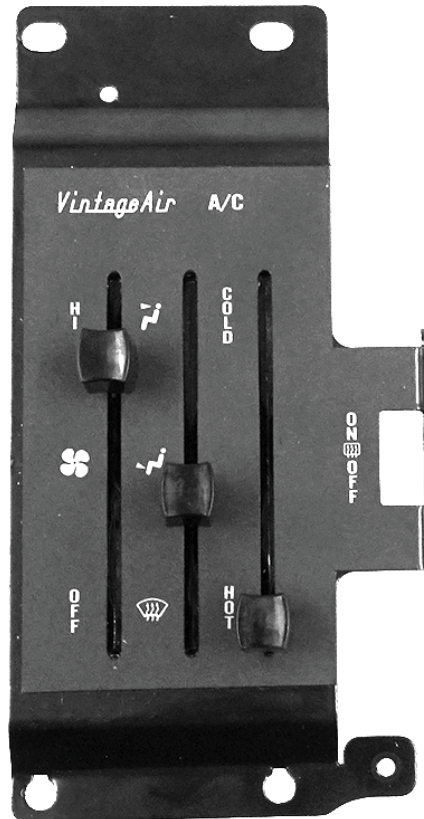




1979-86 Ford Mustang

Control Panel Kit
(473095)



18865 Goll St. San Antonio, TX 78266
Phone: 800-862-6658
Sales: sales@vintageair.com
Tech Support: tech@vintageair.com
www.vintageair.com



www.vintageair.com

Table of Contents

Cover.....	1
Table of Contents.....	2
Packing List/Parts Disclaimer.....	3
Removing OEM Control Panel.....	4
Control Panel Installation with Rear Defrost Switch.....	5
Control Panel Installation with Rear Defrost Switch (Cont.), Control Panel Installation without Rear Defrost Switch.....	6
Control Panel Installation without Rear Defrost Switch (Cont.).....	7
Control Harness Installation.....	8
Control Panel Calibration Procedure.....	9
Control Panel Calibration Procedure (Cont.).....	10
Gen IV Wiring Diagram.....	11
Gen 5 Wiring Diagram.....	12
Operation of Controls.....	13
Packing List.....	14

