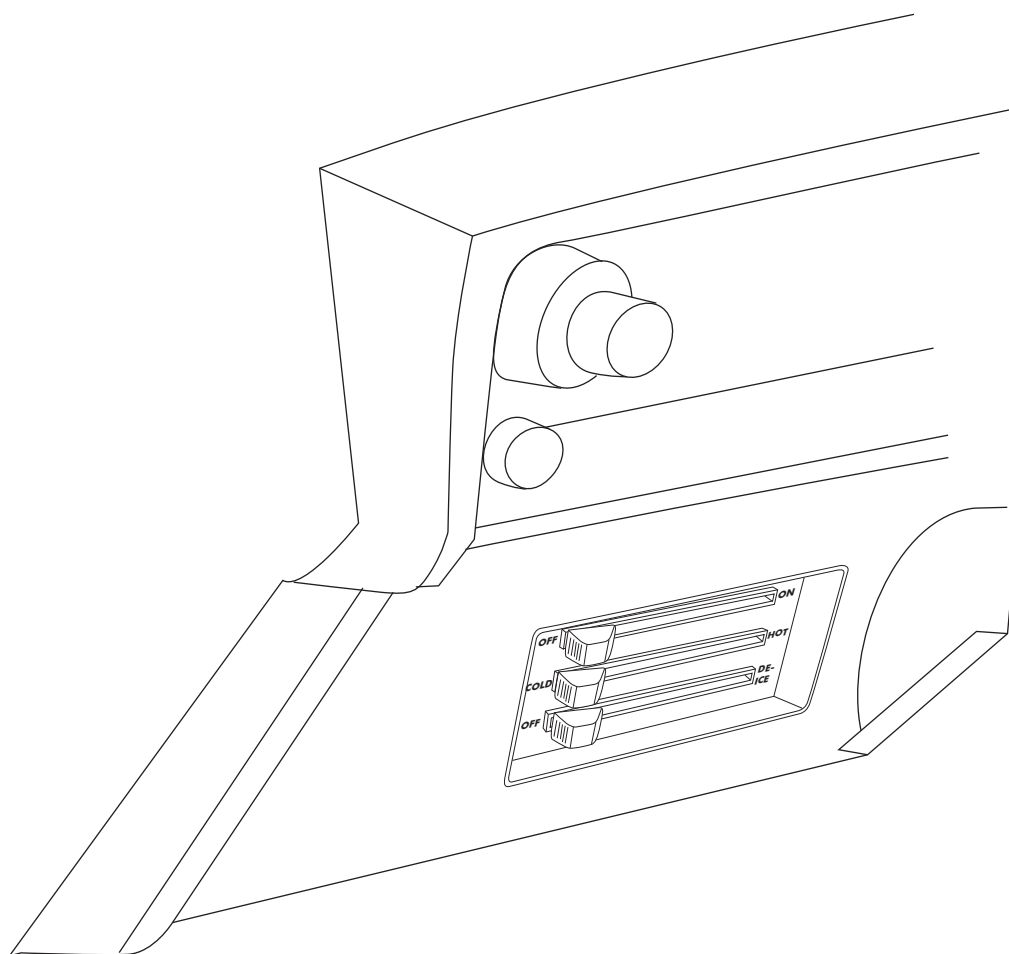




an ISO 9001: 2008 Registered Company

1968 NOVA

WITHOUT AC CONTROL PANEL
CONVERSION KIT
474166



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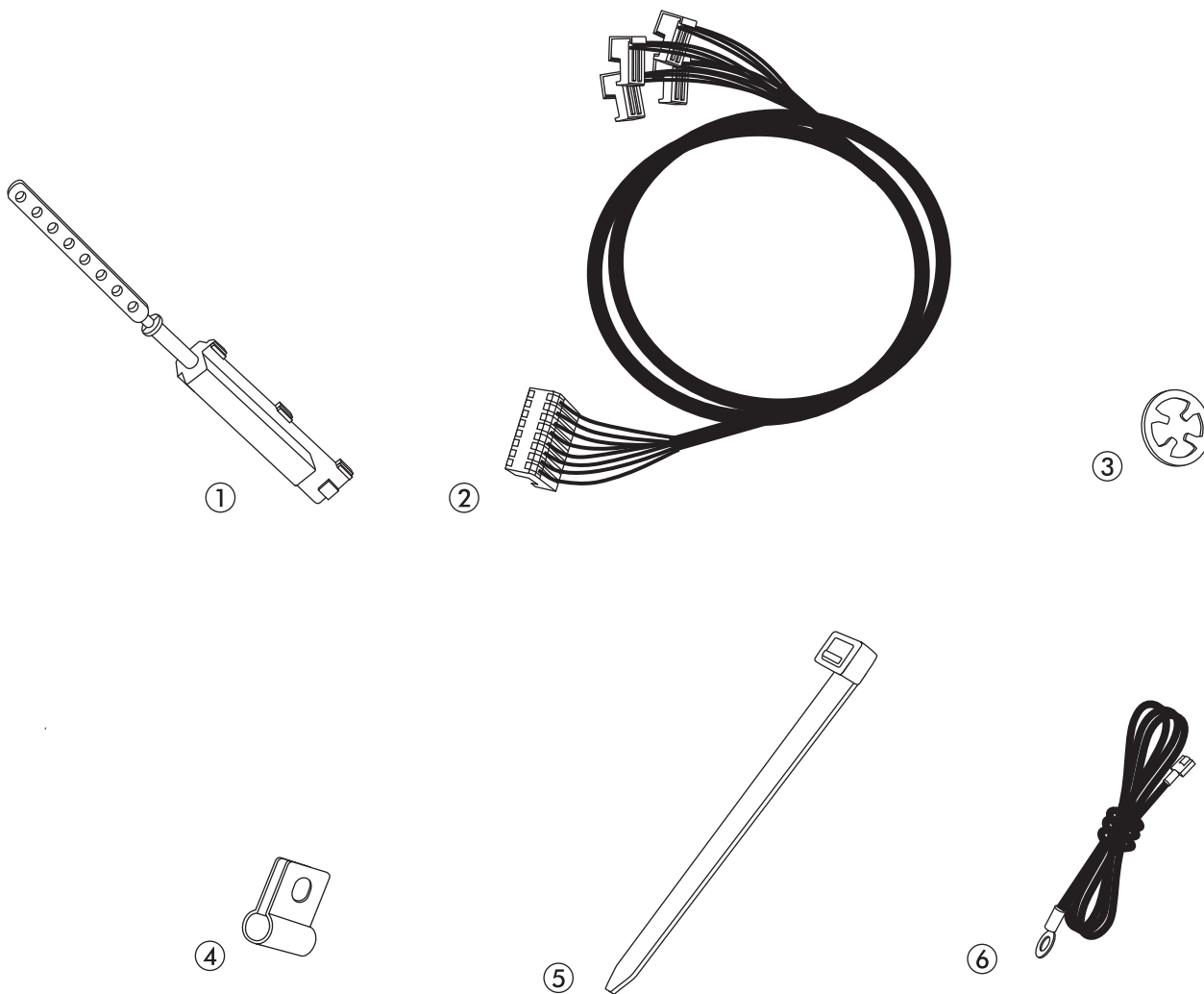


CONTROL KIT PACKING LIST

CONTROL KIT
474166

No	QTY	PART No.	DESCRIPTION
1.	3	112002-SUA	CABLE CONVERTER ASSEMBLY
2.	1	232002-VUA	GEN IV UNIVERSAL CONTROL HARNESS
3.	3	65976-VUE	3/16" PUSH-ON RING
4.	3	491010-VUR	CABLE CONVERTER CLAMP
5.	5	21301-VUP	4" TIE WRAP
6.	1	231520	GROUND WIRE

**** 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.**





CONTROL PANEL CONVERSION INSTRUCTIONS FOR 1968 NOVA wo AC

REMOVING OEM CONTROL PANEL

- ☐ REMOVE THE (2) OEM MOUNTING SCREWS FROM INSTRUMENT PANEL OF DASH
SEE FIGURE 1 BELOW
- ☐ DISCONNECT CABLES AND WIRES FROM BACK OF CONTROL PANEL.
- ☐ REMOVE THE CONTROL PANEL FROM DASH.

