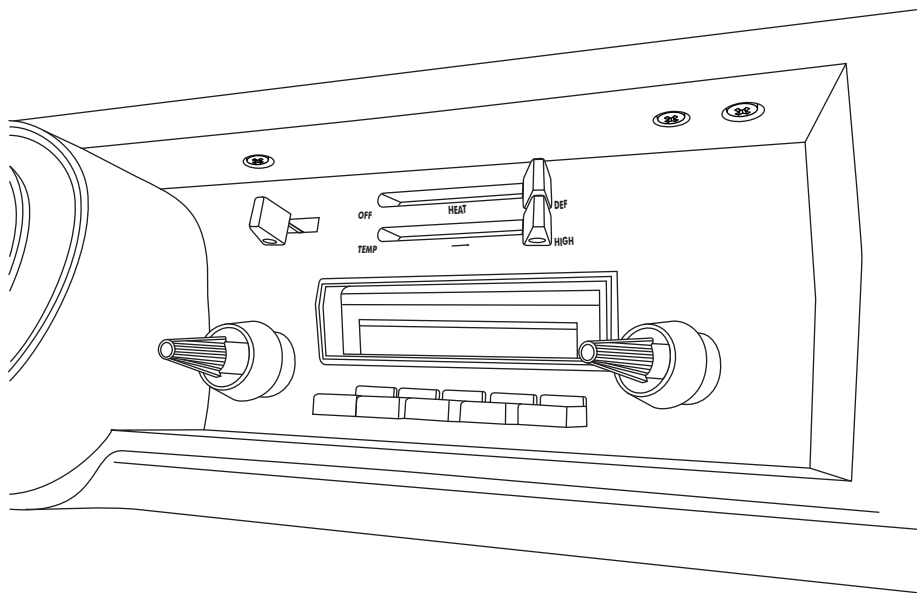




an ISO 9001:2008 Registered Company

1966-67 Dodge Charger, Coronet

without Factory Air
Control Panel Kit
474158



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



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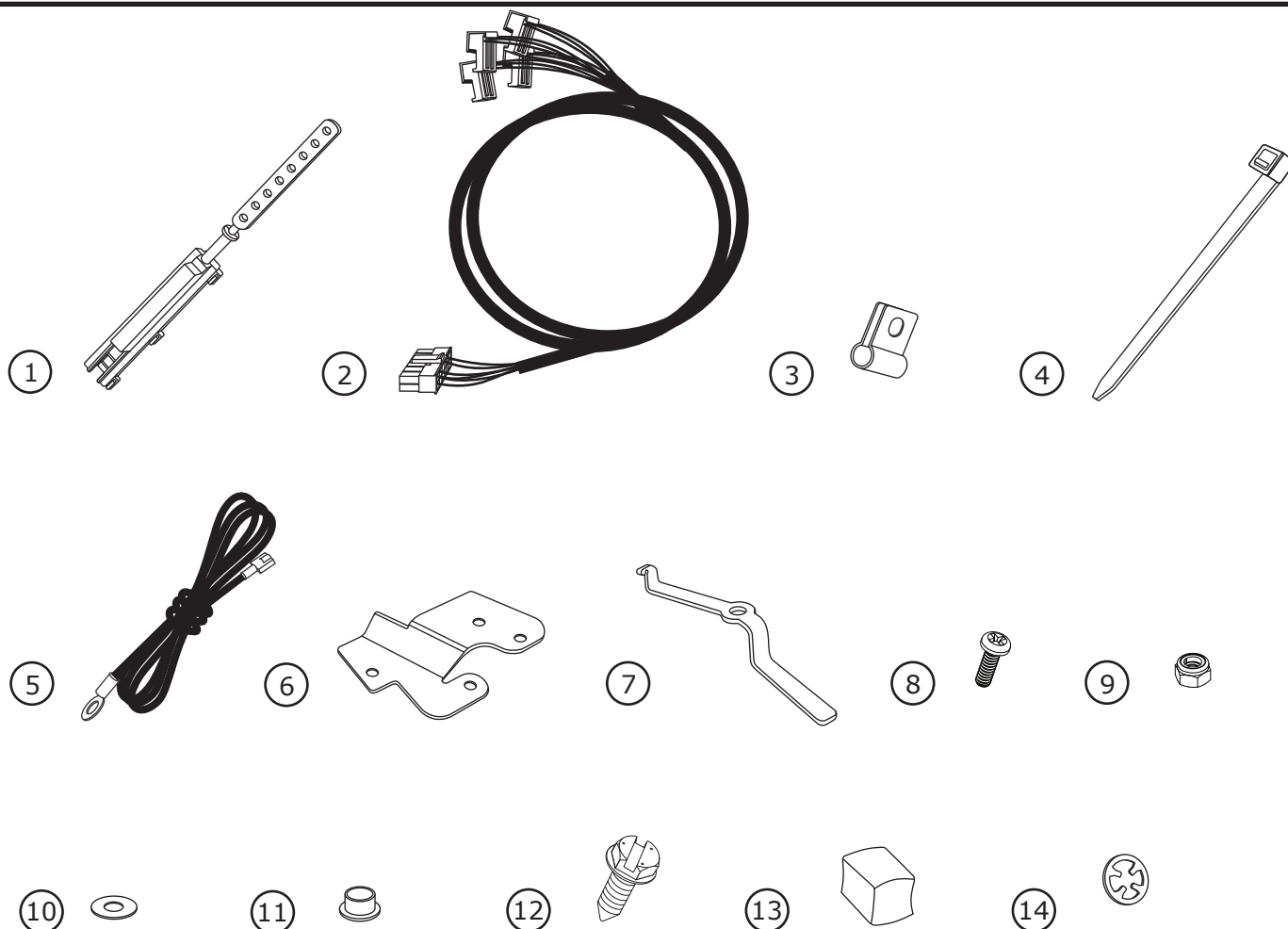


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Packing List: Control Panel Kit (474158)

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	Tie Wrap, 4"
5.	1	231520	Ground Wire
6.	1	640606	Bracket, Fan Switch
7.	1	640607	Lever, Fan Switch
8.	1	18413-VUB	Screw, 4-40 x 3/8", Pan Head
9.	1	18412-VUB	Nut, 4-40, Nyloc
10.	1	49706-VUR	Washer, #6 Nylon, Flat
11.	1	49701-VUI	Bushing, Nylon
12.	3	18247-VUB	Screw, #10 x 1/2", Sheet Metal
13.	3	49301-VUQ	Knobs, Cable Converter, Chrome
14.	2	65976-VUE	Push-on Ring, 3/16"

**** 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, if applicable.
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 and mode cables from rear of control bracket.
12. On a workbench, remove and discard the fan blower switch (retain OEM screws) (See Figure 2, below).
13. Where the original cables were attached, trim off the mode and temperature tabs approximately $1/16"$ x $5/8"$ so the converter barrel fits in this area (See Figures 3 & 3a, below).