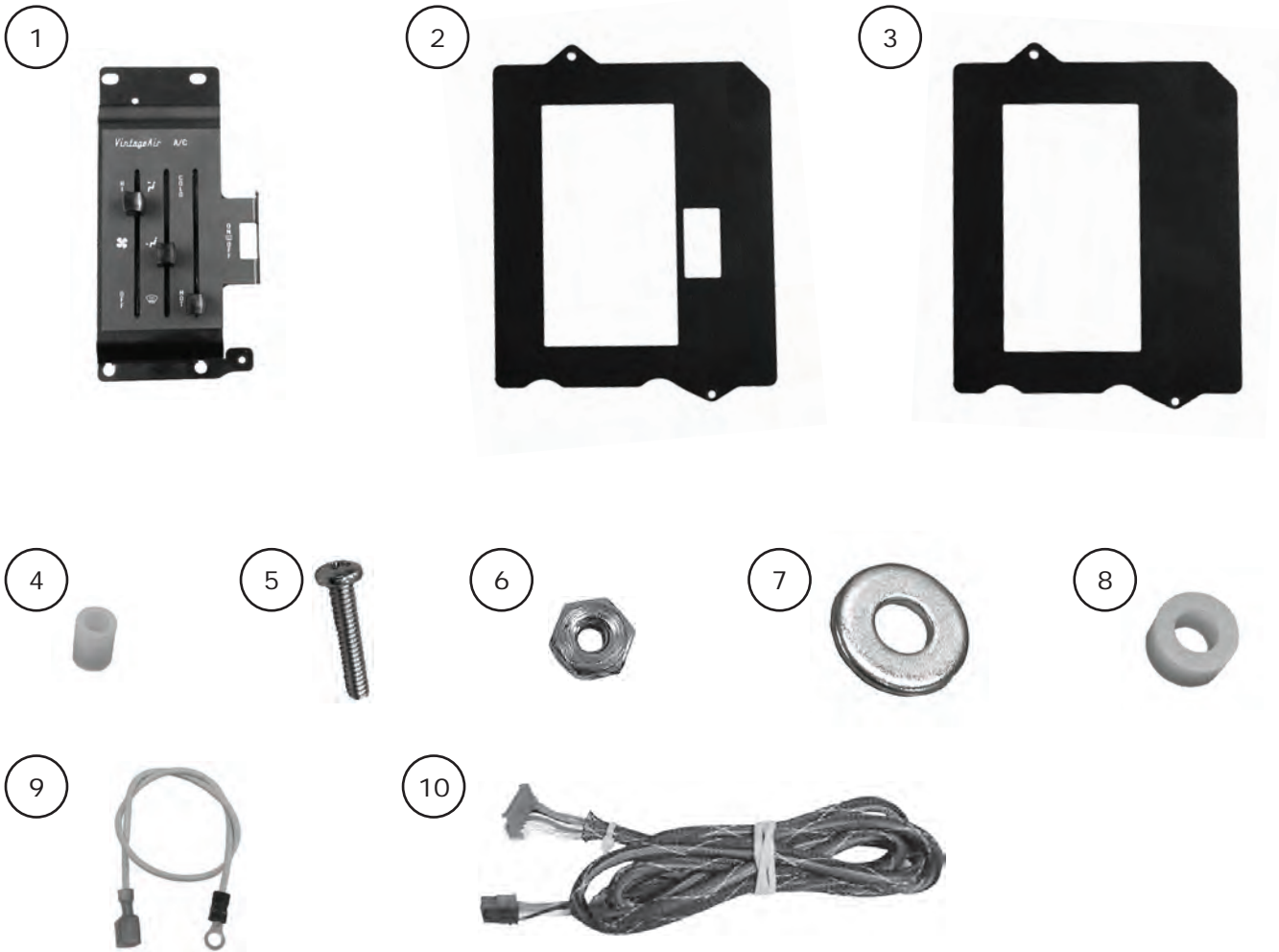


www.vintageair.com

Packing List: Control Panel Kit (473095)

No.	Qty.	Part No.	Description
1.	1	473094	Control Panel Assembly
2.	1	644300	Bezel, with Switch Opening, Front
3.	1	644315	Bezel, without Switch Opening, Front
4.	2	180394	Spacer, .188" OD x .115" ID x .250" Length
5.	4	18400-VUB	Screw, 4-40 x 5/8"
6.	2	18412-VUB	Locknut, #4-40
7.	2	18122-VUB	Washer, #6 Flat
8.	4	180384	Spacer, .375" OD x .188" ID x .188" Length
9.	1	231520	Ground Wire, 12" White, 16 GA with 1/4" Male Spade
10.	1	232007-VUR	Control Harness, Gen IV/Gen 5 Universal

**** 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.



www.vintageair.com

Removing OEM Control Panel

Perform the following:

1. Remove the cluster bezel trim from the top of the dash by removing (3) OEM screws (See Photo 1, below).
2. Remove the control panel from the dash by removing (4) OEM screws (See Photo 2, below).
3. Remove the rear defrost switch from the original control panel by removing the knob, then (2) OEM screws (retain screws) (See Photos 3 and 4, below).