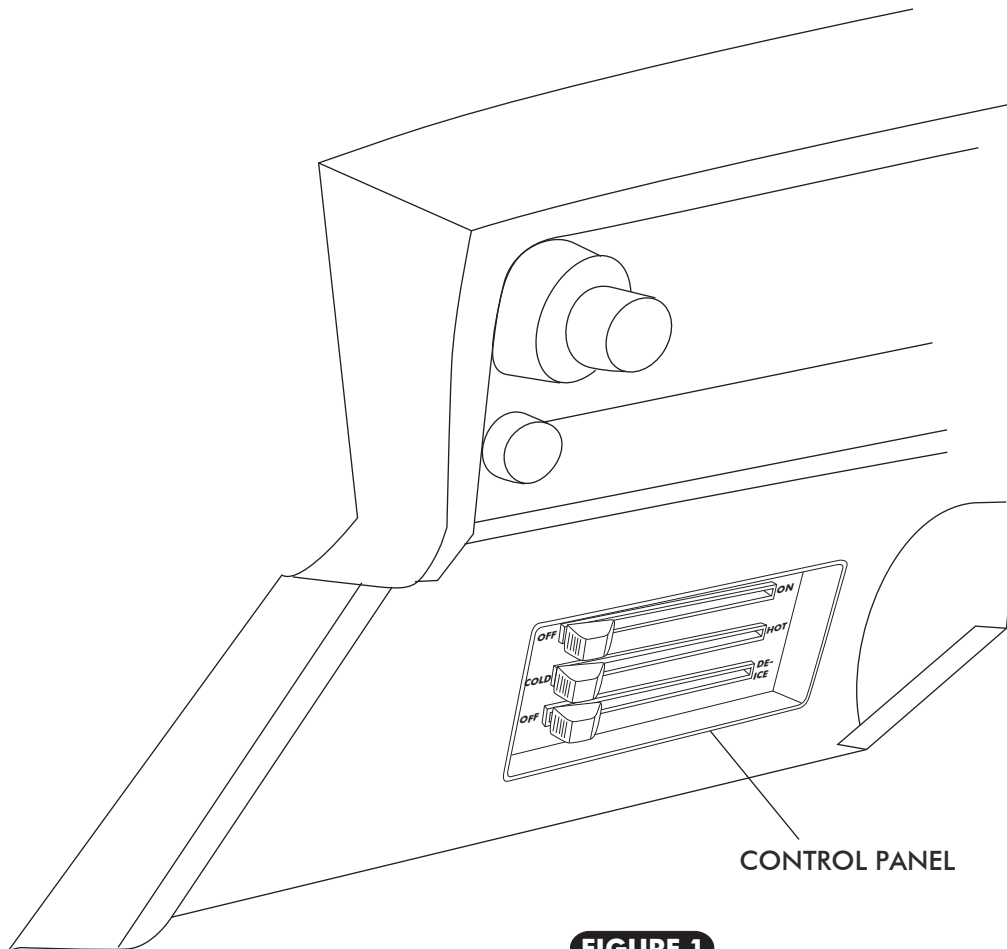


FIGURE 1



CABLE CONVERTER ASSEMBLY MODIFICATIONS

- LOCATE THE THREE CABLE CONVERTER ASSEMBLIES, AND USING A PAIR OF WIRE CUTTERS, CUT CABLE CONVERTER ACTUATOR RODS AS SHOWN BELOW IN FIGURE 2.

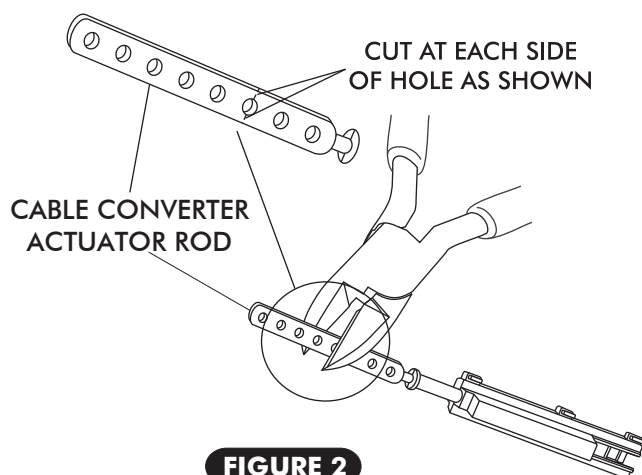
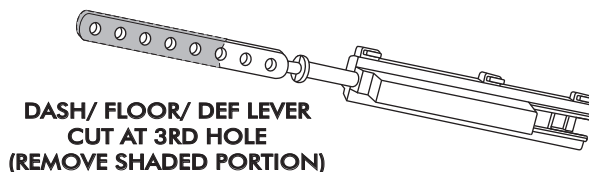
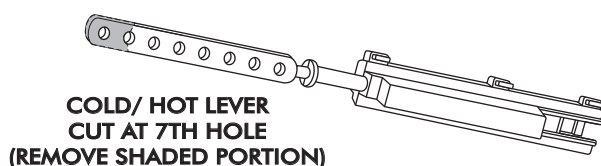
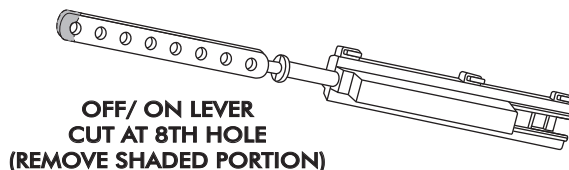


