# 1987-95 Jeep YJ
## Control Panel Kit
## (474136)



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| No. | Qty. | Part No. | Description |
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| **1.** | 1 | 231520 | Ground Wire, 12" White, 16 GA with 1/4" Male Spade |
| **2.** | 1 | 232007-VUR | Control Harness, Gen IV/Gen 5 Universal |
| **3.** | 1 | 474135 | Control Panel Assembly |

**\*\* 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.**

# OEM Control Panel Removal

**Perform the following:**

1. Remove the center trim panel by removing (6) mounting screws (See Photo 1, below).

2. Remove the (4) control panel mounting screws, then pull the panel through the dash. Disconnect the lights, vacuum and electrical connections (See Photos 2 and 3, below).

3. Remove the control panel.

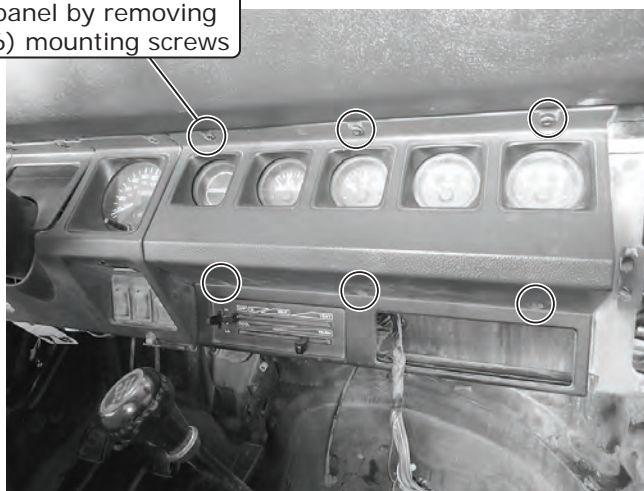Remove center trim panel by removing (6) mounting screws

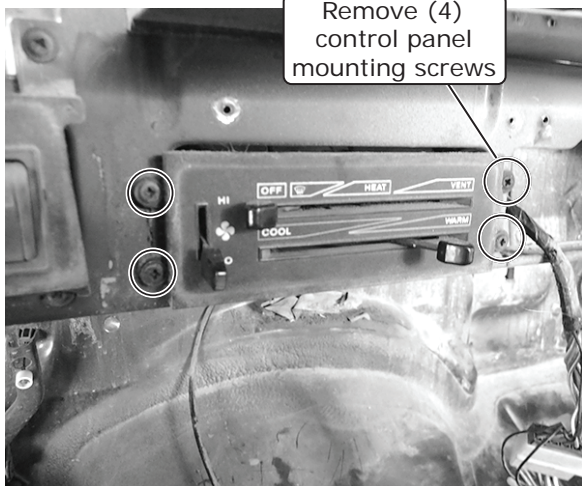Photo 1

Remove (4) control panel mounting screws

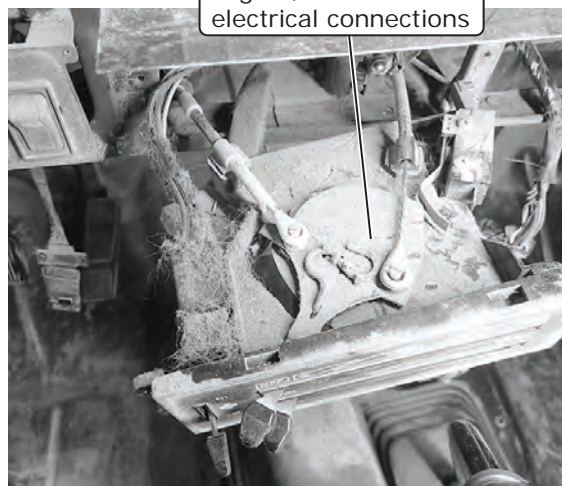Pull panel through dash, then disconnect lights, vacuum and electrical connections

Photo 2

Photo 3

**4**

# Control Panel Installation

1. Connect the universal control harness into the control panel (See Photo 1, below), then route the other end of the harness towards the ECU located on the sub case. Plug the harness into the ECU (See Photo 2, below).