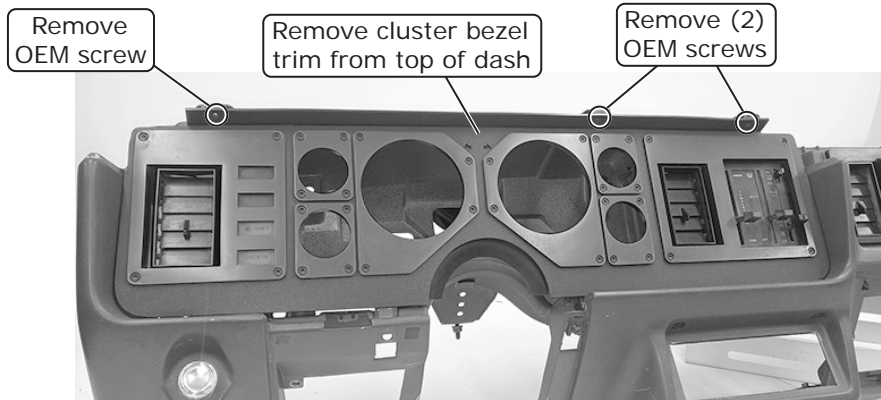


Photo 1

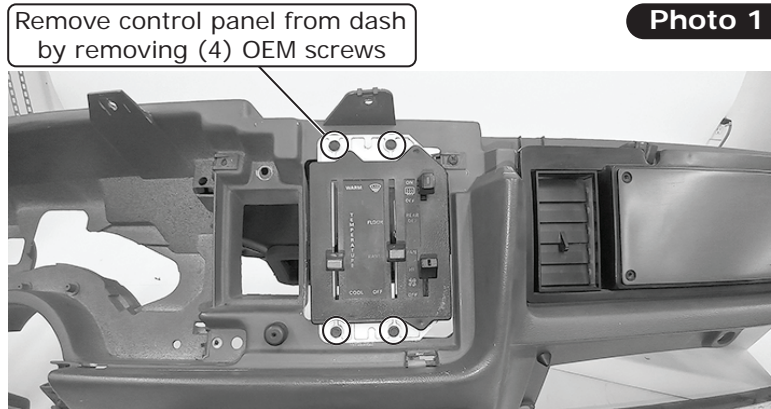


Photo 2

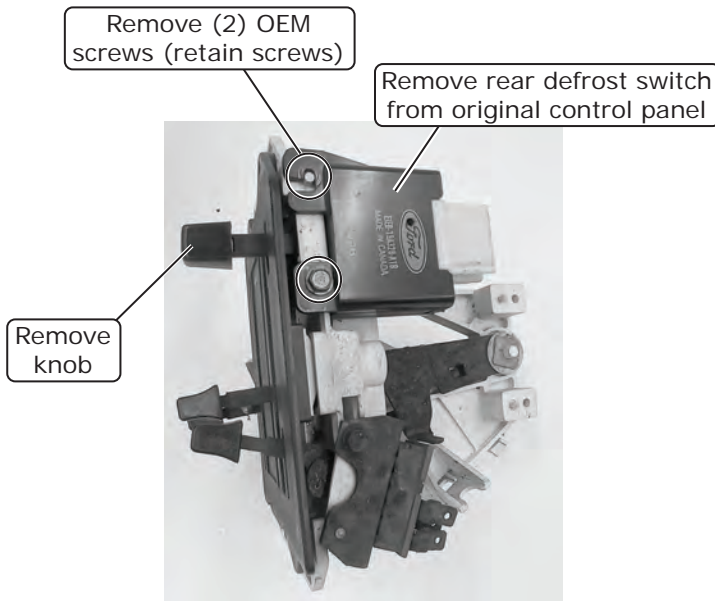
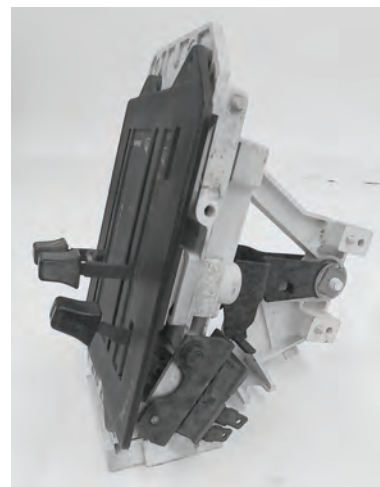


Photo 3



Rear Defrost Switch Removed

Photo 4



www.vintageair.com

Control Panel Installation with Rear Defrost Switch

1. Install the rear defrost switch onto the Vintage Air control panel using (2) #6 flat washers and (2) 4-40 x 5/8" screws provided (See Photo 1, below).
2. After the switch is in place, install the front bezel with the switch opening onto the control panel using (2) .188" OD x .115" ID x .250" length spacers, (2) 4-40 x 5/8" screws, and (2) #4-40 locknuts provided (See Photos 2 and 3, below).
3. Install the new control panel onto the dash using the (4) OEM screws as shown in Photo 5, below. **NOTE: In some cases, the control panel will need spacers to eliminate the gap between the front of the panel and the back of the cluster bezel trim. This kit includes (4) .375" OD x .188" ID x .188" length spacers.**
4. To install the spacers, secure the bottom of the control panel using the (2) OEM screws and (2) .375" OD x .188" ID x .188" length spacers. Then, install (2) OEM screws and .188" length spacers on the top of the control panel (See Photo 4, below).

