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**3313107.107
5 BUTTON THERMOSTAT
HEAT PUMP CONVERSION KIT**

**TO CONVERT
DUCTED HEAT PUMPS
FOR USE WITH**

**3109228.001 & 3109228.019
5 BUTTON COMFORT CONTROL CENTER
THERMOSTATS**

SERVICE INSTRUCTIONS

**3313107.107
CONVERSION KIT**



INTRODUCTION


These instructions apply to all (Dometic) ducted heat pumps (hereinafter referred to as “product,” or “unit”) for use with the 5 Button Comfort Control Center. This kit can be installed by one person. Use the following procedure to ensure a properly installed, and properly functioning unit.


Dometic, LLC reserves the right to modify appearances and specifications without notice.
This manual has safety information and instructions to help users eliminate or reduce the risk of accidents and injuries.

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DOCUMENT SYMBOLS

 Indicates additional information that is not related to personal injury.

 Indicates step-by-step instructions.

IMPORTANT SAFETY INSTRUCTIONS

This manual has safety information and instructions to help users eliminate or reduce the risk of accidents and injuries.

A. Recognize Safety Information



This is the safety alert symbol. It is used to alert you to potential physical injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

B. Understand Signal Words

A signal word will identify safety messages and property damage messages, and will indicate the degree or level of hazard seriousness.



WARNING **WARNING!** indicates a hazardous situation that, if not avoided, could result in death or serious injury.



CAUTION **CAUTION!** indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.

NOTICE

NOTICE. is used to address practices not related to physical injury.

C. Supplemental Directives



Read and follow all safety information and instructions to avoid possible injury or death.

Read and understand these instructions before servicing this product.

Incorrect servicing can lead to serious injury. Follow all service instructions.

The installation must comply with all applicable local or national codes.

All wiring must comply with the latest edition of ANSI/NFPA70 NEC and ANSI/A119.2 for recreational vehicles, and any other applicable electrical codes.

D. General Safety Messages



WARNING **FAILURE** to obey the following warnings could result in death or serious injury.

- This product **MUST** be serviced by a Dometic, LLC Service Center or a qualified service technician.
- Do **NOT** modify this product beyond the scope of these service instructions. Modification (beyond these service instructions) can be extremely hazardous.



CAUTION **FAILURE** to obey the following cautions could result in injury.

- **CUT HAZARD.** Wear protective gloves while handling or working near sheet metal components. Sheet metal parts could have sharp edges.

GENERAL INFORMATION

A. Scope Of Delivery

NOTICE

ADDITIONAL conversion kits will be necessary if more than (1) unit is controlled by the 5 button CCC thermostat.

- (1) Service Instructions
- (1) 3106483.005 Ambient Sensor
- (4) 3101624.017 PC Board Standoff
- (1) 3109229.009 Power Module Board



The power module board is equipped with dip switches. Switches are in the **OFF** position when shipped. Do **NOT** turn switches **ON** unless instructed.

B. Required tools


- AC Voltmeter
- Flat Bladed Screwdriver (Long)
- 5/16" Nut Driver
- #2 Square Drive
- Needle Nose Pliers
- Wire Cutter/Stripper
- Scissors
- Crimping Tool (appropriate for Butt Splice used)

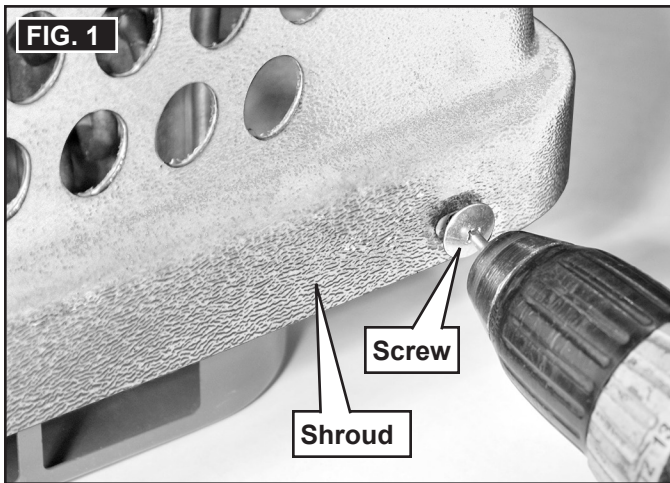
C. Required Components

- (2) Butt Splice Connectors (UL certified, closed end, single opening)

