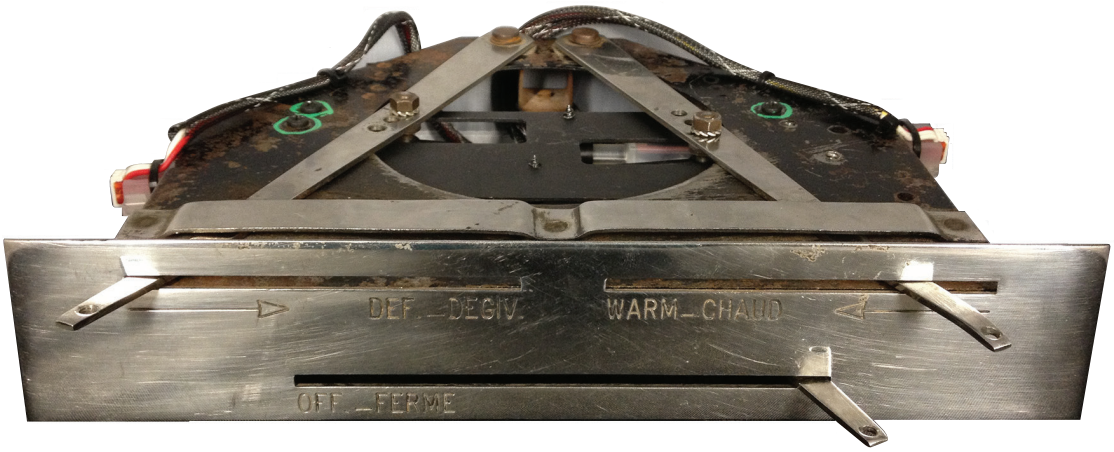
an ISO 9001:2008 Registered Company

1958-61 Facel Vega HK500

Control Panel Conversion Kit

475175



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Packing List:
1958-61 Facel Vega HK500
Control Panel Conversion Kit (475175)

No.	Qty.	Part No.	Description
1.	3	112002-SUA	Cable Converter Assembly
2.	1	232002-VUA	Gen IV Universal Control Harness
3.	3	491010-VUR	Cable Converter Clamp
4.	5	21301-VUP	4” Tie Wrap
5.	1	231520	Ground Wire
6.	2	18235-VUB	#8 x 1/2” Pan Head Screw
7.	6	49704-VUI	1/16” Nylon Flat Washer
8.	7	49705-VUI	1/8” Nylon Flat Washer
9.	2	186009-WSR	#8 Self-Retaining Nylon Washer
10.	3	18231-VUB	#6 x 1/4” Pan Head Screw
11.	3	18122-VUB	#6 Flat Washer
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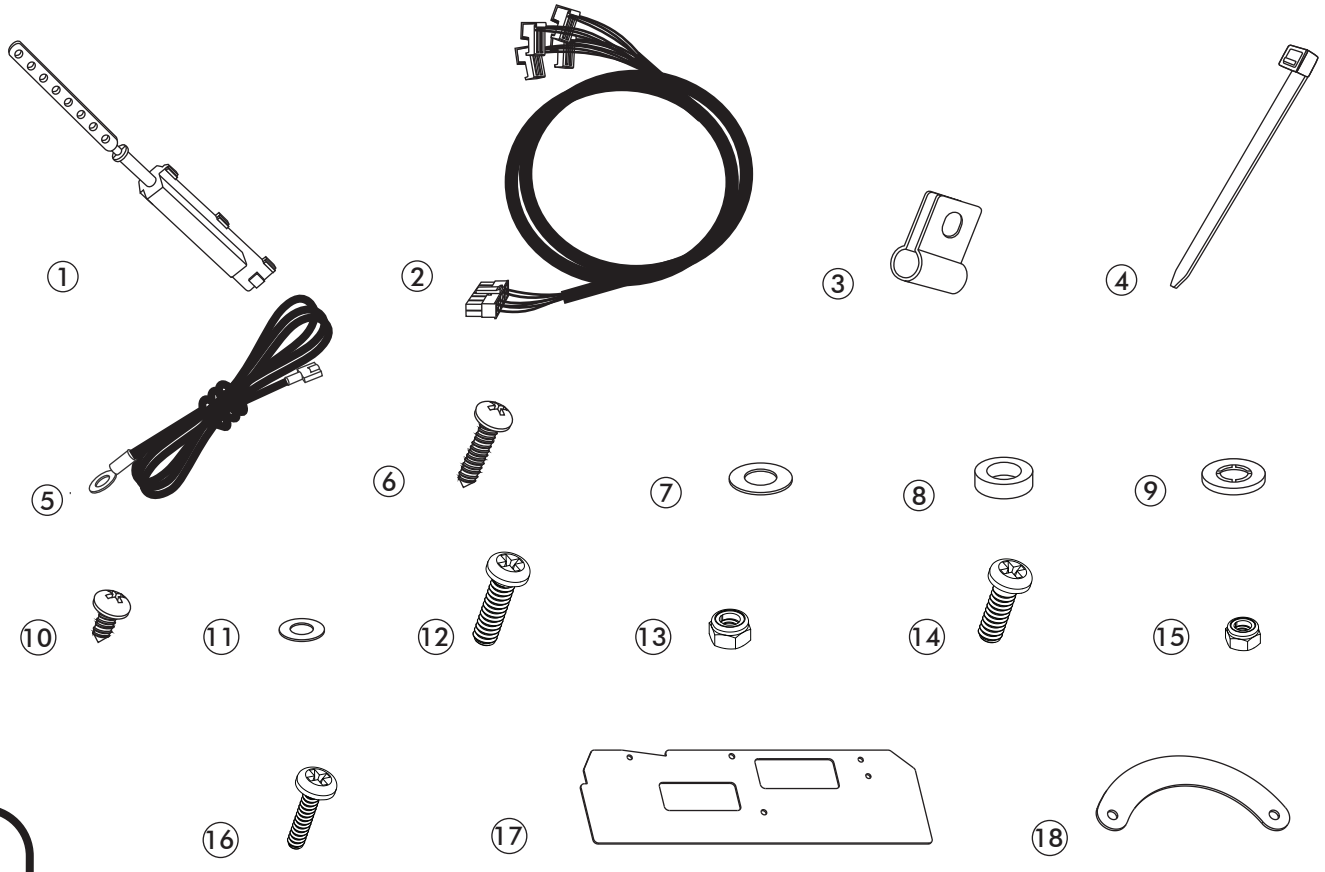
13.	2	18147-VUB	10-32 Nylon Locknut
14.	1	18250-VUB	10-32 x 1/2” Pan Head Screw
15.	1	18602-NSR	8-32 Nyloc Nut
16.	1	18113-PSR	8-32 x 3/4” Pan Head Screw
17.	1	647034	Vega HK500 Control Panel Bracket
18.	1	647035	Vega HK500 Control Panel Lever

