
Foreword

This service manual is the result of the dedication of The Dometic Corporation and its engineers in giving service people the necessary instruction for making accurate analyses of certain conditions. Provided is a diagnostic chart leading a qualified mechanic into the service manual pages to locate and solve symptoms which may occur. Dometic has continued its commitment in providing service people with this, the most up-to-date information about servicing Dometic RV accessories.

CONTENTS

PAGE NO.

DIAGNOSTIC FLOW CHART	1
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SECTION 1

OPERATION

Refrigerator Operation	3
------------------------------	---

SECTION 2

AC VOLTAGE

AC Voltage Requirements.....	5
------------------------------	---

SECTION 3

AC COMPONENTS

Heating Element	5
-----------------------	---

SECTION 4

DC VOLTAGE

DC Voltage Requirements	6
-------------------------------	---

SECTION 5

DC COMPONENTS

5.1 Thermistor	6
5.2 Solenoid Valve	7
5.3 Igniter.....	7
5.4 High Voltage Cable	8
5.5 Electrode	8
5.6 Upper Circuit Board	8
5.7 Lower Circuit Board	8
5.8 Door Switch	10
5.9 Fuses	11
5.10 Climate Control Heater	10

SECTION 6

LP GAS

LP Gas Requirements	11
---------------------------	----

SECTION 7

LP GAS COMPONENTS

7.1 Manual Gas Shut-Off Valve	11
7.2 Orifice	12
7.3 Thermocouple	12
7.4 Burner	12
7.5 Flue Baffle	12
7.6 Flue Tube	12

CONTENTS

PAGE NO.

SECTION 8

WIRING

8.1 External Wiring	12
8.2 Internal Wiring	13

SECTION 9

OTHER

9.1 Leveling	13
9.2 Ventilation	14
9.3 Air Leaks.....	14
9.4 Door Position	16
9.5 Ambient Temperature	16
9.6 Cooling Unit.....	16
9.7 Food Storage.....	16
9.8 High Humidity	17
9.9 Interior Liner Seal to Frame.....	17

This program will address the most common system problems associated with the RM2652, RM2852, RM2612 & RM2812 refrigerators supplied by The Dometic Corporation. Our intent is to provide you with a guideline of checks to make, should you encounter one of the following symptoms.

SYMPTOM	CAUSE	REFER TO	STEP
REFRIGERATOR SECTION			
1. No operation - no panel lights	Operation DC Volts Fuse Wiring Upper Circuit Board Lower Circuit Board	1 4 5.9 8.1 & 8.2 5.6 5.7	A,B,C
2. No operation - has panel lights	Operation DC Volts Thermistor Fuses Wiring Lower Circuit Board	1 4 5.1 5.9 8.2 5.7	A,B,C
3. No AC operation - operates on gas mode	Operation AC Volts Fuse Heating Element Wiring Lower Circuit Board	1 2 5.9 3 8.2 5.7	A, B
4. No Gas operation - operates on AC mode	Operation LP Gas Manual Gas Valve Igniter High Voltage Cable Electrode Solenoid Wiring Lower Circuit Board	1 6 7.1 5.3 5.4 5.5 5.2 8.2 5.7	A,C
5. Insufficient cooling on all modes.	Ventilation Leveling Ambient Temperature Air Leaks Thermistor Cooling Unit	9.2 9.1 9.5 9.3 5.2 9.6	
6. Insufficient cooling on AC - cools properly on gas mode.	AC Volts Heating Element Lower Circuit Board	2 3 5.7	A, B

SYMPTOM	CAUSE	REFER TO	STEP
7. Insufficient cooling on Gas - cools properly on AC mode.	LP Gas Orifice Flue Baffle Flue Tube Burner Lower Circuit Board	6 7.2 7.5 7.6 7.4 5.7	C
8. Freezes.	Operation Thermistor Lower Circuit Board	1 5.1 5.7	
9. Check light on.	DC Volts Wiring LP Gas Manual Gas Valve Solenoid Orifice Burner Thermocouple Lower circuit Board	4 8.2 6 7.1 5.2 7.2 7.4 7.3 5.7	A,C
10. Interior light on when door is closed.	Wiring Door Switch Door Position	8.2 5.8 9.4	
11. Rapid formation of frost.	Food Storage Interior Liner to Frame High Humidity Air Leaks	9.7 9.9 9.8 9.3	
12. Water on frame.	Interior Liner to Frame High Humidity Air Leaks Climate Control Heater	9.9 9.8 9.3 5.10	

SECTION 1 REFRIGERATOR OPERATION

DISPLAY PANEL (RM2652, RM2852)