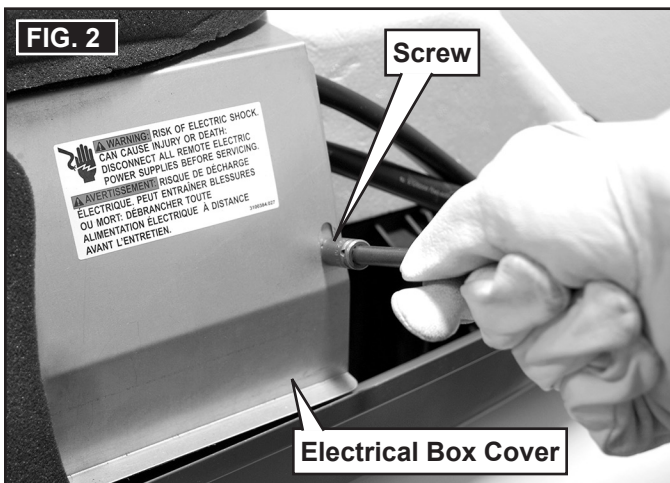
PROCEDURE

A. Remove OLD Power Module Board & Ambient Sensor

-  1. **WARNING!** ELECTRICAL SHOCK HAZARD. Disconnect 120 Vac power from RV, and the positive (+) 12 Vdc terminal from supply battery. Failure to obey this warning could result in death or serious injury.
2. Remove shroud (with screws) from unit. Save for reinstallation later. See (FIG. 1).




3. Remove electrical box cover (with screws). Save for reinstallation later. See (FIG. 2).



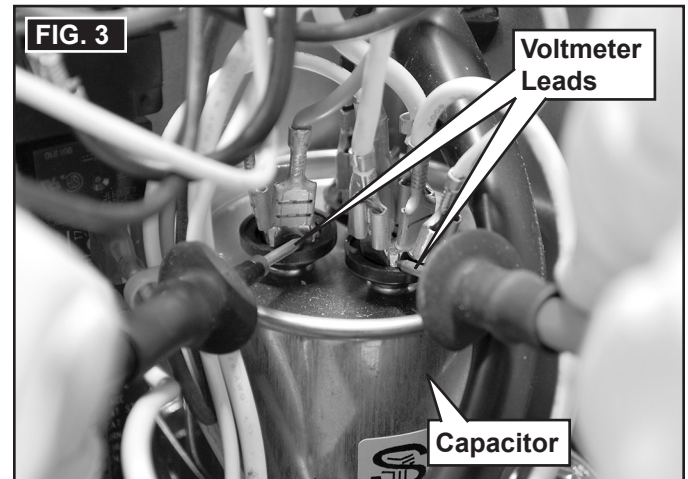
4. **WARNING!** ELECTRICAL SHOCK HAZARD. The start, run, and/or blower (fan) capacitor(s) may contain stored electrical energy. Discharge all capacitors properly before continuing with this service procedure. **NEVER** use a screwdriver or similar object to discharge a capacitor. Failure to obey these warnings could result in death or serious injury.

- a. Set your AC voltmeter to 500 volt scale or higher.


- b. Touch and hold the voltmeter's leads to each of the terminals on the capacitor until it's fully discharged. See (FIG. 3).

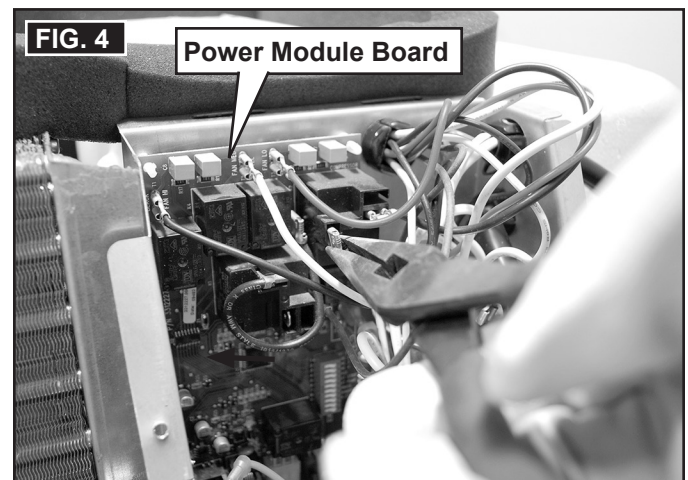
 Capacitors may have (2) or (3) terminals. For capacitors with (3) terminals, alternate touching voltmeter's leads to each of the terminals until capacitor is fully discharged.

- c. Repeat steps (a) through (b) for each capacitor.



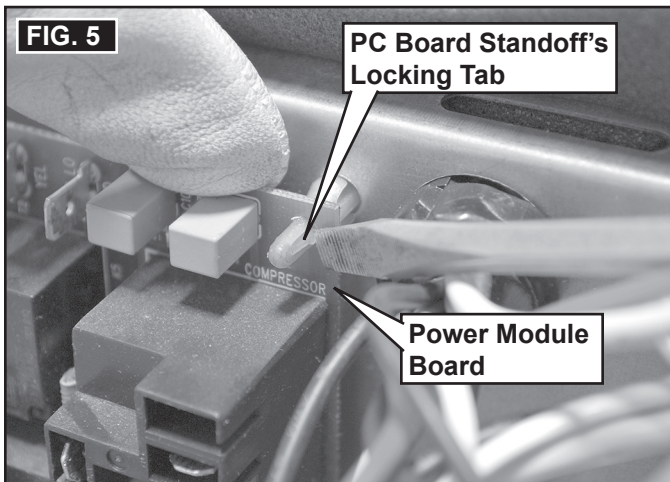
5. Disconnect all wires from the top half of power module board. See (FIG. 4).

