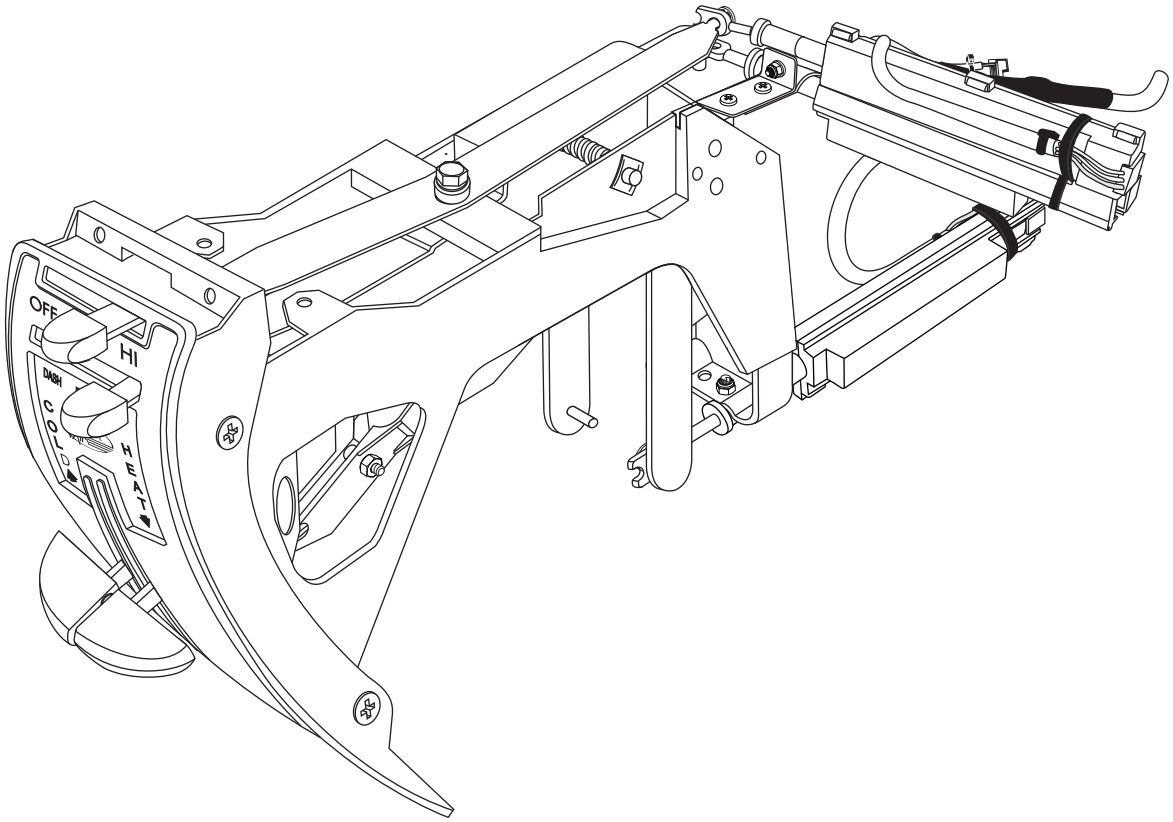
# 1955-56 Chevrolet Full-Size

## 3-Lever Control Panel Conversion Kit (473059)

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# Table of Contents


Cover..... 1
Table of Contents..... 2
Packing List/Parts Disclaimer..... 3
Control Panel Disassembly..... 4
Temperature Cable Control Modification..... 5
Adapter Bracket Installation, Cable Lever Modification (1955 Models Only)..... 6
Blower & Mode Lever Installation..... 7
Cable Converter Assembly Modification, Cable Converter Assembly Mounting Clamp Installation..... 8
Mode Cable Converter Assembly Installation, Mode Control Harness..... 9
Mode Control Harness (Cont.), Blower Speed Cable Converter Assembly Installation..... 10
Blower Speed Control Harness..... 11
Temperature Cable Converter Assembly Installation, Temperature Control Harness..... 12
Temperature Control Harness (Cont.), Control Harness Final Step..... 13
Bezel & Placard Installation..... 14
OEM Control Panel Reassembly..... 15
OEM Control Panel Reinstallation..... 16
OEM Control Panel Reinstallation (Cont.)..... 17
Final Steps..... 18
Control Panel Calibration Procedure..... 19
Control Panel Calibration Procedure (Cont.)..... 20
Gen IV Wiring Diagram..... 21
Gen 5 Wiring Diagram..... 22
Operation of Controls..... 23
Packing List..... 24

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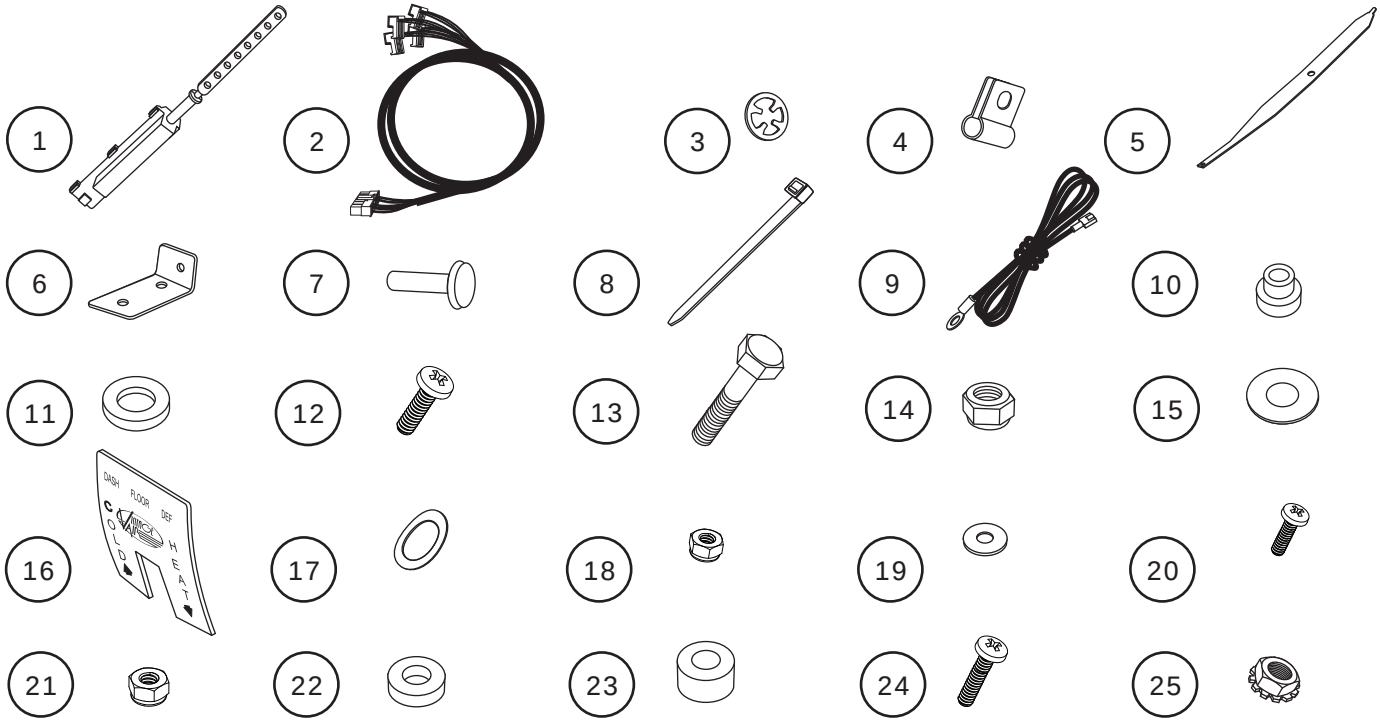
# Packing List: Control Panel Kit (473059)

| No. | Qty. | Part No. | Description |
|---|---|---|---|
| **1.** | 3 | 112002-SUA | Cable Converter Assembly |
| **2.** | 1 | 232002-VUA | Control Harness, Gen IV/Gen 5 Universal |
| **3.** | 4 | 65976-VUE | Push-on Ring, 3/16" |
| **4.** | 3 | 491010-VUR | Cable Converter Clamp |
| **5.** | 1 | 647055 | Lever, Blower Switch |
| **6.** | 1 | 647056 | Bracket, Blower Switch Adapter |
| **7.** | 2 | 188569 | Clevis Pin, 3/16" x 5/8" |
| **8.** | 4 | 21301-VUP | Tie Wrap, 4" |
| **9.** | 1 | 231520 | Ground Wire |
| **10.** | 1 | 180007-SSR | Spacer, Nylon Shoulder |
| **11.** | 1 | 180006-SSR | Spacer, Nylon |
| **12.** | 1 | 18105-VUB | Screw, 8-32 x 3/8", Pan Head |
| **13.** | 1 | 18310-VUB | Bolt, 5/16-18 x 1 ½", Hex |
| **14.** | 1 | 18151-VUB | Locknut, 5/16-18 |
| **15.** | 3 | 18125-VUB | Washer, .312 ID x .750 OD, Flat |
| **16.** | 1 | 48401-PCR | Placard, Control Panel |
| **17.** | 1 | 180911 | Washer, .009, Wave |
| **18.** | 3 | 18107-VUB | Locknut, 6-32 |
| **19.** | 2 | 18122-VUB | Washer, #6 |
| **20.** | 3 | 18237-VUB | Screw, 6-32 x 3/8", Pan Head |
| **21.** | 1 | 18602-NSR | Locknut, 8-32 |
| **22.** | 1 | 182534 | Spacer, 1/4", Nylon |
| **23.** | 1 | 182535 | Spacer, 5/16", Nylon |
| **24.** | 1 | 18258-VUB | Screw, 10-32 x 3/4", Pan Head |
| **25.** | 1 | 18251-VUB | Nut with Star Washer, 10-32 |

**** 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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# Control Panel Disassembly

**Perform the Following:**

1. Remove the OEM control knobs (retain).
2. Remove the OEM blower switch (discard).
3. Remove the control panel bezel (retain).
4. Remove the OEM placard (discard).
5. Remove the inside/outside air lever retaining clip and stud (discard).

