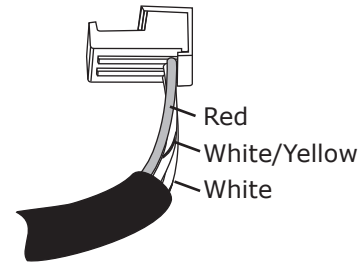


Figure 8



**Dash/Floor/Defrost
Cable Converter
Assembly**

Dash/Floor/Defrost Control Harness (Cont.)

1. Once wires are correctly plugged into cable converter assembly, secure wires to cable converter assembly using tie wraps (supplied) (See Figure 9, 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, as shown, to remain tight. Ensure that the tie wraps are tight enough that the wires cannot move (See Figure 9, below).

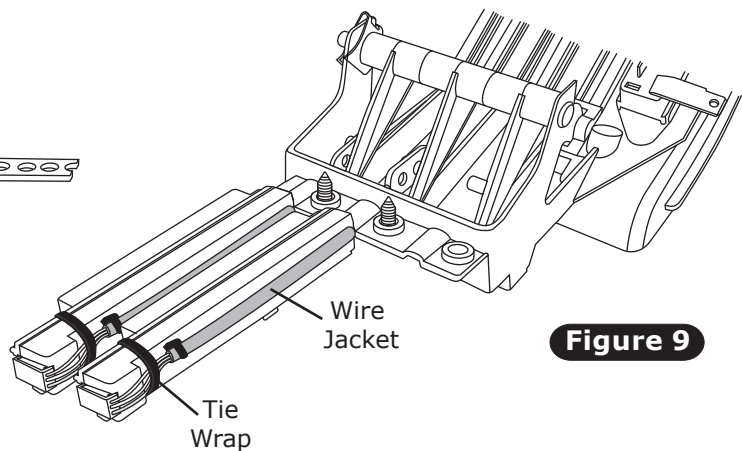
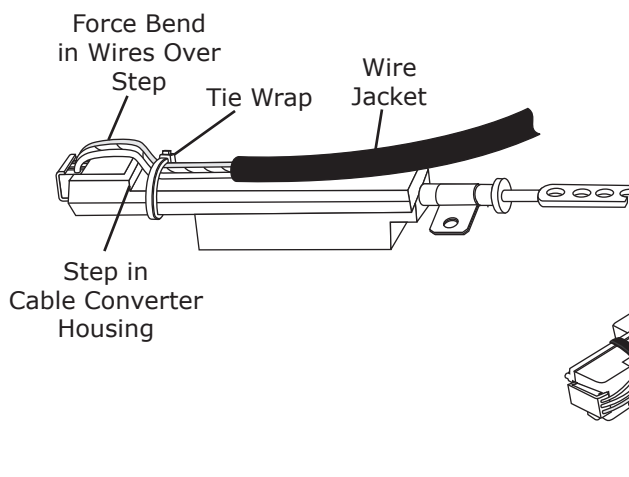


Figure 9



Off/Hi Cable Converter Assembly Installation

1. Install cable converter assembly onto the Off/Hi lever (See Figure 10, below).
2. Install cable converter lever push rod onto OEM cable mounting stud on lever (See Figure 10, below).
3. Secure the cable converter assembly onto OEM control panel using a #10 x 1/2" sheet metal screw as shown in Figure 10, below.
4. Since the cable converter assembly can slide back and forth in the clamp before the screw is tightened, position the cable converter assembly such that the flat part of the rod is as close to flush as possible with the end of housing at the lever's innermost position (See Figure 10, below).
5. Secure cable converter lever push rod onto OEM cable mounting stud using a 3/16" push-on ring as shown in Figure 10, below.