 You may leave the bottom wires connected to power module board (for easier access later).

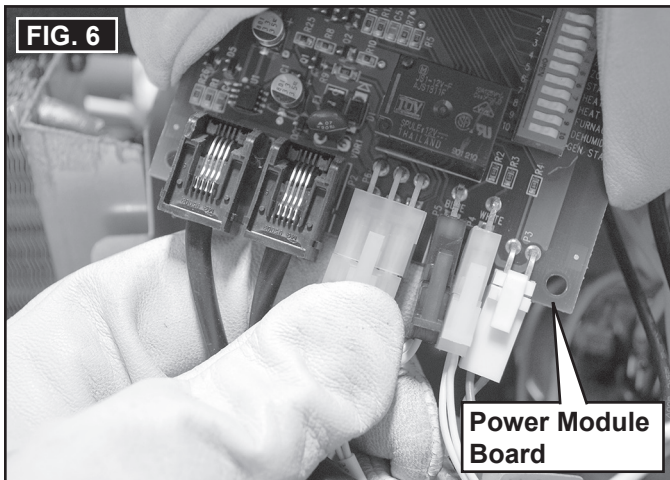


PROCEDURE

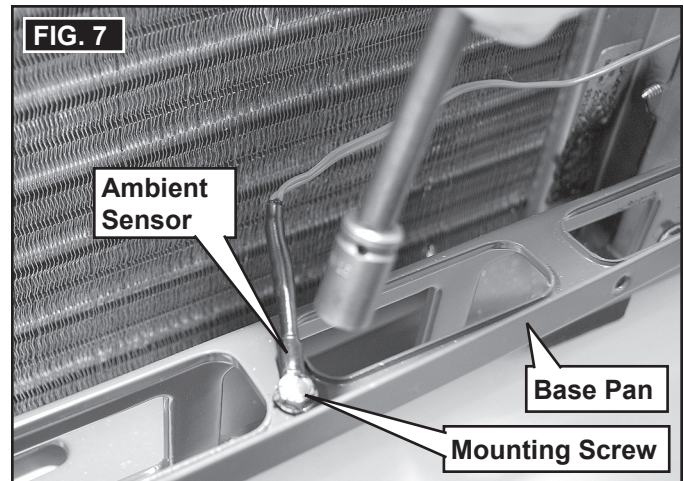
6. Disengage the (4) PC board standoffs from the power module board. See (FIG. 5).
 - a. Gently raise power module board near one of the PC board standoffs while pressing standoff's locking tab.
 - b. Continue to raise board until it disengages from standoff.
 - c. Repeat steps (a) through (b) for each standoff (starting from the top).



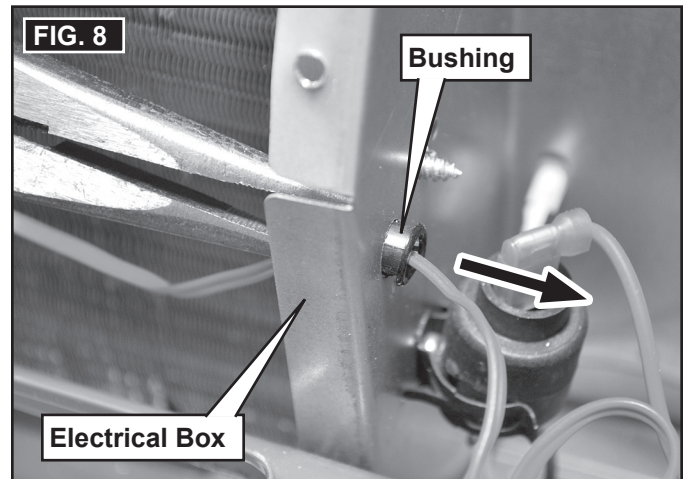
7. With power module board completely disengaged from all PC board standoffs, remove board from all remaining (connected) wires and discard. See (FIG. 6).



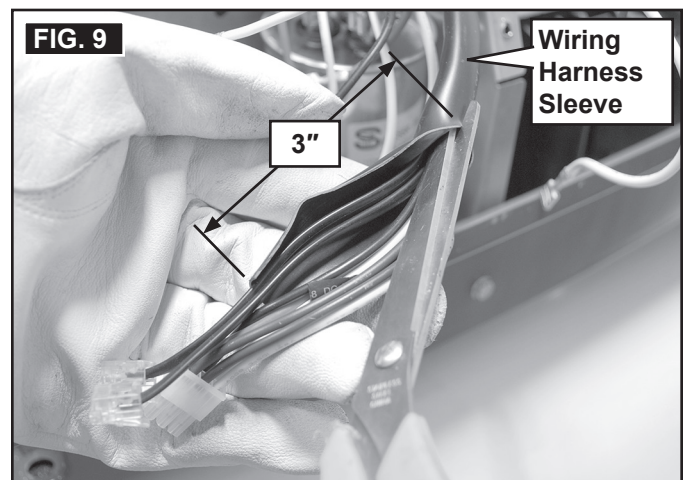
8. Replace any damaged PC board standoffs with new ones (provided). See (FIG. 5).
9. Remove ambient sensor's mounting screw from unit's base pan, and save for reinstallation later. See (FIG. 7).