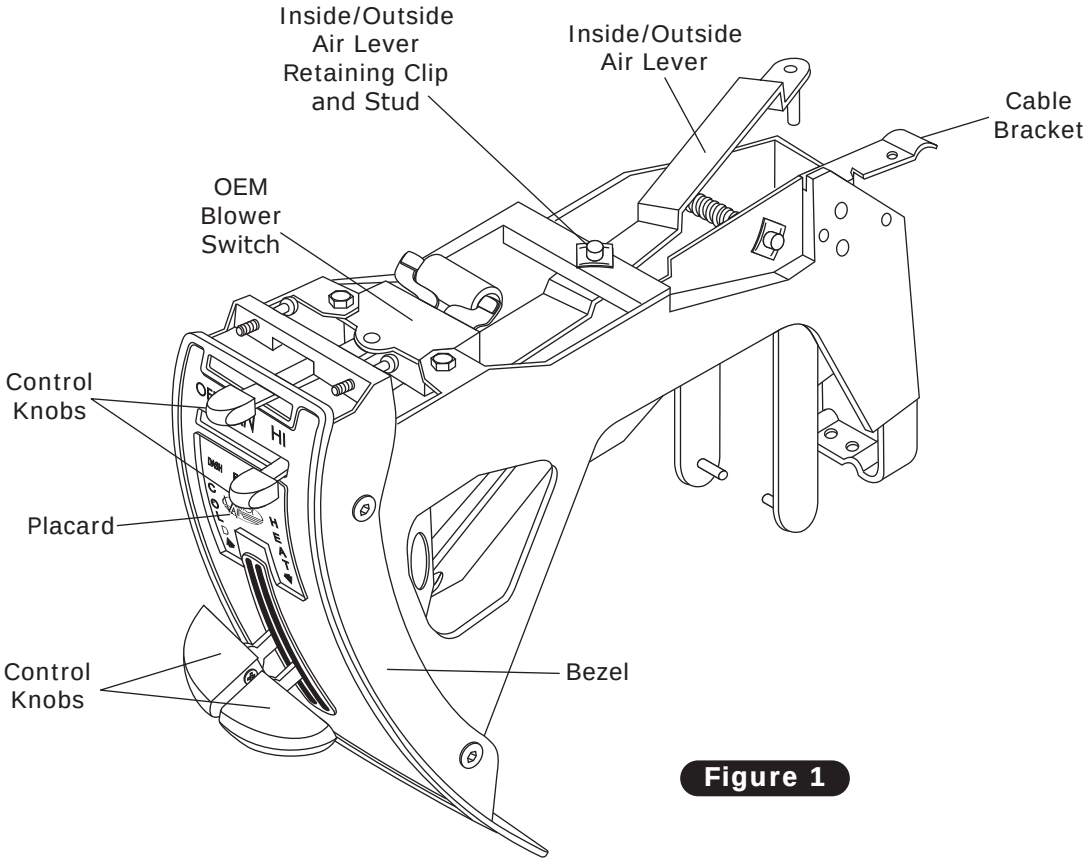



**Figure 1**

# Cold / Hot Cable Control Modification

1. Measure and note the spacing between the cold and hot levers (See Figure 2, below).
2. Install a tight fitting pin or screw through the center of both temperature levers (See Figure 2, below).
3. Using the reference shown in Figure 3, below, mark the area of the levers to be drilled.
4. Secure the lever assembly by placing the correct nylon spacer between the levers (See Figure 3, below). **NOTE: The measurement taken in Step 1, above, will determine which nylon spacer (1/4" or 5/16") will be used. With the correct spacer in place, the levers should remain parallel to one another.**
5. With the lever assembly secure, drill a 13/64" hole through both levers at the location marked in Step 3, above. After drilling, remove the nylon spacer from between the levers.

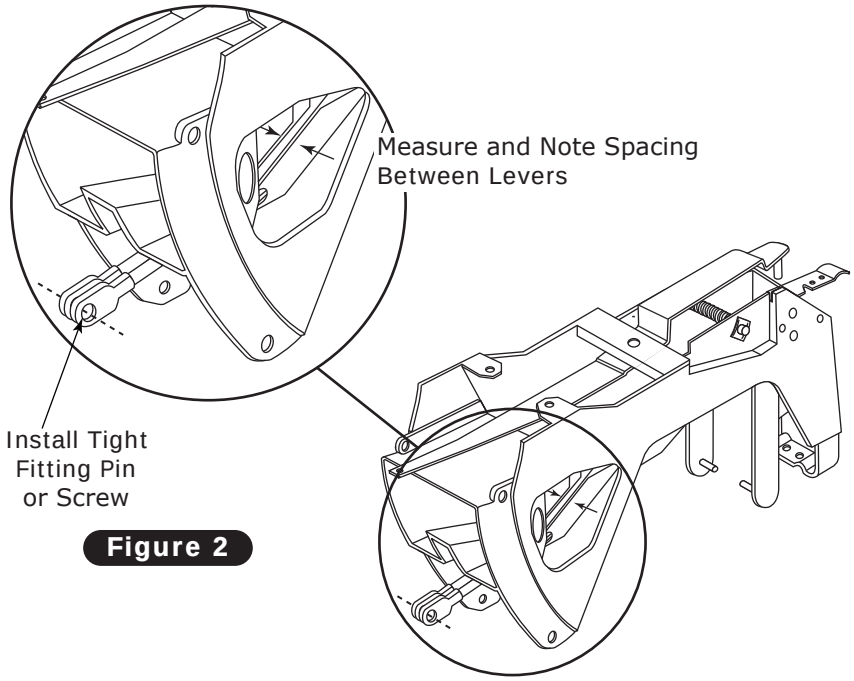
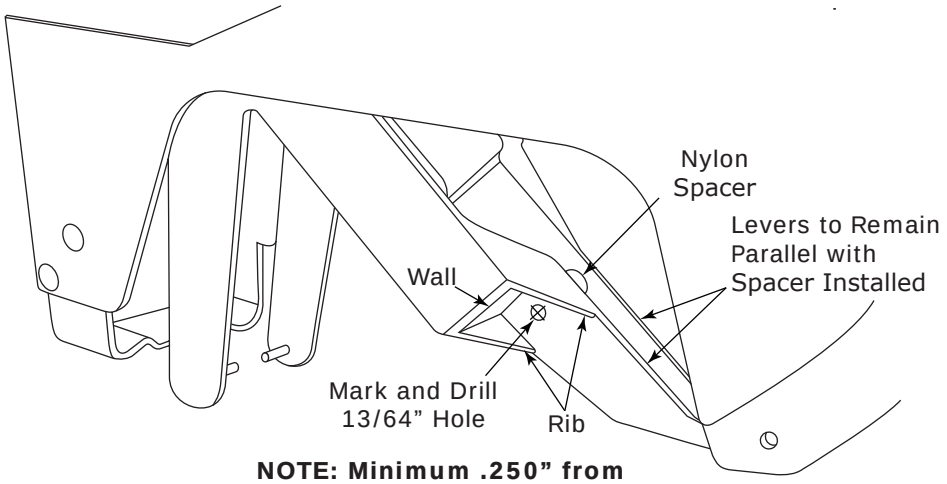



**Figure 2**




**NOTE: Minimum .250" from Wall and Centered Between Ribs.**

**Figure 3**

# Adapter Bracket Installation

1. Install the blower switch adapter bracket onto the control panel using a 6-32 x 3/8” pan head screw, flat washer and locknut as shown below.
2. Using the bracket as a guide, drill a 5/32” hole in the control panel, and install a 6-32 x 3/8” pan head screw and locknut.

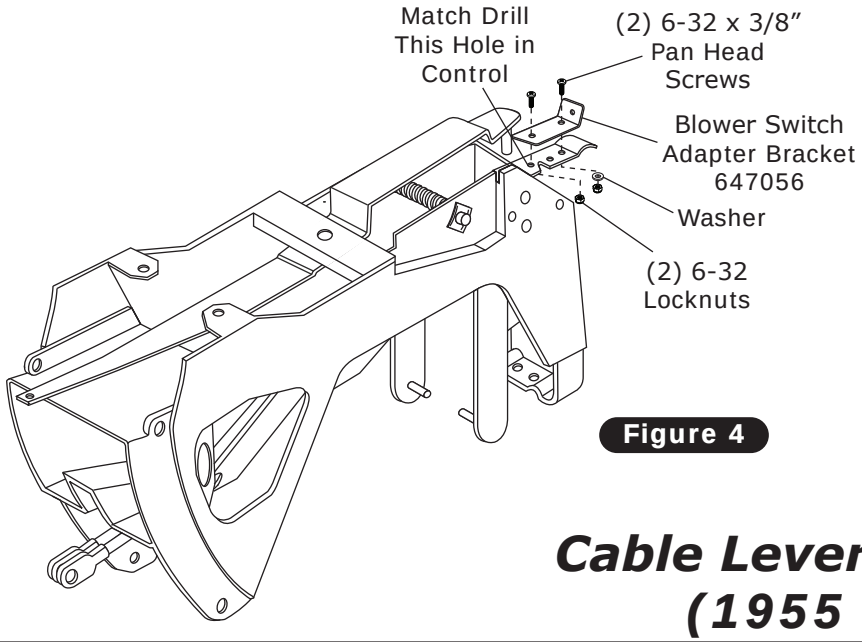



**Figure 4**

# Cable Lever Modification (1955 Models Only)

1. Drill out (2) OEM cable lever rivets as shown in Figure 5, below.
2. Install (2) clevis pins, and secure with (2) push-on rings as shown in Figure 5, below

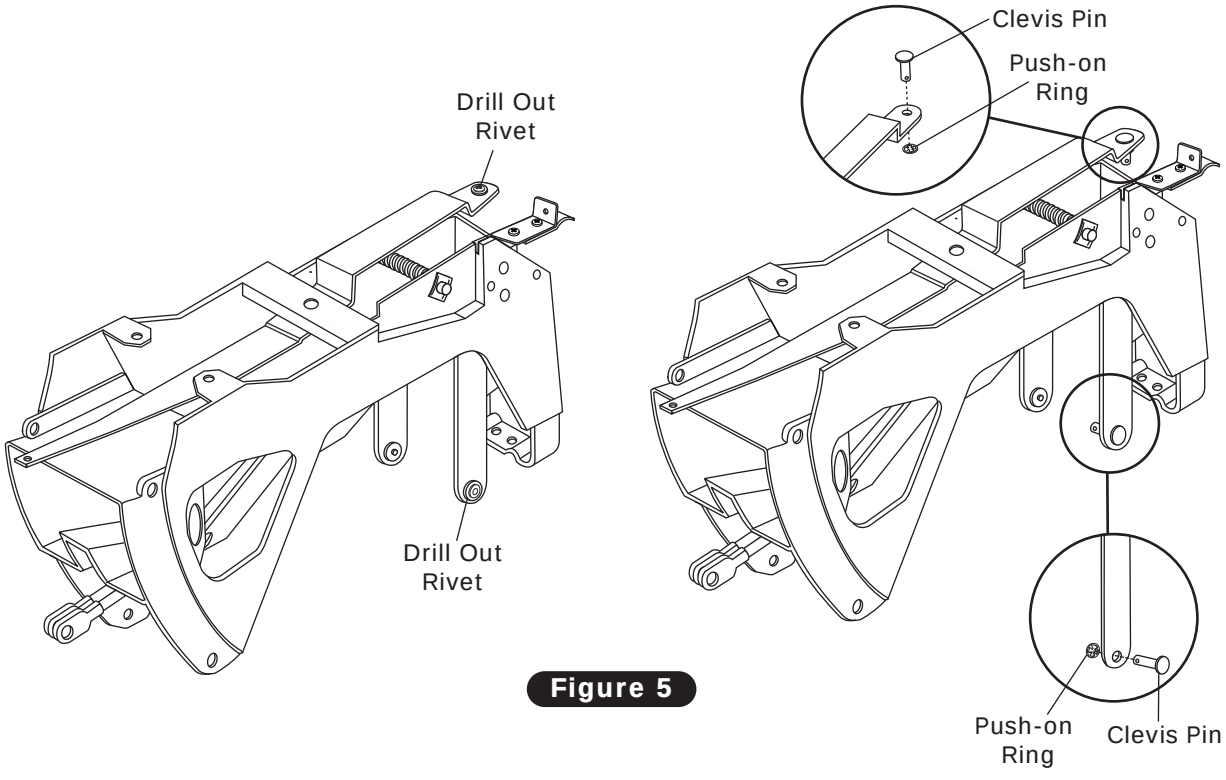



**Figure 5**

# Blower & Mode Lever Installation

**1.** Using a 5/16-18 x 1 ½" hex bolt, (3) flat washers, a wave washer, a nylon spacer, a nylon shoulder spacer, and a locknut, install the blower and mode levers as shown Figure 6, below.

