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**3313107.119
CONTROL ASSEMBLY CONVERSION KIT**

**TO CONVERT
HEAT PUMP
FOR USE WITH**

**3109228.001 & 3109228.019
5 BUTTON COMFORT CONTROL CENTER (CCC)
THERMOSTATS**

**(CONVERTS 459186.XXX (CCC 2) HEAT PUMP UNIT, MAKING IT
COMPATIBLE WITH 3109228.XXX (CCC) 5 BUTTON THERMOSTAT)**

SERVICE INSTRUCTIONS

**3313107.119
CONVERSION KIT**

REVISION A

Form No. 3314908.017 01/17
(French 3314934.013_A)
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LaGrange, IN 46761



**Read these instructions carefully. These
instructions MUST stay with this product.**

INTRODUCTION

This kit is designed to convert a (Dometic) Brisk Air 459186.XXX heat pump (purchased separately) (hereinafter referred to as “unit” or “product”) so it can be used with a 3109226.005 Control Assembly, CCC HS (included in kit) and a 3109228.0XX Comfort Control Center 5 button thermostat (purchased separately). It is not intended for and should not be used on any other model.

Conversion of the unit and the control assembly is to be made prior to installing the system.

Dometicv reserves the right to modify appearances and specifications without notice.

TABLE OF CONTENTS

INTRODUCTION	2
DOCUMENT SYMBOLS	2
IMPORTANT SAFETY INSTRUCTIONS.....	3
A. Recognize Safety Information	3
B. Understand Signal Words.....	3
C. Supplemental Directives.....	3
D. General Safety Messages	3
GENERAL INFORMATION.....	3
A. Scope Of Delivery.....	3
B. Required Tools.....	3
PROCEDURE.....	4
A. Unit Conversion	4
B. Control Assembly Conversion	7
C. System Configuration	7
D. System Reset And Checkout.....	8

DOCUMENT SYMBOLS



Indicates additional information that is **NOT** related to physical 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 indicates a hazardous situation that, if **NOT** avoided, could result in death or serious injury.

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

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 [installing / using / servicing / performing maintenance on] this product.

Incorrect [installation / operation / servicing / maintaining] of this product can lead to serious injury. Follow all instructions.



The installation **MUST** comply with all applicable local or national codes, including the latest edition of the following standards:

U.S.A.

- ANSI/NFPA70, National Electrical Code (NEC)
- ANSI/NFPA 1192, Recreational Vehicles Code

CANADA

- CSA C22.1, Parts I & II, Canadian Electrical Code
- CSA Z240 RV Series, Recreational Vehicles

D. General Safety Messages

⚠ WARNING Failure to obey the following warnings could result in death or serious injury:

- This product **MUST** be [installed / serviced] by 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.
- Do **NOT** add any devices or accessories to this product except those specifically authorized in writing by Dometic Corporation.

⚠ CAUTION CUT HAZARD. Wear protective gloves while handling or working near sheet metal components. Sheet metal parts could have sharp edges. Failure to obey this caution could result in injury.

GENERAL INFORMATION

A. Scope Of Delivery

- (1) Service Instructions
- (1) 3109226.005 Control Assembly, CCC HS
- (1) 3106483.005 Sensor, Ambient (26")
- (1) 302165.000 Cap, Splice
- (1) 3106568.045 Decal, Wiring Diagram
- (1) 309560.002 Tape, Aluminum Foil (2")

B. Required Tools

- Volt-Ohm Meter
- Capacitor Discharge Tool
- Electric Drill (optional)
- #2 Phillips Screwdriver / Bit
- 1/4" Hex Nut Driver / Bit
- 5/16" Hex Nut Driver / Bit
- Flat-Bladed Screwdriver (Long)
- Pliers
- Wire Cutter