FIGURE 2



CABLE CONVERTER ASSEMBLY MOUNTING CLAMP INSTALLATION

- INSTALL CABLE CONVERTER ASSEMBLY MOUNTING CLAMPS. SEE FIGURE 3 BELOW

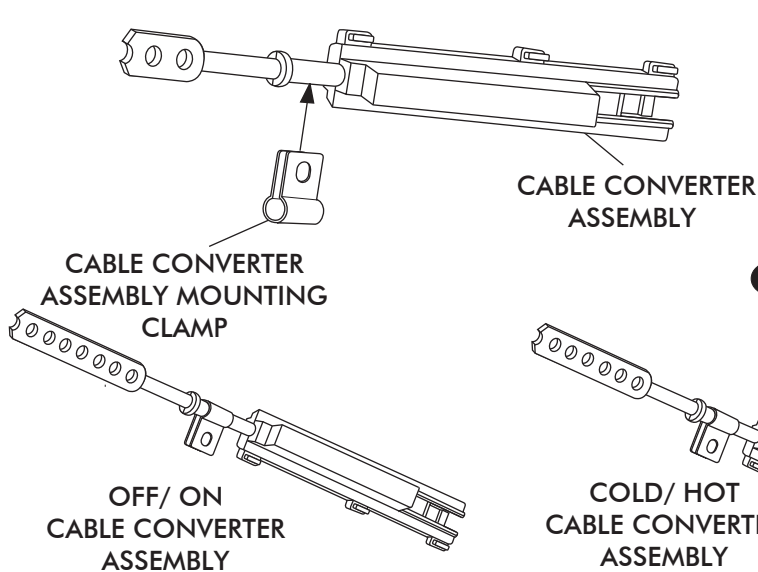


FIGURE 3

ORIENT CABLE CONVERTER ASSEMBLIES AS SHOWN AND INSTALL MOUNTING CLAMPS AS SHOWN. (NOTE: ORIENT CLAMPS IN RELATION TO THE (3) HOUSING SNAPS ON CABLE CONVERTER ASSEMBLY)



CABLE CONVERTER ASSEMBLY INSTALLATION

OFF/ ON CABLE CONVERTER ASSEMBLY

- ❑ INSTALL CABLE CONVERTER ASSEMBLY ON THE OFF/ ON LEVER. SEE FIGURE 4 BELOW.
- ❑ INSTALL CABLE CONVERTER LEVER PUSH ROD ONTO OEM CABLE MOUNTING STUD ON LEVER. SEE BELOW
- ❑ SECURE THE CABLE CONVERTER ASSEMBLY TO THE CONTROL PANEL USING THE OEM SCREW IN THE OEM CABLE CLAMP MOUNTING LOCATION AS SHOWN BELOW.
- ❑ SINCE THE CABLE CONVERTER ASSEMBLY CAN SLIDE BACK AND FORTH IN CLAMP BEFORE SCREW IS TIGHTENED, POSITION CABLE CONVERTER ASSEMBLY SUCH THAT THE FLAT PART OF THE ROD IS AS CLOSE TO FLUSH AS POSSIBLE WITH THE END OF HOUSING AT THE LEVER'S INNER MOST POSITION. AS SHOWN BELOW.
- ❑ SECURE CABLE CONVERTER PUSH ROD ONTO OEM CABLE MOUNTING STUD USING 3/16" PUSH-ON RING AS SHOWN BELOW.

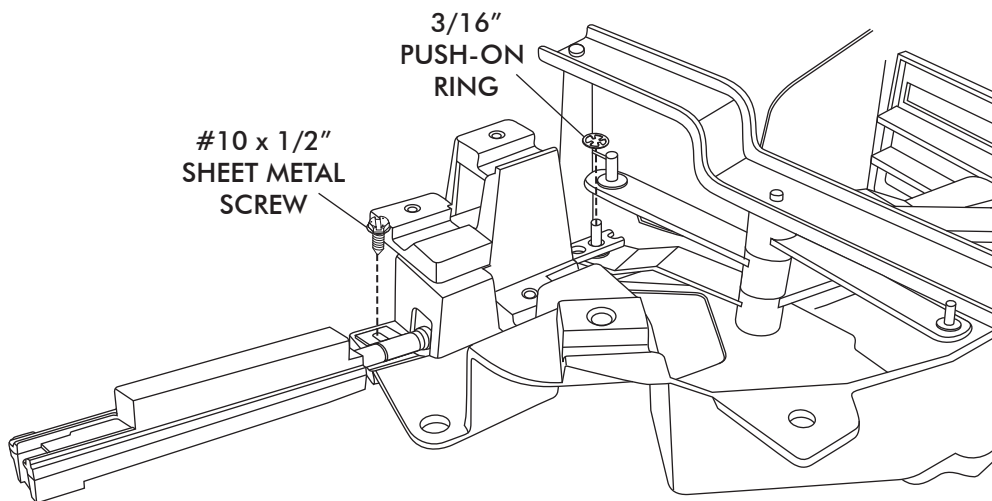
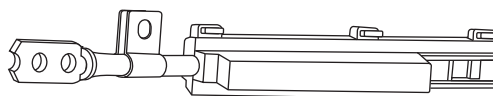
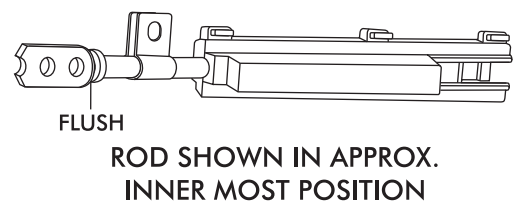
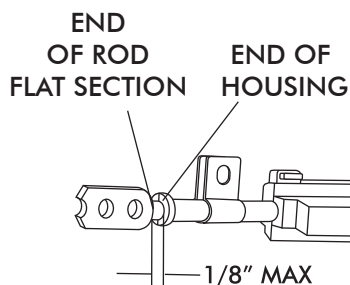


FIGURE 4

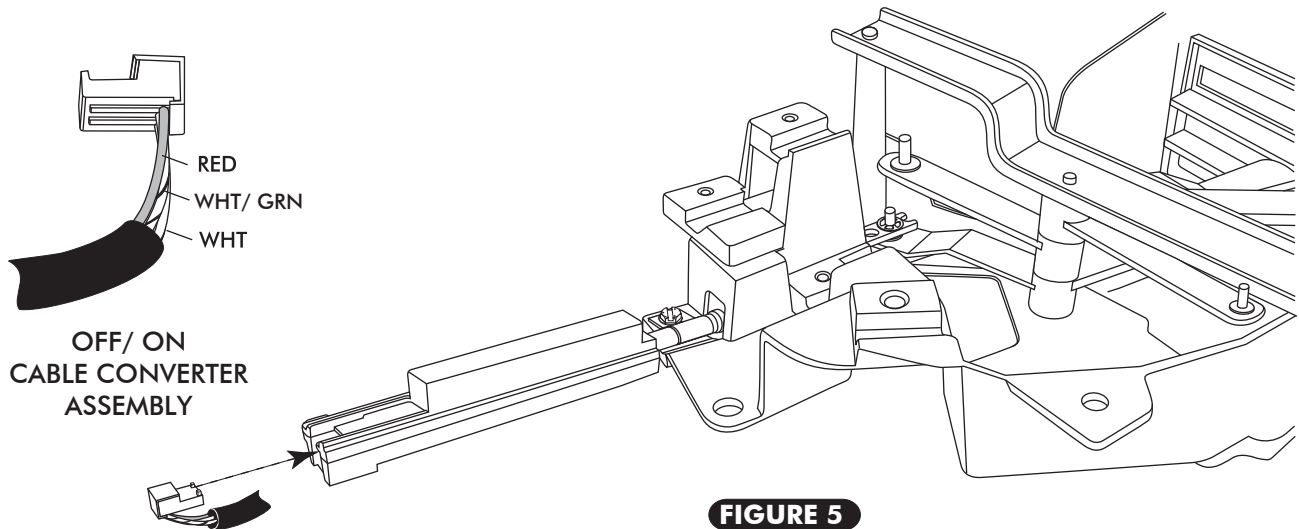


NOTE: DO NOT ALLOW ROD TO SEPARATE HOUSING WHEN ROD IS IN INNER MOST POSITION.