10. Disengage plastic bushing from electrical box, then remove with ambient sensor and discard. See (FIG. 8).



11. Cut/split approximately 3" from end of the wiring harness sleeve (containing the (2) 4 conductor communication cables). See (FIG. 9).



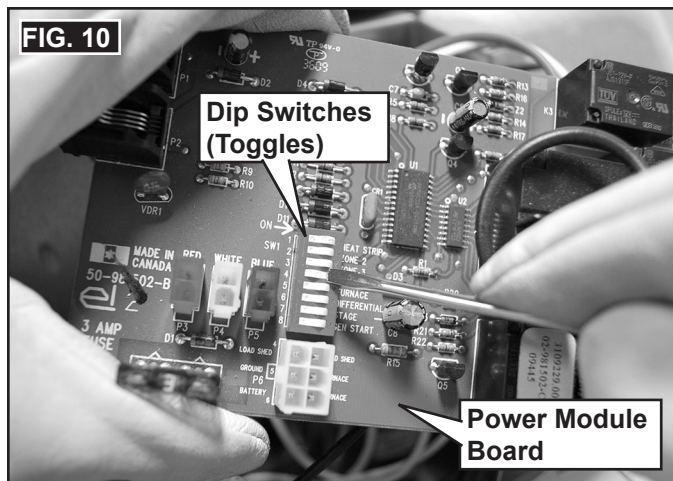
PROCEDURE

B. Install NEW Power Module Board & Ambient Sensor

1. Toggle the appropriate dip switches (on new power module board) to the **ON** position. See (FIG. 10).

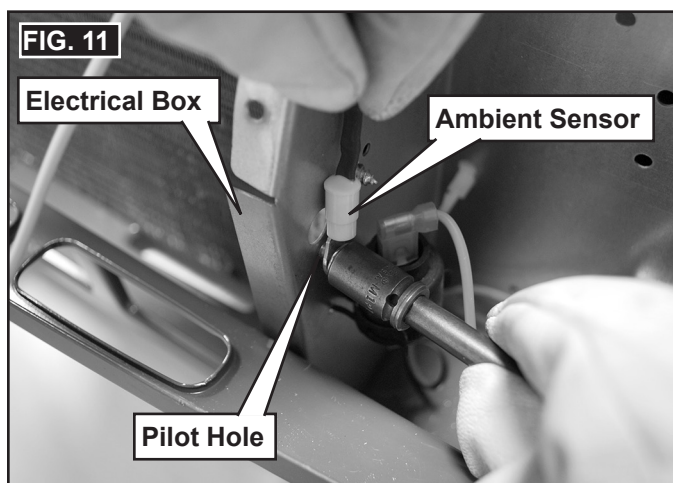
i All dip switches on the power module board is factory preset to the **OFF** position. Placing a switch in the **ON** position selects that option.

The equipment options installed by the RV manufacturer will determine which dip switches to turn **ON** or leave **OFF**.

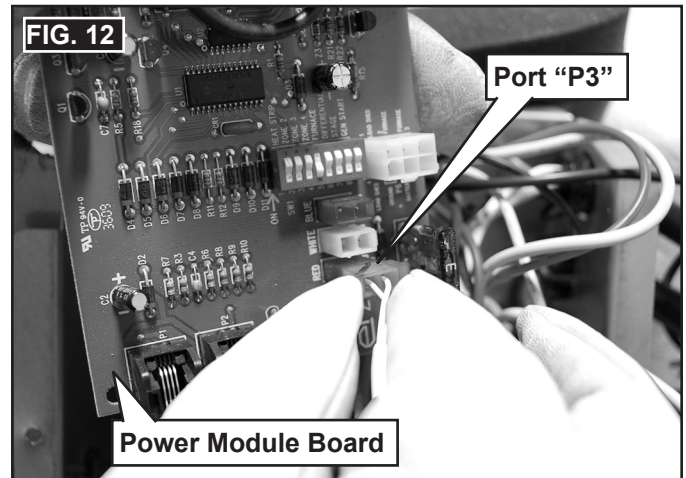


2. Place new ambient sensor (provided) over pilot hole inside of electrical box (near grommet hole). Then reinstall sensor screw to secure sensor to box. See (FIG. 11).