PROCEDURE

A. Unit Conversion

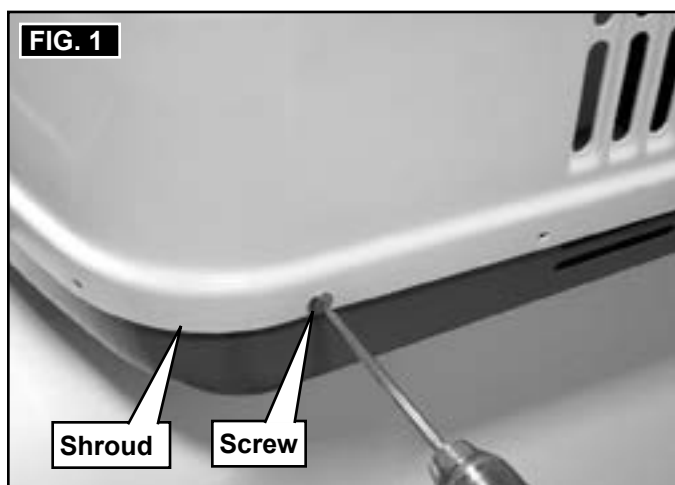
i Before starting conversion, locate rating plate on bottom of unit and verify model number is 459186.XXX.

- 1. ⚠ WARNING ELECTRICAL SHOCK HAZARD.** Disconnect 120 Vac power from RV. Failure to obey this warning could result in death or serious injury.

NOTICE Disconnect the positive (+) 12 Vdc terminal from supply battery. Otherwise, damage to unit could occur.

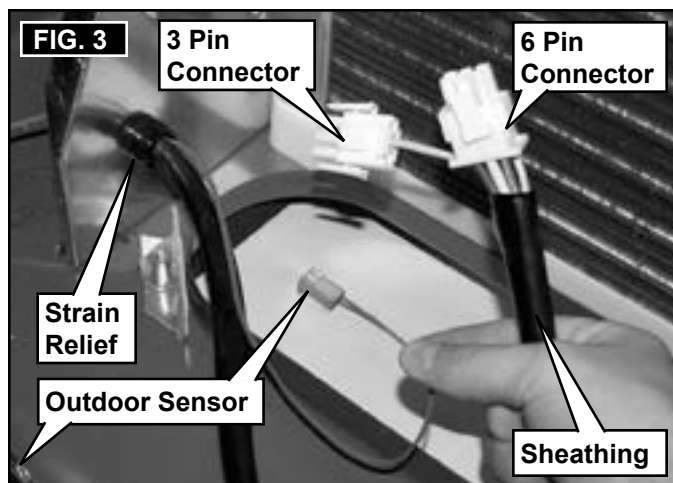
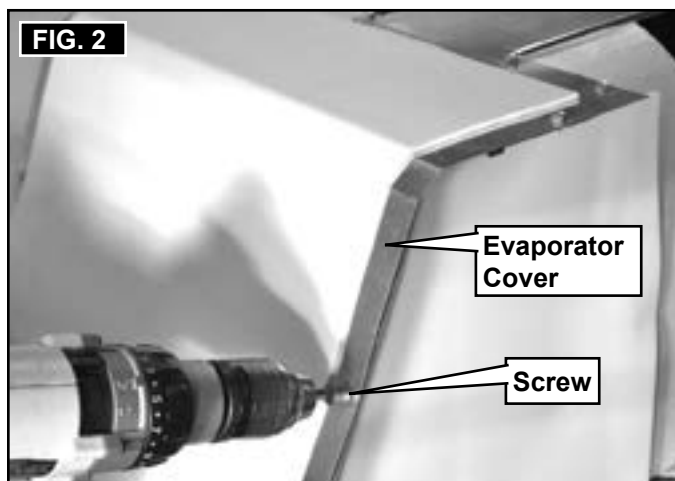
i If unit is **NOT** installed on RV and is disconnected from power, skip to step (2).