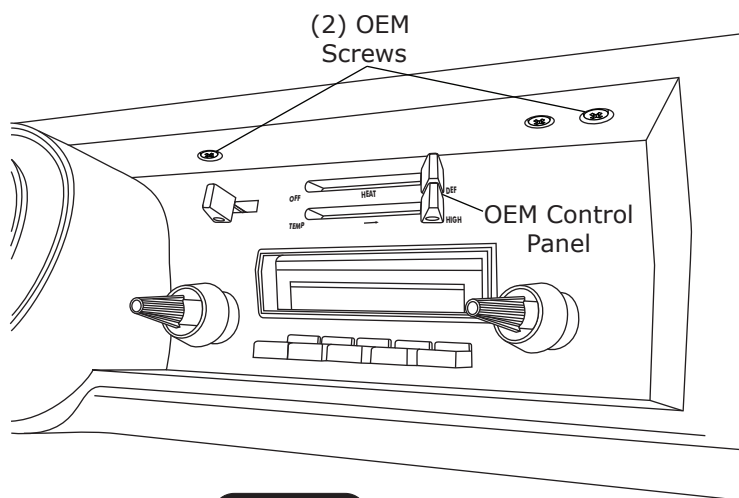


Figure 1

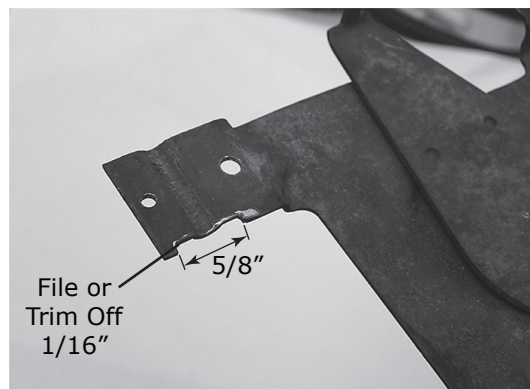


Figure 3

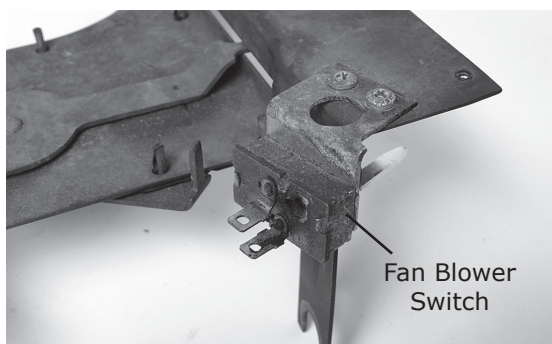


Figure 2

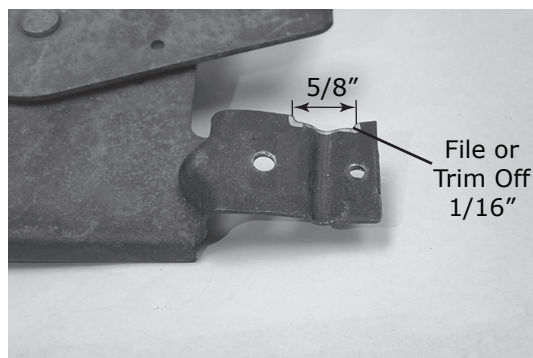


Figure 3a



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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 4, below.

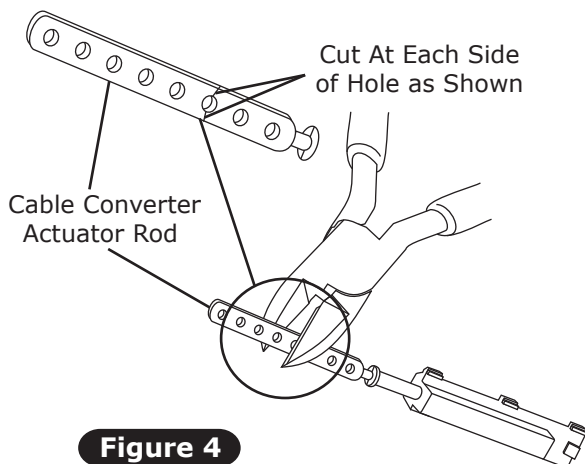
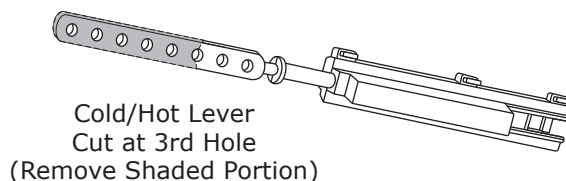
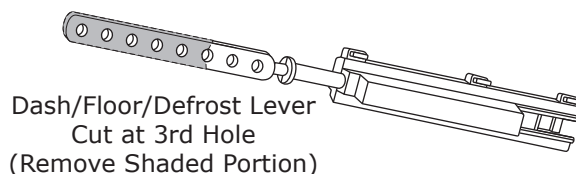
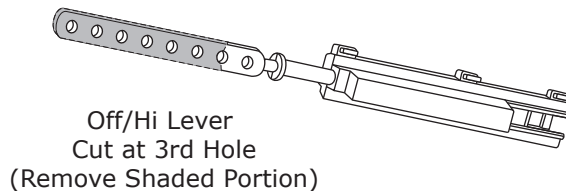


