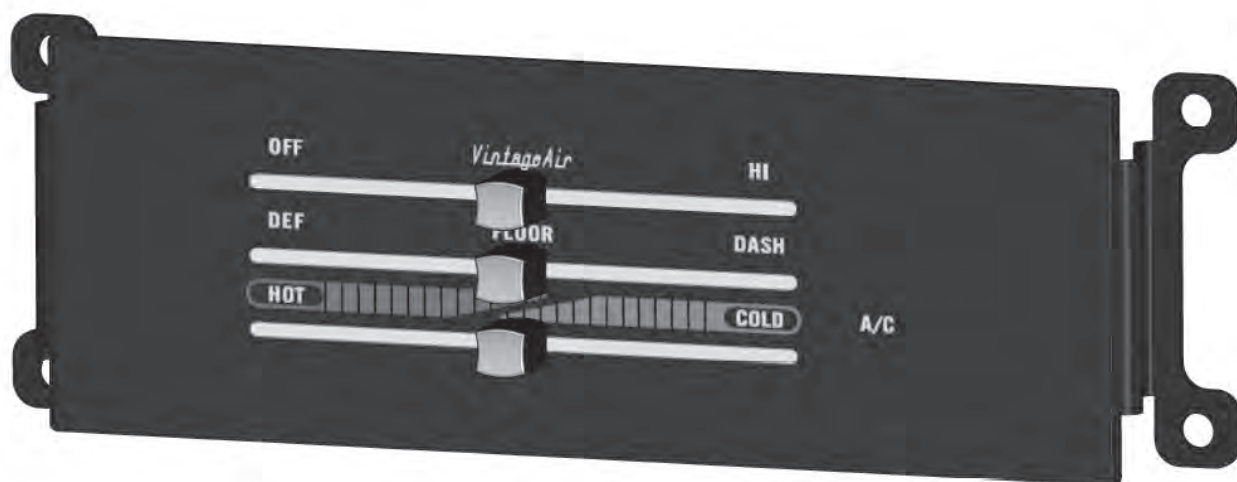




1987-91 Ford F-Series / Bronco

Control Panel Kit
(473098)



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



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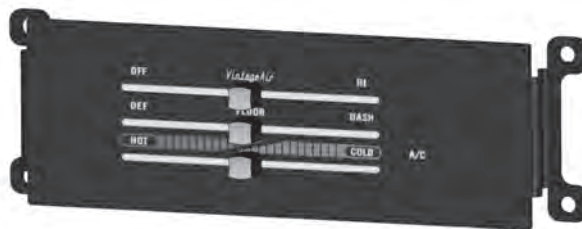
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Packing List: Control Panel Kit (473098)

No.	Qty.	Part No.	Description
1.	1	473099	Control Panel Assembly
2.	1	232007-VUR	Control Harness, Gen IV/Gen 5 Universal
3.	1	231520	Ground Wire, 12" White, 16 GA

**** 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.**

1



2



3



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



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OEM Control Panel Removal

Perform the following:

1. Pry the center bezel away carefully from the dash (See Photos 1 and 2, below). **NOTE: There are (5) spring clips attaching the trim bezel to the dash.**
2. Remove the (4) OEM screws (retain) as shown in Photo 2, below.
3. Pull the panel away from the dash, and disconnect the vacuum lines and cables.
4. Disconnect the electrical connections from the OEM panel (See Photo 3, below).
5. Remove the control panel from the vehicle.

Pry center
bezel away
from dash



Photo 1

Spring clips
locations

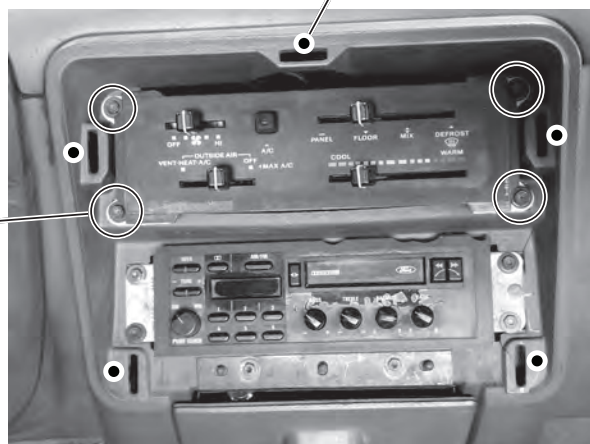


Photo 2

Remove (4)
OEM screws
(retain)