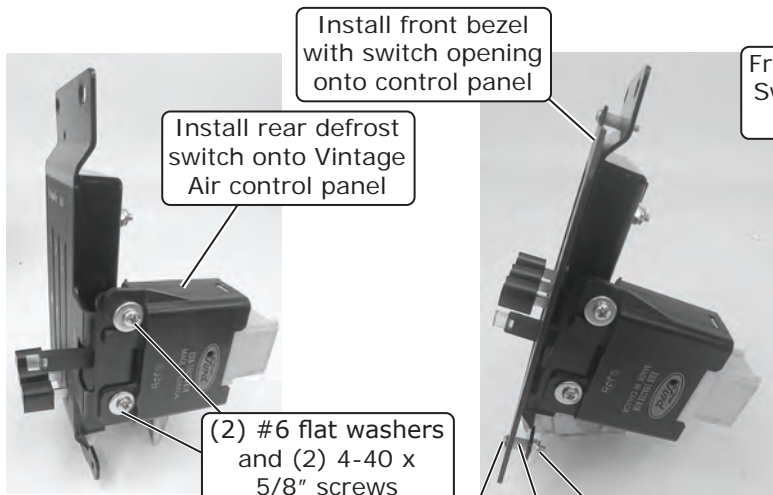


Photo 1



Photo 2

4-40 x 5/8" Screw

#4-40 Locknut

Photo 3

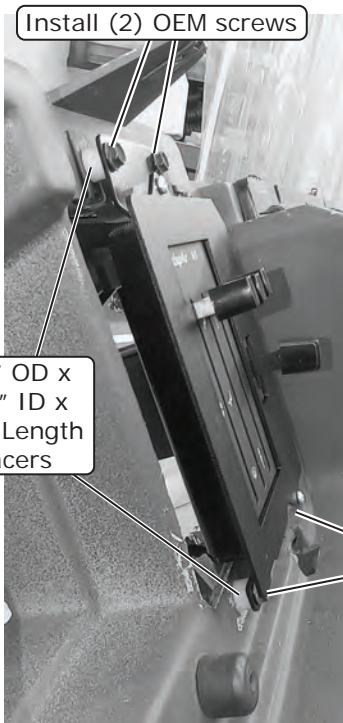


Photo 4

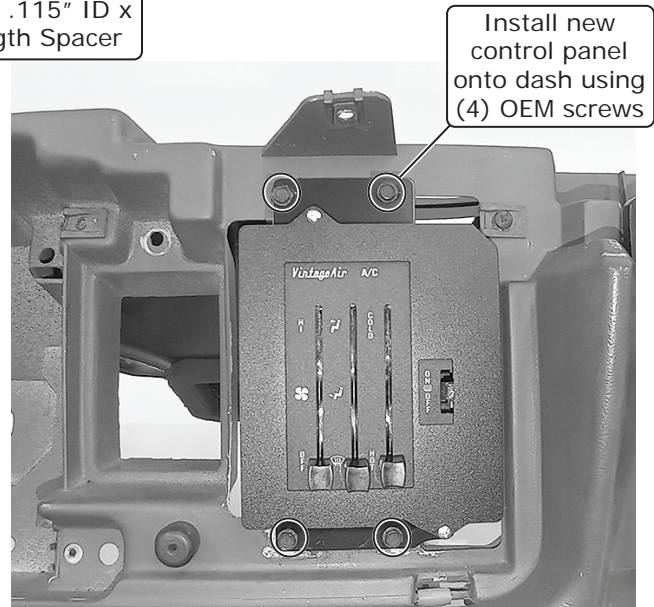


Photo 5



www.vintageair.com

Control Panel Installation with Rear Defrost Switch (Cont.)

5. Reinstall the cluster bezel trim on top of the dash (See Photo 6, below).

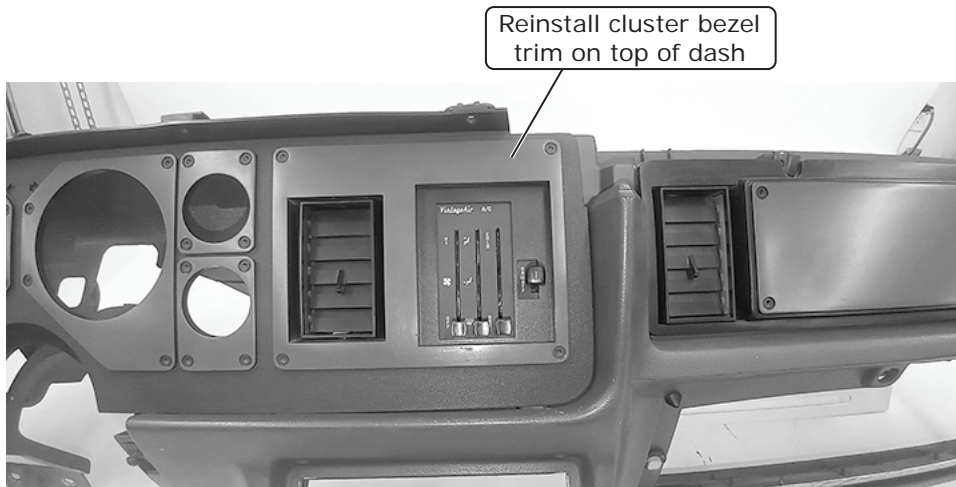
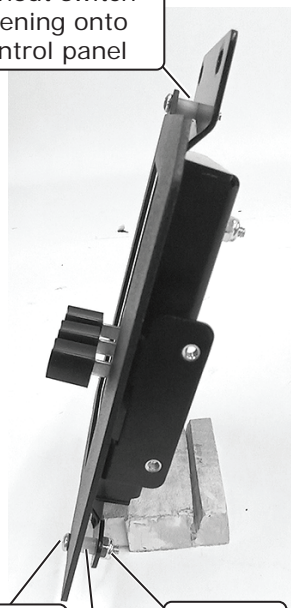


Photo 6

Control Panel Installation without Rear Defrost Switch

1. Install the front bezel without switch opening onto the Vintage Air control panel using (2) .188" OD x .115" ID x .250" length spacers, (2) 4-40 x 5/8" screws and (2) #4-40 locknuts (See Photos 1 and 2, below).

Install front bezel without switch opening onto control panel



4-40 x 5/8" Screw

#4-40 Locknut

.188" OD x .115" ID x .250" Length Spacer

Photo 1

Front Bezel without Switch Opening 644315



Photo 2



www.vintageair.com

Control Panel Installation without Rear Defrost Switch (Cont.)

2. Install the new control panel onto the dash using (4) OEM screws as shown in Photo 4, below. **NOTE: In some cases, the control panel will need spacers to eliminate the gap between the front of the panel and the back of the cluster bezel trim. This kit includes (4) .375" OD x .188" ID x .188" length spacers to be installed between the back of the control panel and the dash.**
3. To install the spacers, secure the bottom of the control panel using the (2) OEM screws and (2) .375" OD x .188" ID x .188" length spacers. Then, install the remaining (2) OEM screws and (2) .375" OD x .188" ID x .188" length spacers on the top of the control panel (See Photo 3, below).
4. Reinstall the cluster bezel trim on top of the dash (See Photo 5, below).