**** 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 the control panel.
2. Disconnect all cables and wires from control panel.

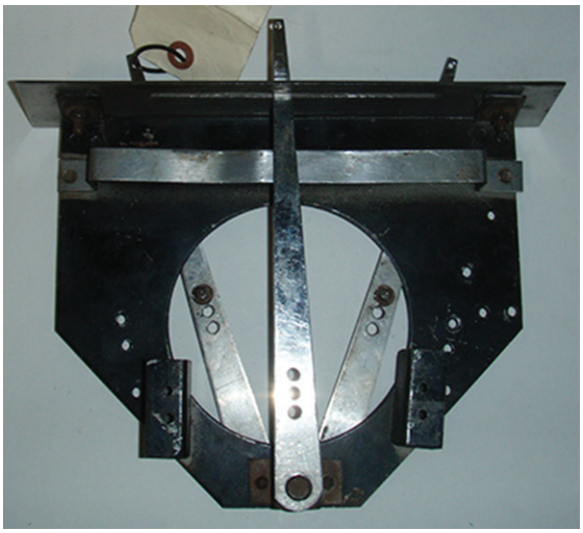


Figure 1

Cable Converter Assembly Modifications

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

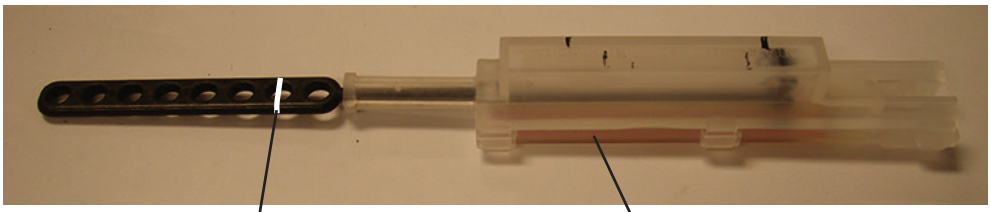


Figure 2

Cable Converter Assembly Mounting Clamp Installation

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

2. Orient cable converter assemblies and install mounting clamps as shown in Figure 3, below. **NOTE: Orient clamps in relation to the (3) housing snaps on cable converter assembly.**

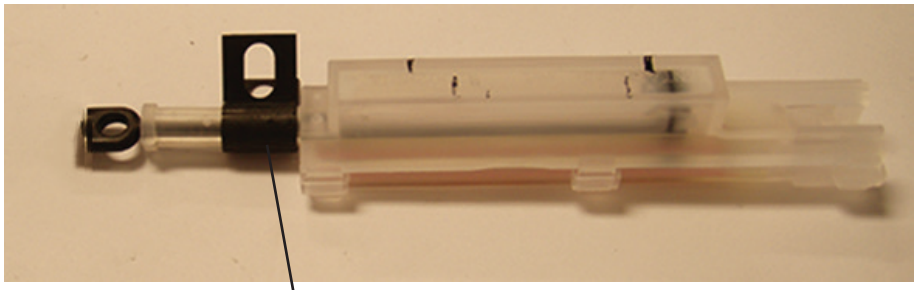


Figure 3

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

1. Secure (2) cable converter assemblies to the control panel as shown in Figure 4, below.

2. Install control panel bracket onto back side of control panel (See Figure 4a, below). Secure using (3) #6 x 1/4" pan head screws (See Figure 4b, below).