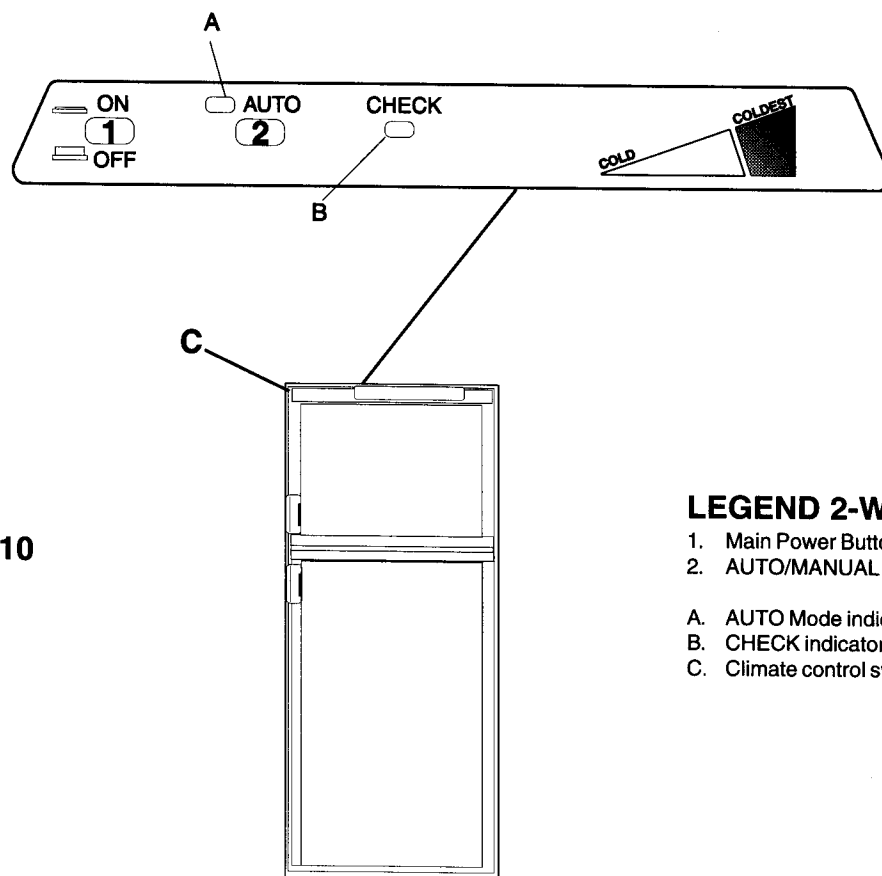
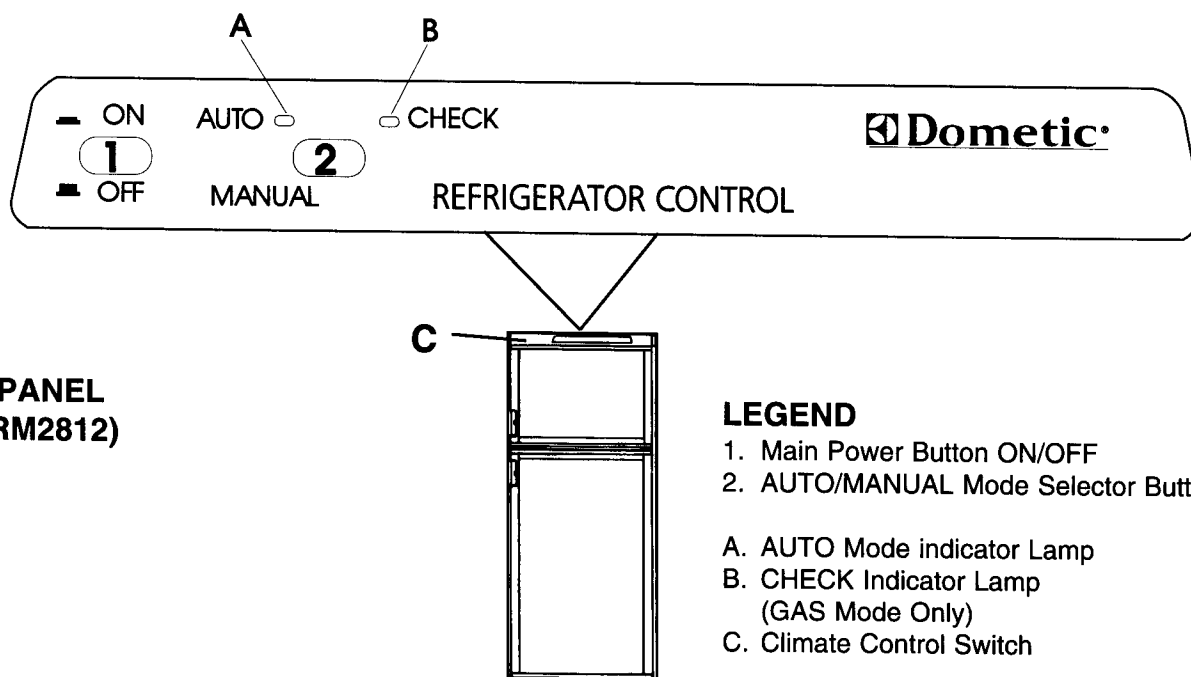