Figure 4



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.**

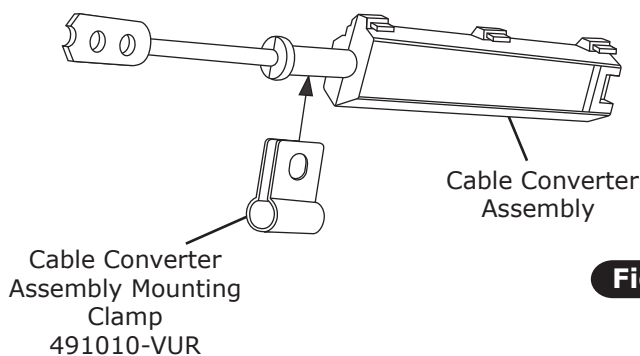
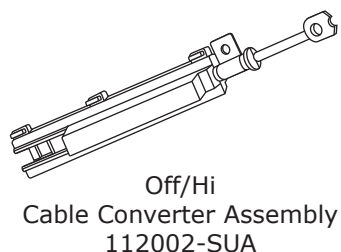
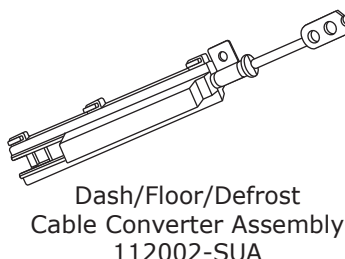


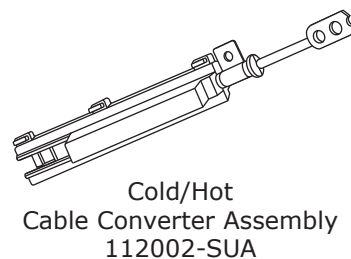
Figure 5



Off/Hi
Cable Converter Assembly
112002-SUA



Dash/Floor/Defrost
Cable Converter Assembly
112002-SUA



Cold/Hot
Cable Converter Assembly
112002-SUA



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Dash/Floor/Defrost Cable Converter Installation

1. Install cable converter lever push rod onto OEM cable mounting stud on lever (See Figure 6, below).
2. Secure the cable converter to the tab using a #10 X 1/2" sheet metal screw through the clamp as shown in Figure 6, below.
3. 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.
4. Secure the cable converter lever push rod onto the OEM cable mounting stud using a 3/16" push-on ring (See Figure 6, below).

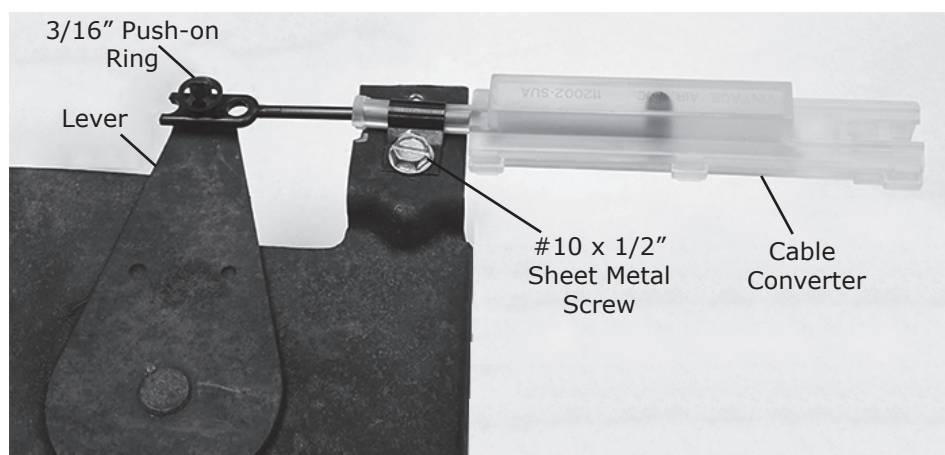


Figure 6

Cold/Hot Cable Converter Installation

1. Install cable converter lever push rod onto OEM cable mounting stud on lever (See Figure 7, below).
2. Secure the cable converter to the tab using a #10 X 1/2" sheet metal screw through the clamp as shown in Figure 7, below.
3. 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.
4. Secure the cable converter lever push rod onto the OEM cable mounting stud using a 3/16" push-on ring (See Figure 7, below).

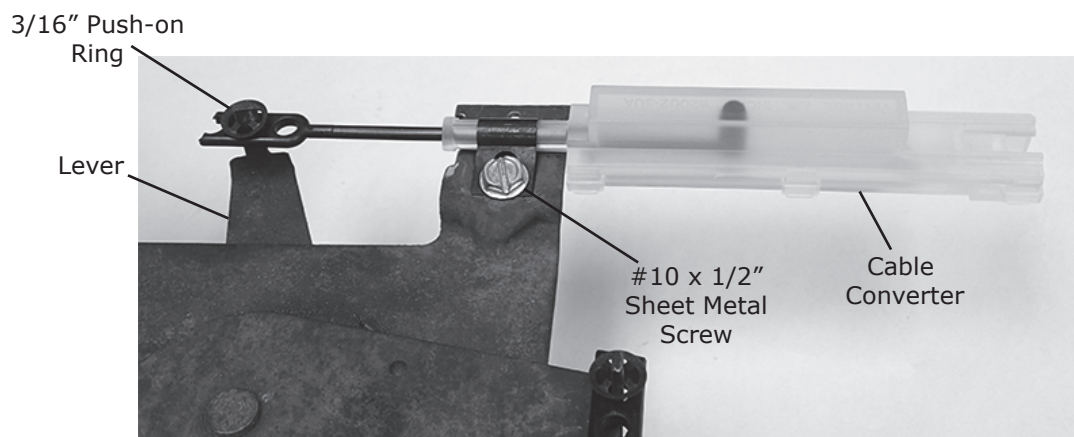


Figure 7



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Off/Hi Bracket & Lever Installation

1. Install Off/Hi lever onto Off/Hi bracket as shown in Figure 8, below.
2. Install Off/Hi bracket onto OEM control panel using OEM screws as shown in Figure 8, below.