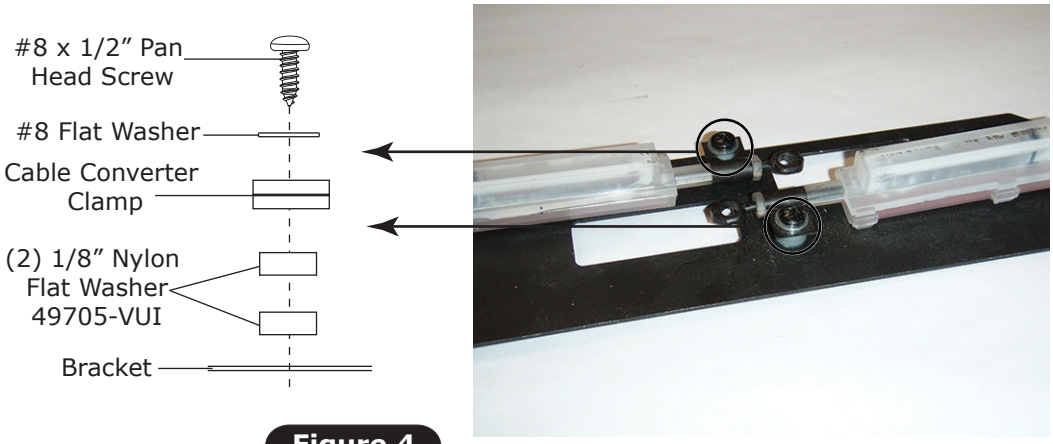
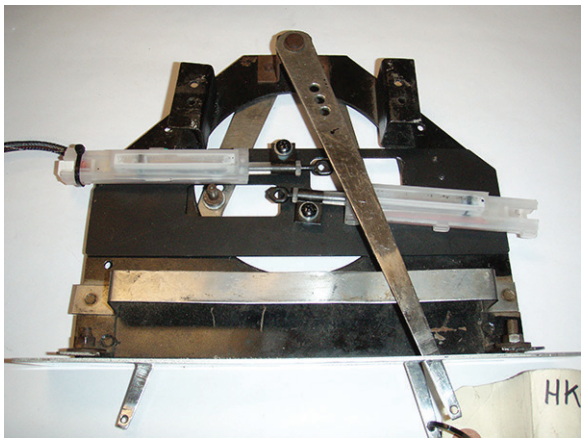


Figure 4



Back Side of Control Panel

Figure 4a

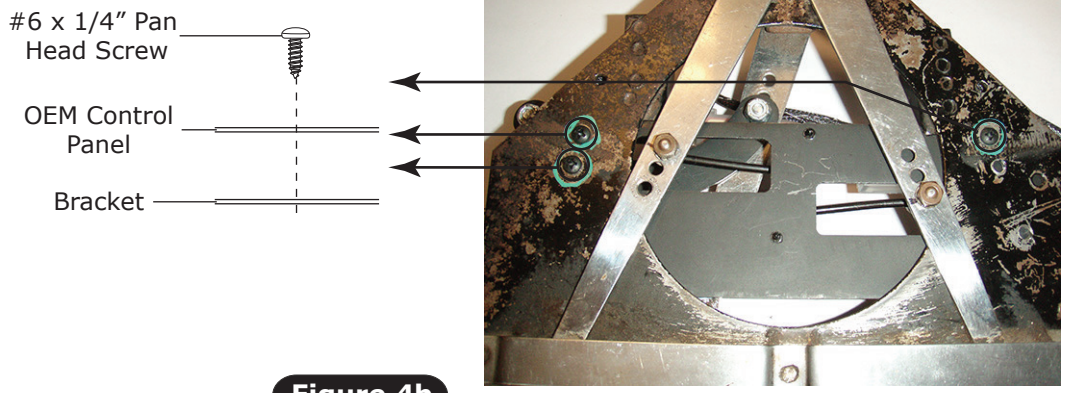


Figure 4b

Dash/Floor/Defrost & Hot/Cold Cable Converter Assembly Installation (Cont.)

1. Install cable converter push rod onto OEM control panel levers as shown in Figure 5, below.
2. Since the cable converter assembly can slide back and forth in the 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.