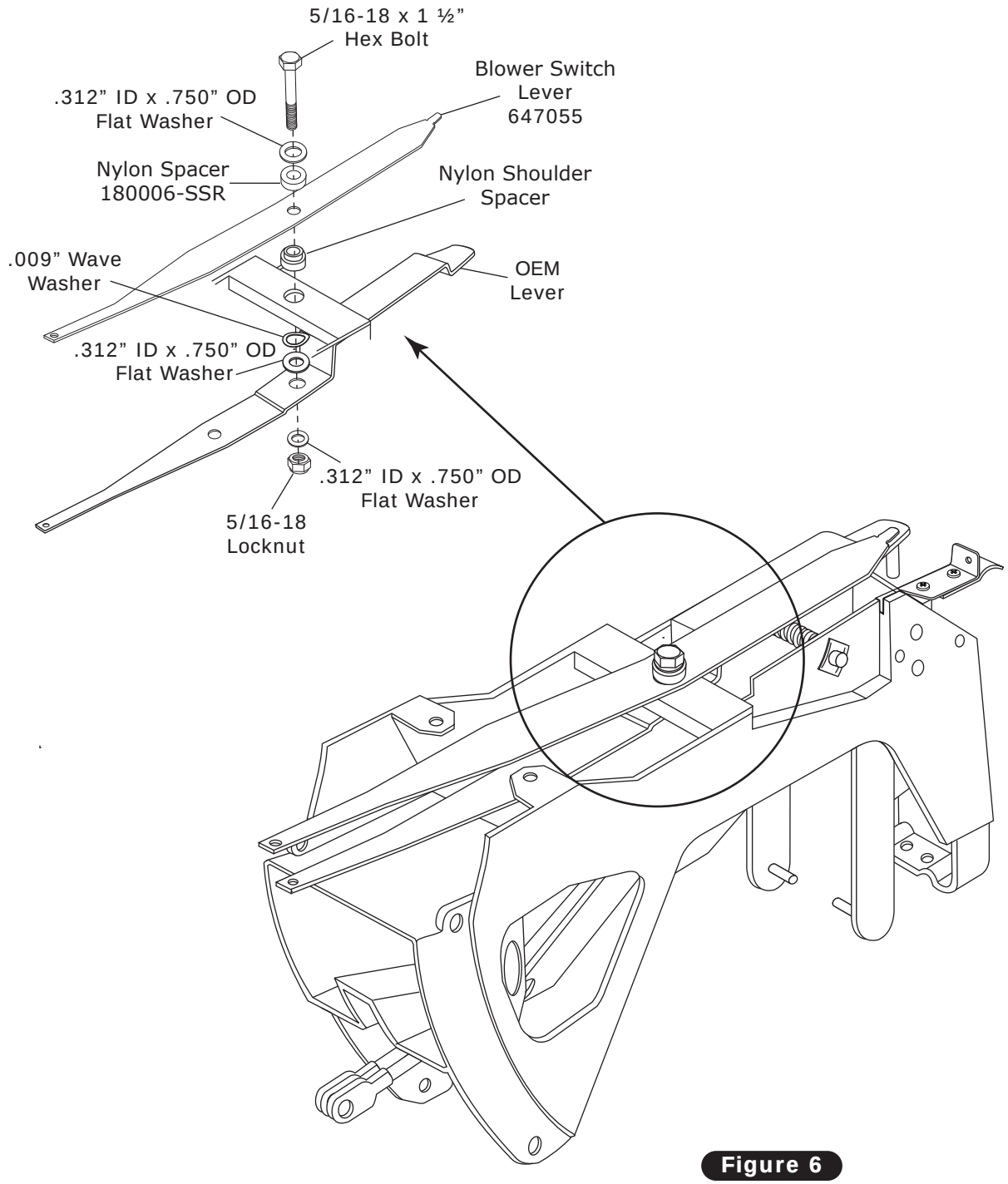
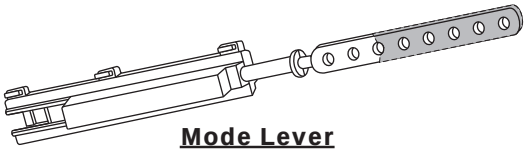


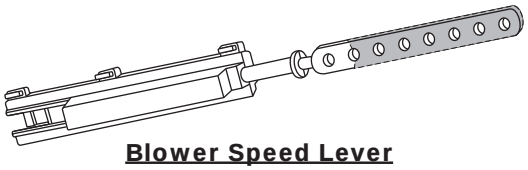

**Figure 6**

# Cable Converter Assembly Modification

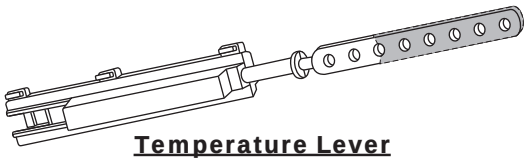
**1.** Locate the (3) cable converter assemblies. Using a pair of wire cutters, cut the cable converter actuator rods as shown in Figure 7, below.



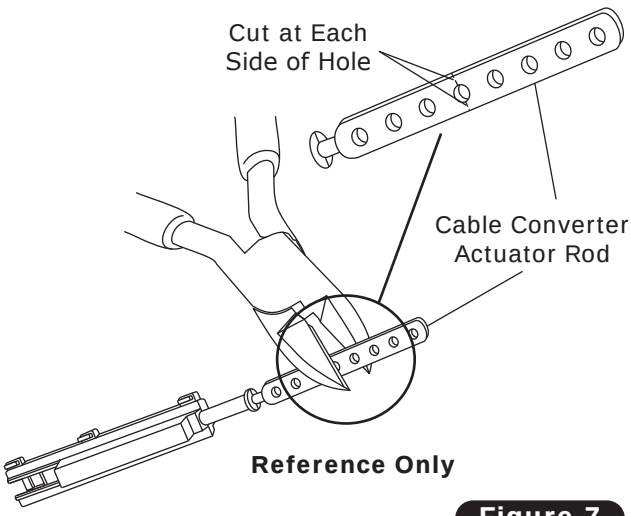
**Mode Lever**
Cut at 3rd Hole
(Remove Shaded Portion)



**Blower Speed Lever**
Cut at 2nd Hole
(Remove Shaded Portion)



**Temperature Lever**
Cut at 3rd Hole
(Remove Shaded Portion)

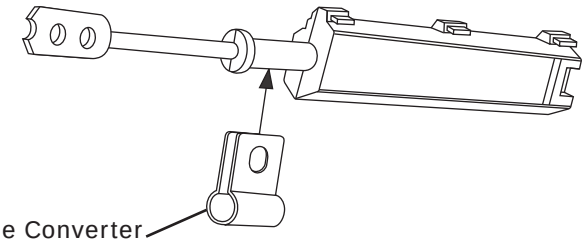


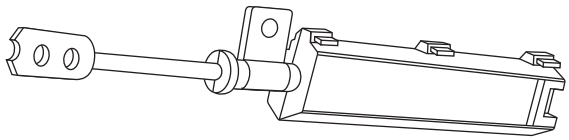

**Reference Only**

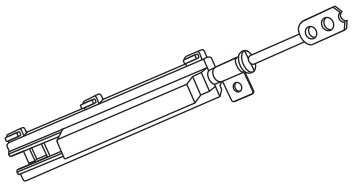
**Figure 7**

# Cable Converter Assembly Mounting Clamp Installation

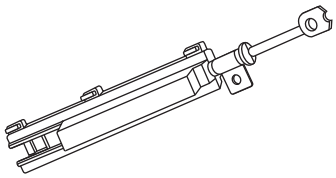
**1.** Install the cable converter assembly mounting clamps. **NOTE: Orient clamps in relation to the (3) housing snaps on the cable converter assembly.**



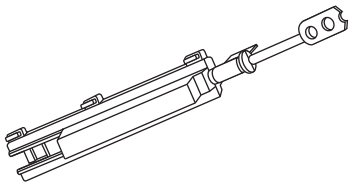





**Mode**
**Cable Converter Assembly**



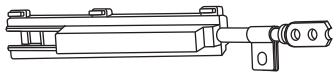
**Blower Speed**
**Cable Converter Assembly**



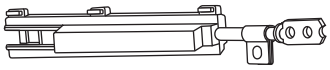
**Temperature**
**Cable Converter Assembly**

# Mode Cable Converter Assembly Installation

1. Install the cable converter assembly onto the mode lever by attaching the cable converter push rod to the OEM cable mounting stud on the lever (See Figure 8, below).
2. Remove the 6-32 x 3/8" pan head screw, and install the cable converter assembly to the control panel OEM cable clamp mounting location and bracket using the 6-32 x 3/8" pan head screw, a washer, and a 6-32 locknut as shown in Figure 8, below.
3. 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.
4. Secure the cable converter lever push rod to the OEM cable mounting stud using a 3/16" push-on ring as shown in Figure 8, below.



Rod Shown in Approximately Innermost Position



**NOTE: Do not allow rod to separate housing when rod is in innermost position.**

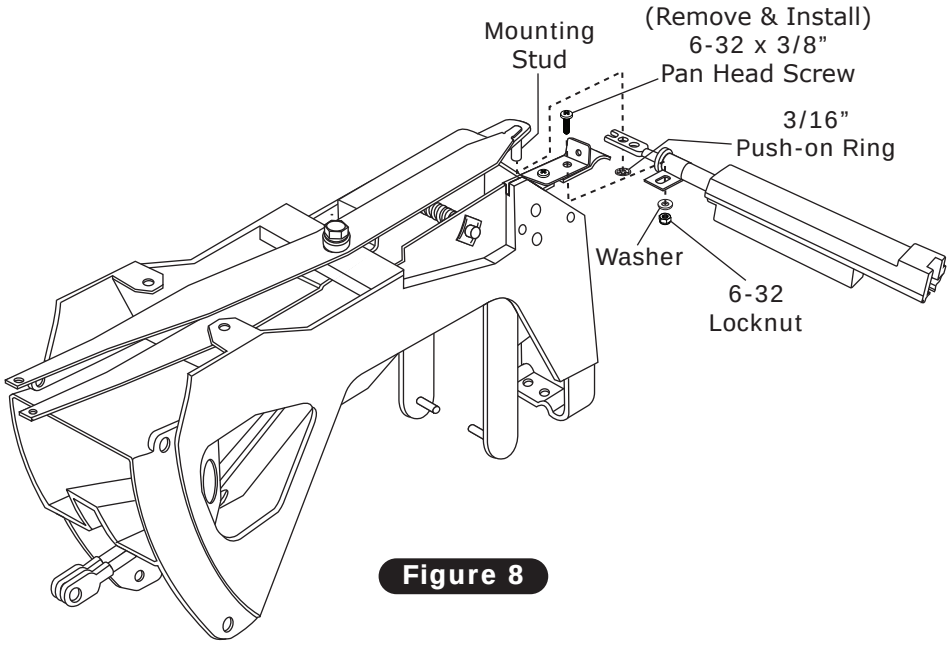
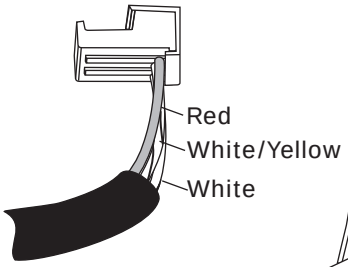