FIG. 10

LEGEND 2-WAY MODEL

1. Main Power Button ON/OFF
 2. AUTO/MANUAL Mode Selector Button
- A. AUTO Mode indicator lamp
B. CHECK indicator lamp (Gas Mode Only)
C. Climate control switch

DISPLAY PANEL (RM2612, RM2812)



LEGEND

1. Main Power Button ON/OFF
 2. AUTO/MANUAL Mode Selector Button
- A. AUTO Mode indicator Lamp
B. CHECK Indicator Lamp
(GAS Mode Only)
C. Climate Control Switch

START-UP INSTRUCTIONS

Before starting the refrigerator, check that all the manual gas valves are in the ON position. DO NOT forget the manual shutoff valve on the rear of the refrigerator.

This refrigerator is equipped with a control system, which can automatically select the most suitable energy source which is available, either 120 Volt AC or LP gas operation. The refrigerator can be operated in either the AUTO mode (thermostat factory preset below the safe food storage temperature) or MANUAL mode (continuous operation - no thermostat control).

NOTE: Under certain cool weather conditions, the food in the lower portion of the fresh food compartment may freeze if operated for an extended period of time on the MANUAL mode.

- A. A 12 volt DC supply must be available for the electronic control to function. The refrigerator will work down to 9.6 volt DC.
- B. Press the main power ON/OFF button (1) to the DOWN position.
- B. In AUTO mode operation, the temperature is controlled by a single temperature setting, on the energy source selected by the control system. (See Auto Mode)
- C. In MANUAL mode operation, the refrigerator will run continuously on the energy source selected by the control system. (See Manual Mode)

NOTE: The food in the lower compartment may be frozen if the refrigerator is left on MANUAL mode.

TO SHUT OFF THE REFRIGERATOR

The refrigerator may be shut off while in any mode of operation by pressing the main power ON/OFF button to the UP (OFF) position. This shuts off all DC power to the refrigerator, including the interior light.

OPERATING MODES

AUTO MODE

Press the AUTO/MANUAL mode selector button (2) to the DOWN position. The AUTO mode indicator lamp (A) will illuminate.

When operating in the AUTO mode, the AUTO mode indicator lamp (A) will illuminate. The control system will automatically select between AC and GAS operation with AC having priority over GAS. If the control system is operating on AC energy and it then becomes unavailable, the system will automatically switch to GAS. As soon as AC becomes available again the control will switch back to AC operation.

If 120 volts AC is not available, the control system will automatically switch to GAS operation. Within 45 seconds the burner should be ignited and operating normally. If unsuccessful, the CHECK indicator lamp (B) will illuminate.

To restart an ignition attempt with the CHECK lamp illuminated or to clear (turn off) the CHECK lamp, press the main power ON/OFF button to the OFF and then to the ON position. The control system will attempt a new 45 second ignition sequence.

On the initial refrigerator start-up on gas (120 volts AC is not available), it may take longer than 45 seconds to allow air to be purged from the gas line. If the refrigerator has not been used for a long time or the LP tanks have just been refilled, air may be trapped in the supply lines. To purge the air from the lines may require resetting the main power ON/OFF button (1) three or four times. If repeated attempts fail to start the LP gas operation, check to make sure that the LP gas supply tanks are not empty and all manual shutoff valves in the lines are open.

NOTE: DO NOT continue to reset GAS operation if the CHECK indicator lamp continues to be illuminated after 3 or 4 tries.

If 120 volts AC becomes available while the CHECK indicator lamp is on, the control system will switch to 120 volt AC operation. The CHECK lamp will not turn off until the main power ON/OFF button is pressed to the OFF then ON position.

In AUTO mode operation, the temperature is controlled by a single temperature setting.

MANUAL MODE

When operating in the MANUAL mode, the AUTO mode indicator lamp (A) will be off, and the refrigerator will run continuously on the energy source selected by the control system.

NOTE: The food in the lower compartment may be frozen if the refrigerator is left on "MANUAL" mode.

STANDBY MODE

This control system contains a feature that will continue to operate the cooling system in the event of a failure of a major operating component. If the control cannot read the temperature sensor and operate at the preset temperature, then the control will run the cooling unit like the MANUAL mode.

The refrigerator will continue to operate in this mode indefinitely or until a new sensor is installed and the system is reset.