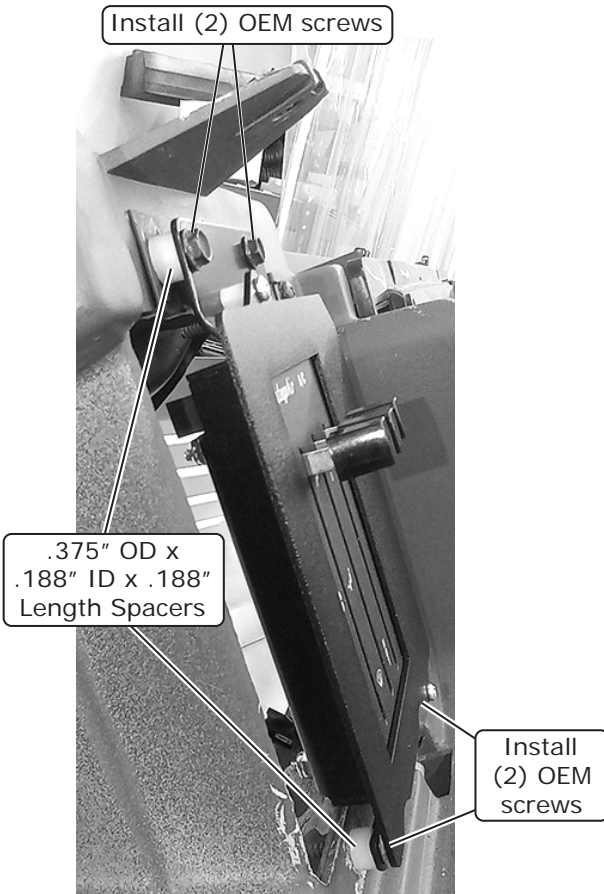


Photo 3

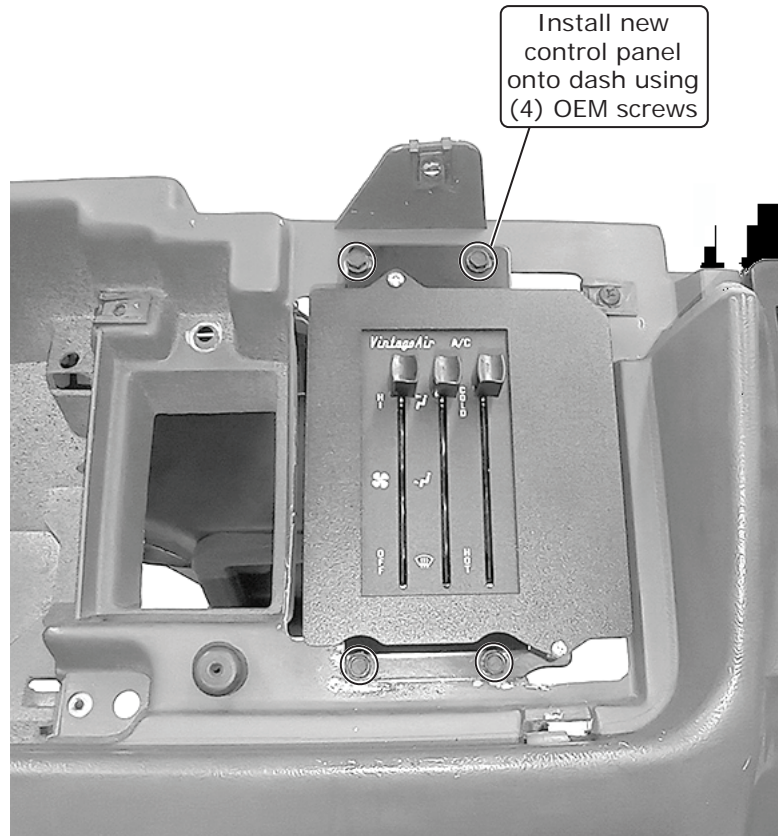


Photo 4

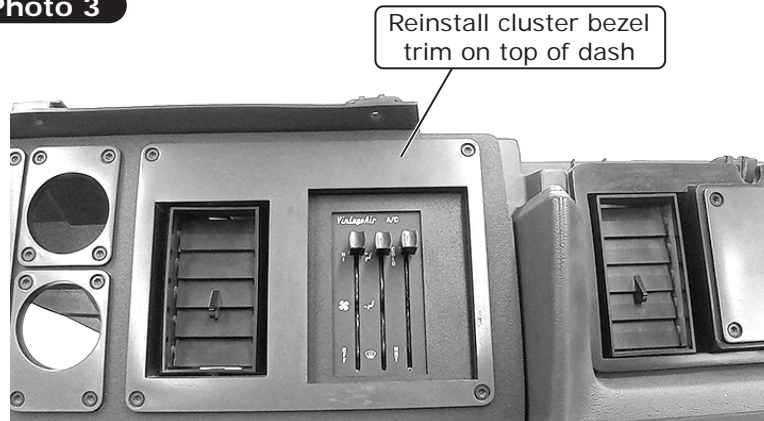


Photo 5



www.vintageair.com

Control Harness Installation

1. After the control panel assembly is installed into the dash, plug the control harness into the port on the back (See Photo 1, below).
2. Plug the other end of the control harness into the ECU (See Photo 2, below). **NOTE: The ECU module is located on the evaporator module. When using a Vintage Air supplied control panel, connect the TAN 20 AWG wire from the Gen IV evaporator wiring harness (232010) or the Gen 5 evaporator wiring harness (231505) to the factory dash lights to enable panel backlighting.**
3. After the control panel is installed, it will require calibration. Please continue to Pages 9 and 10 for the calibration procedure.