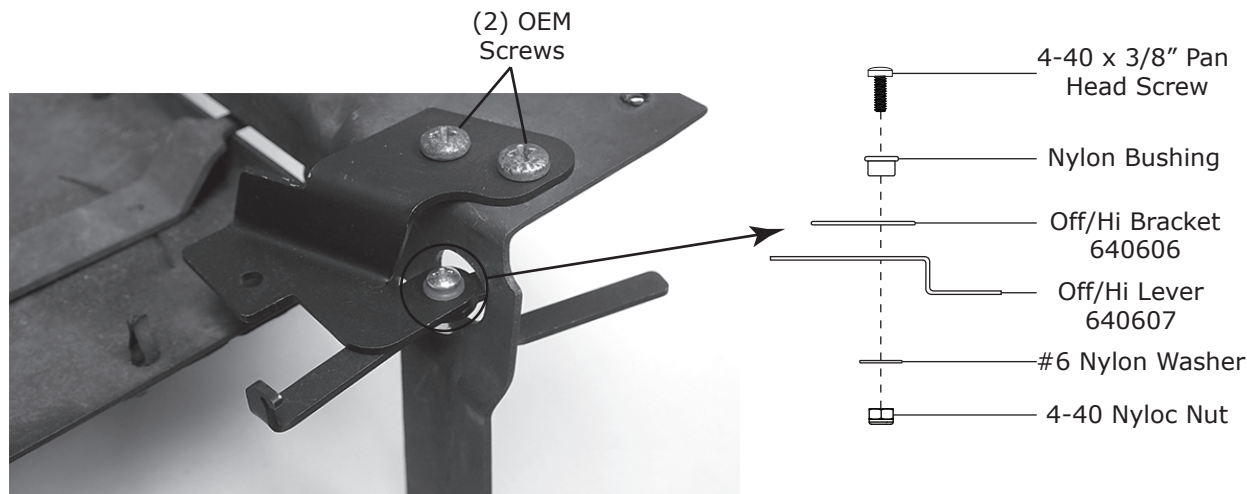


Figure 8

Off/Hi Cable Converter Installation

1. Install cable converter lever push rod onto Off/Hi lever as shown in Figure 9, below.
2. Secure the cable converter assembly to the Off/Hi bracket using a #10 x 1/2" sheet metal screw as shown in Figure 9, below.
3. Since the cable converter assembly can slide back and forth in 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.

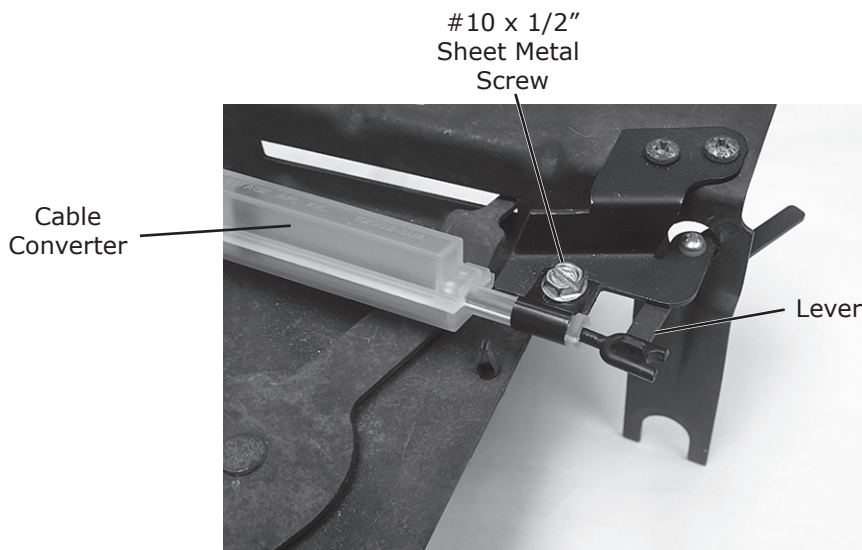


Figure 9



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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 10, 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.

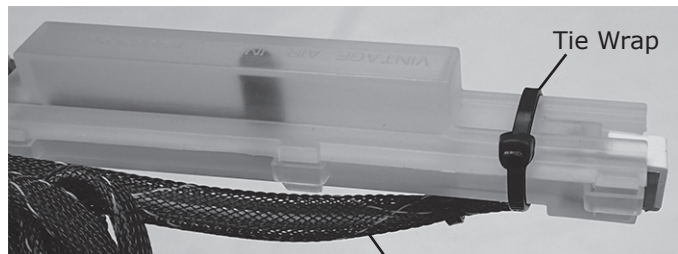
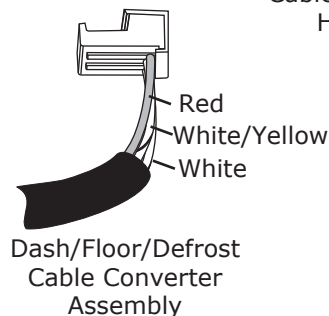
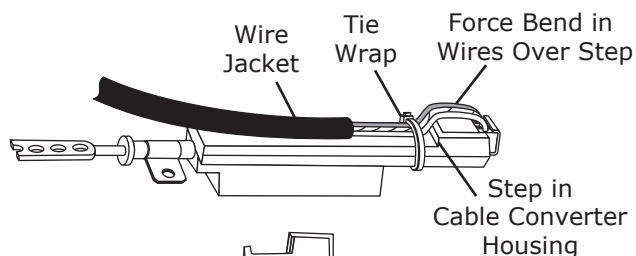


Figure 10

Wire Jacket



Dash/Floor/Defrost
Cable Converter
Assembly

Cold/Hot 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.