2. Remove shroud (with 14 screws) from unit. Save for reinstallation later. See (FIG. 1).

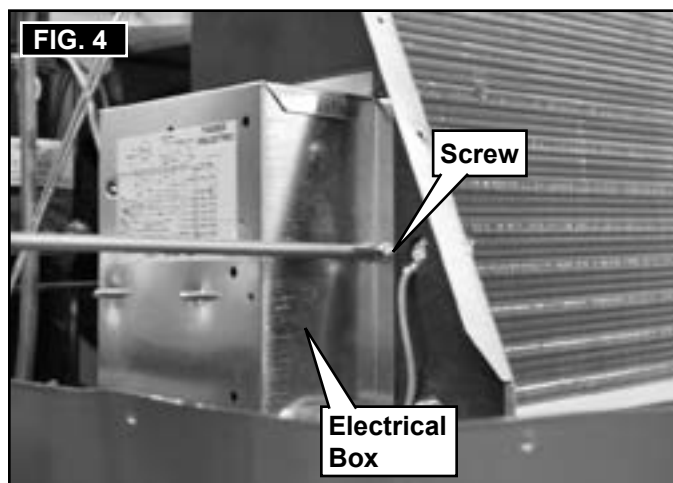


3. Remove evaporator cover (with 5 screws). Save for reinstallation later. See (FIG. 2).

i This will expose the 3 pin connector, 6 pin connector, outdoor sensor, and strain relief. See (FIG. 3).



4. Remove electrical box (with 2 screws) from side of evaporator bulkhead. Save for reinstallation later. See (FIG. 4).



5. **⚠ WARNING ELECTRICAL SHOCK HAZARD.** The capacitor(s) in this product may contain stored electrical energy. **ALWAYS** discharge a capacitor properly before working near it. **NEVER** use a screwdriver or similar object to discharge a capacitor. Failure to obey this warning could result in death or serious injury.

Discharge capacitor using an appropriate capacitor discharge tool. Then **VERIFY** capacitor is discharged (using a volt-ohm meter). See (FIG. 5).

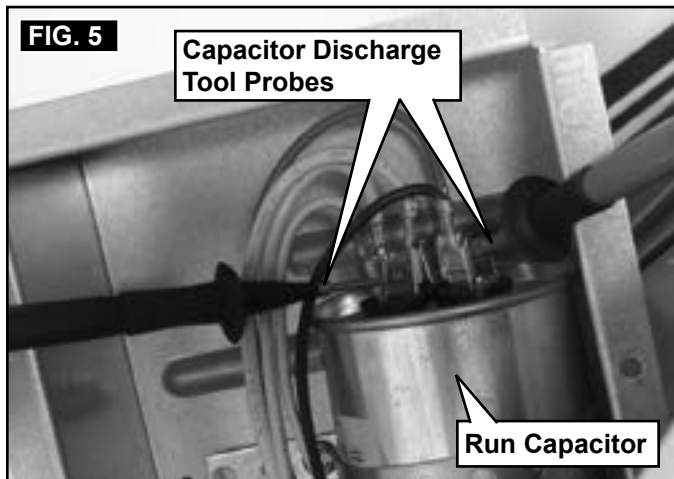
i Do **NOT** use a volt-ohm meter to discharge a capacitor. The high impedance of modern volt-ohm meters make them ineffective for discharging capacitors.

Capacitors may have more than (2) terminals. Touch and hold capacitor discharge

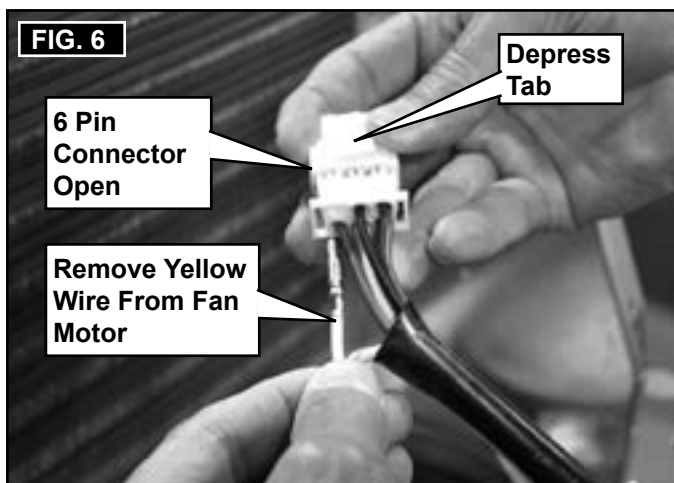
PROCEDURE

tool's probe to **ALL** terminals on each capacitor until fully discharged.