Vacuum

Cables

Disconnect
electrical
connections
from OEM
panel

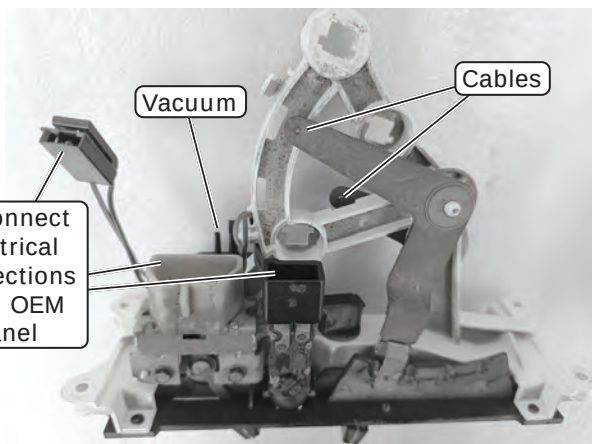


Photo 3



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Control Panel Installation

1. Identify and label the light blue and red striped wire on the OEM dash wiring harness (See Photo 1, below).
2. Connect the light blue and red striped wire to the tan backlighting wire on the Vintage Air wiring harness using the supplied shrink tubing and the butt splice connector, included in the evaporator installation kit, to enable the factory dash illumination control (See Photo 2, below).

Identify and label
light blue and red
striped wire on OEM
dash wiring harness

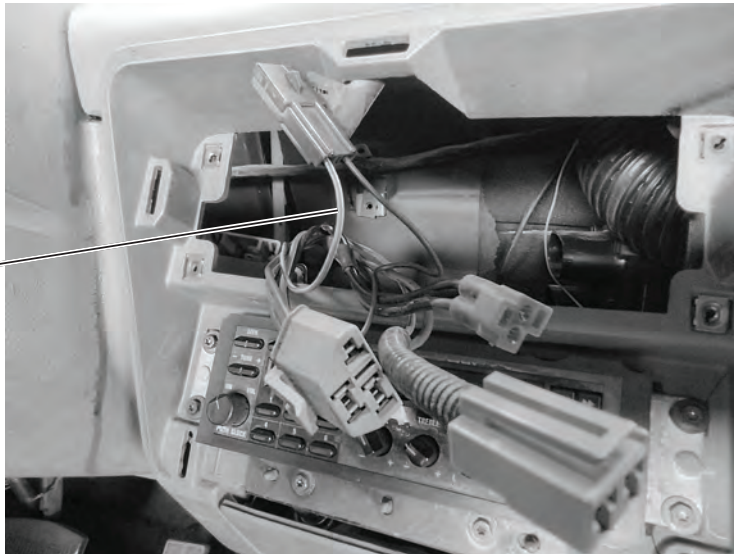
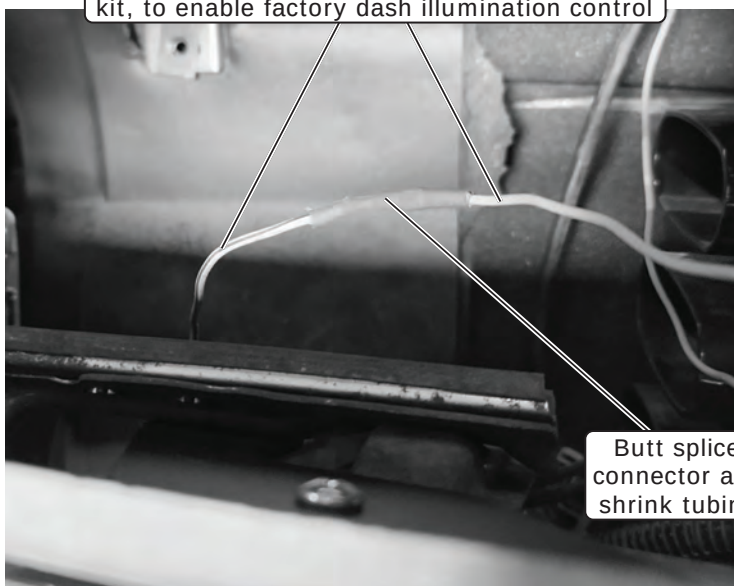