**Figure 8**

# Mode Control Harness

1. Locate the control panel wiring harness, and plug the corresponding wire into the correct cable converter assembly.




**Mode Cable Converter Assembly**

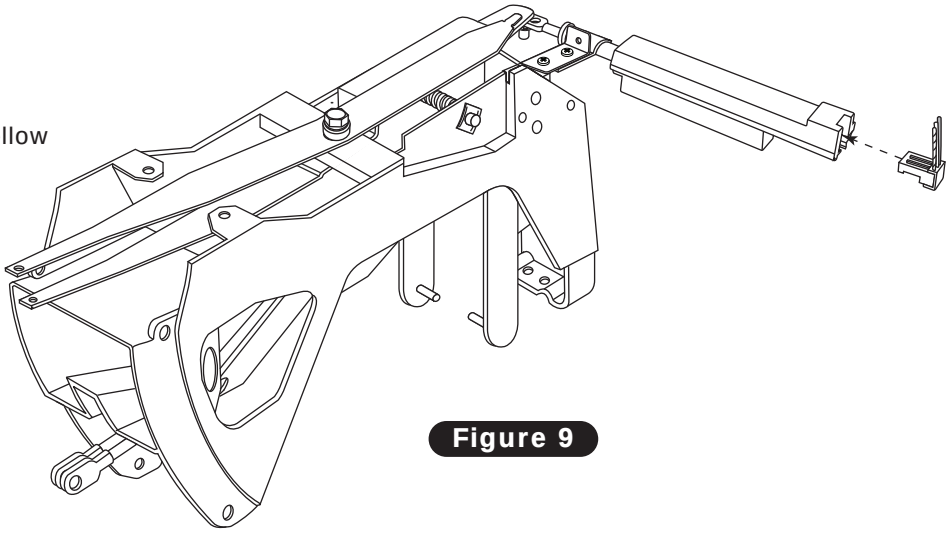


**Figure 9**

# Mode Control Harness (Cont.)

**1.** Once the wires are correctly plugged into the cable converter assembly, secure the wires to the cable converter assembly using the supplied tie wraps. 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.

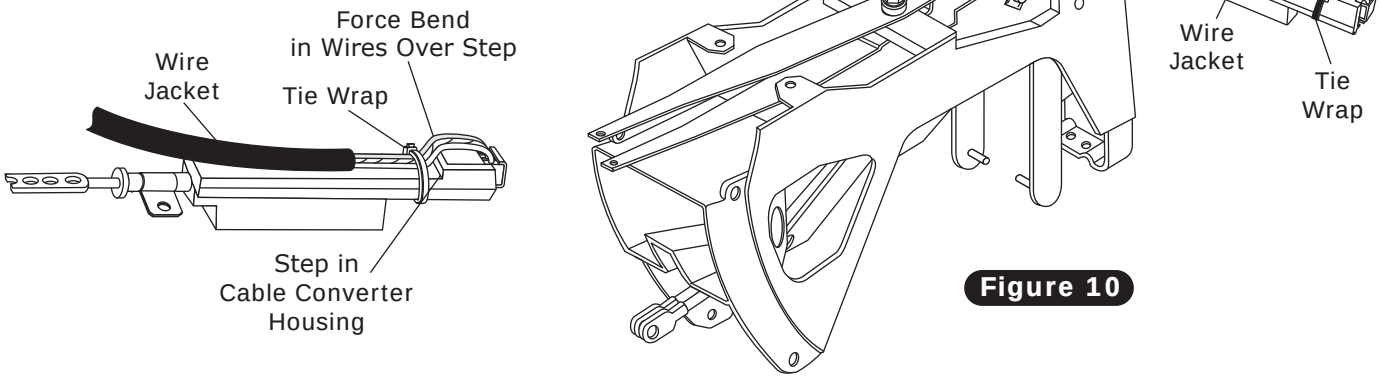


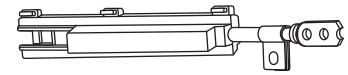

**Figure 10**

# Blower Speed Cable Converter Assembly Installation

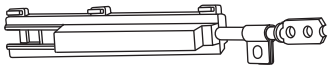
**1.** Install the cable converter assembly onto the blower speed lever by attaching the cable converter lever push rod to the mounting tab on the lever (See Figure 11, below).

**2.** Secure the cable converter assembly to the control panel blower switch adapter bracket using a 6-32 x 3/8" pan head screw, a washer, and a 6-32 locknut as shown in Figure 11, below.

**3.** 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.



Rod Shown in Approximately Innermost Position



**NOTE: Do not allow rod to separate housing when rod is in innermost position.**

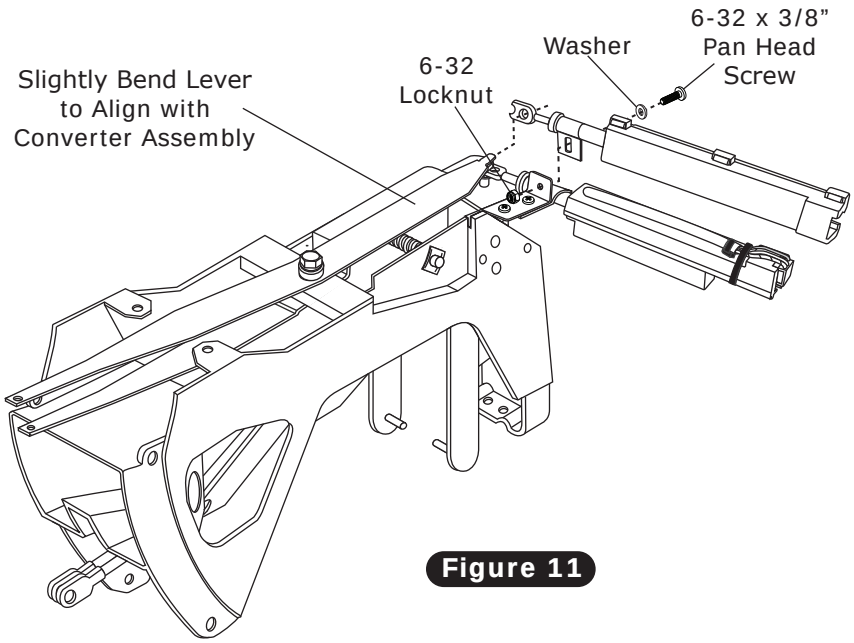
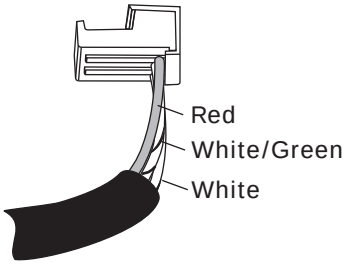



**Figure 11**

# Blower Speed Control Harness

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. 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.




**Blower Speed Cable Converter Assembly**

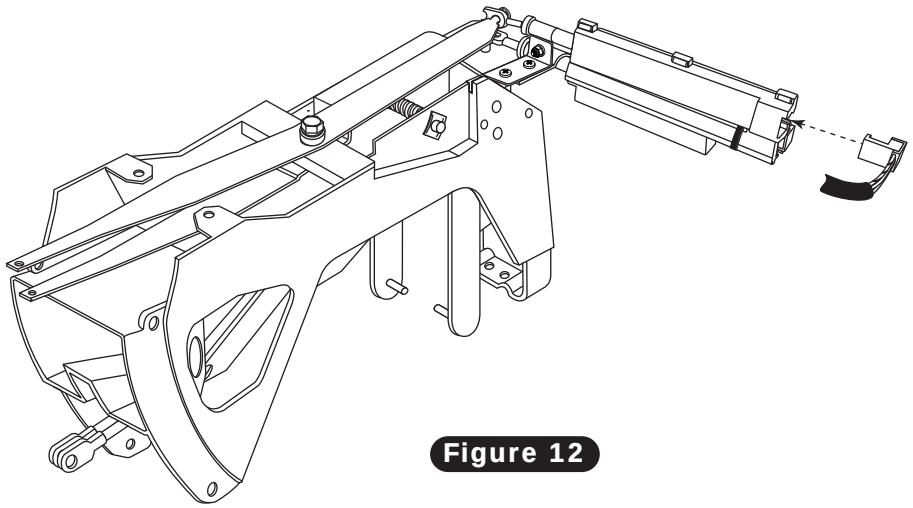
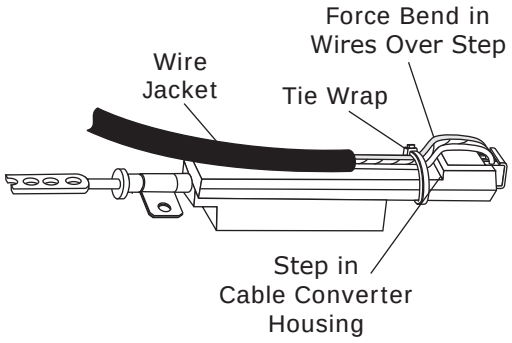


**Figure 12**



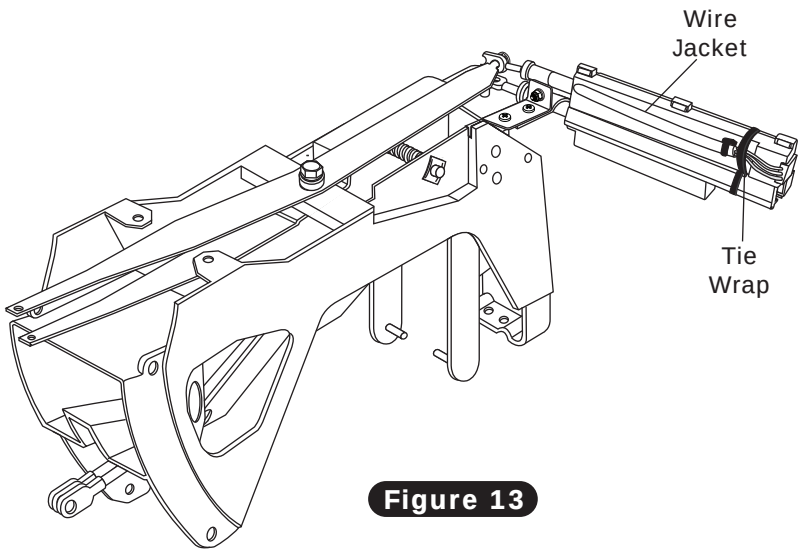
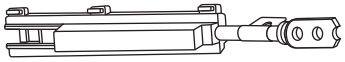



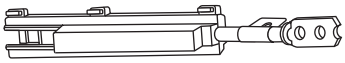

**Figure 13**

# Temperature Cable Converter Assembly Installation

1. Install the cable converter assembly onto the temperature lever by attaching the cable converter push rod to the mounting stud on the lever (See Figure 14, below).
2. Secure the cable converter assembly to the OEM cable clamp mounting location using an 8-32 x 3/8" pan head screw and 8-32 locknut as shown in Figure 14, below.
3. 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.
4. Secure the cable converter lever push rod to the mounting stud using a 3/16" push-on ring as shown in Figure 14, below.