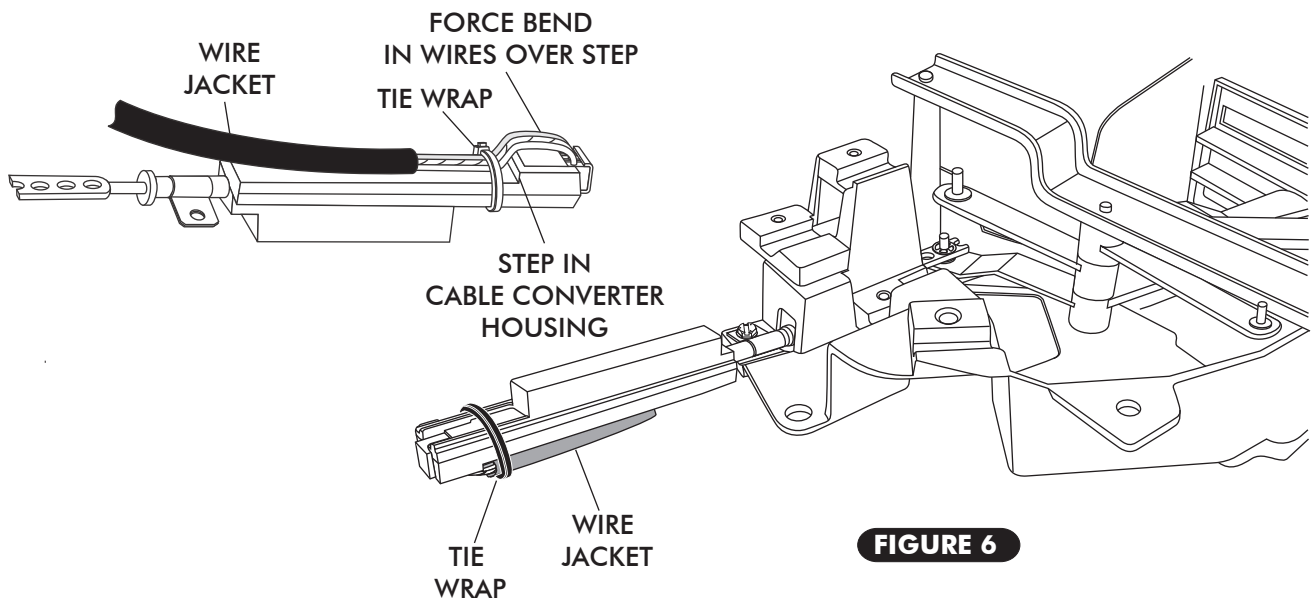


CONTROL HARNESS

- LOCATE THE CONTROL PANEL WIRE HARNESS AND PLUG THE CORRESPONDING WIRES INTO THE CORRECT CABLE CONVERTER ASSEMBLY AS SHOWN IN FIGURE 5 BELOW.



- ONCE WIRES ARE CORRECTLY PLUGGED INTO CABLE CONVERTER ASSEMBLY, SECURE WIRES 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 THEY PASS OVER THE STEP IN CABLE CONVERTER HOUSING. HEAD OF TIE WRAP MUST FALL ON EDGE OF HOUSING AS SHOWN TO REMAIN TIGHT. ENSURE THAT THE TIE WRAPS ARE SNUG ENOUGH THAT THE WIRES CANNOT MOVE. SEE BELOW





CABLE CONVERTER ASSEMBLY INSTALLATION

COLD/ HOT CABLE CONVERTER ASSEMBLY

- INSTALL CABLE CONVERTER ASSEMBLY ON THE COLD/ HOT LEVER. SEE FIGURE 7 BELOW.
- INSTALL CABLE CONVERTER LEVER PUSH ROD ONTO OEM CABLE MOUNTING STUD ON LEVER. SEE BELOW.
- SECURE THE CABLE CONVERTER ASSEMBLY TO THE CONTROL PANEL USING THE OEM SCREW IN THE OEM CABLE CLAMP MOUNTING LOCATION. SEE BELOW.
- SINCE THE CABLE CONVERTER ASSEMBLY CAN SLIDE BACK AND FORTH IN CLAMP BEFORE SCREW IS TIGHTENED, POSITION CABLE CONVERTER ASSEMBLY SUCH THAT THE FLAT PART OF THE ROD IS AS CLOSE TO FLUSH AS POSSIBLE WITH THE END OF HOUSING AT THE LEVER'S INNER MOST POSITION. SEE BELOW.
- SECURE CABLE CONVERTER PUSH ROD ONTO OEM CABLE MOUNTING STUD USING 3/16" PUSH-ON RING AS SHOWN BELOW.

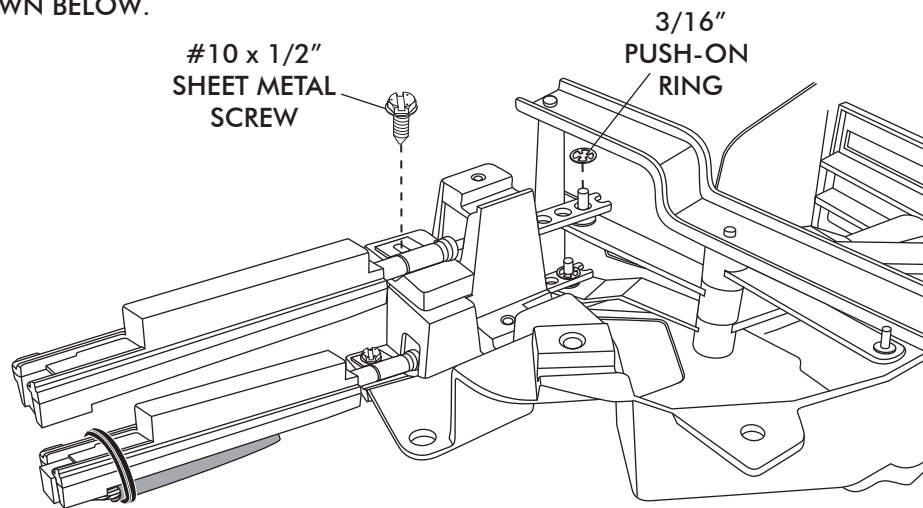


FIGURE 7

CONTROL HARNESS

- LOCATE THE CONTROL PANEL WIRE HARNESS, PLUG THE CORRESPONDING WIRES INTO THE CORRECT CABLE CONVERTER ASSEMBLY AS SHOWN IN FIGURE 8 BELOW.