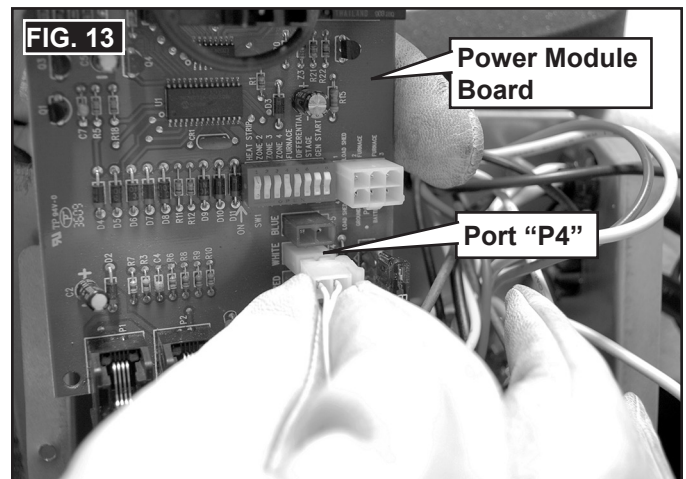
i Coil ambient sensor's excess wire to fit inside electrical box.



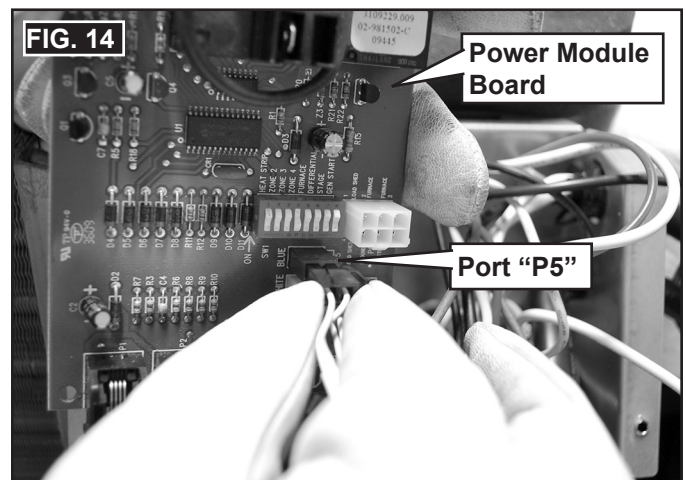
3. Insert the ambient sensor's **RED** 2 pin connector to **RED** port "P3" on the power module board. See (FIG. 12).



4. Insert the **WHITE** 2 pin connector to **WHITE** port "P4" on the power module board. See (FIG. 13).




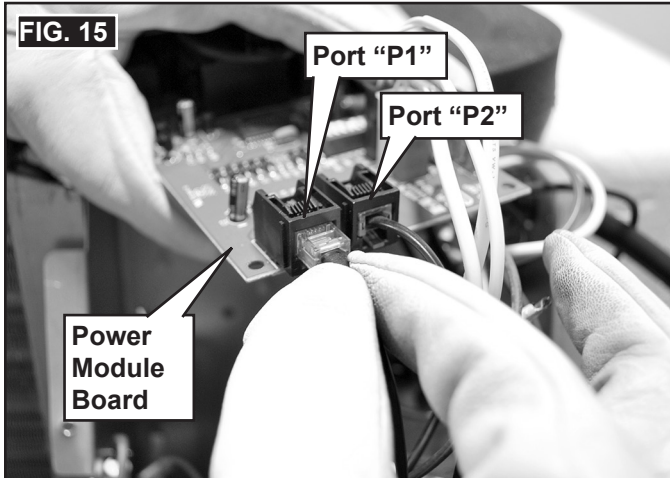
5. Insert the **BLUE** 2 pin connector to **BLUE** port "P5" on the power module board. See (FIG. 14).



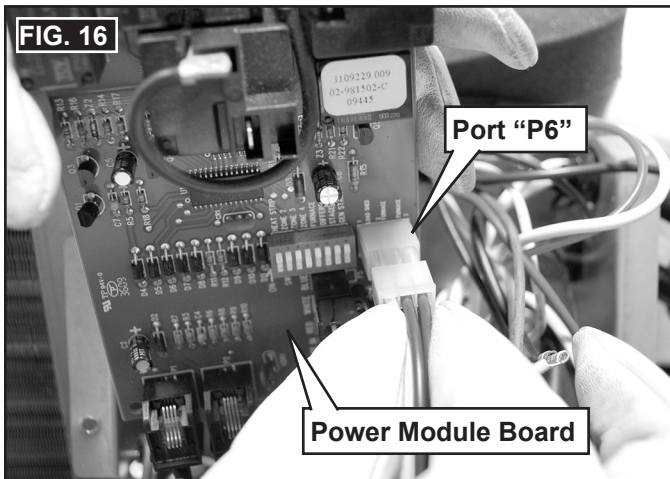
PROCEDURE

6. Insert the (2) 4 conductor communication cable connectors (RJ-11-6C4P) into ports "P1" and "P2" on the power module board. See (FIG. 15).