Photo 1

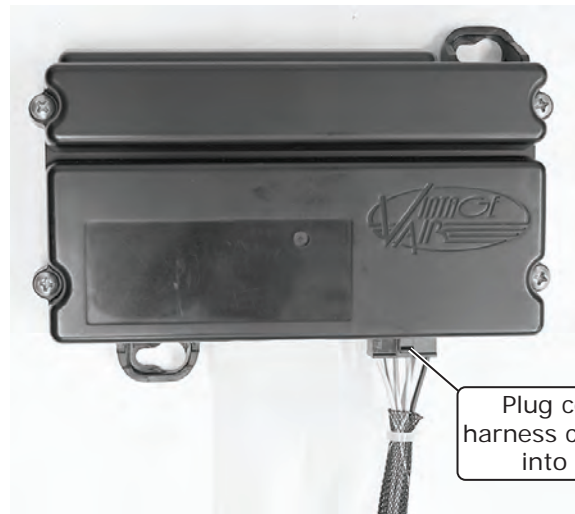


Photo 2

NOTE: When using a Vintage Air supplied control panel, connect the TAN 20 AWG wire from the Gen IV evaporator wiring harness (232010) or the Gen 5 evaporator wiring harness (231505) to the factory dash lights to enable panel backlighting.



www.vintageair.com

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:

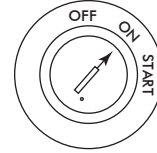
In preparation for calibration, you will need to attach the supplied white ground jumper wire (PN 231520) to a suitable chassis ground. This jumper wire must be easily connected to the gray programming wire located in the main Gen 5 wiring harness, see the Gen 5 wiring diagram and instructions for more 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.



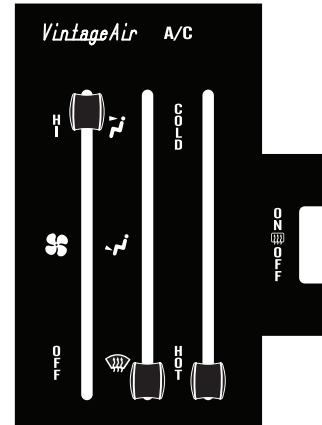
www.vintageair.com

Control Panel Calibration Procedure (Cont.)

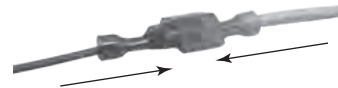
1. Turn on the ignition switch (Do not start the engine).



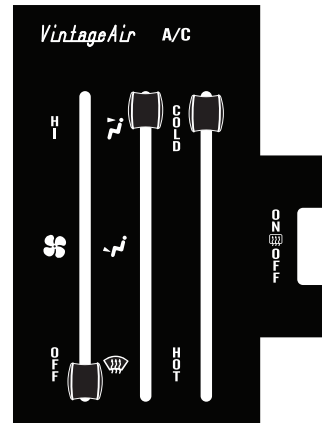
2. Move the control levers/knobs to the positions shown.



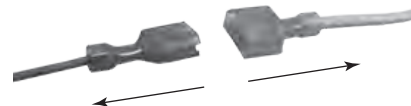
3. Connect the white jumper wire to the gray program wire. Wait approximately 5 seconds for the blower speed to change if using a Gen IV system, if using a Gen 5 system wait for the blower to default to medium speed.



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.



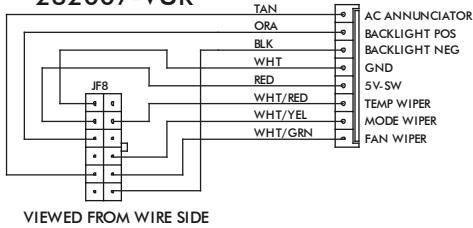
6. Confirm proper operation of controls. Repeat procedure if necessary. When finished, tape over program wire connector with electrical tape to prevent accidental contact with chassis ground.