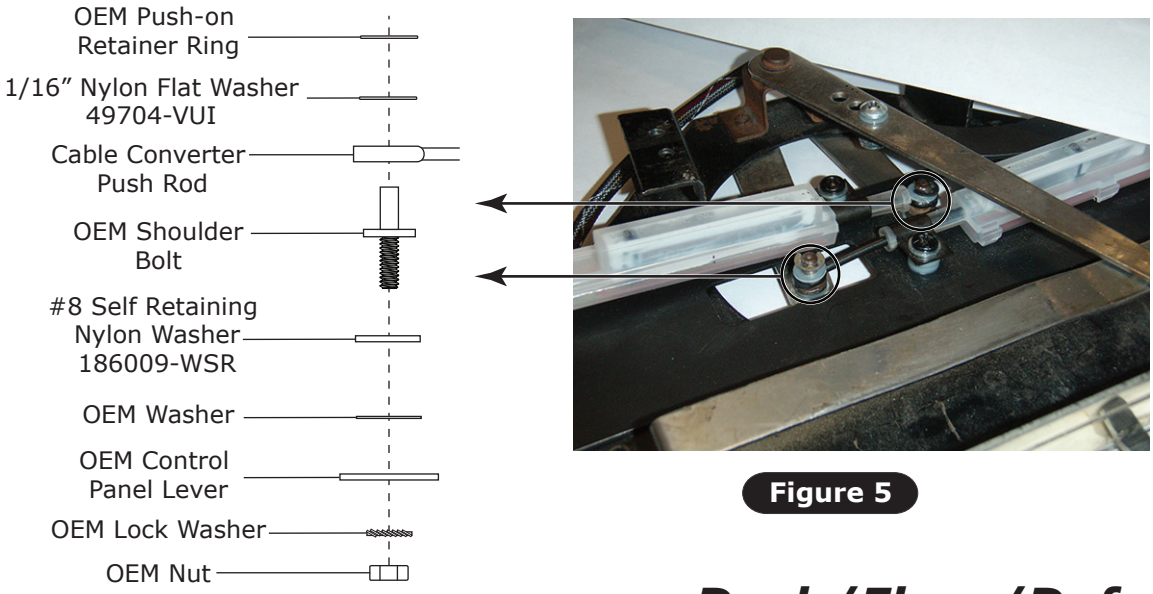
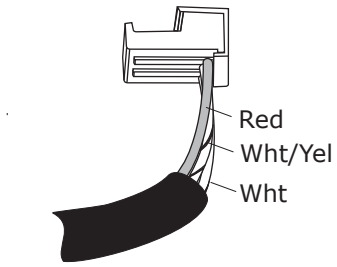


Figure 5

Dash/Floor/Defrost Cable Converter Assembly Wiring Installation

1. Locate the control panel wiring harness, and plug the corresponding wire into the correct cable converter assembly as shown in Figure 6, below.
2. Once the wire is correctly plugged into the cable converter assembly, secure the wire to the 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 snug enough that the wires cannot move (See Figure 6, below).



Dash/Flr/Def Cable Converter Assembly

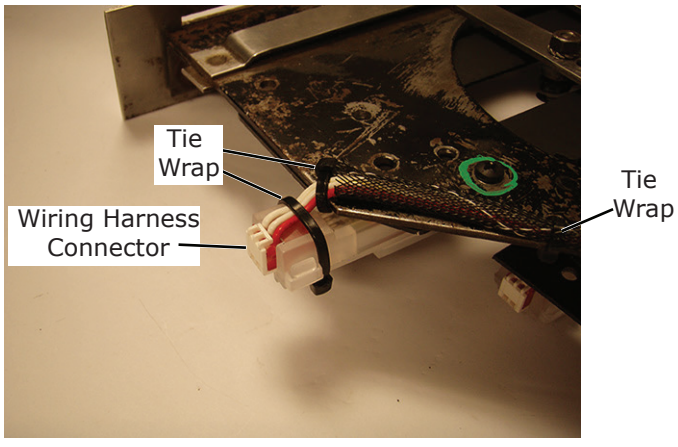
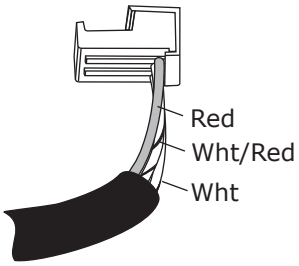


Figure 6

Hot/Cold Cable Converter Assembly Wiring Installation

1. Locate the control panel wiring harness, and plug the corresponding wire into the correct cable converter assembly as shown in Figure 7, below.

2. Once the wire is correctly plugged into the cable converter assembly, secure the wire to the cable converter assembly using tie wraps (supplied) (See Figure 7, 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 snug enough that the wires cannot move (See Figure 7, below).



Hot/Cold Cable Converter Assembly

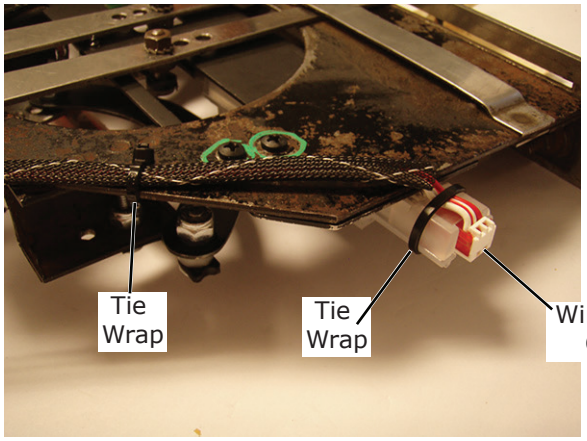
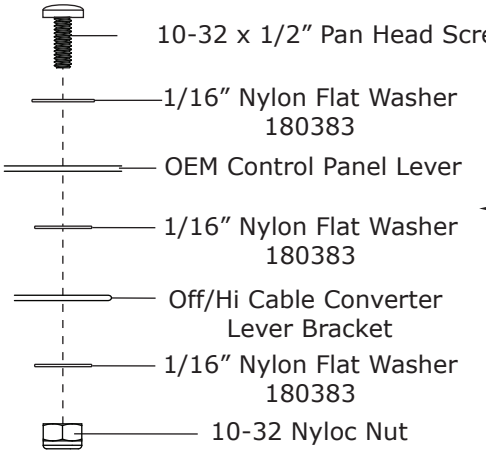