Follow all instructions included with your volt-ohm meter and capacitor discharge tool.

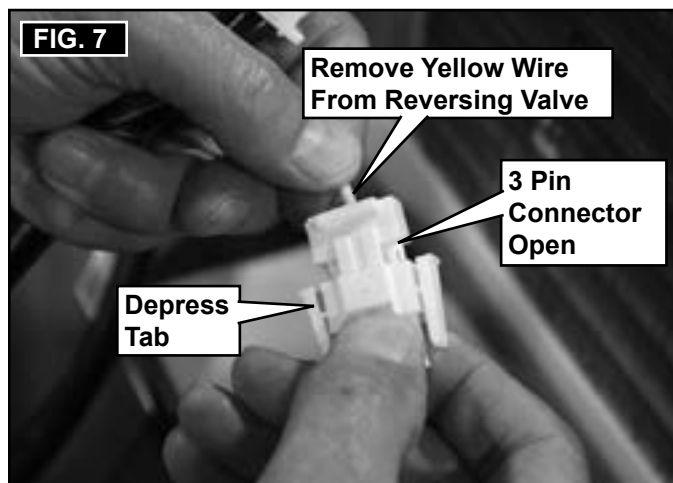


6. Remove strain relief containing plastic sheathing and wires at evaporator bulkhead. Save for reinstallation later. See (FIG. 3).
7. Pull sheathing back (away from 6 pin connector) about 3 inches. See (FIG. 3).
8. Depress tab on both sides of 6 pin connector and slide open. See (FIG. 3).
9. Remove **YELLOW** wire (from fan motor) from 6 pin connector. See (FIG. 6).