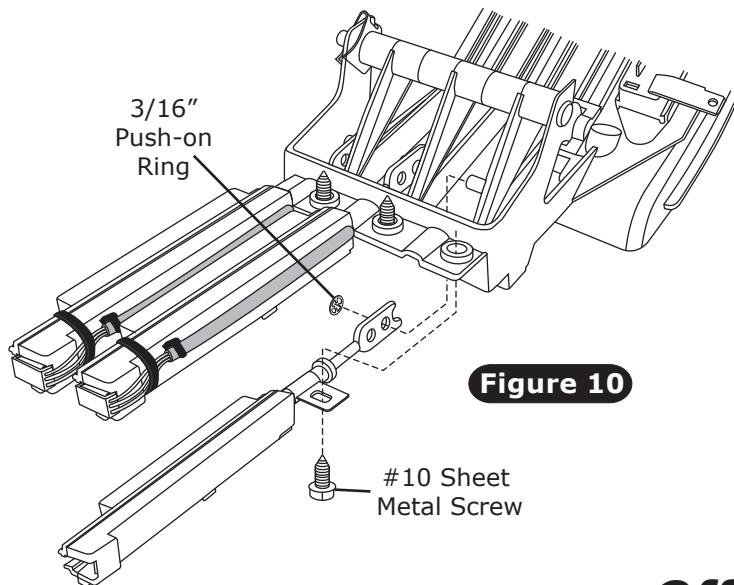
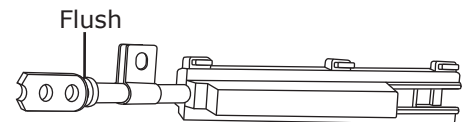
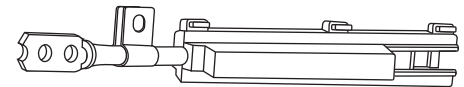


Figure 10



Rod Shown in Approximately
Innermost Position



**NOTE: Do Not Allow Rod to
Separate Housing When
Rod Is in Innermost Position.**

Off/Hi Control Harness

1. Locate the control panel wiring harness and plug the corresponding wire into the correct cable converter assembly as shown in Figure 11, below.

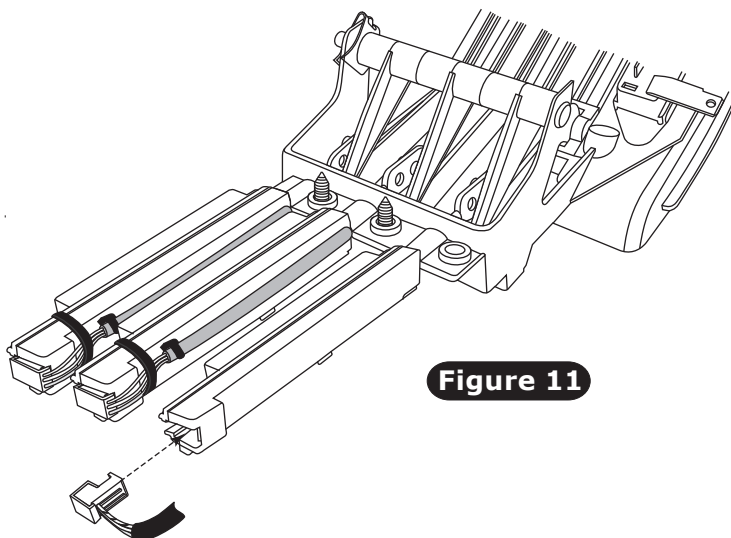
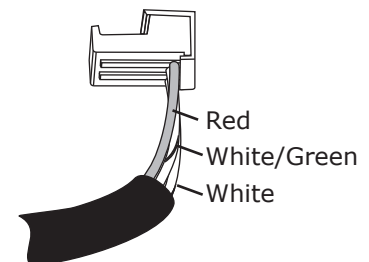


Figure 11



**Off/Hi
Cable Converter
Assembly**



Off/Hi Control Harness (Cont.)

1. Once wires are correctly plugged into cable converter assembly, secure wires to cable converter assembly using tie wraps (supplied) (See Figure 12, 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, as shown, to remain tight. Ensure that the tie wraps are tight enough that the wires cannot move (See Figure 12, below).