Figure 7

Off/Hi Cable Converter Bracket Installation

1. Install Off/Hi cable converter lever bracket onto OEM control panel lever as shown in Figure 8, below.



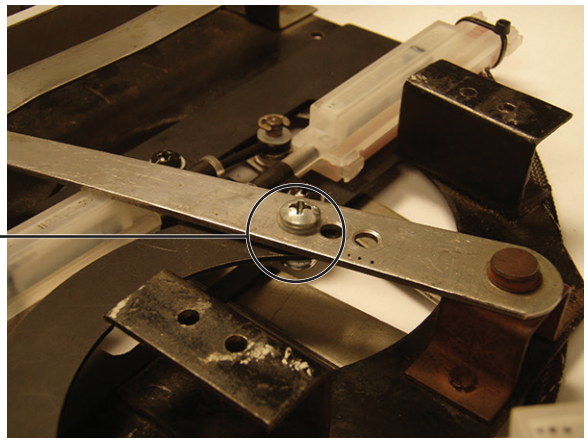


Figure 8

Off/Hi
Cable Converter Assembly Installation

1. Install cable converter onto control panel as shown in Figure 9, below.

2. Install cable converter push rod onto off/hi lever bracket as shown in Figure 9a, below.

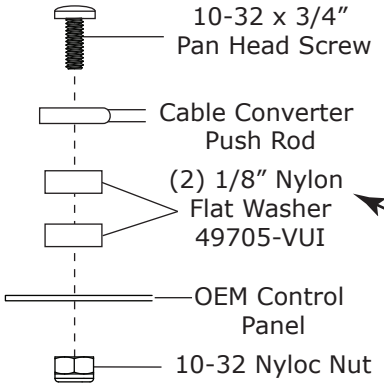


Figure 9a

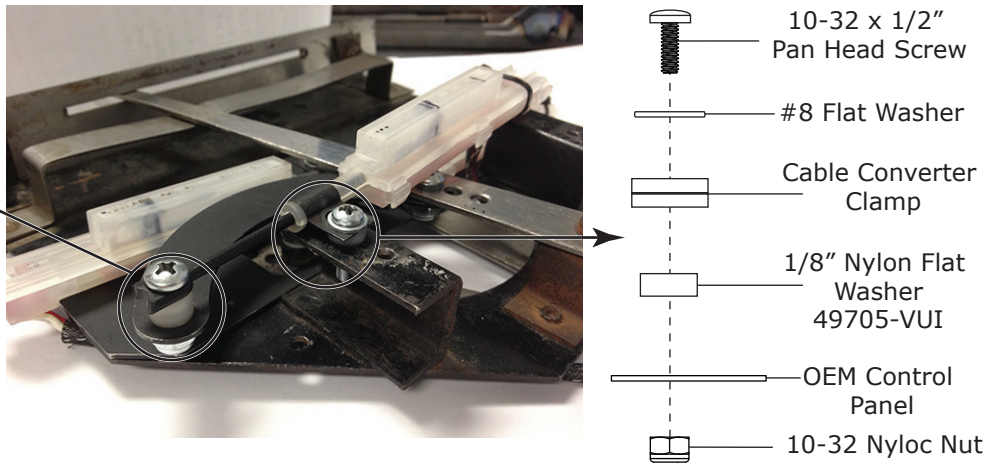
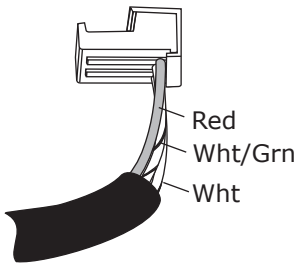


Figure 9

Off/Hi
Cable Converter Assembly Wiring Installation

1. Locate the control panel wiring harness, and plug the corresponding wire into the correct cable converter assembly as shown in Figure 10, below.

2. Once the wire is correctly plugged into the cable converter assembly, secure wire to the cable converter assembly using tie wraps (supplied) (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, as shown, to remain tight. Ensure that the tie wraps are snug enough that the wires cannot move (See Figure 10, below).



Off/Hi Cable Converter Assembly

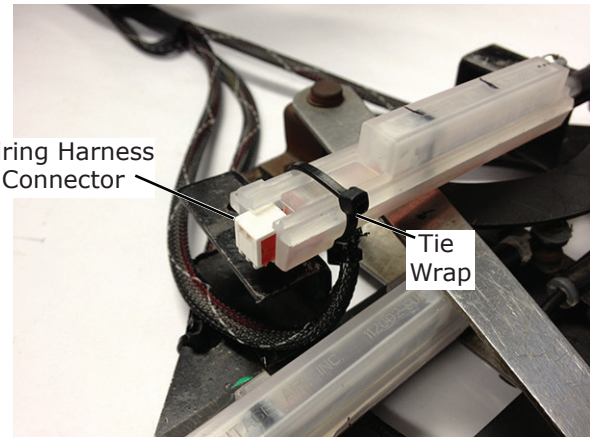


Figure 10

Final Steps

1. Using the supplied tie wraps, tie the wires, including the unused wire, to the control panel. Confirm that the wires are secure and do not interfere with lever operation or cable converter assemblies.