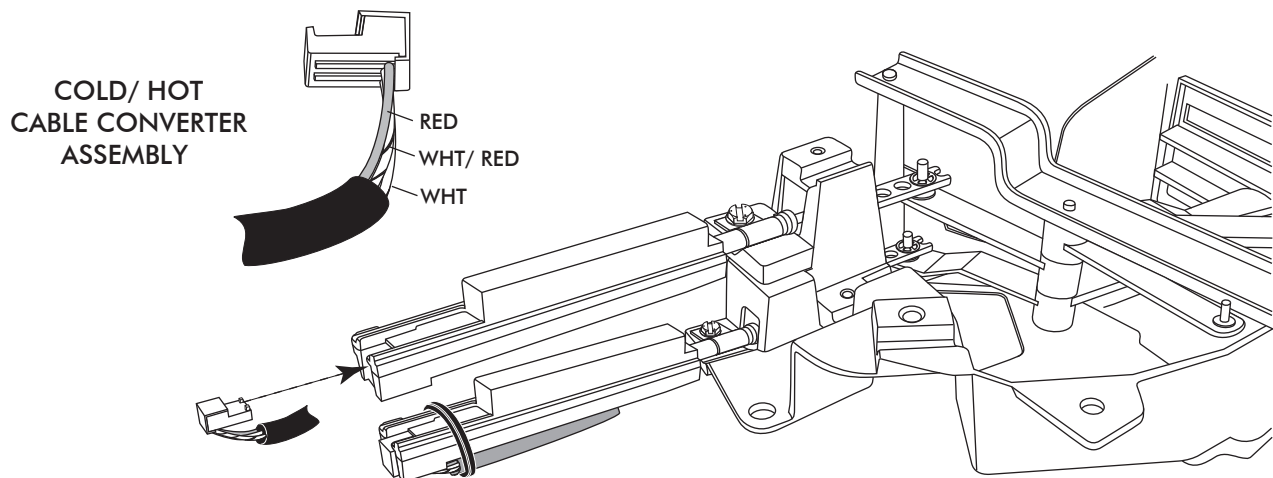


FIGURE 8



CONTROL HARNESS CONT.

- ONCE WIRES ARE CORRECTLY PLUGGED INTO CABLE CONVERTER ASSEMBLY, SECURE WIRES TO THE CABLE CONVERTER ASSEMBLY USING TIE WRAPS (SUPPLIED). SEE FIGURE 9 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 THEY PASS OVER THE STEP IN CABLE CONVERTER HOUSING. HEAD OF TIR WRAP MUST FALL ON EDGE OF HOUSING AS SHOWN TO REMAIN TIGHT. ENSURE THAT THE TIE WRAPS ARE SNUG ENOUGH THAT THE WIRES CANNOT MOVE. SEE BELOW

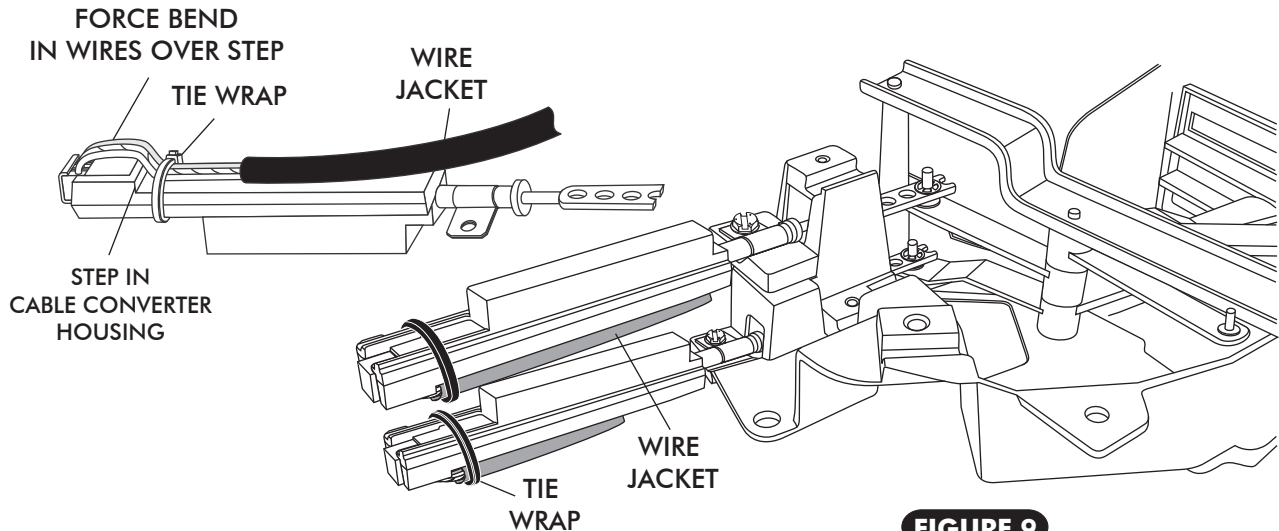


FIGURE 9

DASH/ FLR/ DEF CABLE CONVERTER ASSEMBLY

- INSTALL CABLE CONVERTER ASSEMBLY ON THE DASH/ FLR/ DEF LEVER. SEE FIGURE 10 BELOW.
- INSTALL CABLE CONVERTER LEVER PUSH ROD ONTO OEM CABLE MOUNTING STUD ON LEVER. SEE BELOW.
- SECURE THE CABLE CONVERTER ASSEMBLY TO THE CONTROL PANEL USING OEM SCREW IN THE OEM CABLE CLAMP MOUNTING LOCATION. SEE BELOW.
- SINCE THE CABLE CONVERTER ASSEMBLY CAN SLIDE BACK AND FORTH IN CALMP BEFORE SCREW IS TIGHTENED, POSITION CABLE CONVERTER ASSEMBLY SUCH THAT THE FLAT ROD IS AS CLOSE TO FLUSH AS POSSIBLE WITH THE END OF HOUSING AT THE LEVER'S INNER MOST POSITION. SEE FIGURE 4, PAGE 6.
- SECURE CABLE CONVERTER LEVER PUSH ROD ONTO OEM CABLE MOUNTING STUD USING 3/ 16" PUSH-ON RING AS SHOWN BELOW.

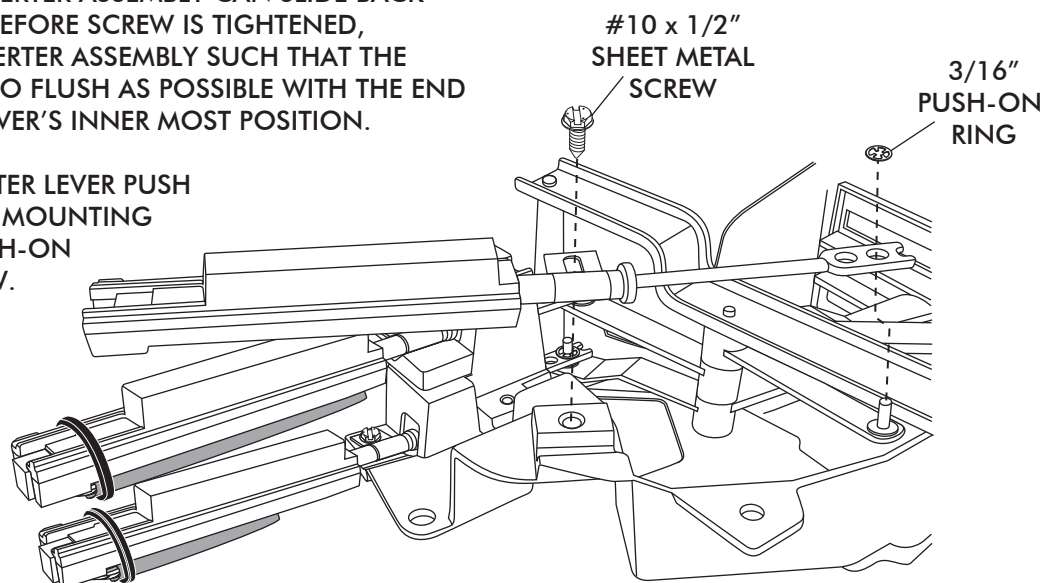


FIGURE 10



CONTROL HARNESS

- LOCATE THE CONTROL PANEL WIRE HARNESS AND PLUG THE CORRESPONDING WIRES INTO THE CORRECT CABLE CONVERTER ASSEMBLY AS SHOWN IN FIGURE 11 BELOW.