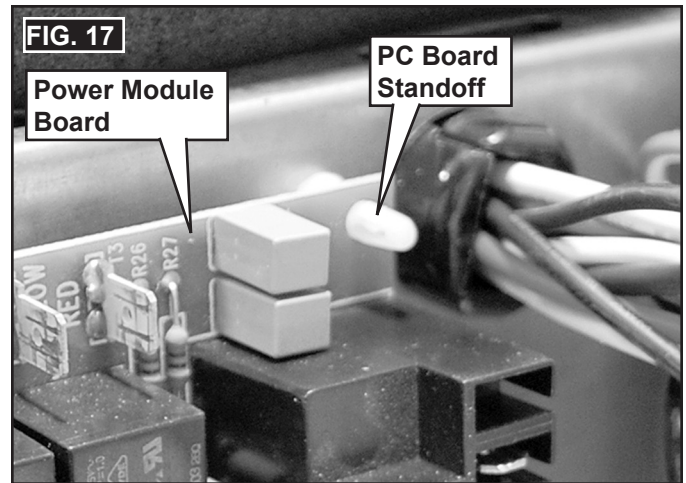
 It doesn't matter what communication cable is plugged into which port.



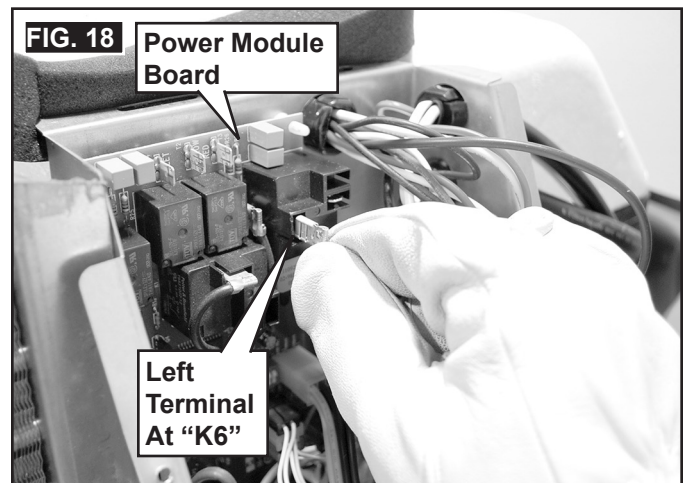
7. Insert the 6 pin connector to port "P6" on the power module board. See (FIG. 16).



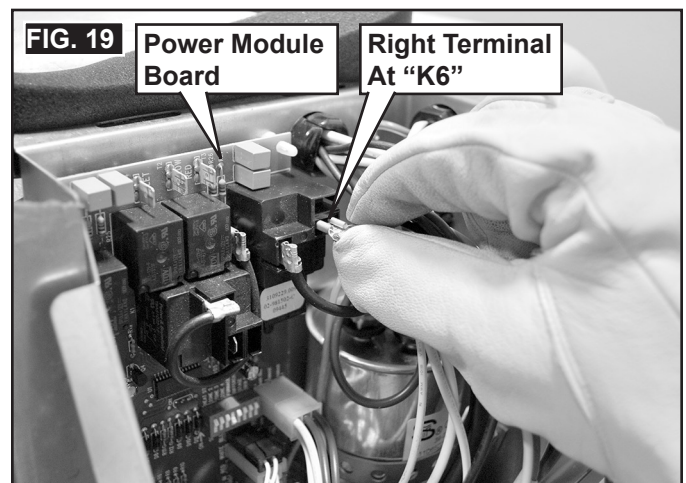
8. Attach power module board to the (4) PC board standoffs (inside electrical box). See (FIG. 17).
 - a. Align board's mounting holes to standoffs.
 - b. Gently press board onto each standoff until all (4) snaps securely in place.



9. Connect the thick **BLACK** wire to left terminal at "K6" on the power module board. See (FIG. 18).



10. Connect the thick **BLUE** wire to right terminal at "K6" on the power module board. See (FIG. 19).

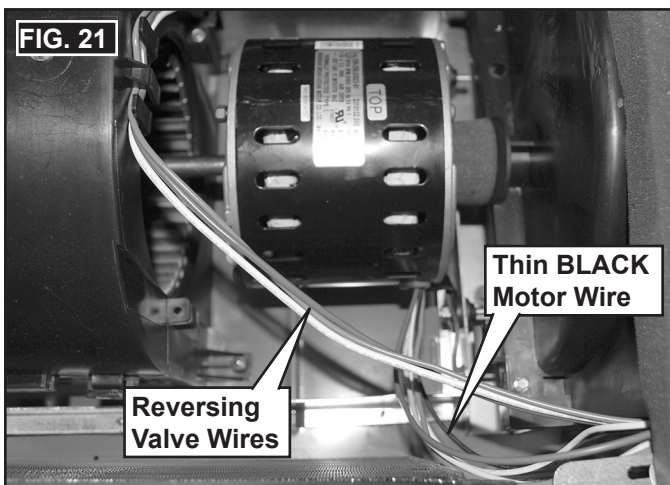
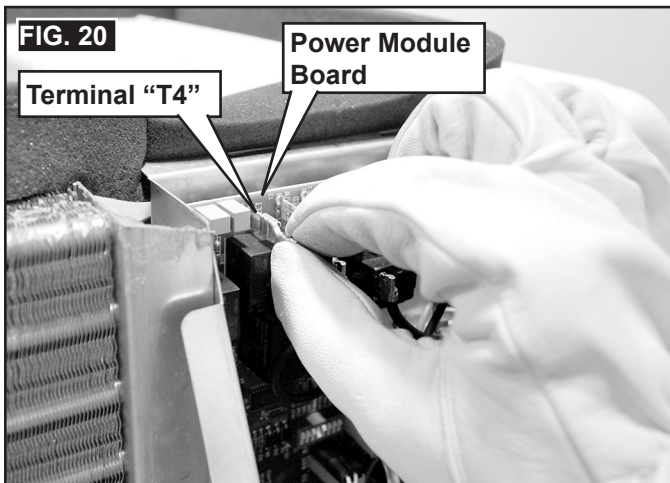


PROCEDURE

11. Connect one of the (2) reversing valve wires to terminal "T4" on the power module board. See (FIG. 20).

i It doesn't matter which reversing valve wire is attached to terminal "T4".