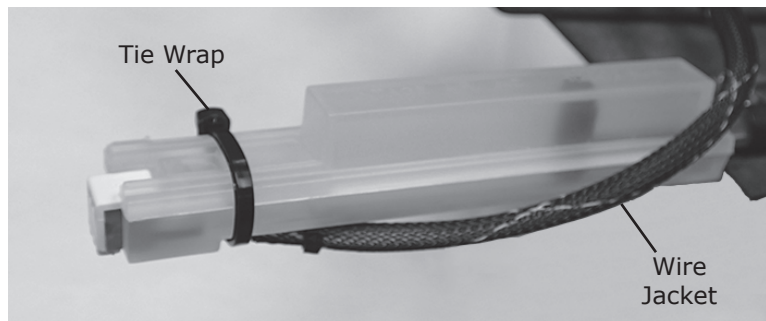
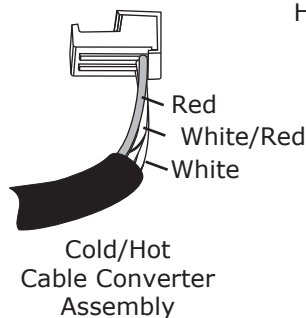
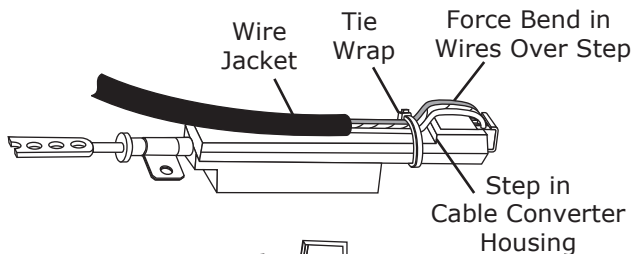


Figure 11



Cold/Hot
Cable Converter
Assembly



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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 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 to remain tight. Ensure that the tie wraps are tight enough that the wires cannot move.

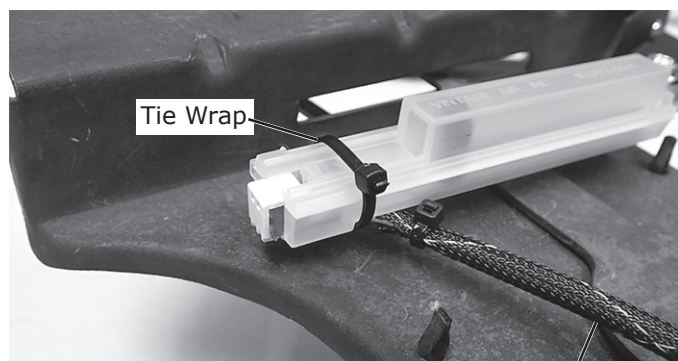
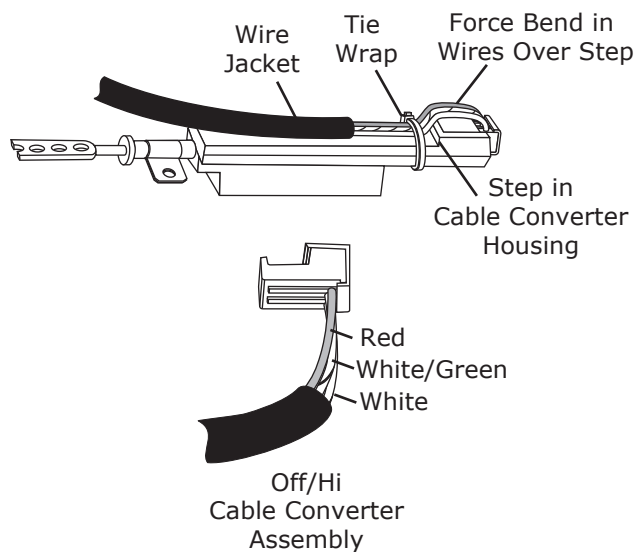


Figure 12





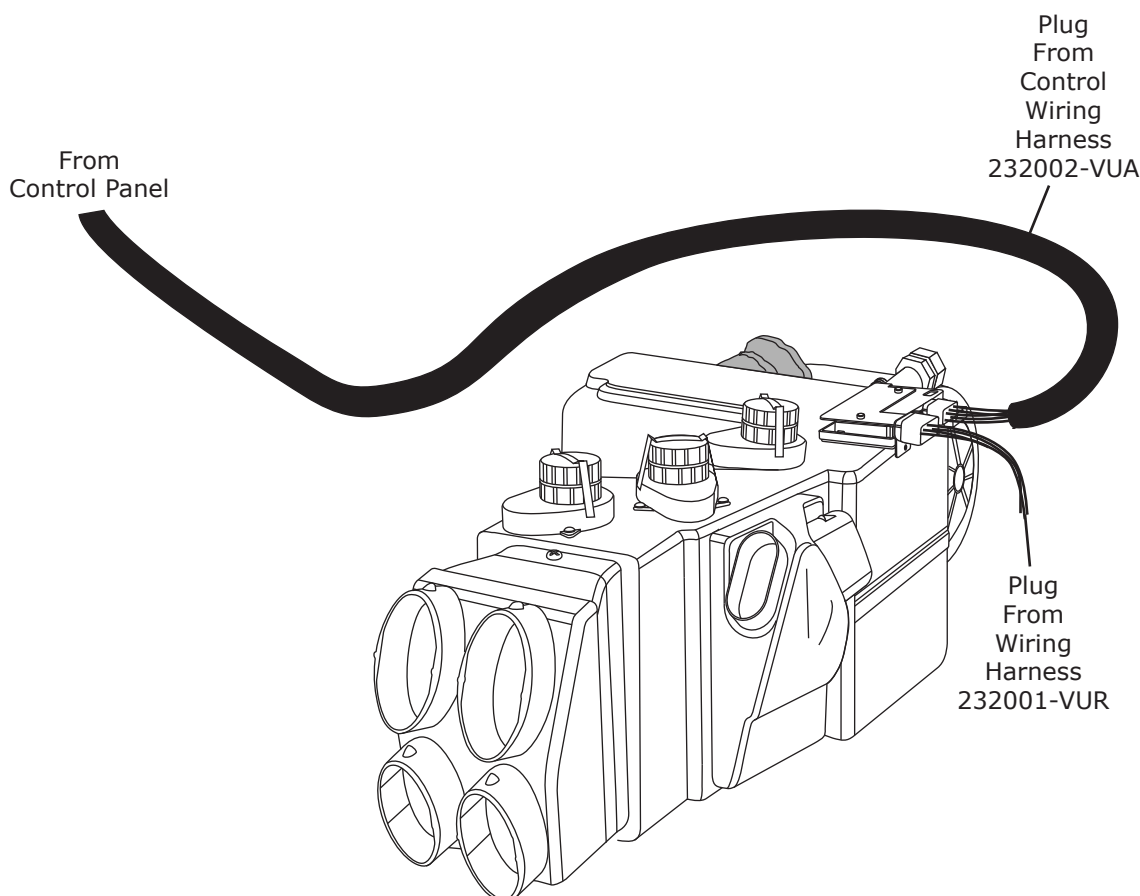
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Control Panel & Instrument Panel Reinstallation