Photo 1

Connect light blue and red striped wire to tan
backlighting wire on Vintage Air wiring harness
using supplied shrink tubing and butt splice
connector, included in evaporator installation
kit, to enable factory dash illumination control



Butt splice
connector and
shrink tubing

Photo 2



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Control Panel Installation

3. Install the control harness onto the control panel as shown in Photo 3, below.
4. Route the control harness through the control panel opening, toward the ECU (See Photo 3, below).
5. Install the control panel into the opening, then secure it using the (4) OEM screws as shown in Photo 4, below.
6. Install the trim bezel as shown in Photo 5, below.
7. Plug the harness into the ECU.
8. Follow the calibration procedures on Page 8.



Photo 3

Secure control panel with (4) OEM screws

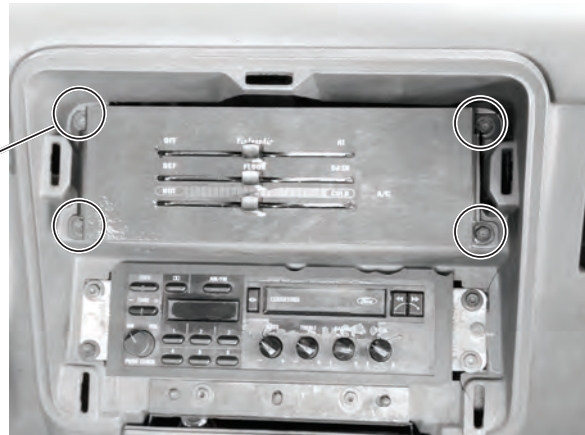


Photo 4

Install trim bezel



Photo 5



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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:

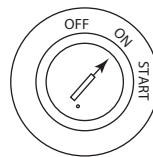
In preparation for calibration, you will need to attach the supplied white ground jumper wire (PN 231520) to a suitable chassis ground. This jumper wire must be easily connected to the gray programming wire located in the main Gen 5 wiring harness, see the Gen 5 wiring diagram and instructions for more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



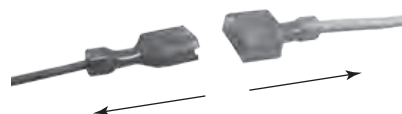
3. Connect the white jumper wire to the gray program wire. Wait approximately 5 seconds for the blower speed to change if using a Gen IV system, if using a Gen 5 system wait for the blower to default to medium speed.



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.