2. Install control panel from behind dash. **NOTE: Make sure cable converter assemblies clear the duct hose behind the left side of the dash opening. Do not force the control panel into the dash. Forcing the control panel into the dash will damage the cable converter assemblies and/or duct hose.**

3. Plug the wiring harnesses into the ECU module on the sub case (See Figure 11, below).

4. Wire according to wiring diagram on Page 13.

5. 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 13.

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 11 & 12.

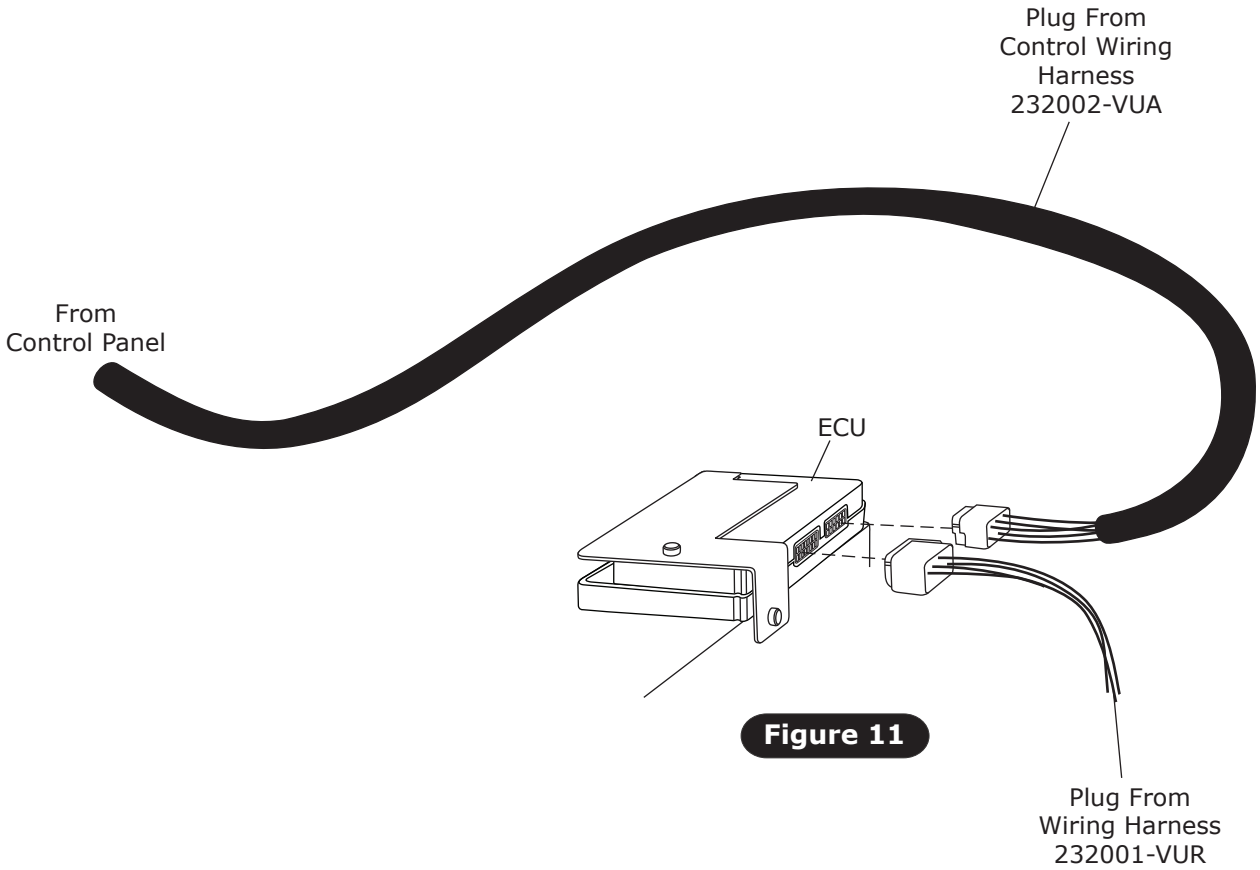
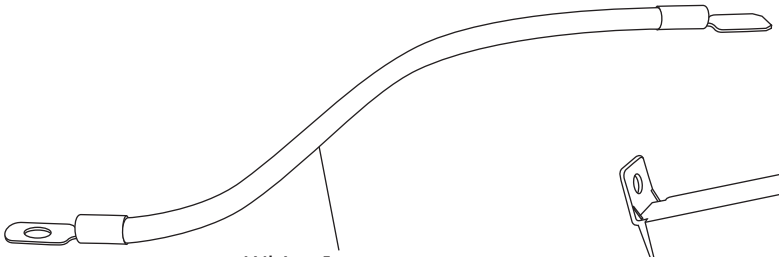