Rod Shown in Approximately Innermost Position



**NOTE: Do not allow rod to separate housing when rod is in innermost position.**

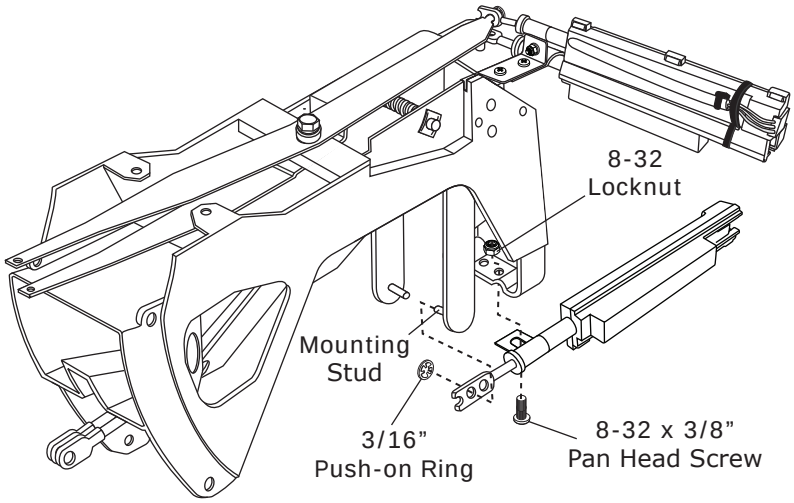
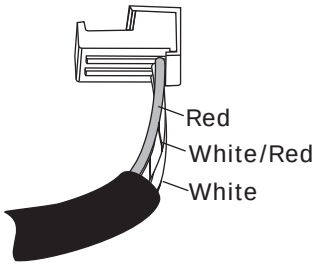



**Figure 14**

# Temperature Control Harness

1. Locate the control panel wiring harness, and plug the corresponding wire into the correct cable converter assembly.




**Temperature Cable Converter Assembly**

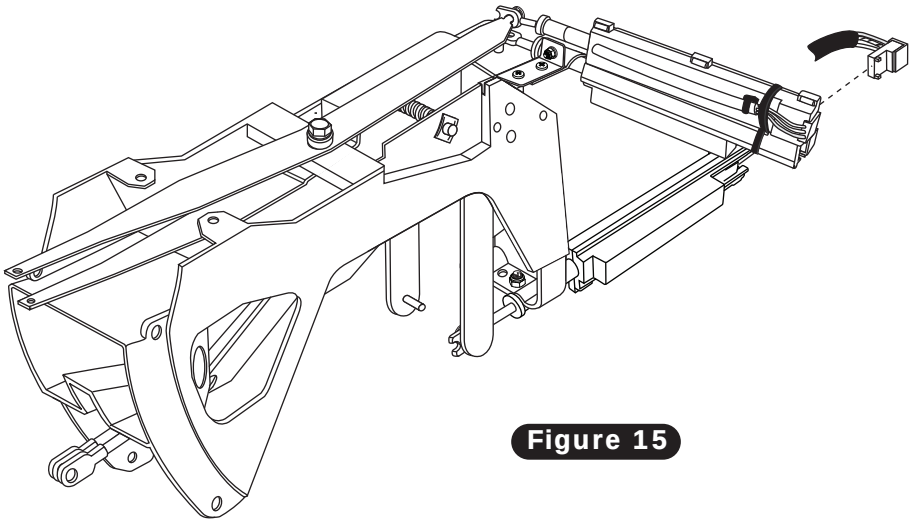


**Figure 15**

# Temperature Control Harness (Cont.)

**1.** Once the wires are correctly plugged into the cable converter assembly, secure the wires to the cable converter assembly using the supplied tie wraps. 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.

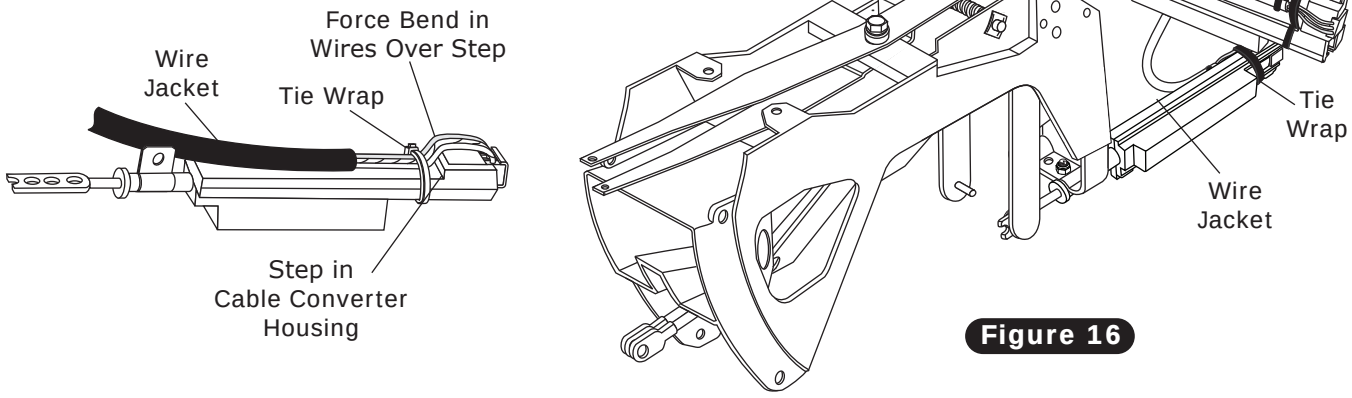
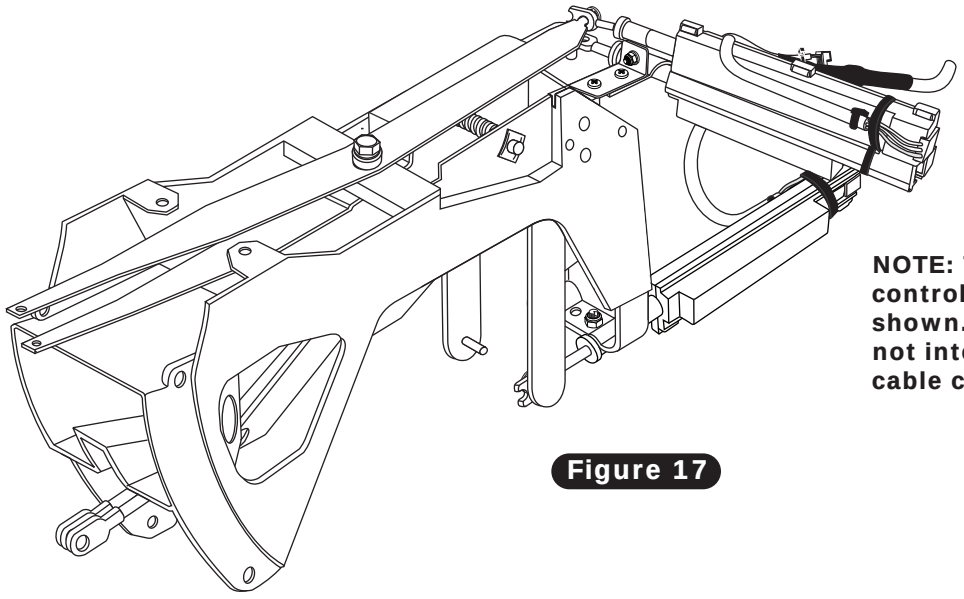



**Figure 16**

# Control Harness Final Step

**NOTE: The fourth lead with the white/blue wire is not used in this application.**

**1.** Using the supplied tie wraps, tie the wires to the control panel. 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 the levers or cable converter assemblies.**

**Figure 17**

# Bezel & Placard Installation

**1.** Install the bezel and placard as shown in Figure 18, below.

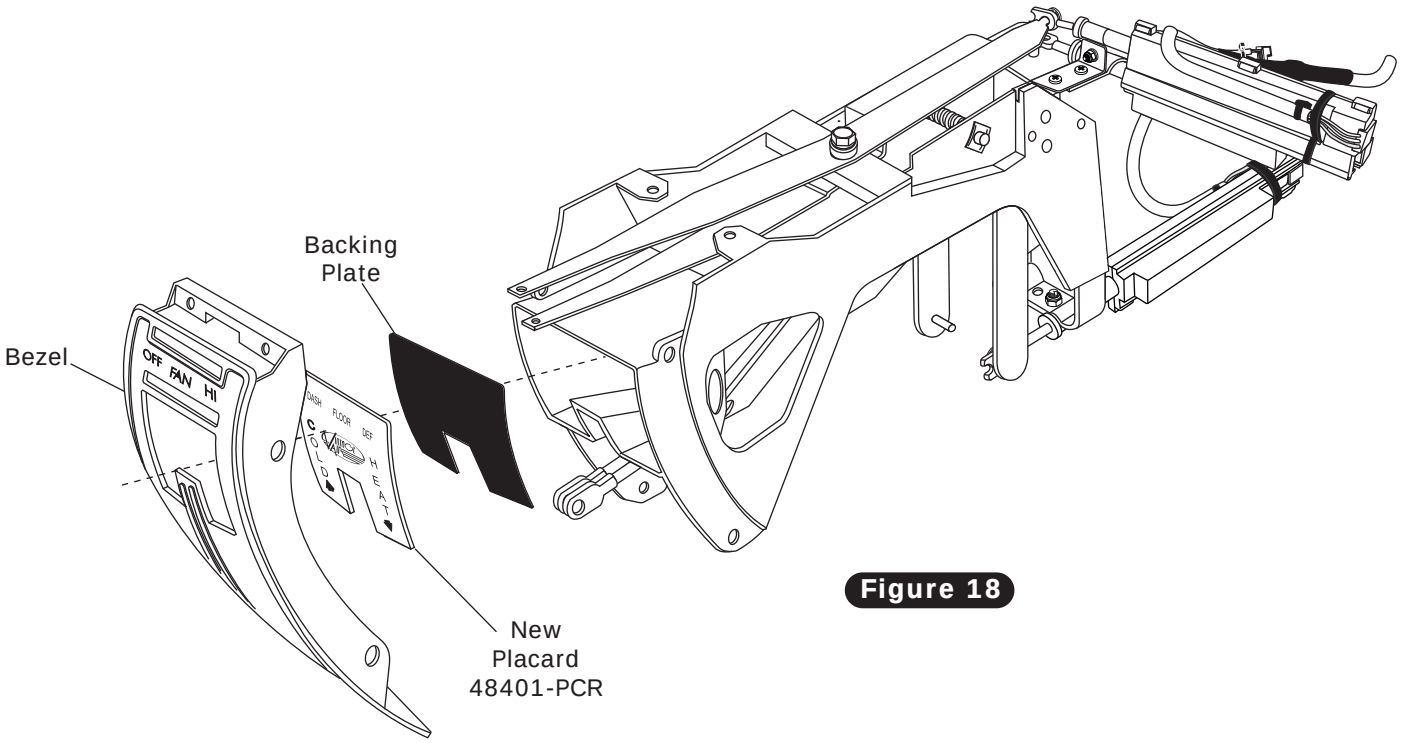



**Figure 18**

# OEM Control Panel Reassembly

**1.** Reinstall the OEM control panel knobs.

**2.** Reinstall the nylon spacer between the temperature control levers (as referenced on Page 5), along with a 10-32 x .750" screw and 10-32 hex nut as shown in Figure 19, below.