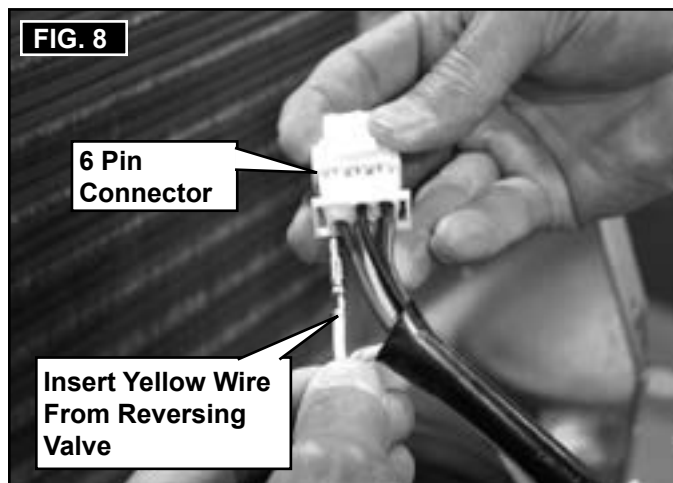


10. Pull **YELLOW** wire (from fan motor) out of plastic sheathing and through hole in evaporator bulkhead.

11. Depress tab on both sides of 3 pin connector and slide open. See (FIG. 7).



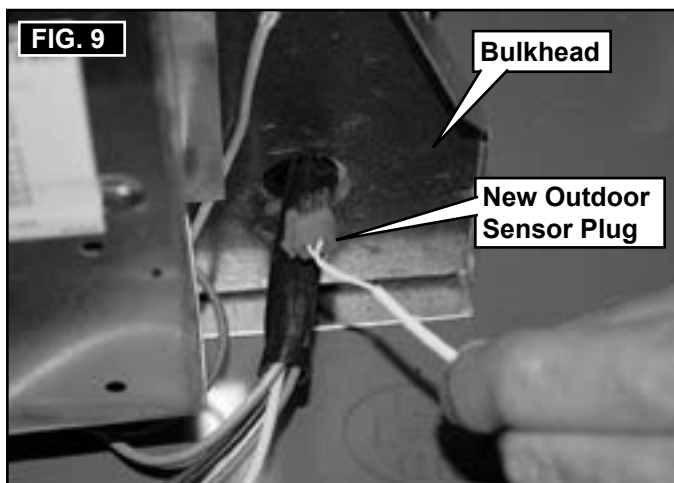
12. Remove **YELLOW** wire (from reversing valve) and discard 3 pin connector. See (FIG. 7).
13. Insert **YELLOW** wire (from reversing valve) into 6 pin connector, and slide closed to secure wire. See (FIG. 8).



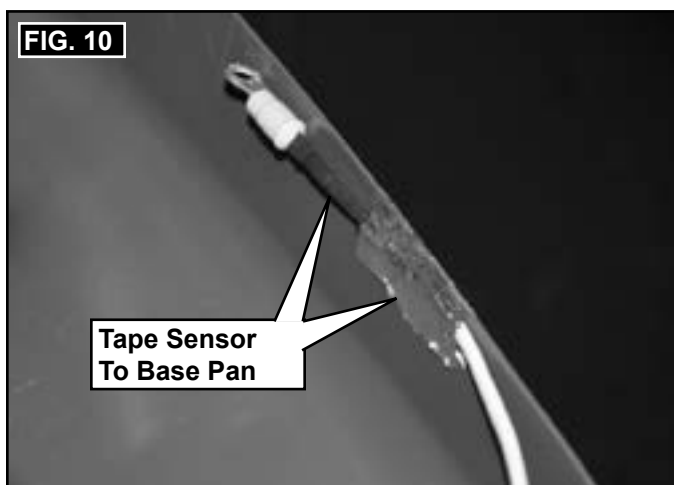
14. Slide sheathing back up against 6 pin connector. See (FIG. 3).
15. Remove tape holding red outdoor sensor wire to base pan. Then pull sensor through hole in bulkhead and discard.

PROCEDURE

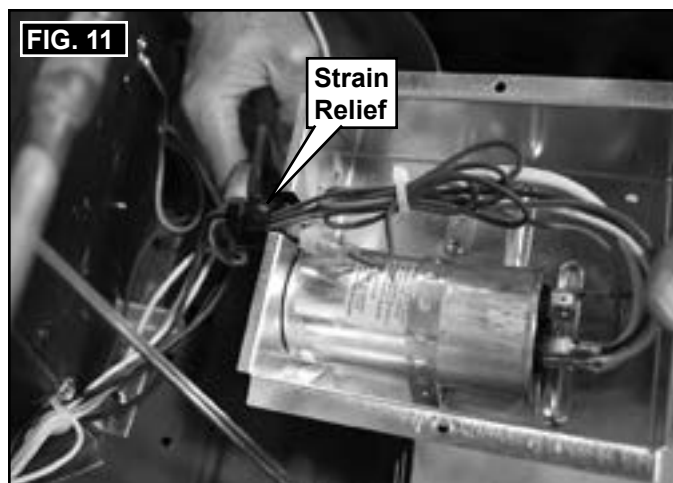
16. Route new outdoor sensor (plug) through hole in bulkhead. See (FIG. 9).