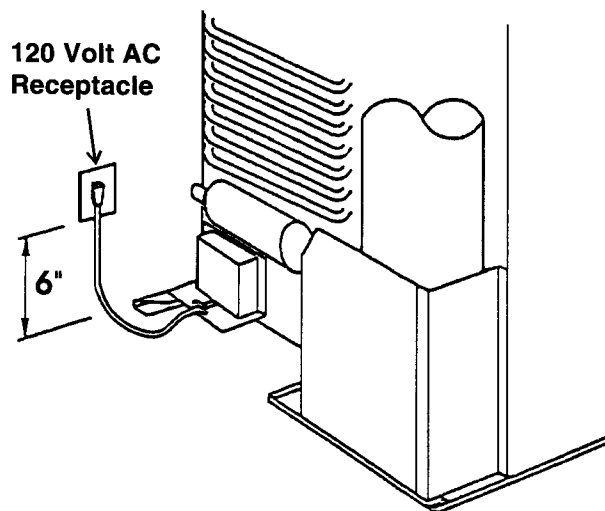
SECTION 2

AC VOLTAGE REQUIREMENTS

The refrigerator is a 120 volt AC, 60 Hz appliance. The proper operating range is **100 to 132 volts**. Check the AC volts at the receptacle where the refrigerator is attached. If voltage is outside of the proper operating range, correct the power source problem.

If voltage drops below 100 volts, cooling efficiency will decrease with voltage decrease. The refrigerator will not switch to another mode of operation until all **AC power is lost**.

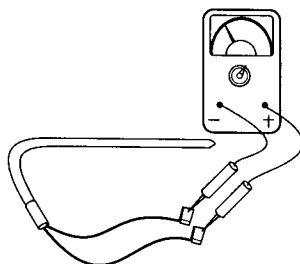
The refrigerator is equipped with a three-prong (grounded) plug for protection against shock hazards, and should be plugged directly into a properly grounded three-prong receptacle. DO NOT cut or remove the grounding prong from this plug. The power cord should be routed to avoid direct contact with the burner cover, flue cover or manual gas shutoff valve knob. The free length of the cord is two feet and therefore recommended that the receptacle be located to the left side of the refrigerator (viewed from the rear) and approximately six inches from the floor. This allows easy access through the vent door.



SECTION 3

AC COMPONENTS-HEATING ELEMENT

The heating element is designed to deliver a predetermined amount of heat to the cooling unit. To check a heating element, remove the heater leads from the lower circuit board and measure for proper resistance across the two leads with a properly calibrated ohm



meter. This check is to be done with the heating element at room temperature.

You should obtain the following readings, $\pm 10\%$:

	WATTS	VOLTS	OHMS
RM2612	295	120	48
RM2652	325	120	44
RM2812	325	120	44
RM2852	325	120	44

SECTION 4

DC VOLTAGE REQUIREMENTS

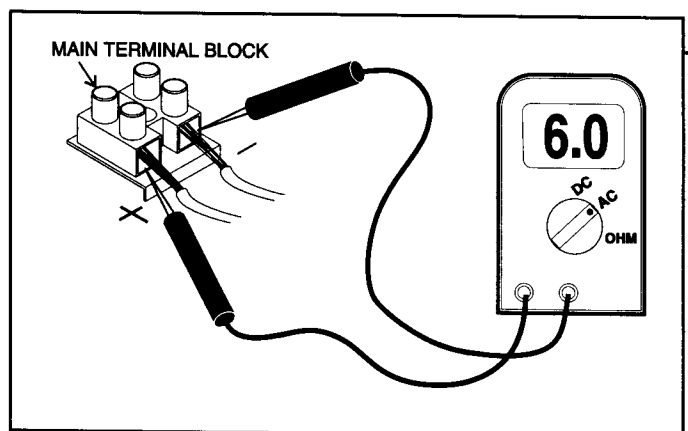
For the refrigerator to operate on any mode, DC voltage must be supplied to the terminals at the rear of the refrigerator.

Clean Direct Current (DC) power is mandatory for high-tech circuits to operate as designed. The sources for DC power are a battery and a converter.

A battery will provide straight line DC power, but extended operation will require recharging of the battery by the converter or the alternator.

The converter and alternator produce DC power by a series of diodes that rectify alternating current to DC. A battery or capacitors can be used to clean up the AC ripple that is present after AC voltage has been rectified.

AC ripple can be measured by a digital voltmeter set on the AC scale at the main terminal block connections. Six volts AC or less is acceptable.