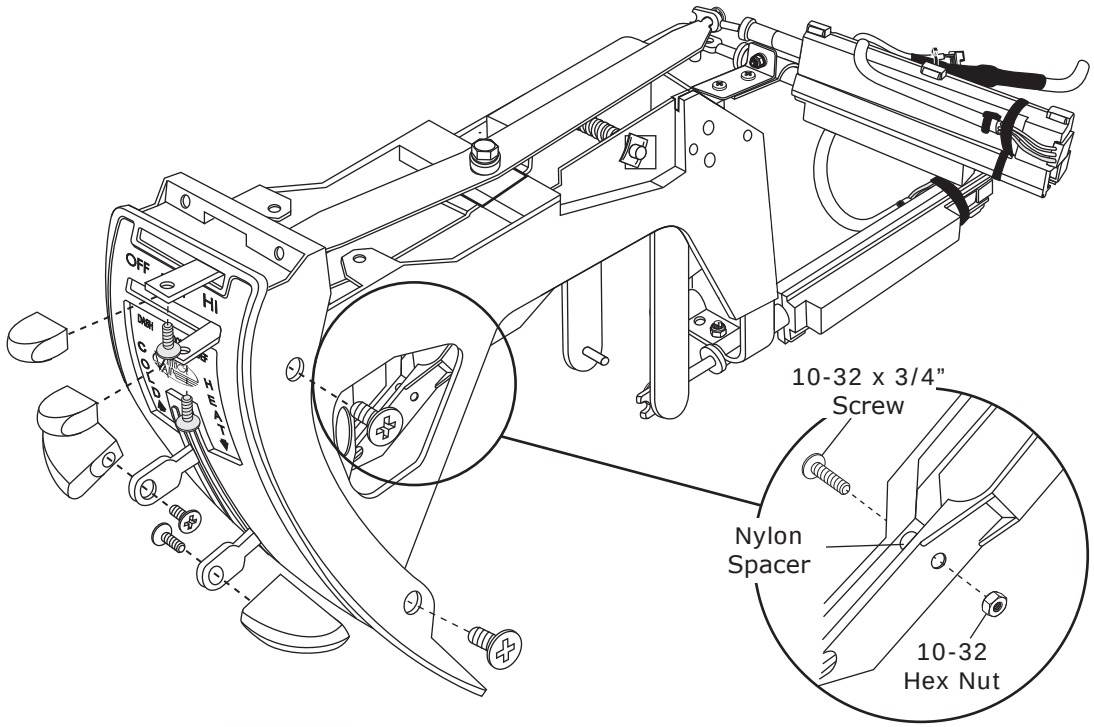



**Figure 19**

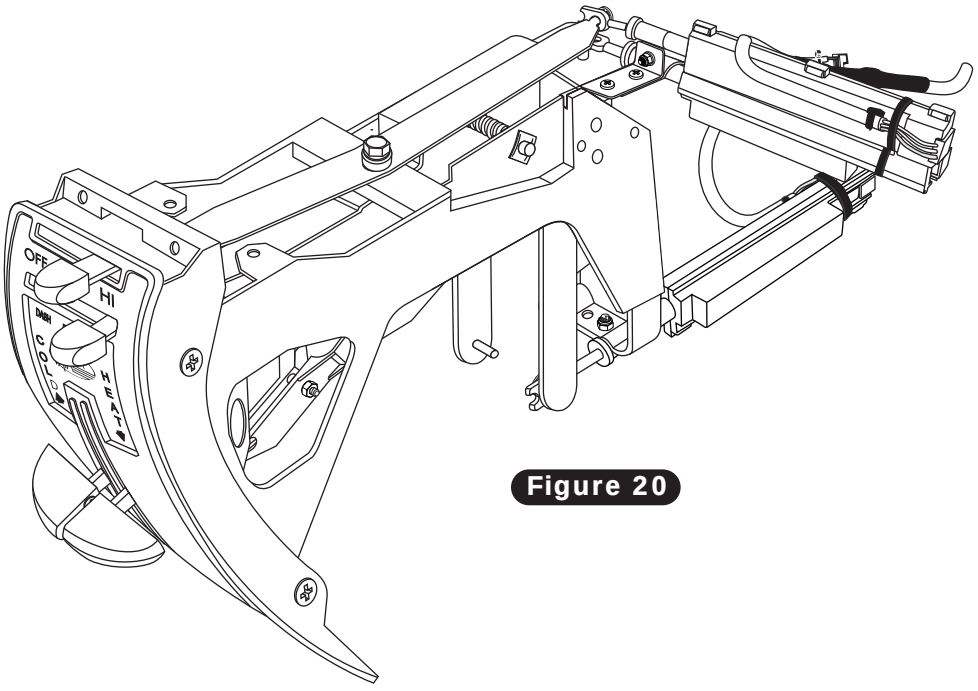



**Figure 20**

# OEM Control Panel Reinstallation

**1.** Remove the (2) U-nuts from the bottom of the control panel opening in the dash (See Photo 1, below).
**2.** Insert the control panel wiring harness through the dash opening (See Photo 2, below).
**3.** Insert the blower speed and mode cable converters through the dash opening as shown in Photo 3, below.

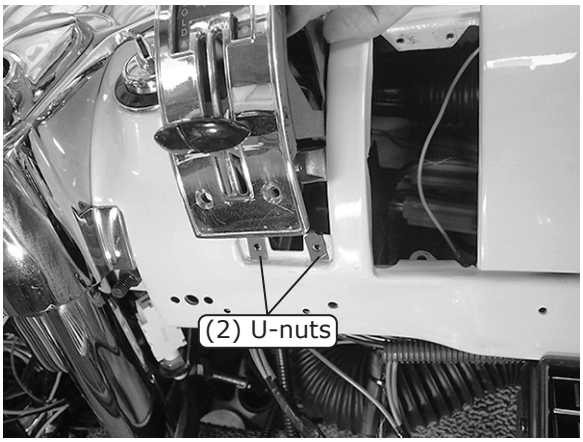



**Photo 1**

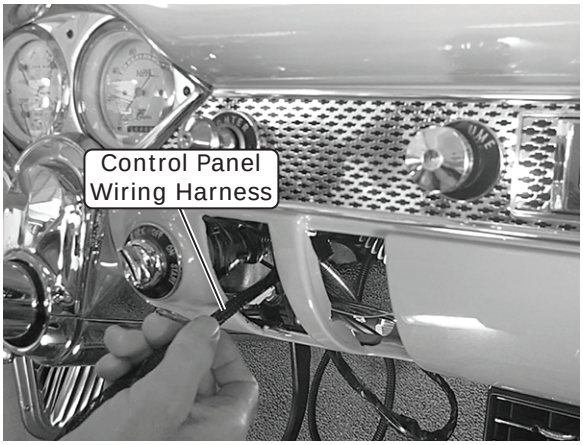



**Photo 2**

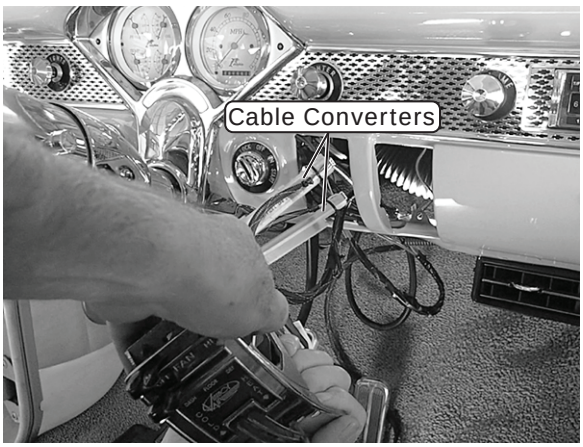



**Photo 3**

# OEM Control Panel Reinstallation (Cont.)

**1.** Push the temperature cable converter upward, and carefully insert the control panel into the dash.

**NOTES:**

**A. When inserting the control panel into the dash, some bending of the cable converter arms will be necessary in order to obtain clearance. This is to be expected, and it will not damage the cable converter assemblies (See Photos 4 & 5, below).**

**B. The temperature knobs on the control panel may be moved up or down as needed to help provide control panel installation clearance (See Photo 6, below).**

**C. When the control panel has been inserted, but before it is fully seated against the dash, reinstall the (2) U-nuts removed in Step 1, Page 16.**