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 13.
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 11 & 12.



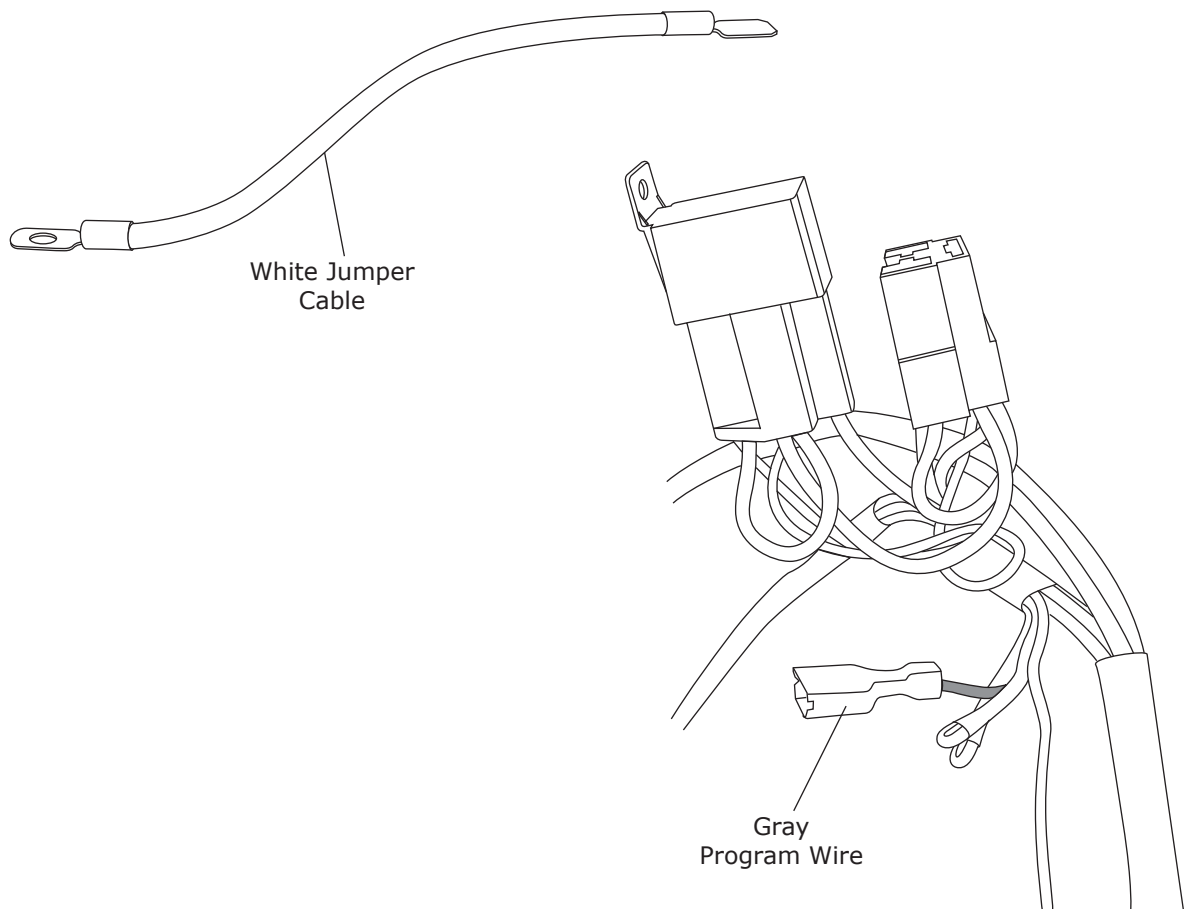


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Control Panel Calibration Procedure

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.

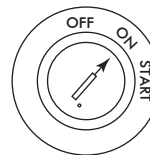




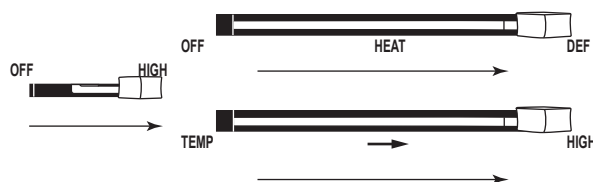
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Control Panel Calibration Procedure (Cont.)

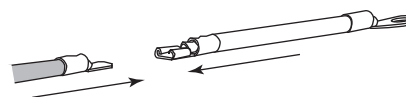
1. Turn on the ignition switch (Do not start the engine).



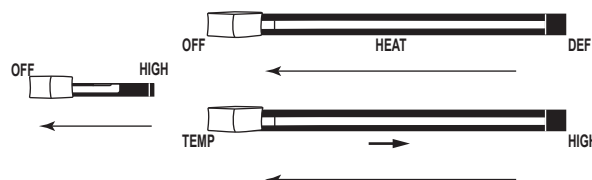
2. Move the control levers/knobs to the position shown.



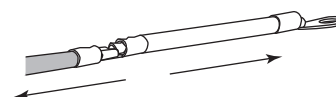
3. Connect the white jumper wire to the gray program wire. Wait for the blower speed to change (Approximately 5 seconds).