NOTE: A brief interruption of the DC power supply while refrigerator is operating on gas can cause a check light; for example:

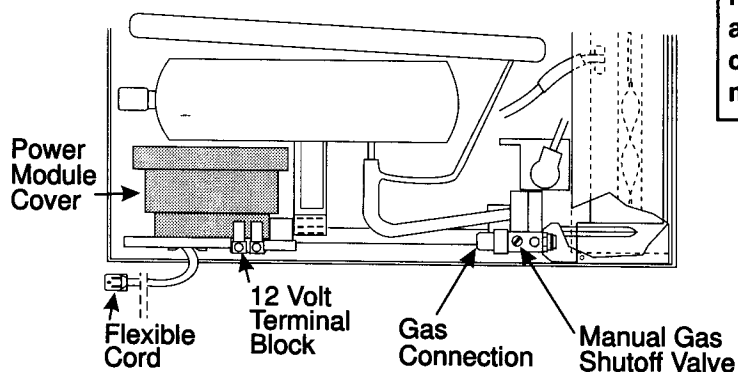
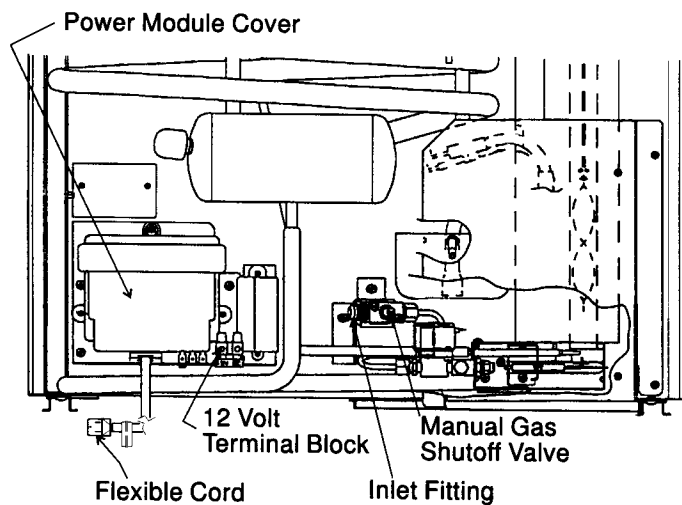
Turning the refrigerator OFF-ON while operating in the gas mode can cause a check light.

The switching of relays from converter power to battery power when unplugging from shore power or shutting down of the generator could interrupt DC power long enough to cause a check light.

The thermocouple produces 25–35 MVDC when operating. When DC power is interrupted and re-stored, the thermocouple may not have sufficient time to cool. If the power module sees above 6 MVDC, when power is restored the power module will assume a problem in the gas mode and immediately turn on the check light.

The operational range of the unit is a minimum of 9.6V DC to a maximum of 22V DC. At 22V DC, the unit will automatically shut down until voltage has decreased to 18V DC for proper operation; however, the panel lights will continue to illuminate until voltage has dropped to 4V DC or below.

Connecting the refrigerator to an unregulated converter can result in improper operation of the refrigerator. Do not use the body or chassis of the RV as a substitute for either or the two conductors. Proper polarity is crucial for refrigerator operation. Check for proper DC voltage at the positive and negative terminals at the back of the unit. If the voltage is outside the operational range, correct the power supply problem.

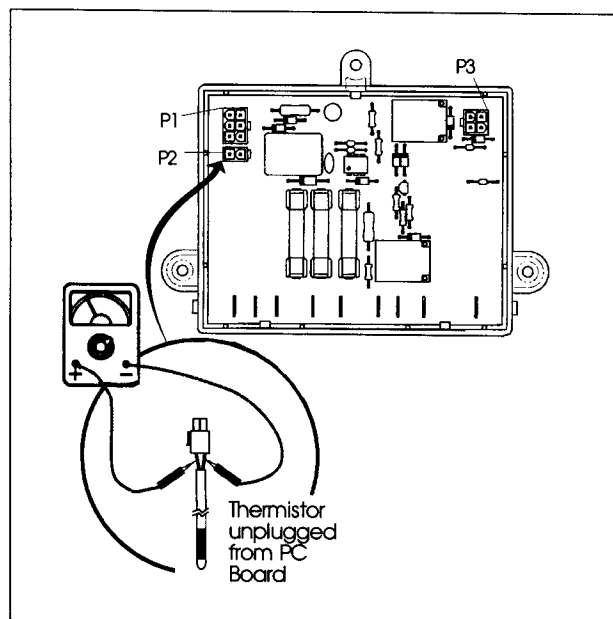


SECTION 5 DC COMPONENTS

5.1 THERMISTOR

To determine if the thermistor is functioning properly, perform the following test.

Remove the cover from lower circuit board. Disconnect the thermistor harness from the P2, 2-pin terminal on the lower circuit board. Place the thermistor in a glass of ice water, approximately 33°F to 35°F. Wait 2 to 3 minutes. Using a properly calibrated ohm meter, place a probe on each terminal point. You should get a reading of approximately 7,000 to 10,000 ohms. Normal failure for this type of device is to have a very high resistance. A defective thermistor could cause an over-cooling condition on all modes.



NOTE: Refer to Sec. 5.7 for lower circuit board identification.