www.vintageair.com

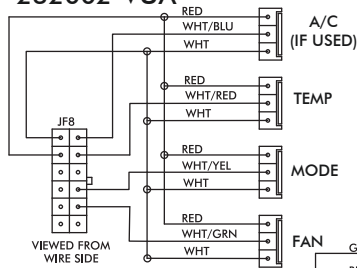
Gen IV Wiring Diagram

232007-VUR



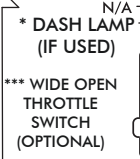
VIEWED FROM WIRE SIDE

232002-VUA

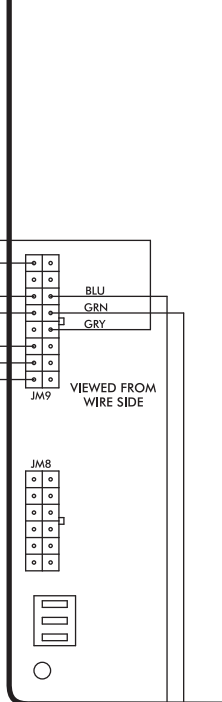


VIEWED FROM WIRE SIDE

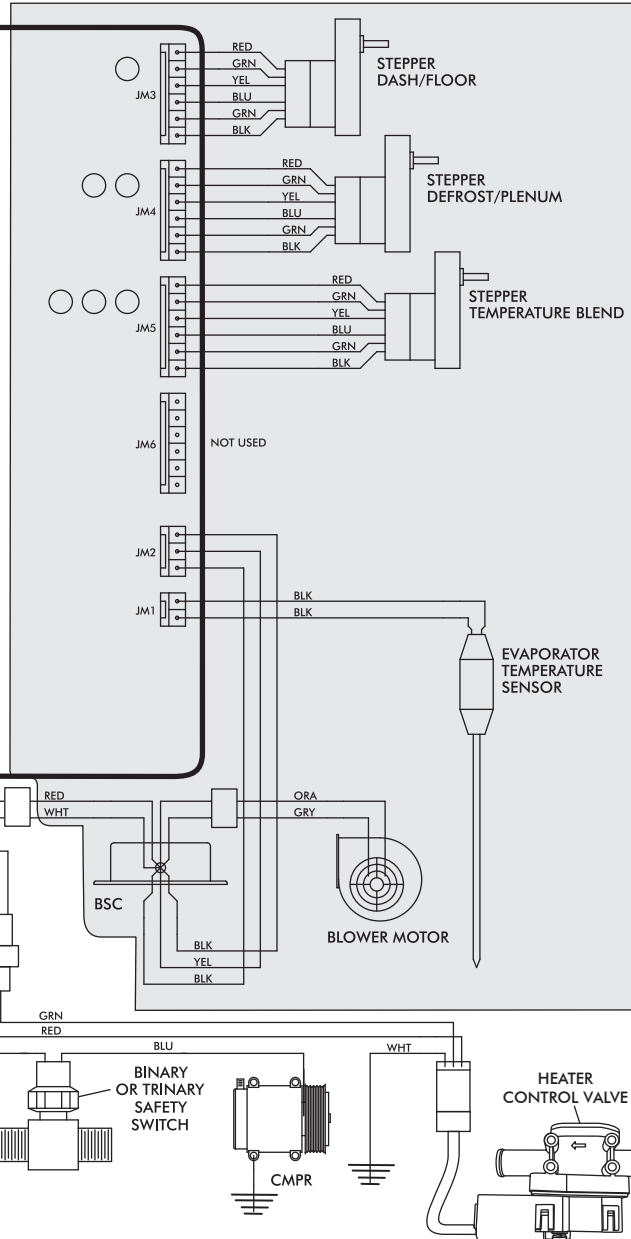
PROGRAM



GEN IV ECU



PRE-WIRED



NOTE: = CHASSIS GROUND

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

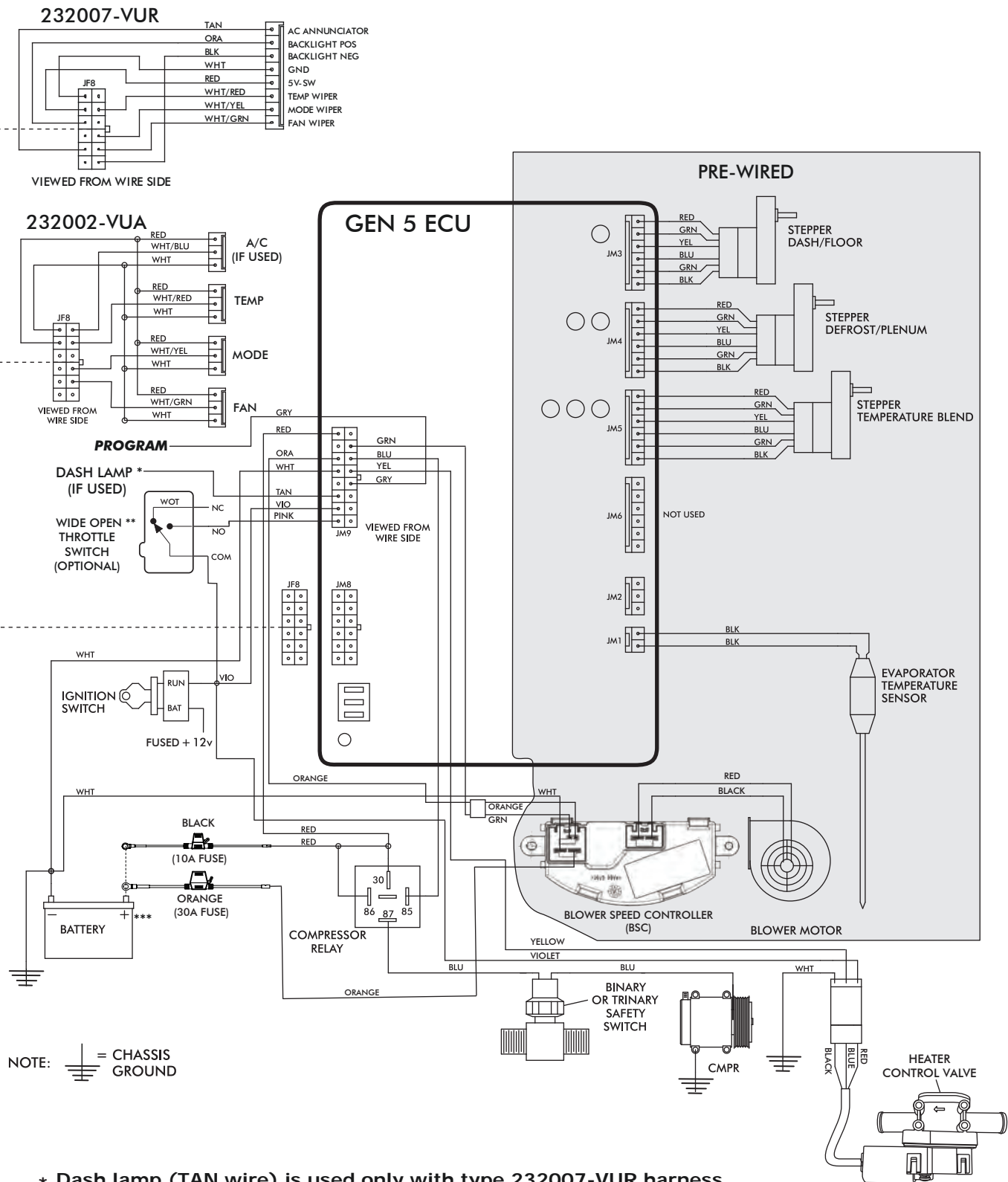
** Warning: Always mount circuit breaker as close to the battery as possible. (NOTE: Wire between battery and circuit breaker is unprotected and should be carefully routed to avoid a short circuit).

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



www.vintageair.com

Gen 5 Wiring Diagram



NOTE: = CHASSIS GROUND

- * 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.



www.vintageair.com

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 9 and 10 for calibration procedure.**

Blower Speed

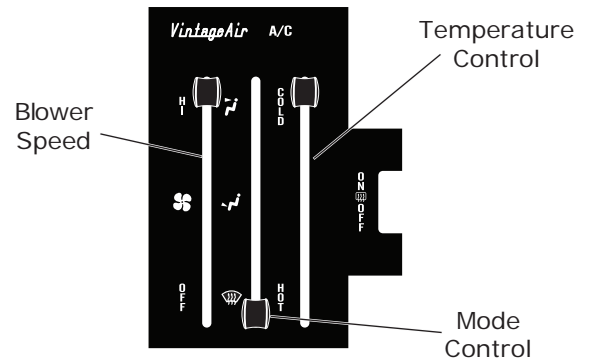
This lever/knob controls blower speed, from OFF to HI.

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