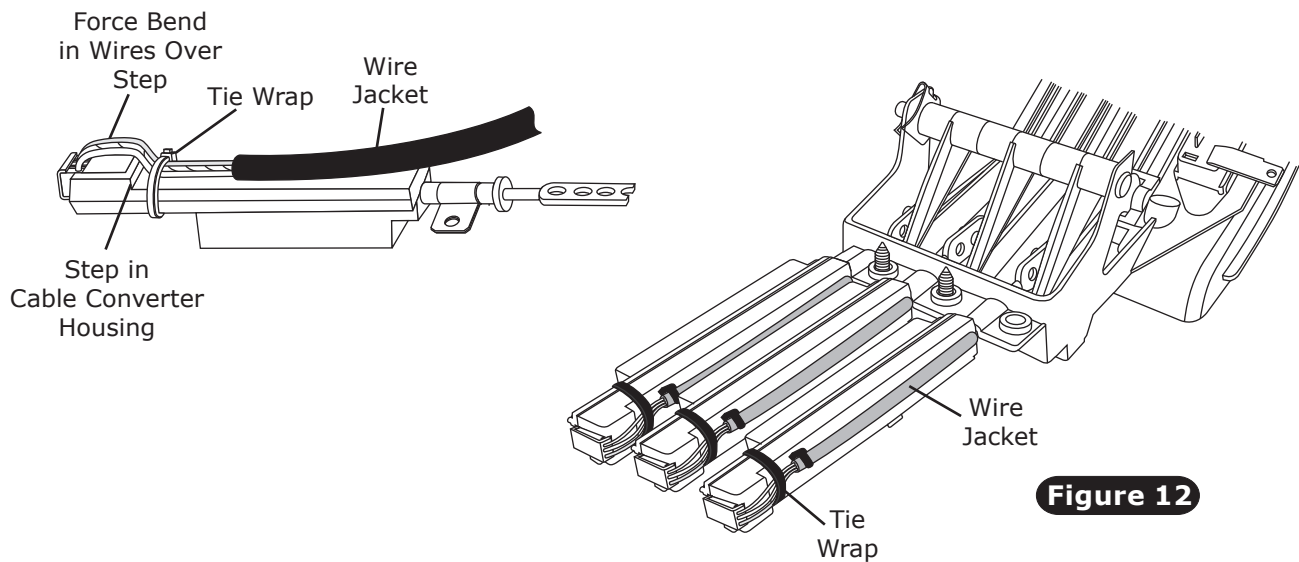
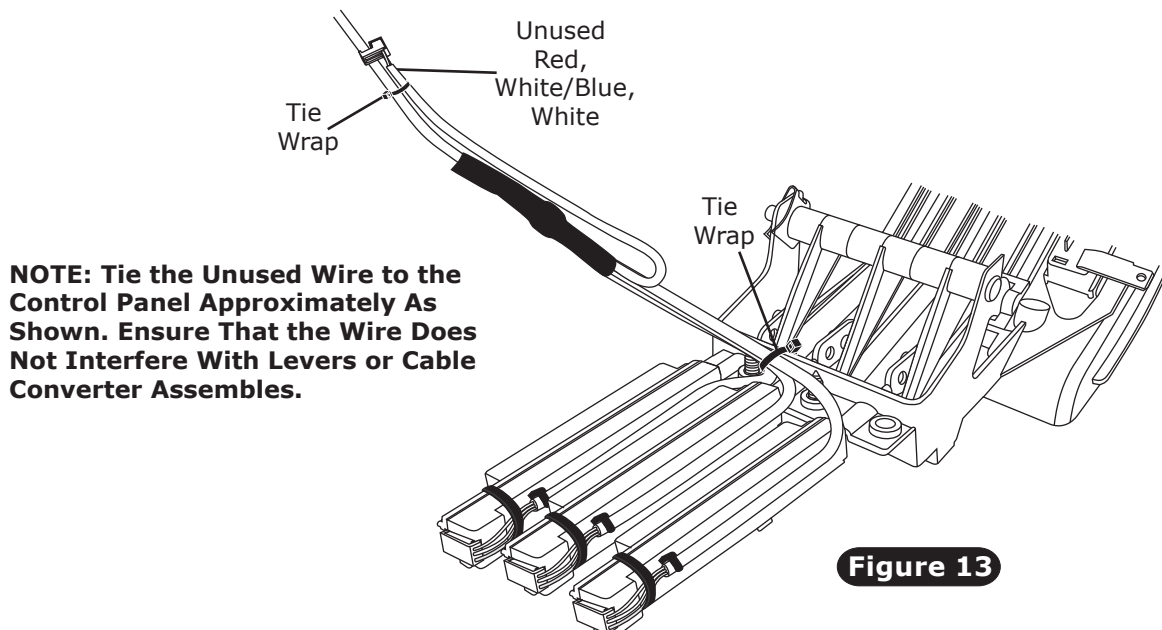


Figure 12

Control Harness Final Step

1. Using the supplied tie wraps, tie the wires to the control panel as shown in Figure 13, below. Confirm that wires are secured and do not interfere with lever operation or cable converter assembly.



NOTE: Tie the Unused Wire to the Control Panel Approximately As Shown. Ensure That the Wire Does Not Interfere With Levers or Cable Converter Assemblies.