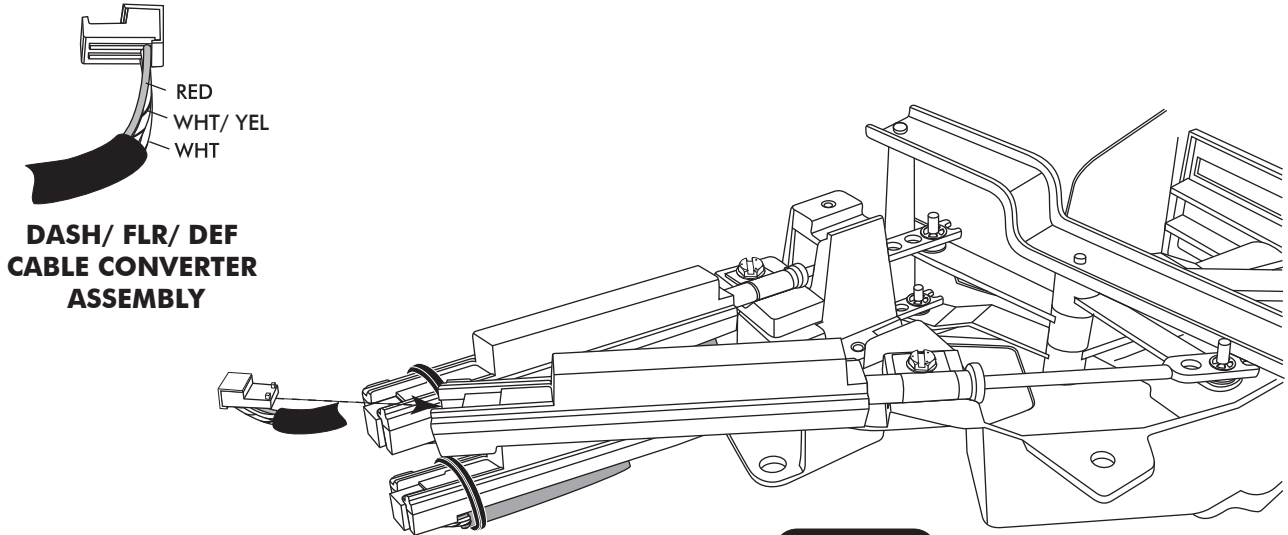


FIGURE 11

- ONCE WIRES ARE CORRECTLY PLUGGED INTO CABLE CONVERTER ASSEMBLY, SECURE WIRES TO THE CABLE CONVERTER ASSEMBLY USING TIE WRAPS (SUPPLIED). SEE FIGURE 12 BELOW. THE TIE WRAP MUST BE LOCATED BETWEEN THE END OF THE WIRE JACKET AND STEP IN CABLE CONVERTER HOUSING FORCING A BEND IN EACH WIRE AS THEY PASS OVER THE STEP IN CABLE CONVERTER HOUSING. HEAD OF TIE WRAP MUST FALL ON EDGE OF HOUSING AS SHOWN TO REMAIN TIGHT. ENSURE THAT THE TIE WRAPS ARE SNUG ENOUGH THAT THE WIRES CANNOT MOVE. SEE BELOW

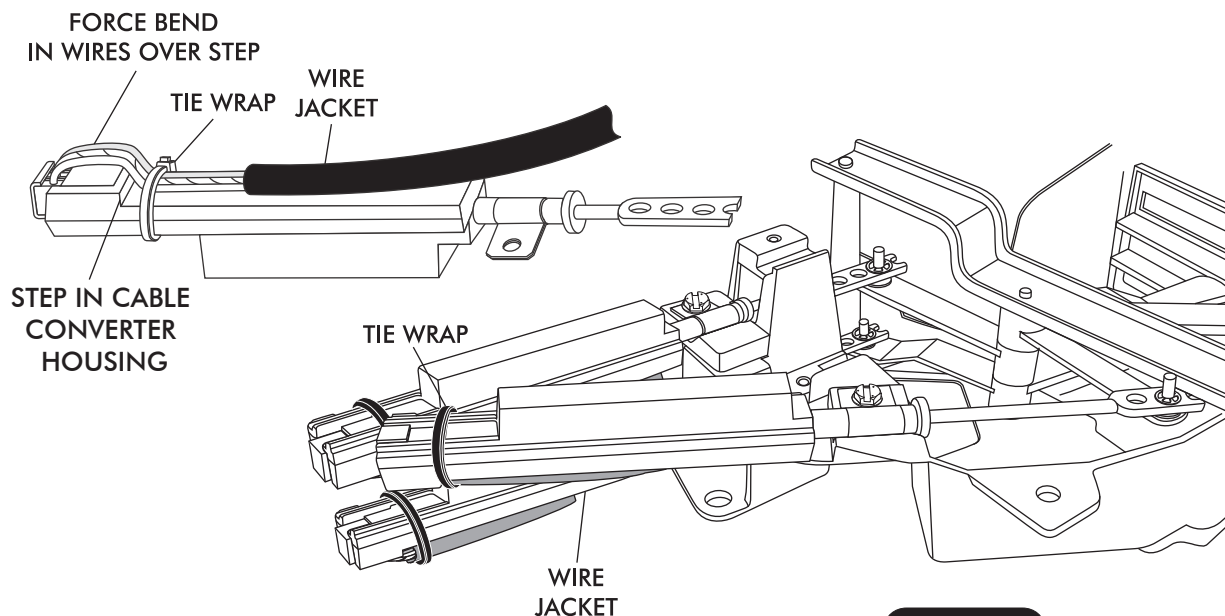


FIGURE 12



CONTROL HARNESS CONT.

- USING THE SUPPLIED TIE WRAPS, TIE THE WIRES TO THE CONTROL PANEL AS SHOWN IN FIGURE 13 BELOW. CONFIRM THAT WIRES ARE SECURED AND DO NOT INTERFERE WITH LEVER OPERATION OR CABLE CONVERTER ASSEMBLY.