Figure 11

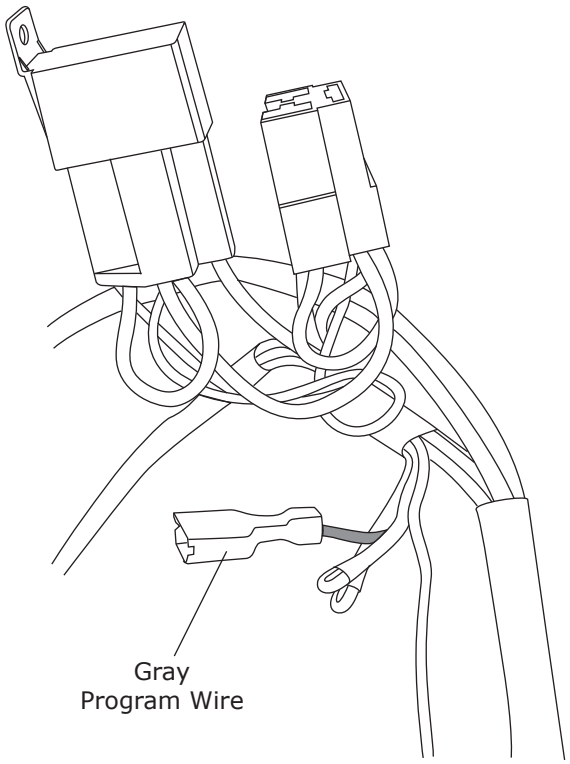
Control Panel Calibration Procedure

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.



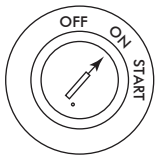
White Jumper Cable



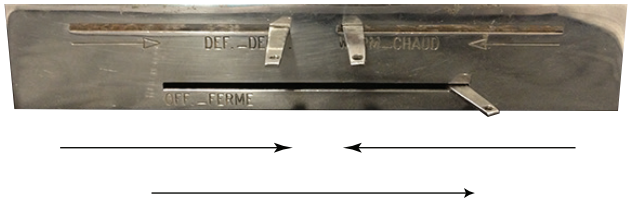
Gray Program Wire

Control Panel Calibration Procedure (Cont.)

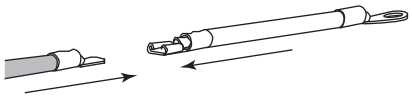
1. Turn on the ignition switch (Do not start the engine).



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

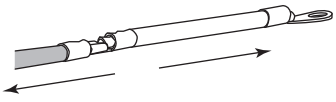


3. Connect the white jumper wire to the gray program wire. Wait for the blower speed to change (Approximately 5 seconds).



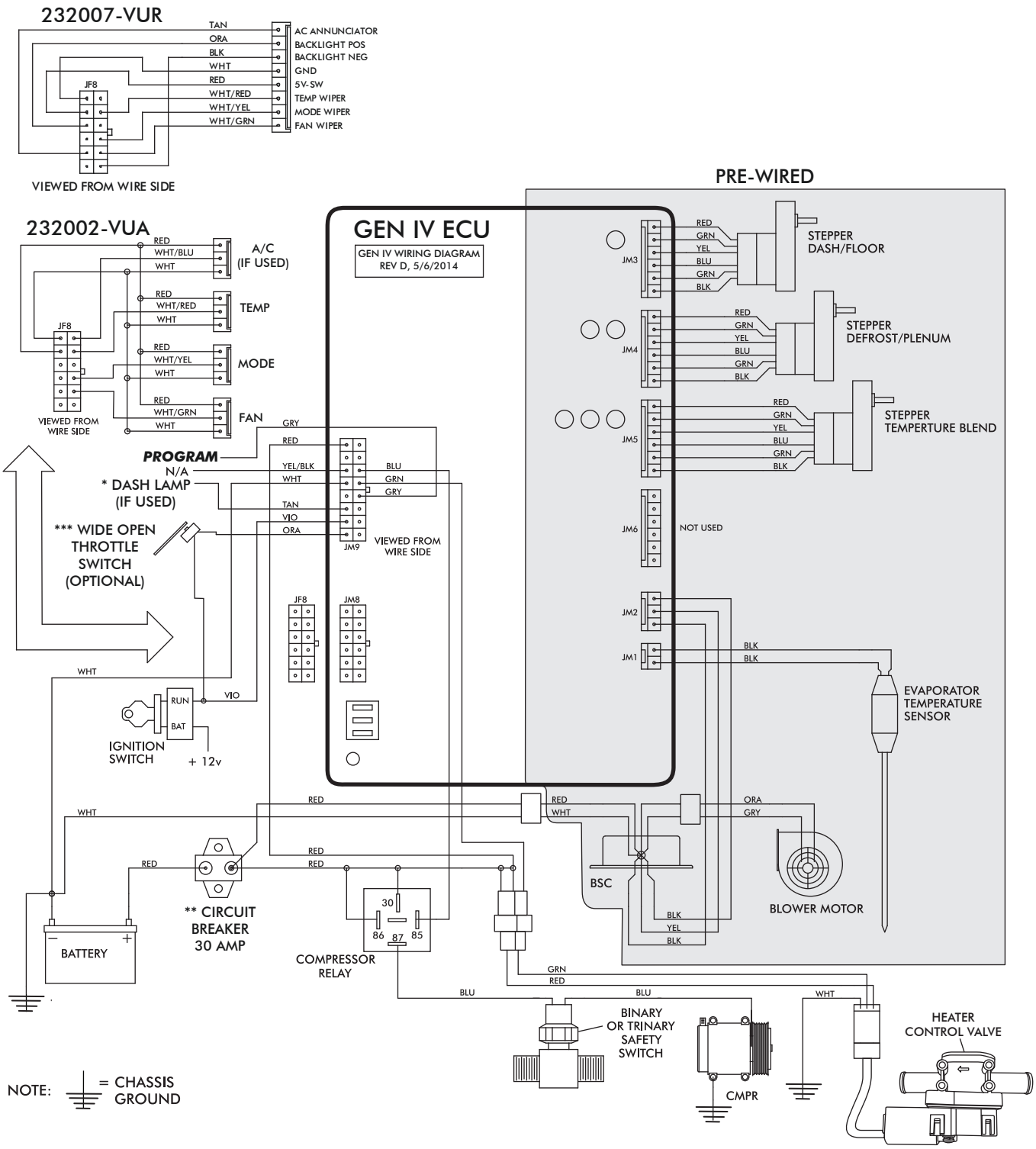
4. Move the control levers/knobs to the positions shown.