Figure 13



Control Panel Reinstallation

1. Reinstall OEM control panel knobs as shown below.
2. Reinstall control panel into dash using (4) OEM screws.

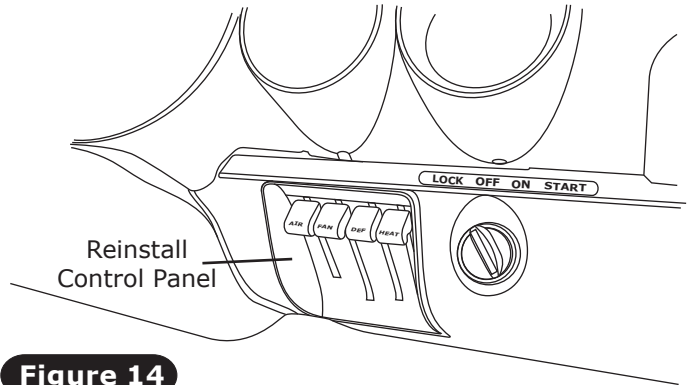
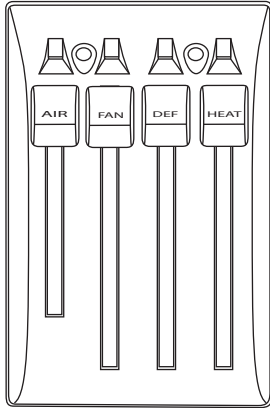


Figure 14

Final Steps

1. Plug the wiring harnesses into the ECU module on the sub case (See Figure 15, below).
2. Wire according to 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 two cable harness relays. This wire is labeled PROGRAM on the wiring diagram on Page 14.
 - 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 wire 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.