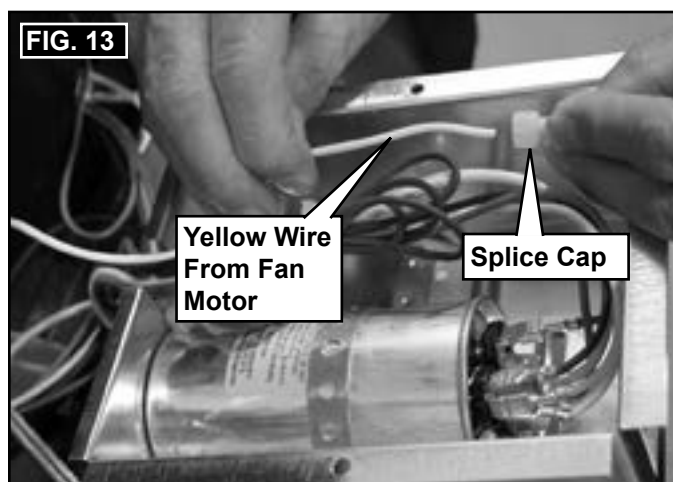
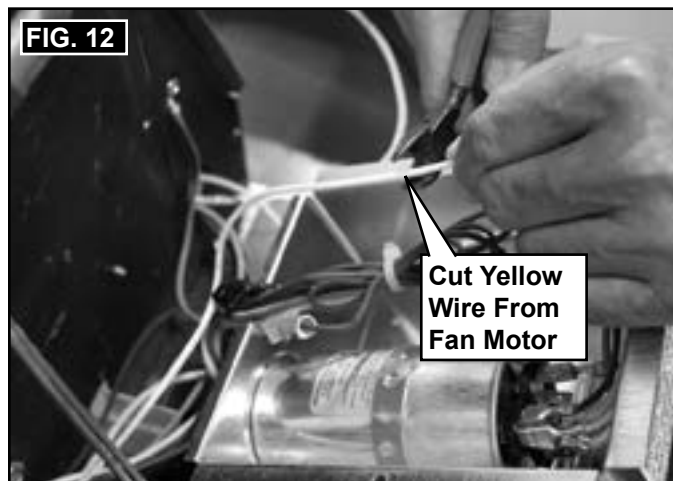
17. Reinstall strain relief to contain plastic sheathing and wires at evaporator bulkhead. See (FIG. 3).
18. Using aluminum foil tape (provided), tape new outdoor sensor in position on base pan at same location as old (removed) sensor. See (FIG. 10).



19. With electrical box removed from evaporator bulkhead, remove strain relief from bottom of electrical box. Save for reinstallation later. See (FIG. 4) & (FIG. 11).



20. Route **YELLOW** wire (from fan motor) into electrical box.
21. Cut **YELLOW** wire (from fan motor) inside electrical box (leaving approximately 2"), and cap with splice cap (provided). See (FIG. 12) & (FIG. 13).