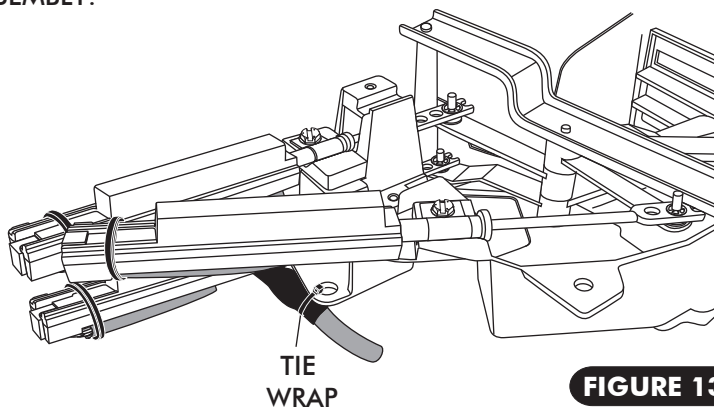


FIGURE 13

FINAL STEPS

- REINSTALL CONTROL PANEL IN DASH.
- PLUG THE WIRING HARNESS INTO THE ECU MODULE ON THE SUB CASE. SEE FIGURE 14 BELOW.
- WIRE ACCORDING TO WIRING DIAGRAM ON PAGE 14.
- CONTROL PANEL CALIBRATION PROCEDURE AND OPERATION INSTRUCTIONS:
 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
 LOCATE THE GRAY WIRE WITH AN UNUSED CONNECTOR IN THE WIRING HARNESS NEAR THE TWO CABLE HARNESS RELAYS. THE WIRE IS LABELED PRGM ON THE WIRING DIAGRAM ON PAGE 14.
 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 THE GRAY PRGM WIRE WHEN THE PROCEDURE REQUIRES IT.
 TO CALIBRATE THE CONTROL PANEL FOLLOW THE CALIBRATION PROCEDURES ON PAGE 12 & 13.

PLUG
FROM
CONTROL
WIRING
HARNESS
232002-VUA

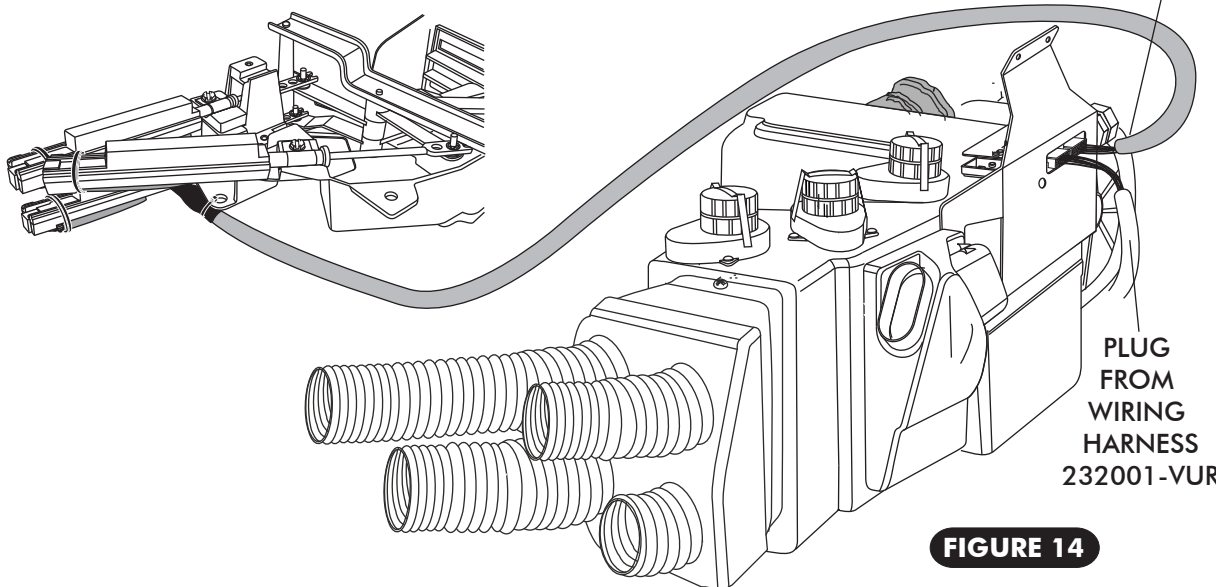


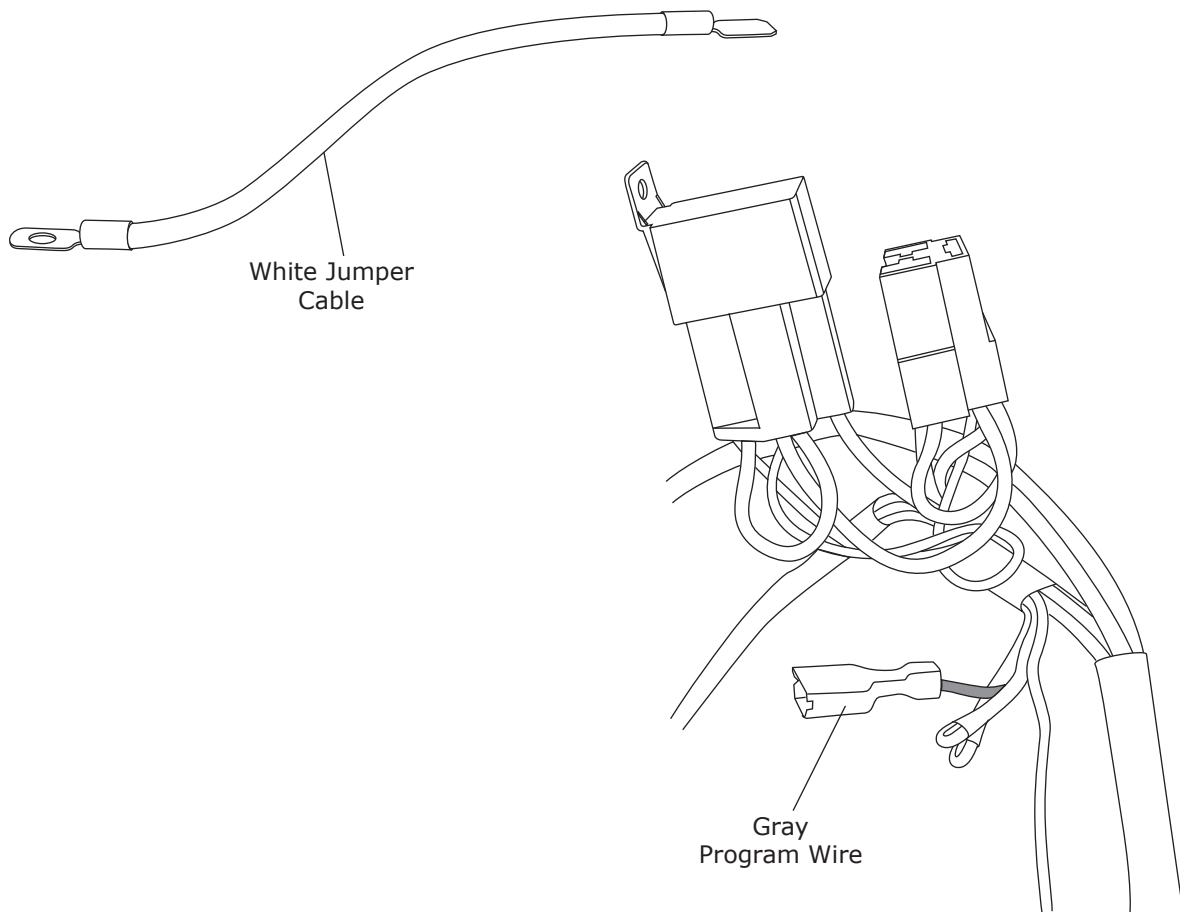
FIGURE 14



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.