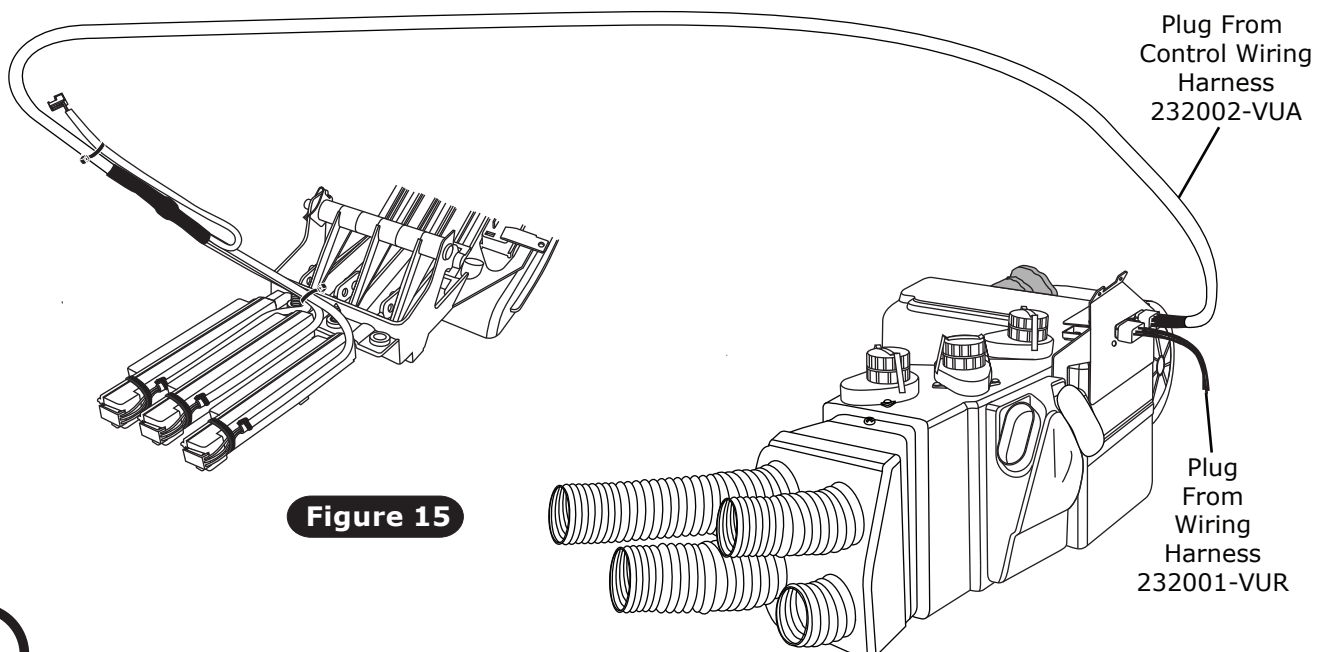


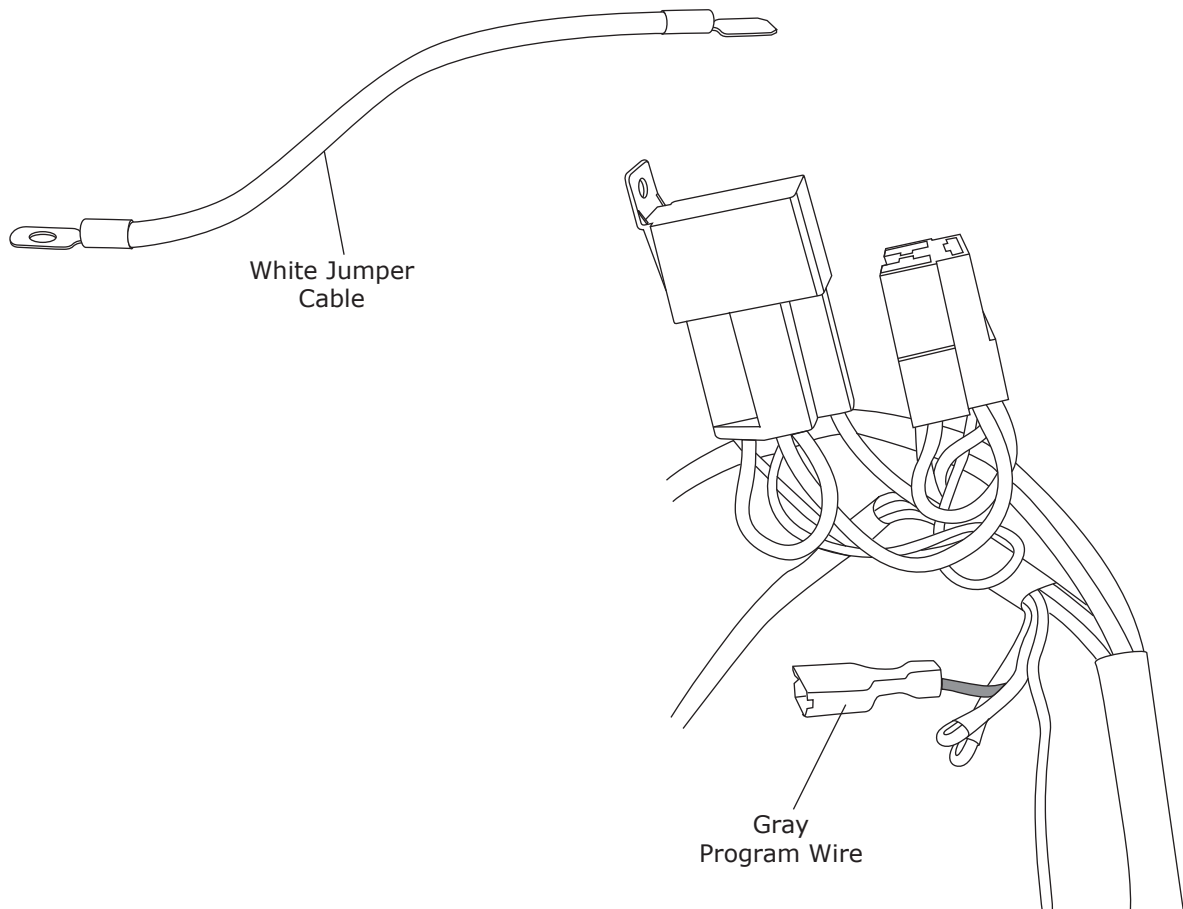
Figure 15



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.

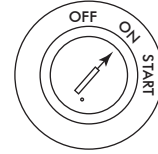
In preparation for calibration, you will need to attach the supplied white ground jumper wire to a suitable chassis ground. This jumper wire must be easily connected to the gray programming wire located in the main Gen IV wiring harness next to the relays. During the calibration procedure, you will connect 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.