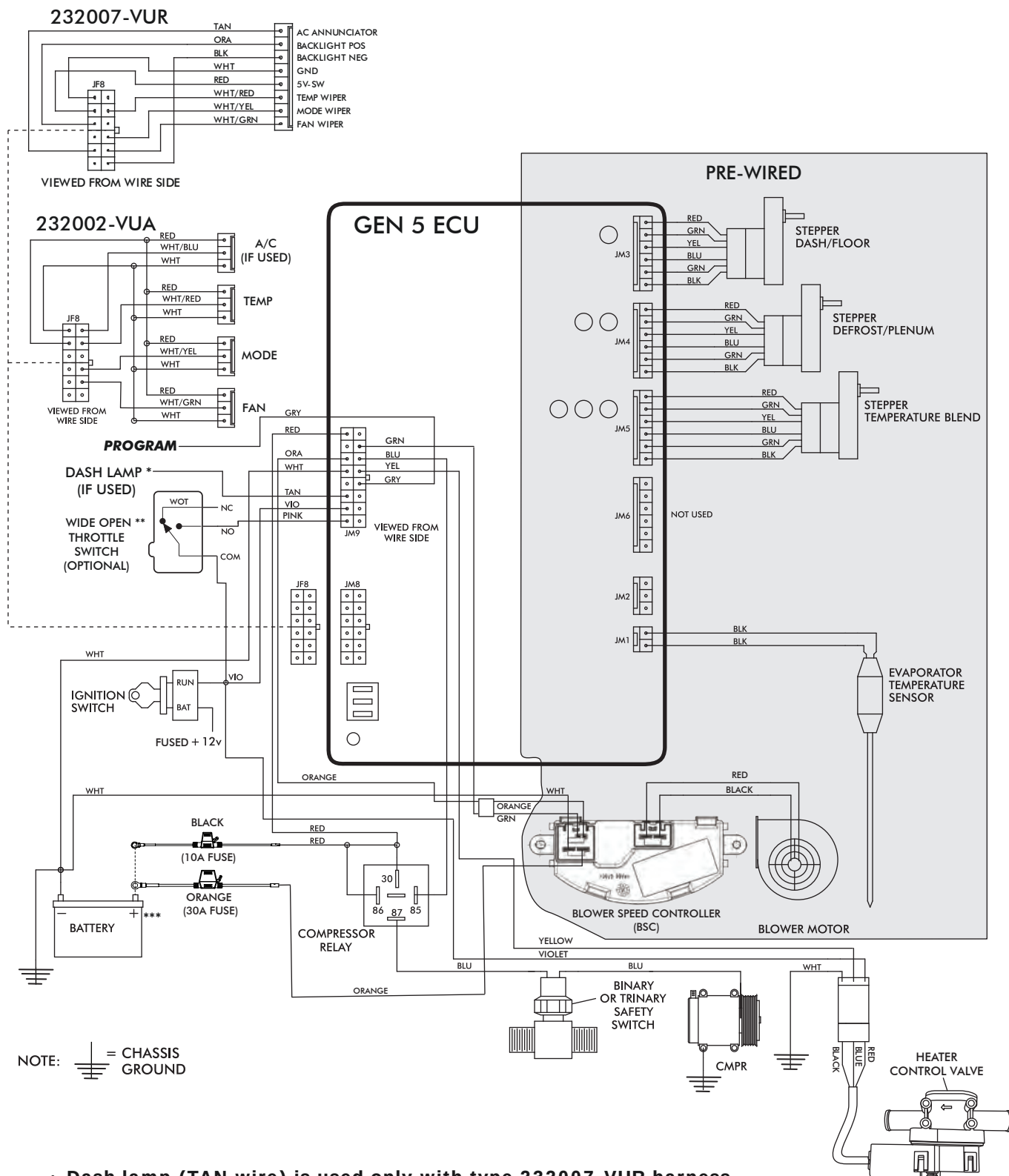


6. Confirm proper operation of controls. Repeat procedure if necessary. When finished, tape over program wire connector with electrical tape to prevent accidental contact with chassis ground.



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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 7 and 8 for calibration procedure.**

Blower Speed

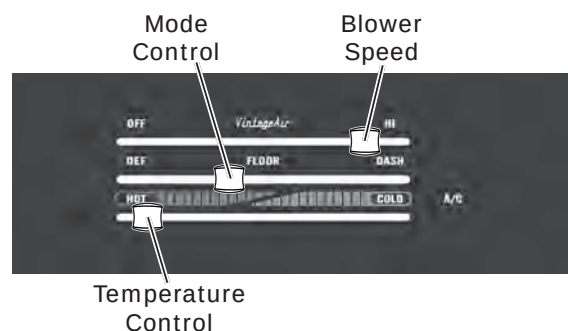
This lever/knob controls blower speed, from OFF to HI.

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).





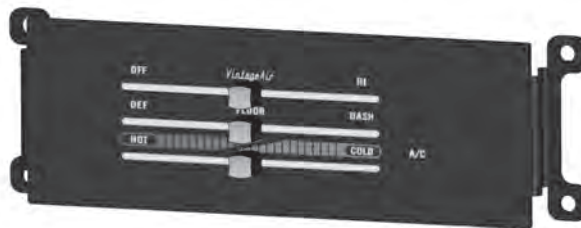
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3.	1	231520	Ground Wire, 12" White, 16 GA

Checked By: _____
Packed By: _____
Date: _____

1



2



3



**NOTE: Images may not depict actual parts and quantities.
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