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



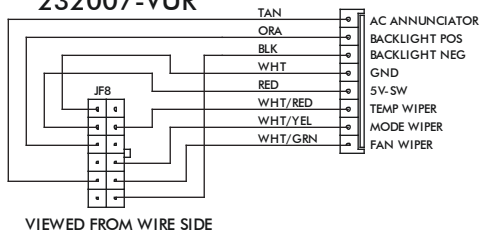
5. Disconnect the white jumper wire from the gray program wire. The blower speed will change, indicating completion of the calibration procedure.



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.

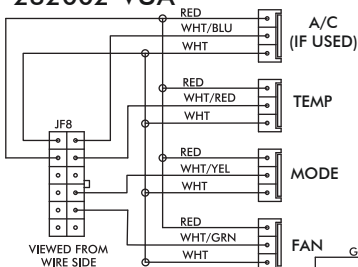


232007-VUR



VIEWED FROM WIRE SIDE

232002-VUA

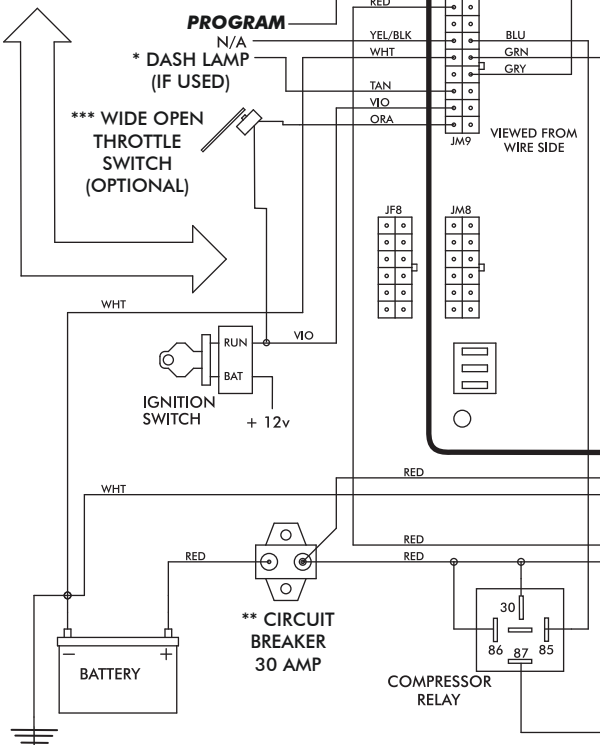



VIEWED FROM
WIRE SIDE

PROGRAM

* DASH LAMP —
(IF USED)

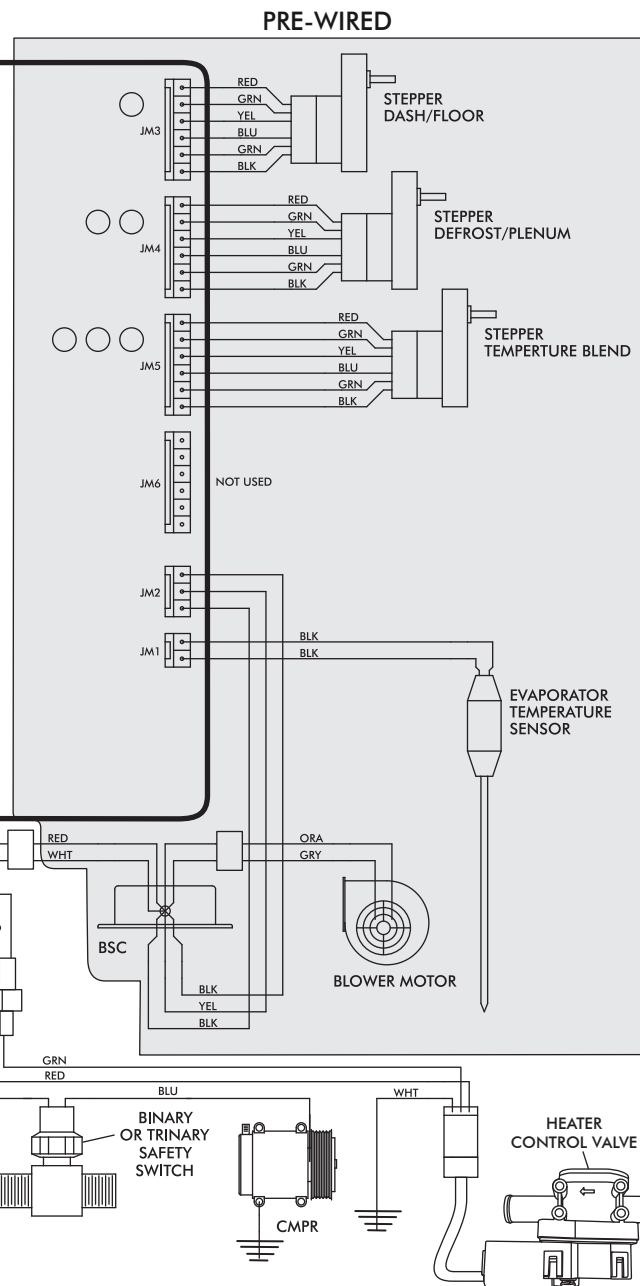
*** WIDE OPEN
THROTTLE
SWITCH
(OPTIONAL)



NOTE:  = CHASSIS GROUND

GEN IV ECU

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



- **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

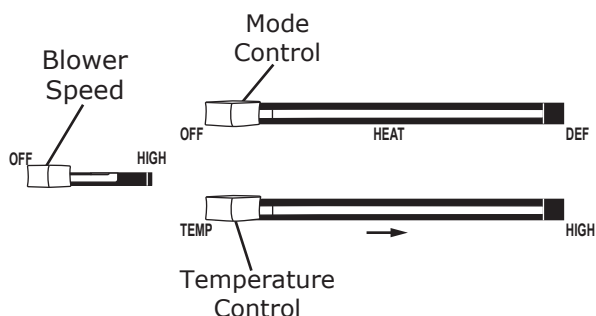
This lever/knob controls blower speed, from OFF to HI.