CAUTION

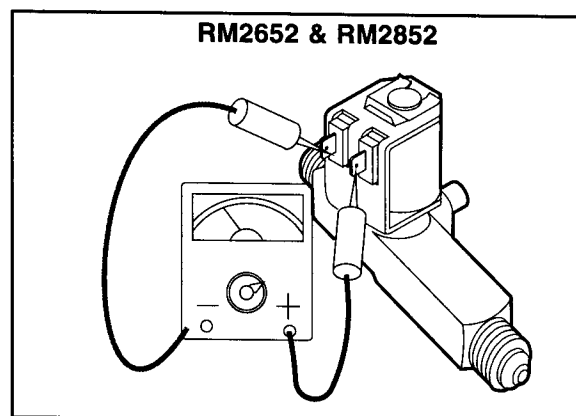
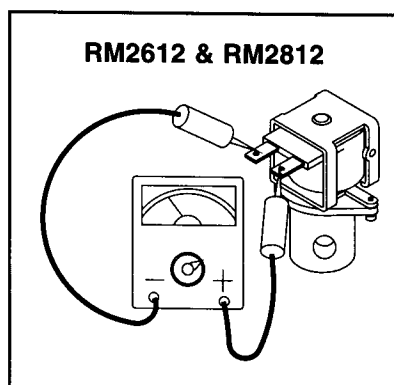
NEVER use a thermistor adjuster or a thermistor for any other model of refrigerator. Either of these can cause an over-cooling problem similar to manual mode of operation.

5.2 SOLENOID VALVE

When the refrigerator selects LP gas operation, DC volts are sent to the solenoid coil which opens the internal valve.

Check the solenoid coil with a properly calibrated ohm meter. Remove the connector from the solenoid and measure the resistance across the terminals. The proper reading would be 49 ohms with tolerance range of ten percent.

Next, hook up a manometer at the test port. Then check for DC volts at gas valve terminals while the unit is in trial-for-ignition (approximately 45 seconds). If DC volts are present and pressure is low, replace the valve. If DC volts are not present at the valve while the unit is in trial-for-ignition (approximately 45 seconds), verify that the wire at Plug 3, Terminal 2 on lower circuit board have DC volts (9 or more). If the valve chatters, check for low input voltage to the valve (below 9 volts DC).

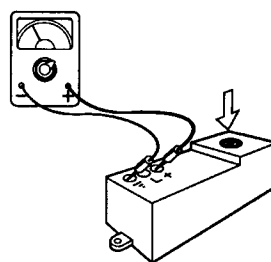


5.3 IGNITER

The igniter is an electronic device that produces high voltage to create a spark at the burner, only on gas mode.

First verify proper voltage at the positive (+) and ground (–) terminals of the ignitor. The reading should be within one volt of incoming voltage at the main

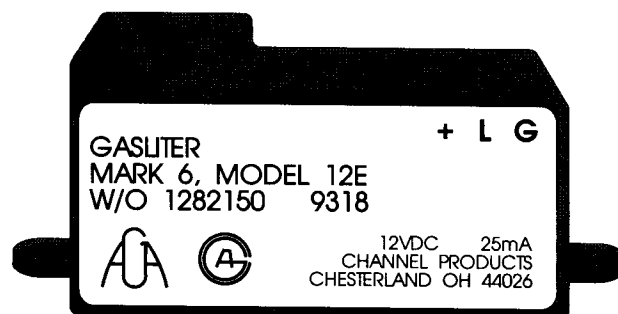
terminal block during trial-for-ignition (approximately 45 seconds). A voltage drop of more than one volt would indicate a loose connection (see Sec. 8.2) or a circuit board problem (see Sec. 5.7A and 5.7C).



Next, disconnect DC power at refrigerator terminal block. Remove high voltage cable from igniter. Reconnect DC power – the igniter should produce a sparking sound, during trial-for-ignition (approximately 45 seconds). If not, replace the igniter. If sparking sound, the igniter is good.

The igniter installed on the refrigerators as original equipment is part number 2931132019 (RV Gas Model 679). This igniter is rated 50 MA. This igniter may also be used on any other model.

DO NOT install the Channel Mark 6, Model 12E igniter (shown below) as a service replacement part.



Installing the Channel Mark 6, Model 12E, rated 25 MA can result in failure to ignite on gas if the DC power supply is below 12.5 volts DC. The igniter will see low voltage and not produce a spark, resulting in flame failure lockout.

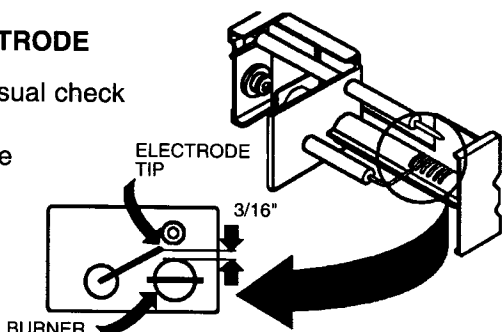
Installation of the Channel Products, Inc., Gasliter Mark 6, Model 12E, will **VOID** the Warranty on the refrigerator.