**2.** Secure the control panel by reinstalling the OEM screws (See Photo 7, below).

**Photo 4**

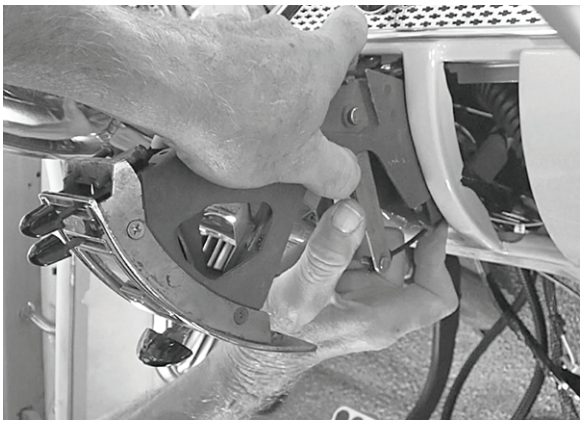


**Photo 5**

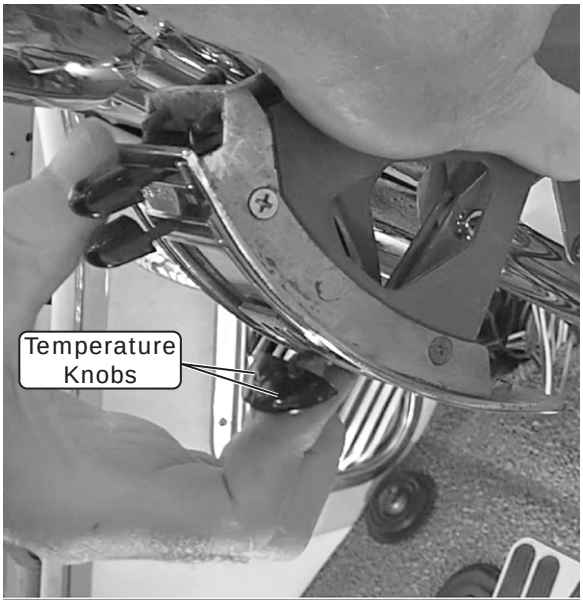



**Photo 6**

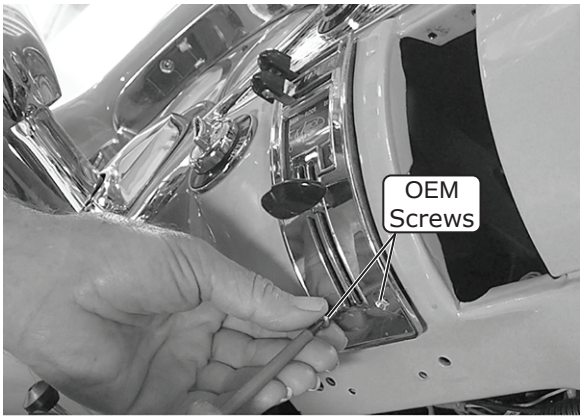



**Photo 7**

# Final Steps

**1.** Plug the wiring harnesses into the ECU module on the sub case.

**2.** Wire according to the wiring diagram on Page 21 or Page 22.

**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 19 & 20.

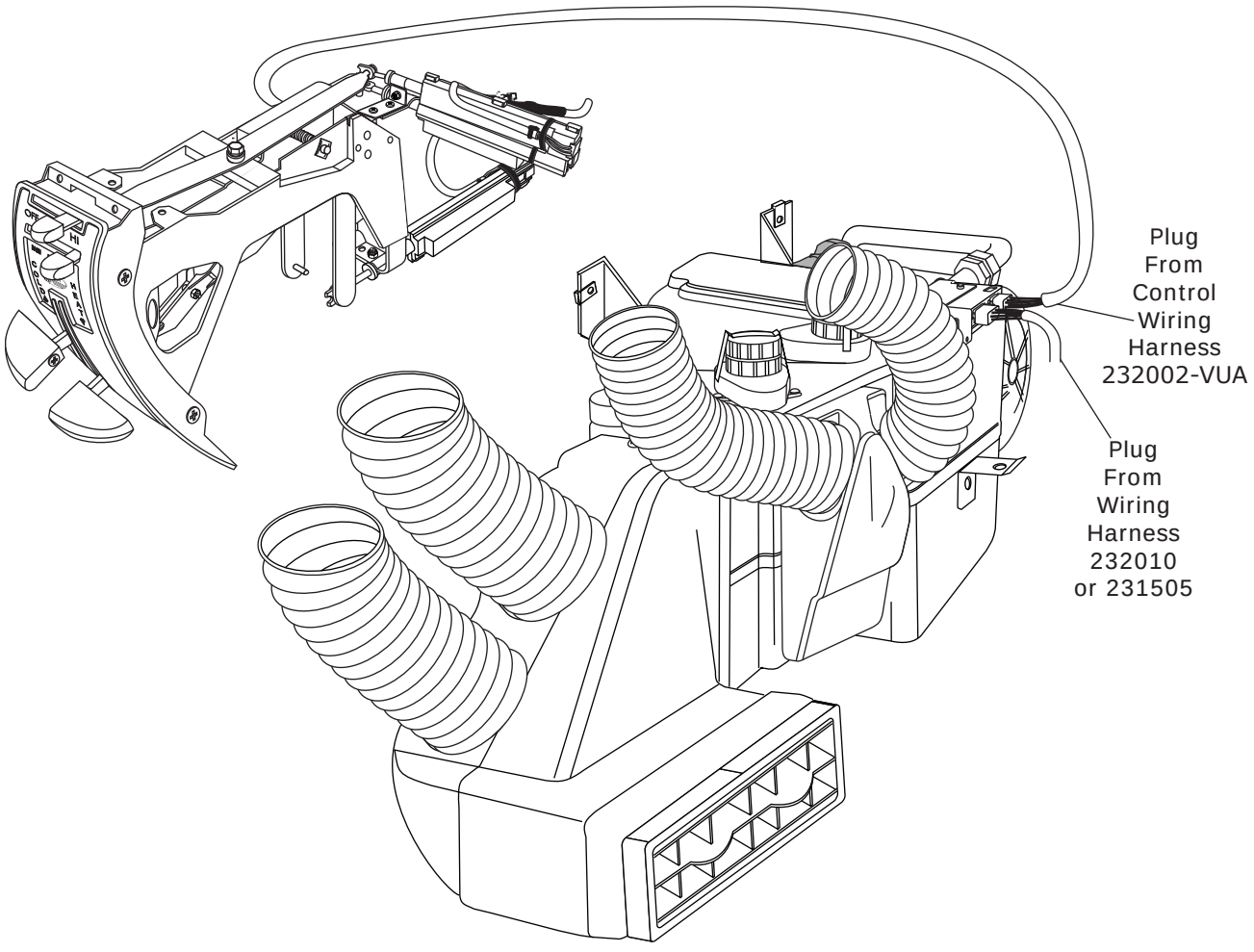



**Figure 21**

# Control Panel Calibration Procedure

On Vintage Air Gen IV and Gen 5 systems using cable converters or replacement electronic controls, it is necessary to calibrate the system to your specific control panel. This procedure ensures that the travel of your control panel levers or knobs is translated into precise control of the blower 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.

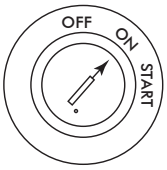
**Gen IV Systems:**

In preparation for calibration, you will need to attach the supplied white ground jumper wire (PN 231520) 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 compressor relay. 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 pulse on/off, signaling that the lower limits have been learned and that the calibration procedure is complete.

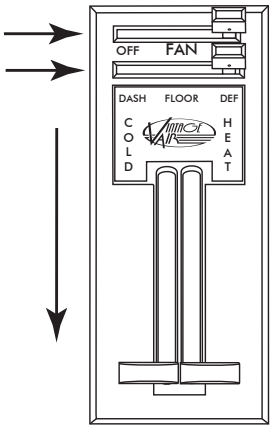
**Gen 5 Systems:**

In preparation for calibration, you will need to attach the supplied white ground jumper wire (PN 231520) to a suitable chassis ground. This jumper wire must be easily connected to the gray programming wire located in the main Gen 5 wiring harness, see the Gen 5 wiring diagram and instructions for more information. During the calibration procedure, you will connect the white jumper to the gray program wire, and ground, which will then put the ECU into calibration mode. When the ECU is in calibration mode, the blower will default to medium speed and the ECU will flash a solid red light. Once in calibration mode you will cycle the controls as indicated in the calibration procedure on the next page. When complete, the jumper and program wire will be disconnected. The blower will turn off indicating calibration is complete.

# Control Panel
# Calibration Procedure (Cont.)

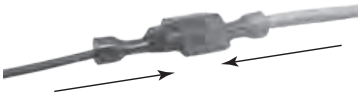


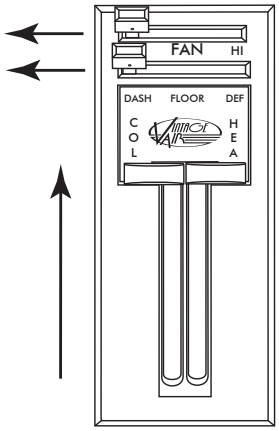

**1.** Turn on the ignition switch (Do not start the engine).




**2.** Move the control levers/knobs to the positions shown.

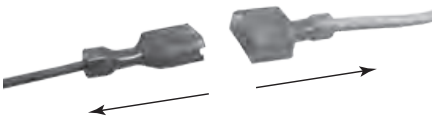
**3.** Connect the white jumper wire to the gray program wire. Wait approximately 5 seconds for the blower speed to change if using a Gen IV system, if using a Gen 5 system wait for the blower to default to medium speed.





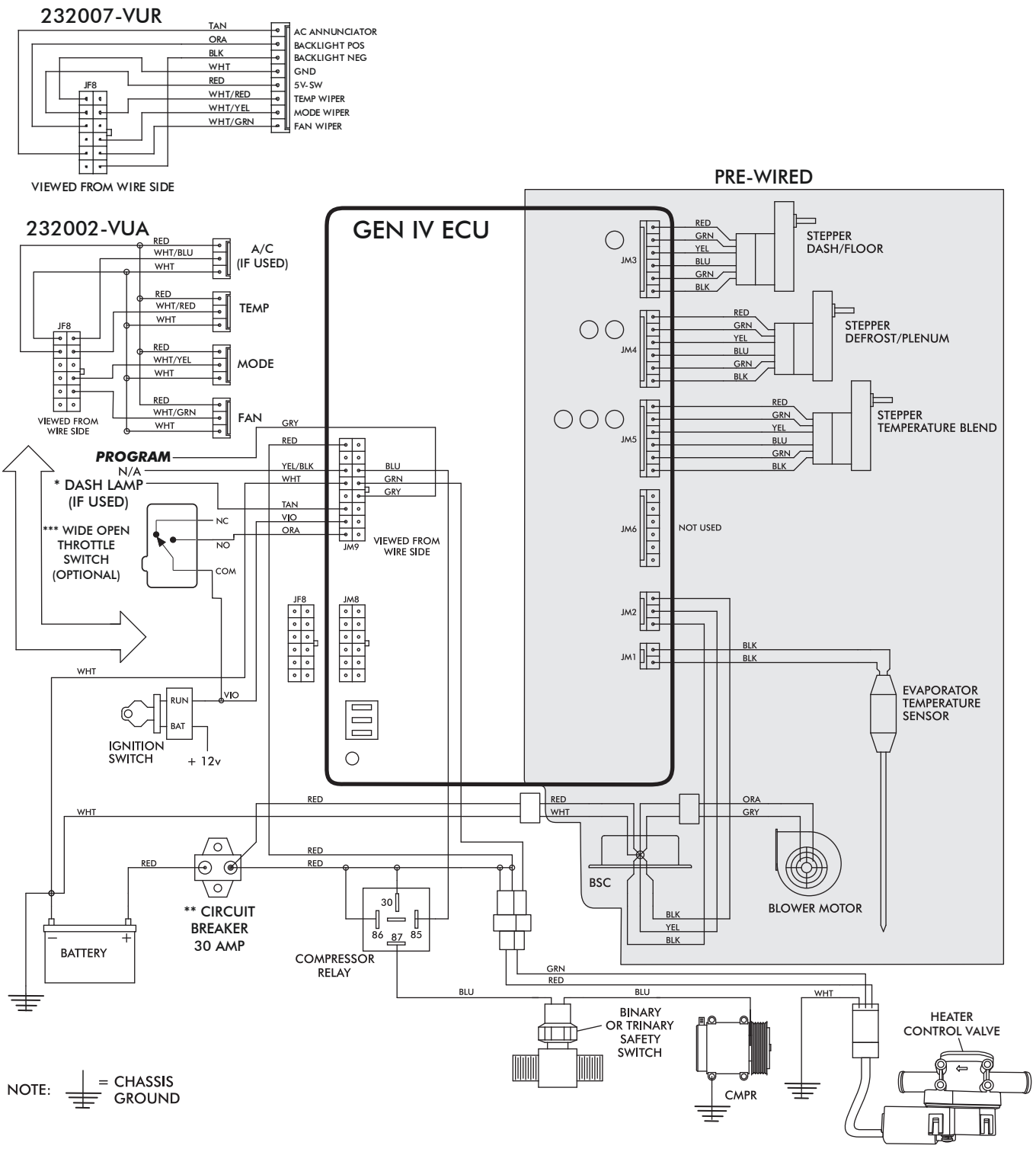

**4.** Move the control levers/knobs to the positions shown.

**5.** Disconnect the white jumper wire from the gray program wire. The blower speed will change if using a Gen IV system, and will shut off if using a Gen 5 system, 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.