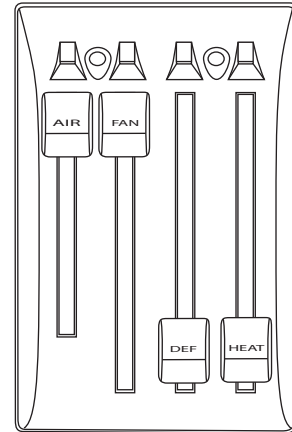


Control Panel Calibration Procedure (Cont.)

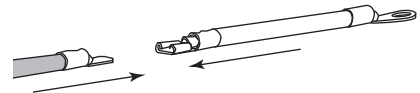
1. Turn on the ignition switch (Do not start the engine).



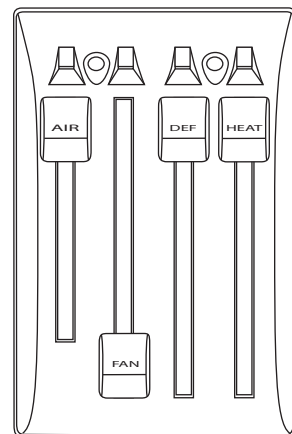
2. Move the control levers/knobs to the position shown.



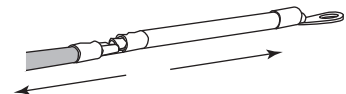
3. Connect the white jumper wire to the gray program wire. Wait for the blower speed to change (Approximately 5 seconds).



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.

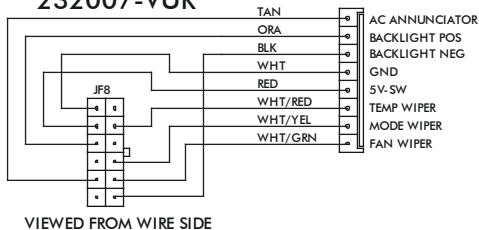


6. Confirm proper operation of controls. Repeat procedure if necessary. When finished, tape over program wire connector with electrical tape to prevent accidental contact with chassis ground.

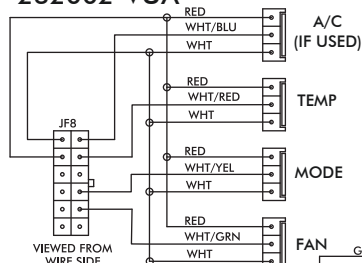


Wiring Diagram

232007-VUR

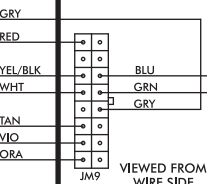


232002-VUA

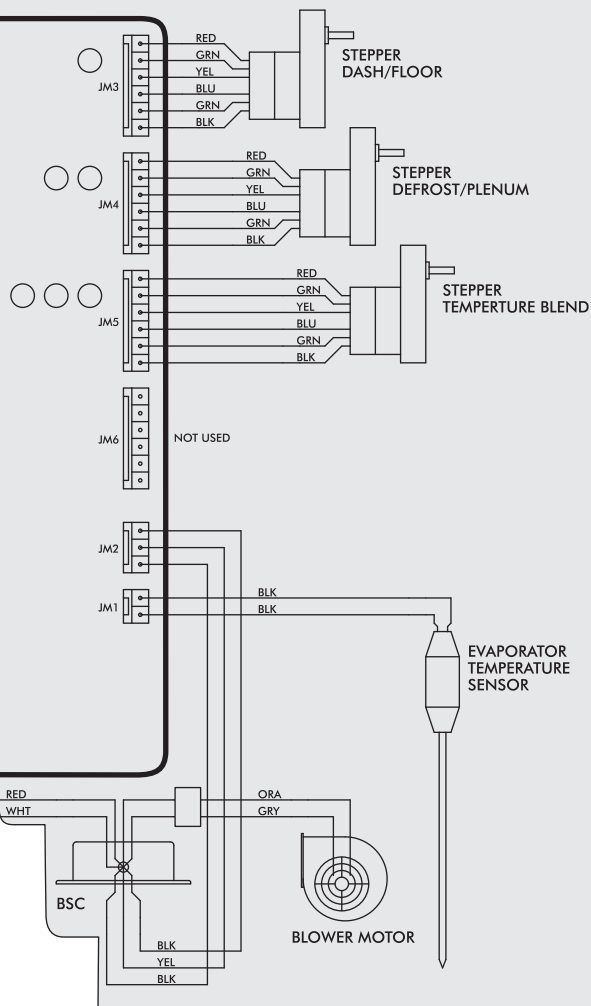


GEN IV ECU

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



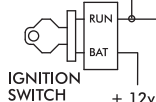
PRE-WIRED



PROGRAM

* DASH LAMP
(IF USED)

*** WIDE OPEN
THROTTLE SWITCH
(OPTIONAL)



WHT

IGNITION SWITCH

+ 12v

BATTERY

WHT

RED

RED

RED

RED

RED

RED

RED

RED

RED

RED

RED

RED

RED

RED

RED

RED

RED

RED

RED

RED

RED

RED

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 Routd to Avoid a Short Circuit).
- Wide Open Throttle Switch Contacts Close Only at Full Throttle, Which Disables A/C Compressor.