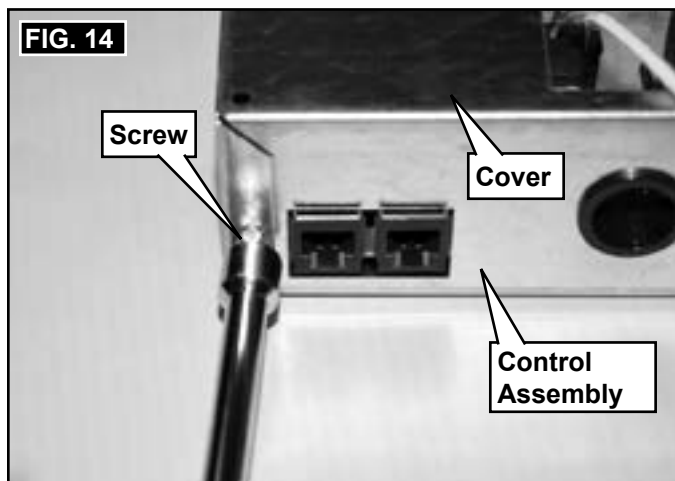


PROCEDURE

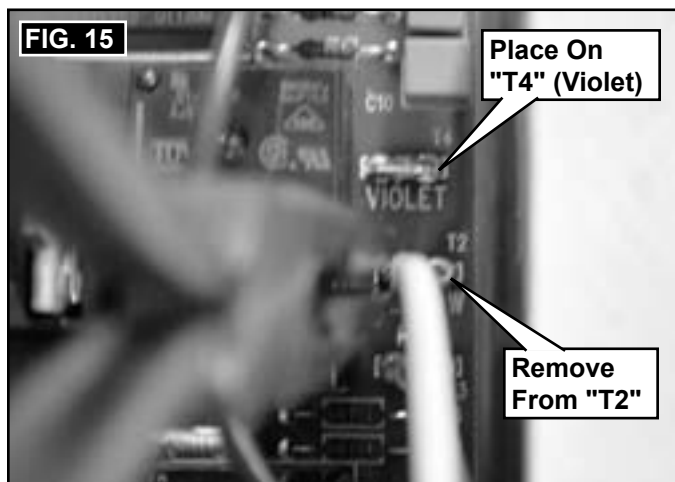
22. Reposition wires leading from fan motor and compressor (including cut **YELLOW** wire) at bottom of electrical box, and reinstall strain relief. See (FIG. 11).
23. Affix new wiring diagram (3106568.045 - provided) over existing wiring diagram on electrical box.
24. Verify all connections are secure, with no loose wires.
25. Arrange wires inside electrical box, and reinstall electrical box cover (with screws). See (FIG. 4).
26. Reinstall shroud (with screws) onto unit. See (FIG. 1).

B. Control Assembly Conversion

1. Remove cover (with 6 screws) from control assembly. Save for reinstallation later. See (FIG. 14).

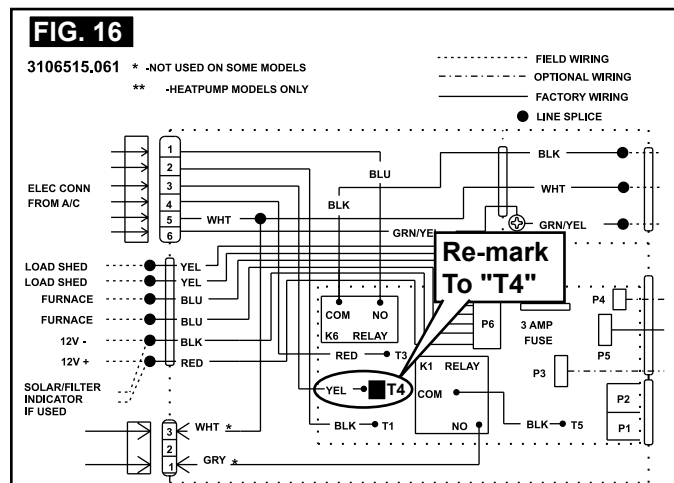


2. Disconnect **YELLOW** wire from terminal "T2" on power module board. See (FIG. 15).



3. Connect **YELLOW** wire (disconnected from terminal "T2") to terminal "T4" (violet) on power module board. See (FIG. 15).

4. Reinstall cover (with screws) onto control assembly. See (FIG. 14).
5. Mark out "T2" on control assembly wiring diagram, and write "T4" (with ink pen) in its place. See (FIG. 16).



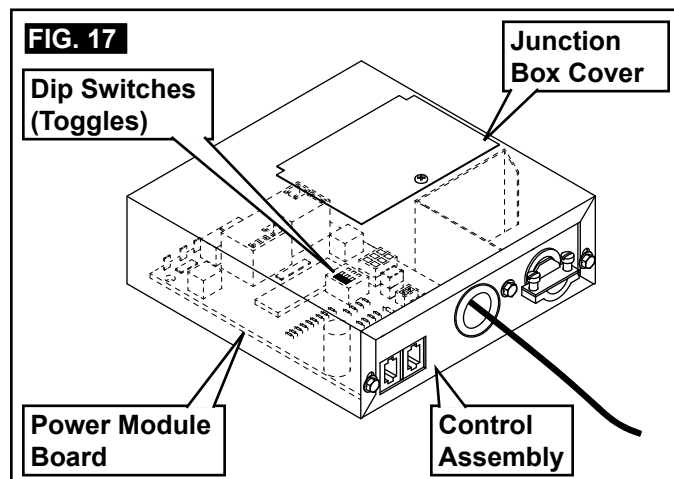
6. Make appropriate connections to control assembly (6 pin connector and outdoor sensor).

i The conversion is now complete. This unit and control assembly combination can now be used with a Comfort Control Center 5 button thermostat (part number 3109228.XXX).