2. Secure the control panel to the dash using the OEM screws or the (4) supplied #8 x 1/2" wide head screws (See Photo 3, below).

3. Reinstall the center trim panel at this time.

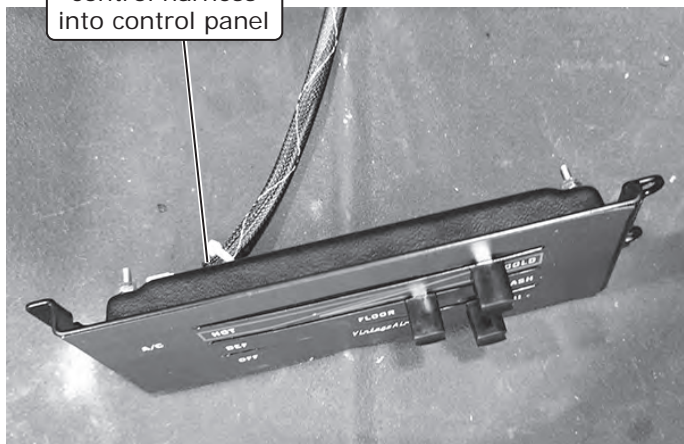Connect universal control harness into control panel
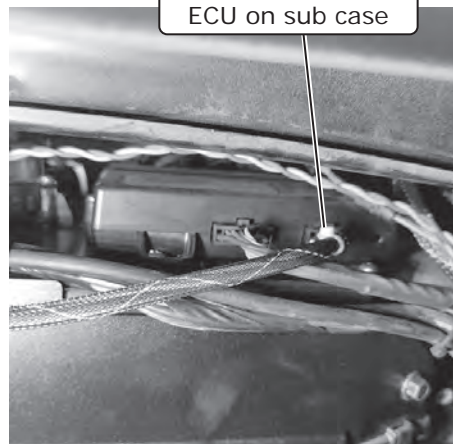
Plug universal control harness into ECU on sub case



**Photo 1**



**Photo 2**

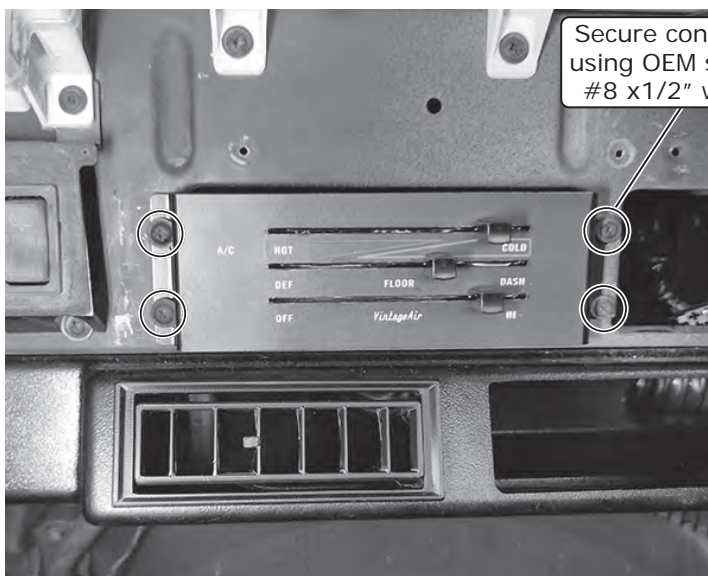Secure control panel to dash using OEM screws or supplied #8 x1/2" wide head screws