The color of the (2) reversing valve wires will be either **VIOLET** or **BLACK**. Do **NOT** confuse these with the thin **BLACK** wire from the motor. See (FIG. 21).



12. Cut the flag terminal from the remaining reversing valve wire, and strip approximately 1/2" of the insulation from wire end. See (FIG. 22).




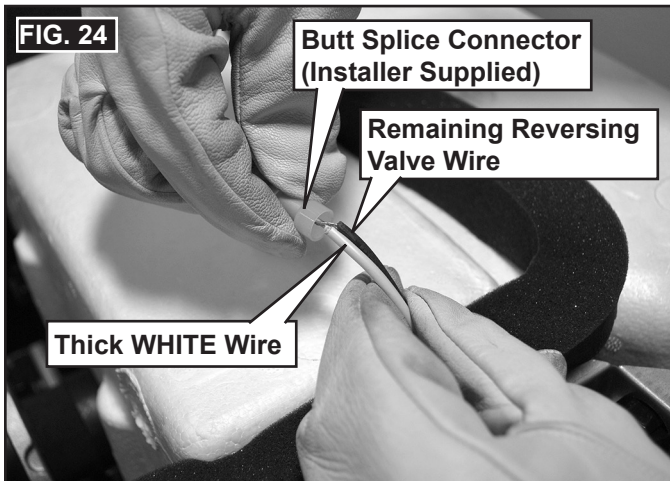
13. Cut the flag terminal from the thick **WHITE** wire, and strip approximately 1/2" of the insulation from wire end. See (FIG. 23).




PROCEDURE

14. Connect the thick **WHITE** wire with the remaining (**VIOLET** or **BLACK**) reversing valve wire using a properly sized, UL certified, closed end, single opening butt splice connector (installer supplied). See (FIG. 24).

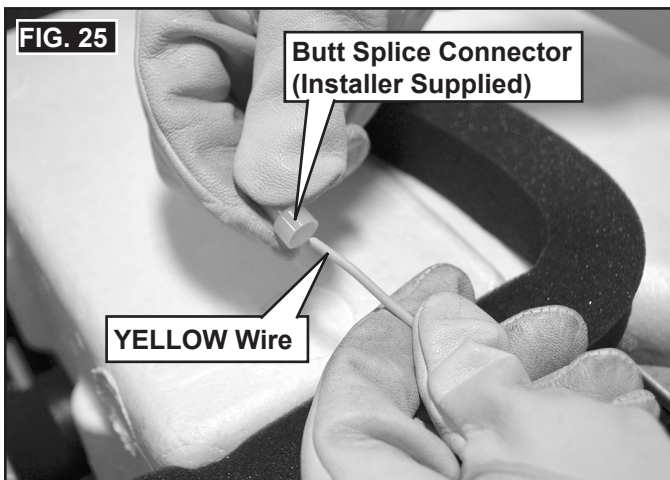
 Refer to the crimp tool manufacturer for crimping instructions.



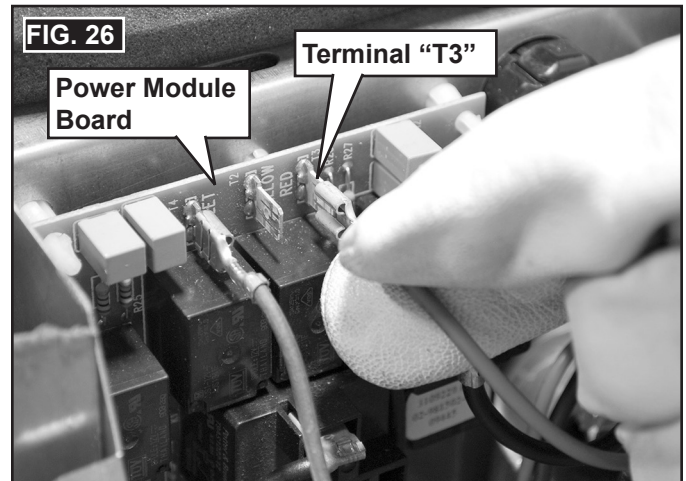
15. Cut the flag terminal from the **YELLOW** wire, and cap with a properly sized, UL certified, closed end, single opening butt splice connector (installer supplied). See (FIG. 25).

 Refer to the crimp tool manufacturer for crimping instructions.