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



- **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.**

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).

Packing List:
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Control Panel Conversion Kit (475175)

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7.	6	49704-VUI	1/16” Nylon Flat Washer
8.	7	49705-VUI	1/8” Nylon Flat Washer
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10.	3	18231-VUB	#6 x 1/4” Pan Head Screw
11.	3	18122-VUB	#6 Flat Washer
12.	1	18258-VUB	10-32 x 3/4” Pan Head Screw
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16.	1	18113-PSR	8-32 x 3/4” Pan Head Screw
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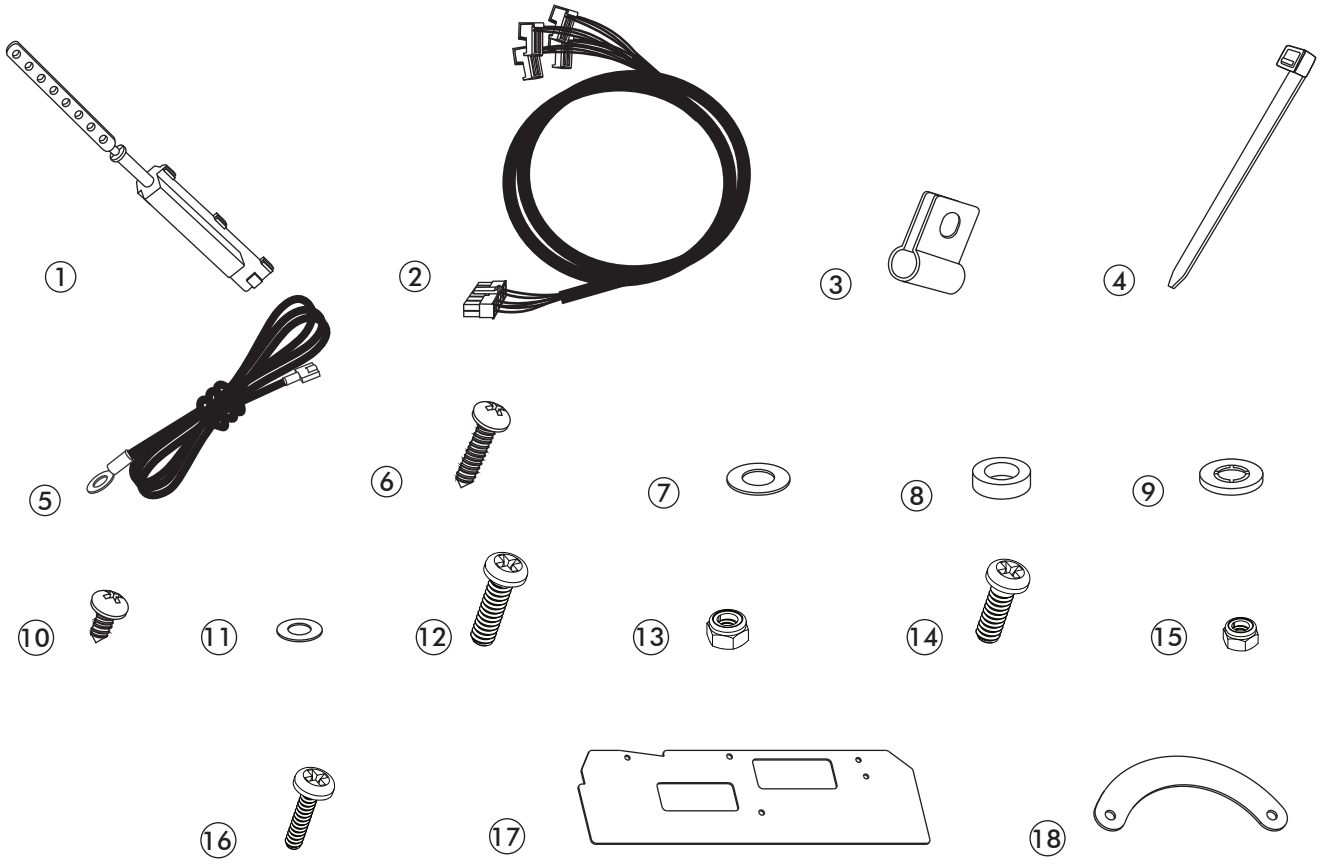
18.	1	647035	Vega HK500 Control Panel Lever

Checked By: _____

Packed By: _____

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