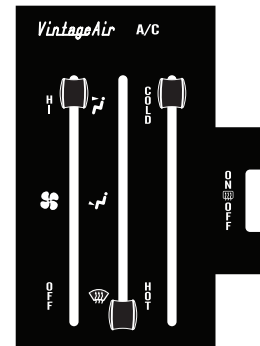
Adjust to desired speed.

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

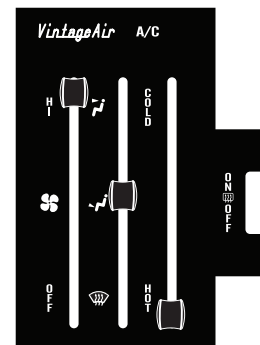
Adjust to desired speed.

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

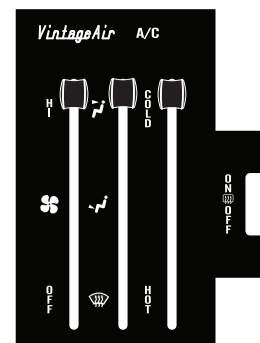
Adjust to desired speed.

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).





www.vintageair.com

Packing List: Control Panel Kit (473095)

No.	Qty.	Part No.	Description
1.	1	473094	Control Panel Assembly
2.	1	644300	Bezel, with Switch Opening, Front
3.	1	644315	Bezel, without Switch Opening, Front
4.	2	180394	Spacer, .188" OD x .115" ID x .250" Length
5.	4	18400-VUB	Screw, 4-40 x 5/8"
6.	2	18412-VUB	Locknut, #4-40
7.	2	18122-VUB	Washer, #6 Flat
8.	4	180384	Spacer, .375" OD x .188" ID x .188" Length
9.	1	231520	Ground Wire, 12" White, 16 GA with 1/4" Male Spade
10.	1	232007-VUR	Control Harness, Gen IV/Gen 5 Universal

Checked By: _____
Packed By: _____
Date: _____

1



2



3



4



5



6



7



8



9



10



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