**Photo 3**

# 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.
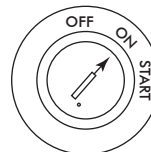
## Gen 5 Systems:

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.
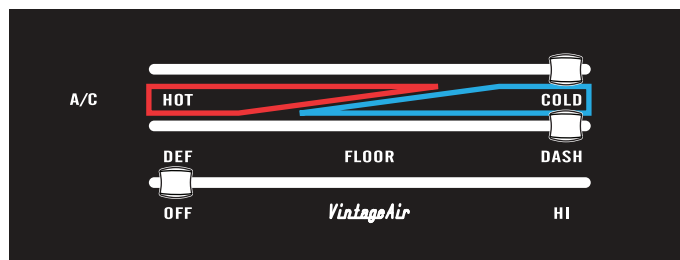
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**1.** Turn on the ignition switch (Do not start the engine).
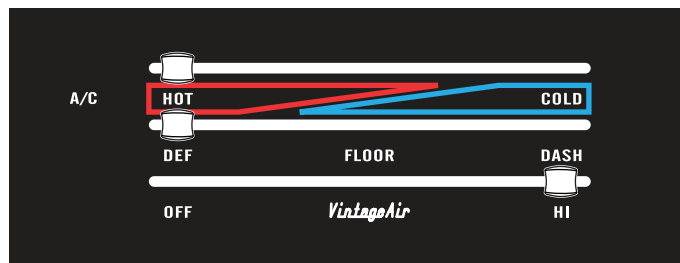
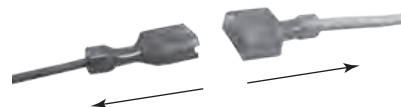**2.** Move the control levers/knobs to the positions shown.

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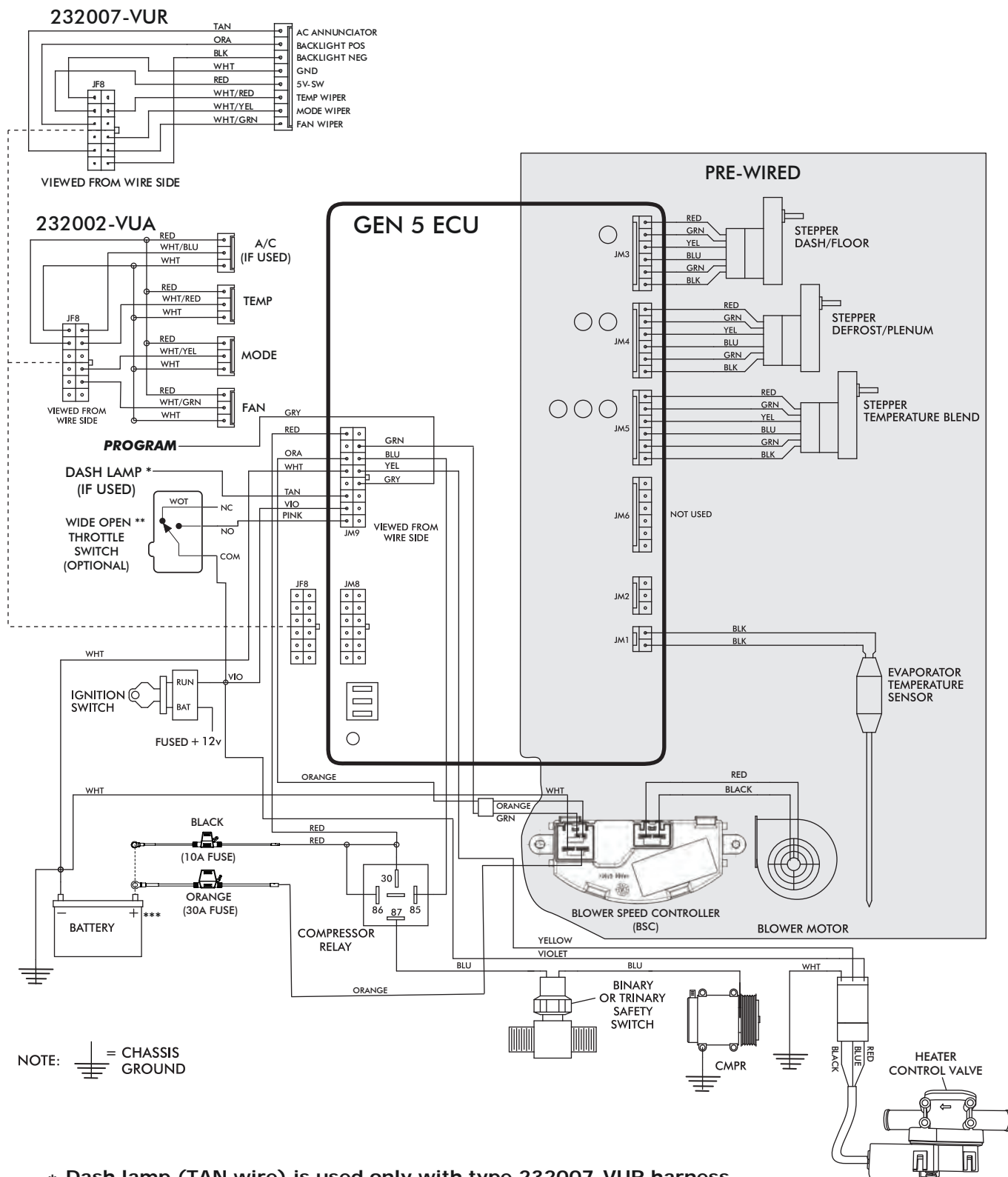
**6.** Confirm proper operation of controls. Repeat procedure if necessary. When finished, tape over program wire connector with electrical tape to prevent accidental contact with chassis ground.