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

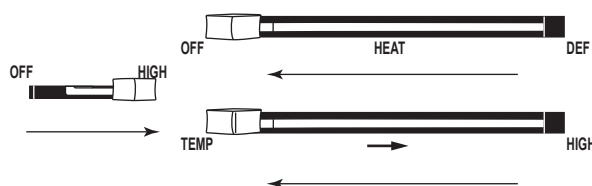
Adjust to desired speed.

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

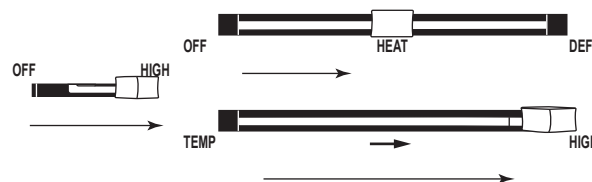
Adjust to desired speed.

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

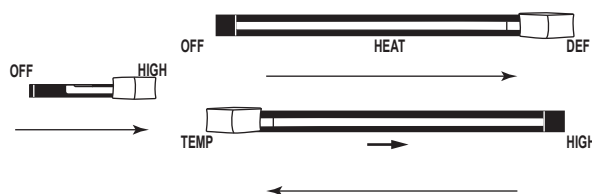
Adjust to desired speed.

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).



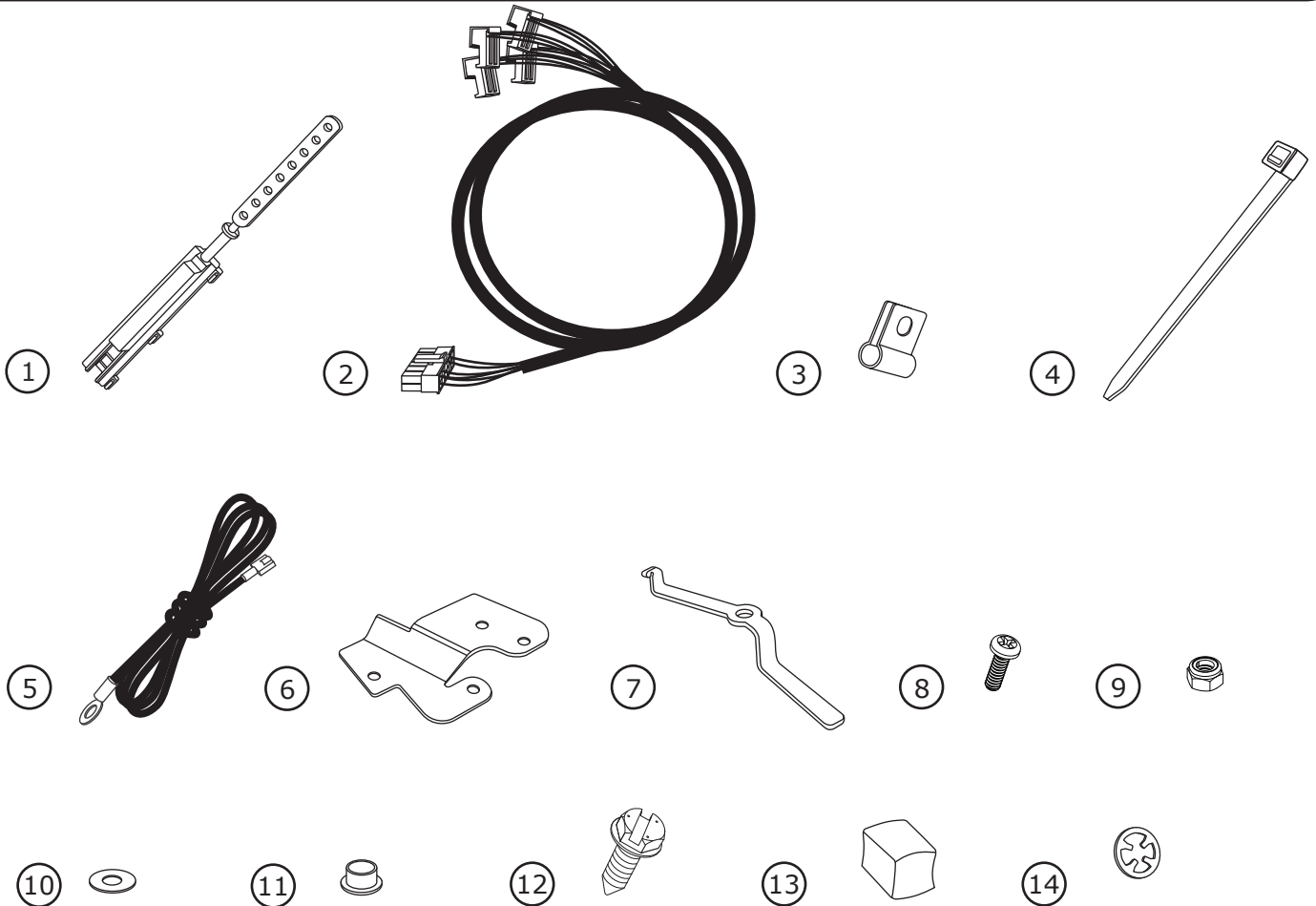


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Packing List: Control Panel Kit (474158)

No.	Qty.	Part No.	Description
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4.	5	21301-VUP	Tie Wrap, 4"
5.	1	231520	Ground Wire
6.	1	640606	Bracket, Fan Switch
7.	1	640607	Lever, Fan Switch
8.	1	18413-VUB	Screw, 4-40 x 3/8", Pan Head
9.	1	18412-VUB	Nut, 4-40, Nyloc
10.	1	49706-VUR	Washer, #6 Nylon, Flat
11.	1	49701-VUI	Bushing, Nylon
12.	3	18247-VUB	Screw, #10 x 1/2", Sheet Metal
13.	3	49301-VUQ	Knobs, Cable Converter, Chrome
14.	2	65976-VUE	Push-on Ring, 3/16"

Checked By: _____
Packed By: _____
Date: _____



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