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. **NOTE: For proper control panel function, refer to control panel instructions for calibration procedure.**

Blower Speed

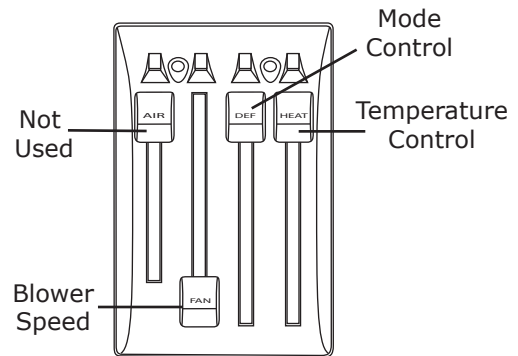
This lever/knob controls blower speed, from OFF to HI.

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

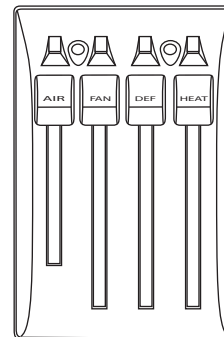
Adjust to desired speed.

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

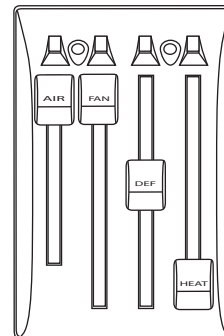
Adjust to desired speed.

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

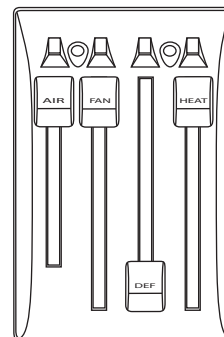
Adjust to desired speed.

Temperature Control

Adjust to desired temperature.

Mode Control

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

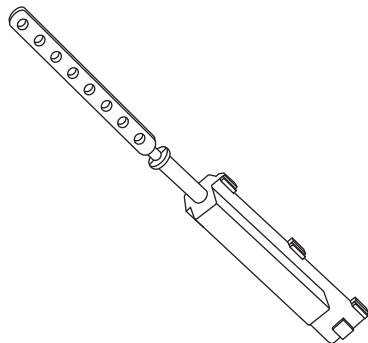




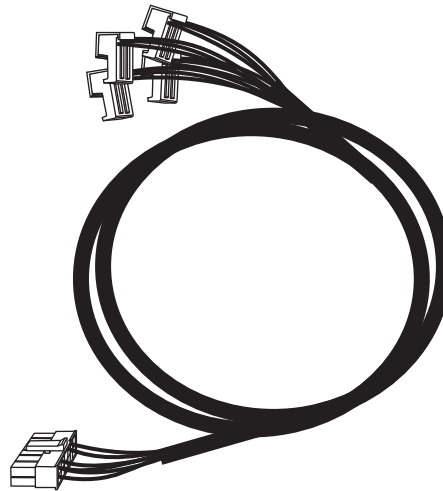
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Chevrolet Full-Size/El Camino
4-Lever Control Panel Conversion Kit (473159)**

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4.	3	491010-VUR	Cable Converter Pot Clamp
5.	5	21301-VUP	4" Tie Wrap
6.	1	231520	Ground Wire
7.	3	18247-VUB	#10 x 1/2" Sheet Metal Screw

Checked By: _____
Packed By: _____
Date: _____



①



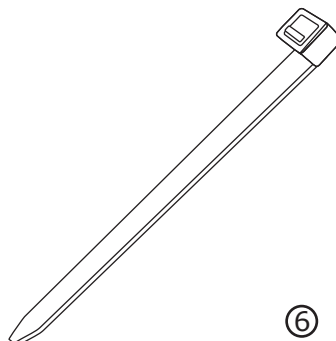
②



③



④



⑤



⑥



⑦