* 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.

# *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 6 and 7 for calibration procedure.**
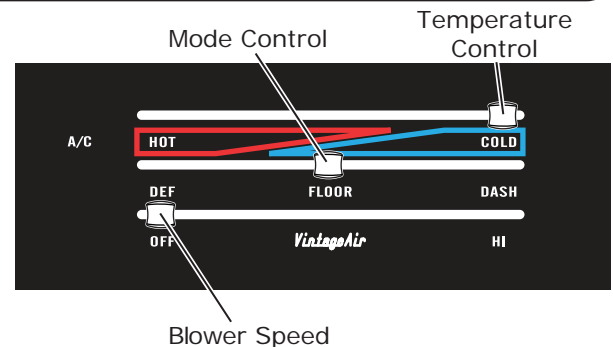
### Blower Speed
This lever/knob controls blower speed, from OFF to HI.

### 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.

Mode Control
Temperature Control
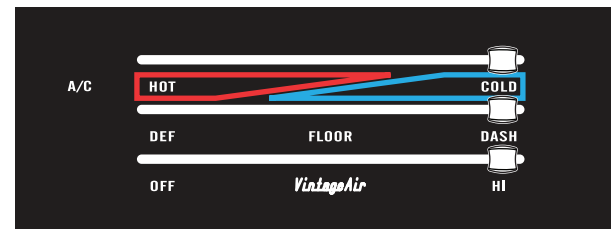Blower Speed

## *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).
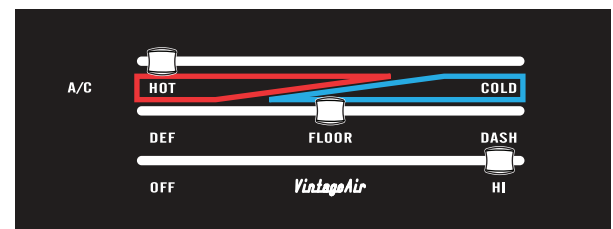
## *Heat Operation*

### 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).

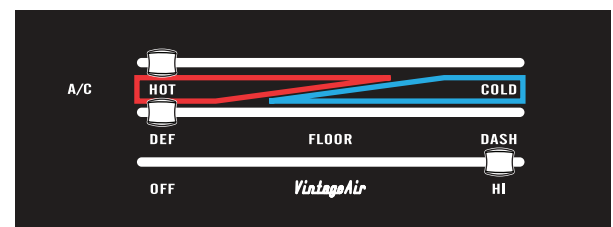## *Defrost/De-fog Operation*

### 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).
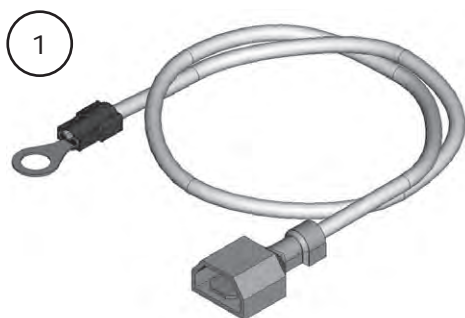
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Checked By: _____
Packed By: _____
Date: _____

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