5.4 HIGH VOLTAGE CABLE

Disconnect DC power at the refrigerator terminal block. Disconnect high voltage cable from electrode. Reconnect DC power. If sparking starts during trial-for-ignition (approximately 45 seconds), the cable is good (see Sec. 5.5). If there is no sparking during trial-for-ignition (approximately 45 seconds), disconnect DC power and disconnect high voltage cable at the igniter. Reconnect DC power. If there is a sparking sound from the igniter during trial-for-ignition (approximately 45 seconds), then replace high voltage cable.

5.5 ELECTRODE

First, do a visual check for cracks or breaks on the ceramic insulator. Verify the mounting bracket is attached properly to the electrode. If either of the above is found, replace the electrode. The spark gap must be set at three sixteenths ($3/16''$) of an inch and tip of electrode above the slots in the burner.



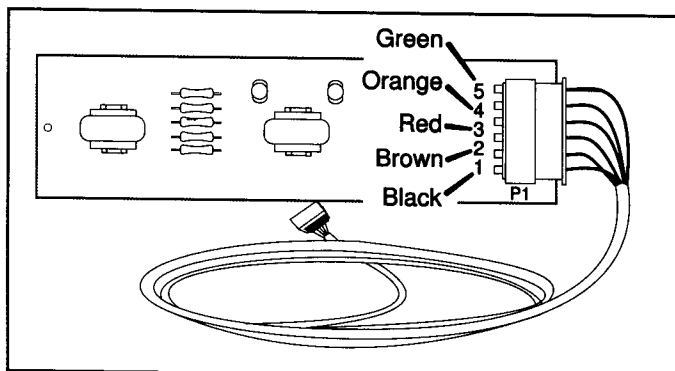
If igniter (see Sec. 5.3) and high voltage cable (see Sec. 5.4) are good and there is no spark at the tip of the electrode, replace the electrode.

5.6 UPPER CIRCUIT BOARD

NOTE: The PAL tester will allow for proper testing of the integrity of the upper and lower circuit boards. PAL is available from your Dometic parts distributor.

With main ON/OFF switch on display panel in OFF position:

Check for DC voltage at Plug 1, Terminal 4 (orange wire) and terminal 5 (red wire) negative (–) DC on the lower circuit board. If no voltage, then check fuse



condition. Replace if blown. Check for DC voltage between J4 and J10 terminals on the lower circuit board. If fuse is good and there is battery voltage at J4, remove and replace lower circuit board.

Next, check for DC voltage at the upper circuit board between terminal 4 (orange wire) and terminal 3 (red wire) which is negative (–) DC. If no voltage, and your previous check proved voltage at the lower circuit board between these wires, replace the cable assembly. If DC volts are present, proceed to the next check.

With main ON/OFF switch on display panel in ON position:

Check for DC volts between terminal 3, red wire (–) negative and terminal 5 (green wire) and terminal 1 (black wire). If there is no voltage, the ON/OFF switch on upper circuit board is defective. Replace the upper circuit board. If voltage is present, the ON/OFF switch is good.

Next, do the same voltage test at the lower circuit board. Red wire (–) negative plug 1, terminal 5, to green wire, plug 1, terminal 1 and black wire, plug 1, terminal 3. If there is no voltage and you had voltage on previous test, the cable assembly is defective and you must replace it. If voltage is present, the ON/OFF switch on the upper circuit board and cable assembly is good.

5.7 LOWER CIRCUIT BOARD

NOTE: The PAL tester will allow for proper testing of the integrity of the upper and lower circuit boards. PAL is available from your Dometic parts distributor.

The controls for Models RM2612, RM2812, RM2652 and RM2852 are unique to these models. They are **NOT** interchangeable with any other models.

On Model RM2612, below Serial Number 41900000, there were three separate and distinct versions of controls as described below. The various components **MUST NOT** be mixed.

If you suspect mismatched part numbers, compare the part numbers on parts to the ones listed below to ensure a proper match.

The RM2612 with Serial Number 41900000 or higher will have Version III controls as original equipment.

The RM2812, RM2652 and RM2852 should have only Version III controls as original equipment.

CAUTION

MIXING OF ELECTRICAL COMPONENTS FROM OTHER MODEL REFRIGERATORS AND WITHIN THE "12 SERIES" MODEL REFRIGERATORS MAY CAUSE IMPROPER OPERATION (i.e. NO COOLING, OVER-COOLING) AND DAMAGE TO POWER MODULE, DISPLAY PANEL OR BOTH.