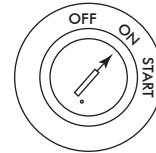
In preparation for calibration, you will need to attach the supplied white ground jumper wire to a suitable chassis ground. This jumper wire must be easily connected to the gray programming wire located in the main Gen IV wiring harness next to the relays. During the calibration procedure, you will connect 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.



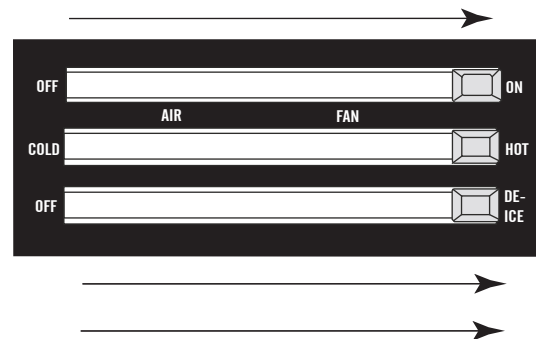


Control Panel Calibration Procedure (Cont.)

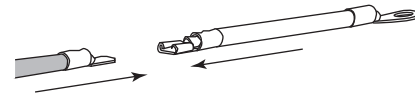
1. Turn on the ignition switch (Do not start the engine).



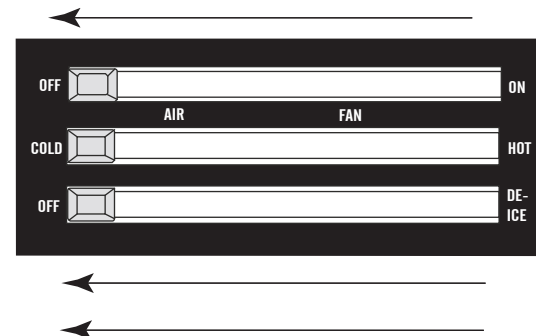
2. Move the control levers/knobs to the position shown.



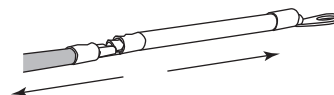
3. Connect the white jumper wire to the gray program wire. Wait for the blower speed to change (Approximately 5 seconds).



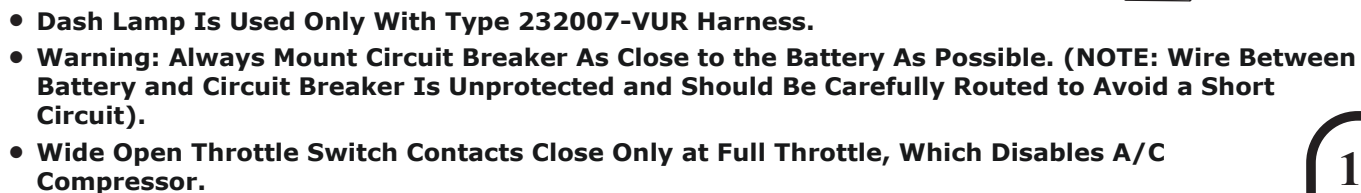
4. Move the control levers/knobs to the positions shown.



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.





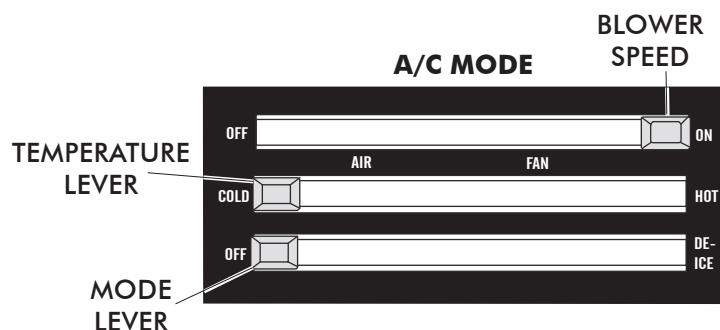
OPERATION OF CONTROLS

NOTE: CONTROLS MUST BE CALIBRATED FOR PROPER OPERATION-REFER TO CONTROL PANEL INSTRUCTIONS.

THE TEMPERATURE LEVER TOGGLES BETWEEN A/C AND HEAT MODES. FOR A/C MODE SLIDE THE TEMPERATURE LEVER ALL THE WAY LEFT, FOR HEAT MODE SLIDE THE LEVER RIGHT TO DISENGAGE THE COMPRESSOR, THEN MOVE THE LEVER TO SELECT DESIRED TEMPERATURE.

NOTE: EACH TIME THE SYSTEM TOGGLES BETWEEN MODES, THE BLOWER WILL MOMENTARILY CHANGE SPEEDS.

ALL SWITCHES ARE VARIABLE BETWEEN POSITIONS, SYSTEM WILL PERFORM A BLEND BETWEEN THE FUNCTIONS.

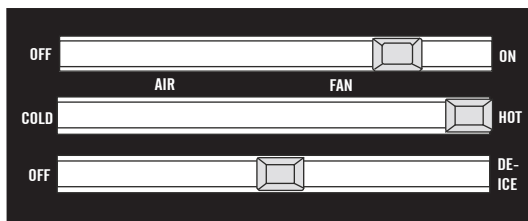


BLOWER SPEED
ADJUST TO DESIRED
SPEED

MODE LEVER
SLIDE THE LEVER TO
THE LEFT POSITION

TEMPERATURE LEVER
IN A/C MODE SLIDE THE
TEMPERATURE LEVER ALL
THE WAY TO THE LEFT
TO ENGAGE COMPRESSOR.
(SLIDE LEVER LEFT OR RIGHT
TO ADJUST DESIRED
TEMPERATURE)

HEAT MODE

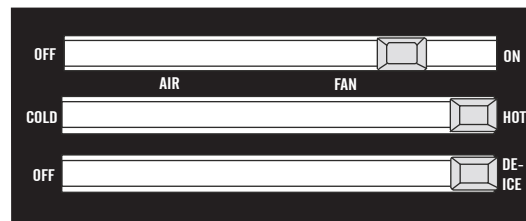


BLOWER SPEED
ADJUST TO DESIRED
SPEED

MODE LEVER
SLIDE THE LEVER TO
THE CENTER POSITION

TEMPERATURE LEVER
SLIDE THE TEMPERATURE
LEVER ALL THE WAY RIGHT
TO THE HOT POSITION.
(SLIDE LEVER LEFT OR RIGHT
TO DESIRED TEMPERATURE)

DEFROST/ DE-FOG MODE



BLOWER SPEED
ADJUST TO DESIRED
SPEED

MODE LEVER
SLIDE THE LEVER TO
THE RIGHT POSITION

TEMPERATURE LEVER
ADJUST LEVER TO
DESIRED TEMPERATURE.
(COMPRESSOR IS
AUTOMATICALLY
ENGAGED)



CONTROL KIT PACKING LIST

CONTROL KIT
474166

No	QTY	PART No.	DESCRIPTION	
1.	3	112002-SUA	CABLE CONVERTER ASSEMBLY	_____
2.	1	232002-VUA	GEN IV UNIVERSAL CONTROL HARNESS	_____
3.	3	65976-VUE	3/16" PUSH-ON RING	_____
4.	3	491010-VUR	CABLE CONVERTER CLAMP	_____
5.	5	21301-VUP	4" TIE WRAP	_____
6.	1	231520	GROUND WIRE	_____

CHECKED BY: _____
PACKED BY: _____
DATE: _____