# Gen IV Wiring Diagram

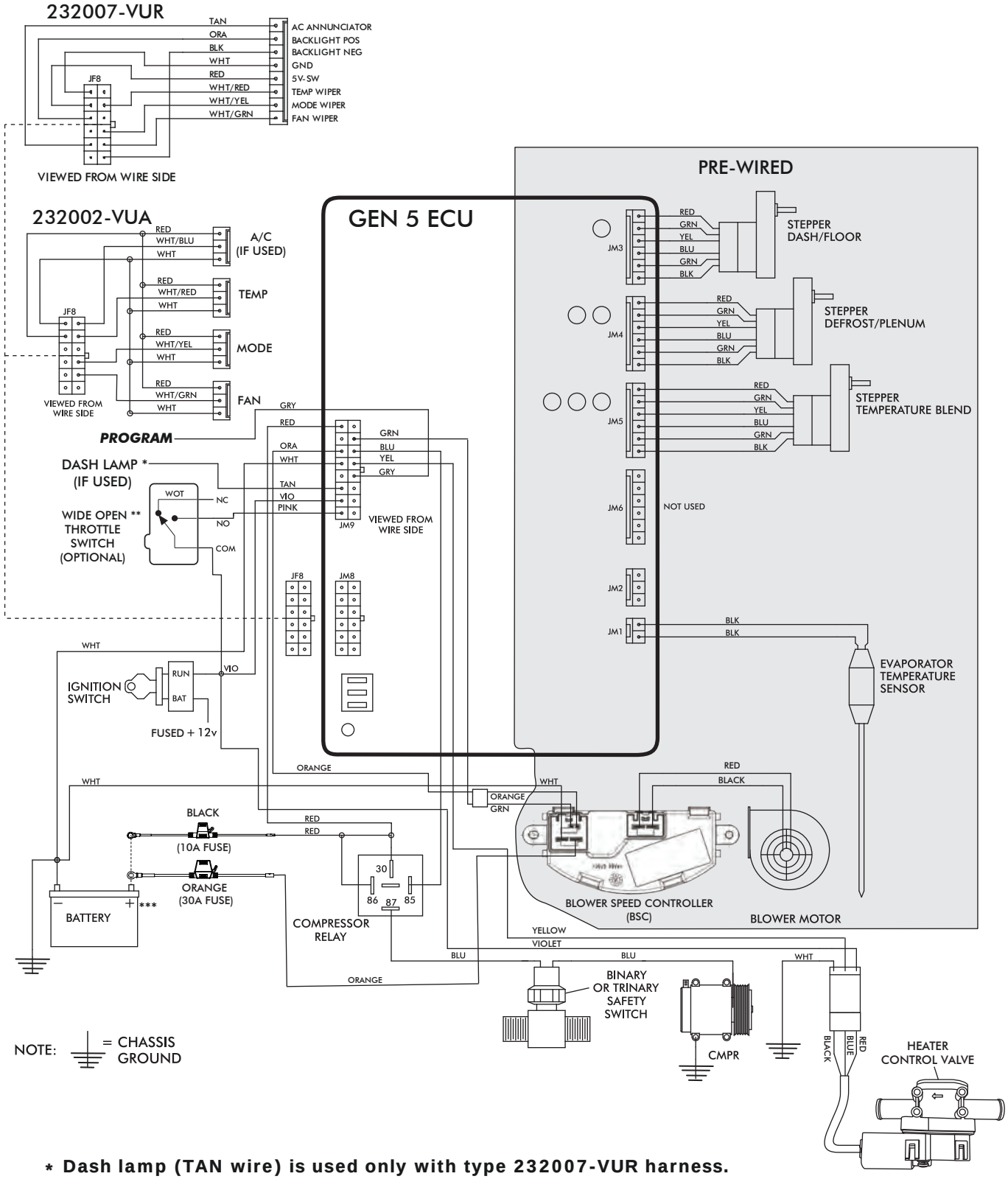



*** Dash lamp is used only with type 232007-VUR harness.**

**** 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.**

# Gen 5 Wiring Diagram




*** Dash lamp (TAN wire) is used only with type 232007-VUR harness.**

**** Wide open throttle switch contacts close only at full throttle, which disables A/C compressor.**

***** Install fuse assemblies at or as near to the battery as possible.**

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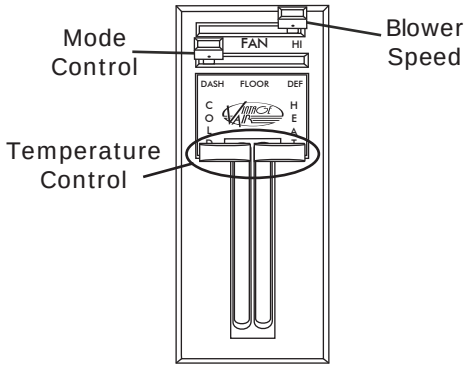
# Operation of Controls

On Gen IV or Gen 5 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 in and out of heat and A/C operations, to indicate the change. **NOTE: For proper control panel function, refer to Pages 19 & 20 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.

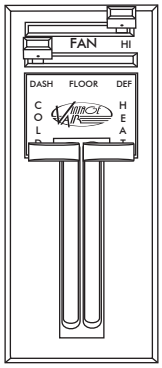



## *A/C Operation*

**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).

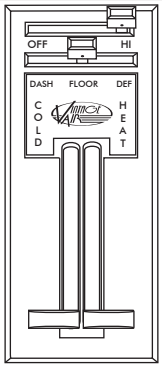



## *Heat Operation*

**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).

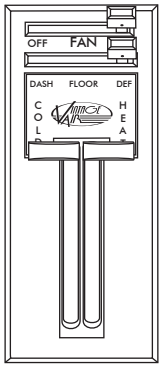



## *Defrost/De-fog Operation*

**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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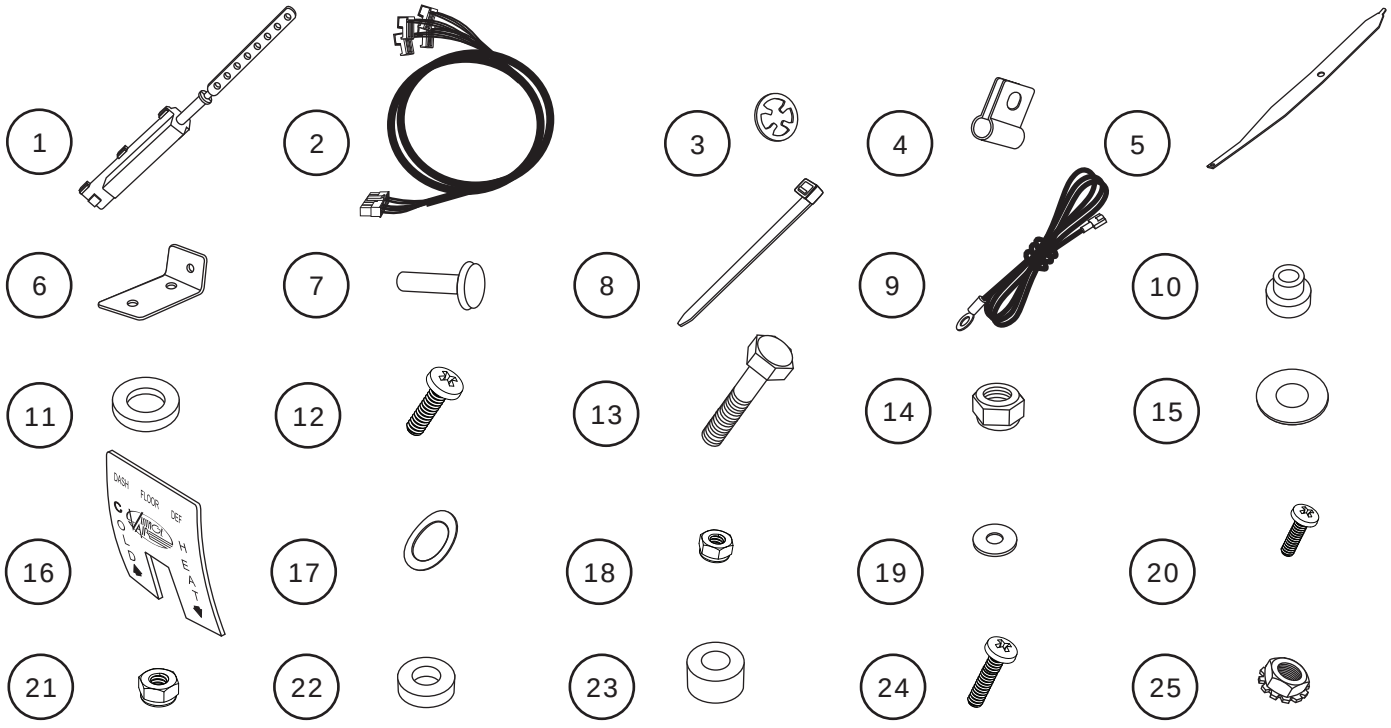
# Packing List: Control Panel Kit (473059)

| No. | Qty. | Part No. | Description | |
|---|---|---|---|---|
| **1.** | 3 | 112002-SUA | Cable Converter Assembly | |
| **2.** | 1 | 232002-VUA | Control Harness, Gen IV/Gen 5 Universal | |
| **3.** | 4 | 65976-VUE | Push-on Ring, 3/16" | |
| **4.** | 3 | 491010-VUR | Cable Converter Clamp | |
| **5.** | 1 | 647055 | Lever, Fan Switch | |
| **6.** | 1 | 647056 | Bracket, Fan Switch, Pot Adapter | |
| **7.** | 2 | 188569 | Clevis Pin, 3/16" x 5/8" | |
| **8.** | 4 | 21301-VUP | Tie Wrap, 4" | |
| **9.** | 1 | 231520 | Ground Wire | |
| **10.** | 1 | 180007-SSR | Spacer, Nylon Shoulder | |
| **11.** | 1 | 180006-SSR | Spacer, Nylon | |
| **12.** | 1 | 18105-VUB | Screw, 8-32 x 3/8", Pan Head | |
| **13.** | 1 | 18310-VUB | Bolt, 5/16-18 x 1 ½", Hex | |
| **14.** | 1 | 18151-VUB | Locknut, 5/16-18 | |
| **15.** | 3 | 18125-VUB | Washer, .312 ID x .750 OD, Flat | |
| **16.** | 1 | 48401-PCR | Placard, Control Panel | |
| **17.** | 1 | 180911 | Washer, .009, Wave | |
| **18.** | 3 | 18107-VUB | Locknut, 6-32 | |
| **19.** | 2 | 18122-VUB | Washer, #6 | |
| **20.** | 3 | 18237-VUB | Screw, 6-32 x 3/8", Pan Head | |
| **21.** | 1 | 18602-NSR | Locknut, 8-32 | |
| **22.** | 1 | 182534 | Spacer, 1/4", Nylon | |
| **23.** | 1 | 182535 | Spacer, 5/16", Nylon | |
| **24.** | 1 | 18258-VUB | Screw, 10-32 x 3/4", Pan Head | |
| **25.** | 1 | 18251-VUB | Nut with Star Washer, 10-32 | |

Checked By: _____
Packed By: _____
Date: _____




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