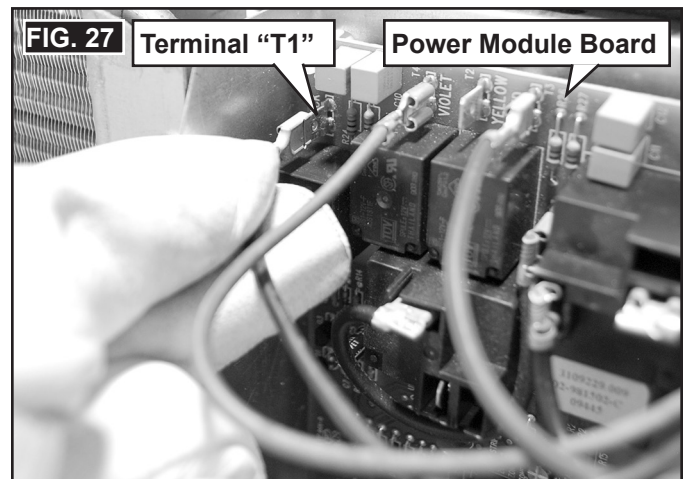
This wire is no longer used.



16. Connect the thin **RED** wire to terminal "T3" on the power module board. See (FIG. 26).



17. Connect the thin **BLACK** wire (from motor) to terminal "T1" on the power module board. See (FIG. 21) and (FIG. 27).



18. Verify all connections are secure, and that there are no loose wires.

 The capped **YELLOW** wire should be the only wire left unconnected. See (FIG. 25).

19. Arrange wires inside electrical box, and reinstall electrical box cover (with screws). See (FIG. 2).
20. Reinstall shroud (with screws) onto unit. See (FIG. 1).

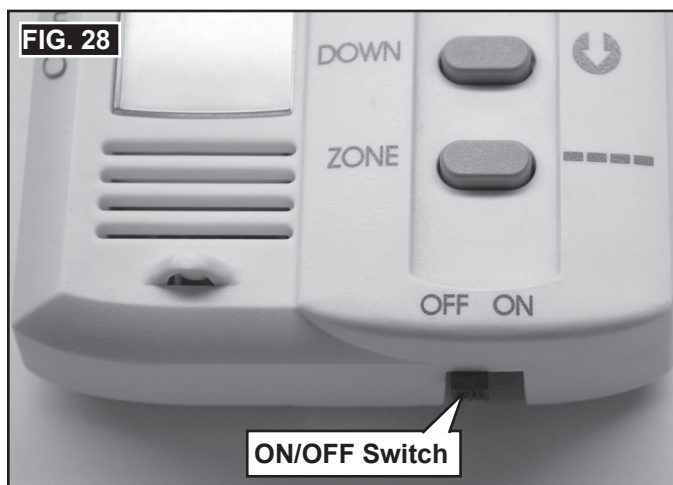
PROCEDURE

C. System Reset and Checkout

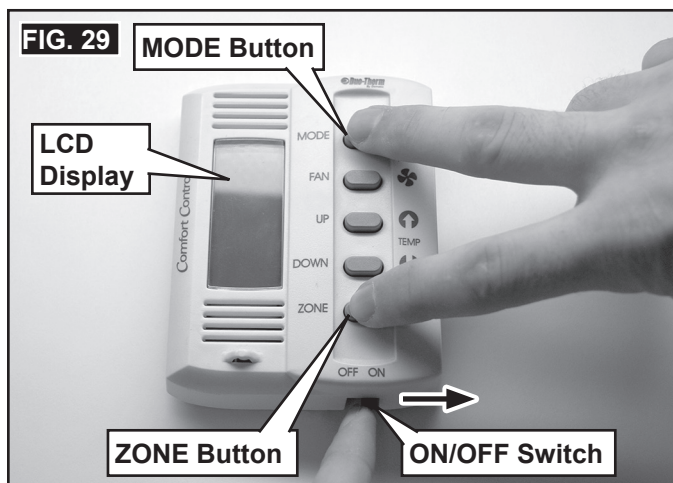
The Comfort Control Center (CCC) will require a system reset in order to recognize the power module board that was installed with this kit.

A system reset will remove all previously programmed memory, and will return the CCC to the factory presets for its current dip switch settings. See step (1) in section, "B. Install NEW Power Module Board & Ambient Sensor" on page (6).


1. Reconnect the positive (+) 12 Vdc terminal to supply battery, and 120 Vac power to RV.
2. Make sure the CCC **ON/OFF** switch is in the **OFF** position. See (FIG. 28).




3. Press and hold the **MODE** and **ZONE** buttons simultaneously, then turn the **ON/OFF** switch to the **ON** position. The LCD will display "FF". See (FIG. 29).



4. Release the **MODE** and **ZONE** buttons. The LCD will return to default display, completing CCC system reset.

 If dip switches are reconfigured after this step, this system reset will need to be performed again. See (FIG. 10).

5. Test operation of CCC and unit to verify all features are functioning properly.

 Refer to the CCC and unit operating instructions before testing system functions.