C. System Configuration

1. Remove junction box cover (with screw) from control assembly (if applicable). Save for reinstallation later. See (FIG. 17).

i If junction box cover is **NOT** pre-installed on control assembly (but provided in separate bag), skip to step (2).



PROCEDURE

2. Toggle appropriate dip switches (on new power module board) to the **ON** position. See (FIG. 17).

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

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


Compare dip switch settings to old power module board.

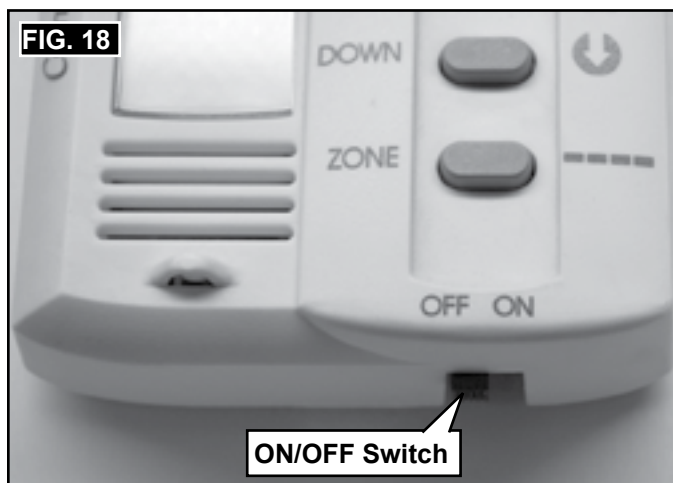
3. Reinstall junction box cover (with screw) onto control assembly. See (FIG. 17).

D. System Reset And Checkout

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

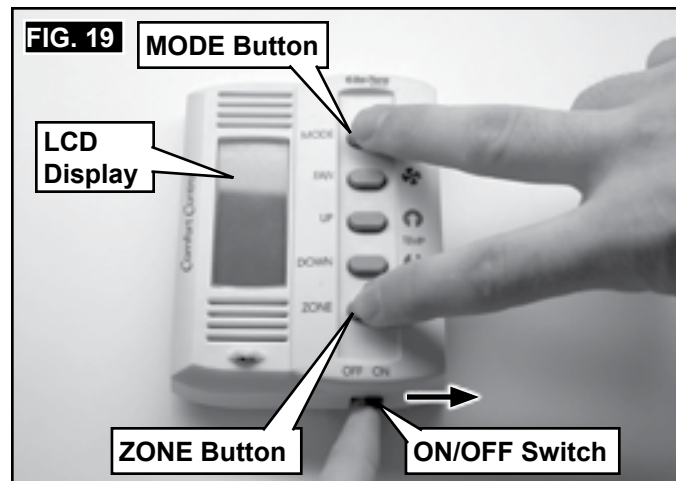
i A system reset will remove all previously programmed memory, and will return the CCC to factory presets (for its current dip switch settings). See step (2) in section, "C. System Configuration".

-  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. 18).



3. Press and hold **MODE** and **ZONE** buttons simultaneously, then turn **ON/OFF** switch to the **ON** position. The LCD will display "FF". See (FIG. 19).

i If LCD displays code "EE", repeat this step. If code "EE" persists, check the communication cables and their connections.



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

i If dip switches are reconfigured after this step, it will be necessary to perform this system reset again. See (FIG. 17).

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

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