When Replacement Electronic Controls on Model RM2612, with Serial Numbers below 41900000 are required, use 3108701.601 Electronic Control Kit. It contains a matching set of controls as in Version III.

Individual parts can be ordered for all RM2812, RM2652 and RM2852 refrigerators and any RM2612 with a serial number over 41900000. These were produced with Version III controls as original equipment.

VERSION I

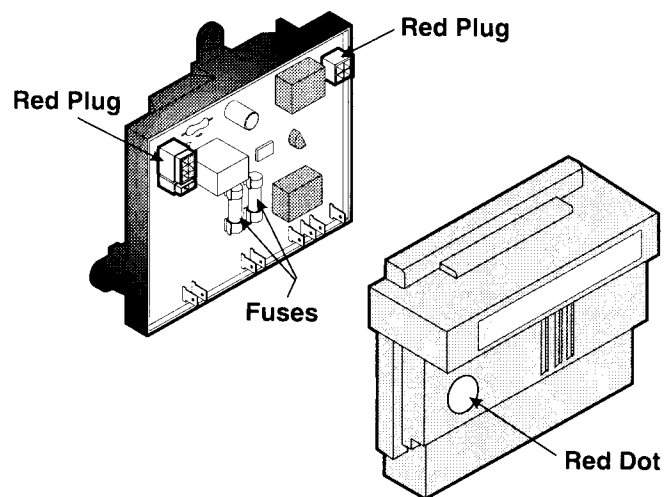
Display Panel	2932189.01
Power Module	2931842.02 or 2931842.03
Thermistor	2931863035

VERSION II

Display Panel	2932189.02
Power Module	2931842.02X
Thermistor	2931863035

- * Power Module has red plugs and a Red Dot on the cover.

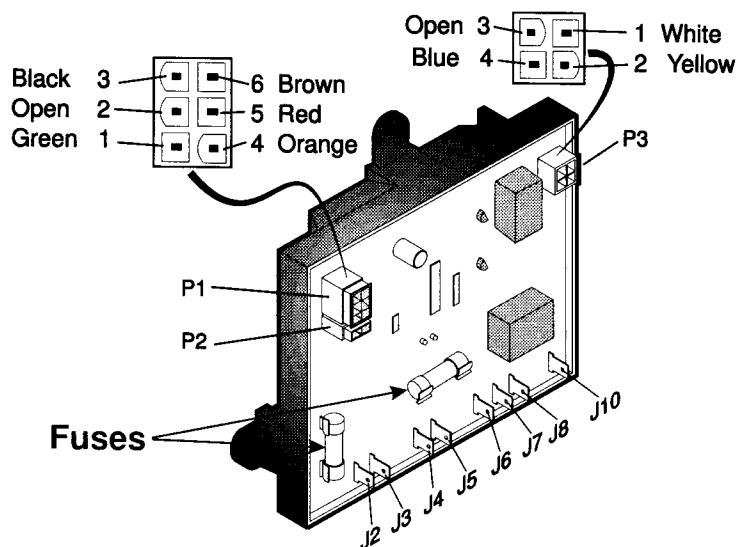
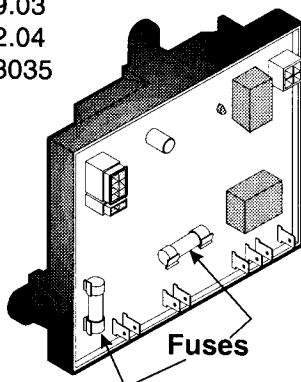
Power Module 2931842.02X



VERSION III

Display Panel	2932189.03
Power Module	2931842.04
Thermistor	2931863035

Power Module 2931842.04



A. **DC VOLT:** ALL TESTS ARE TO BE DONE WITH THE REFRIGERATOR IN THE COOLING MODE.

Before any checks are made, make sure the board is receiving proper DC volts (see Sec. 4). Measure volts between terminal J4 and the ground strip. Voltage should be the same as at the positive (+) and negative (-) on the terminal block. If not, check for loose connections.

B. **AC MODE:** NOTE: The PAL tester will allow for proper testing of the integrity of the upper and lower circuit boards. PAL is available from your Dometic parts distributor.

ALL TESTS ARE TO BE DONE WITH THE REFRIGERATOR IN THE COOLING MODE.

For AC heating element operation, check that incoming AC voltage is present at terminals J5 and J6 on the circuit board. If voltage is below 100 volts, see Sec. 2.

Check for voltage at the heating element connection terminals J7 and J8 on the circuit board. If no voltage is present, check the 5 amp AC and 3 amp DC fuses. If fuse is defective, replace the fuse. If fuses are good, replace the circuit board.

NOTE: Before installing a new circuit board, determine and correct the cause of the failure. If voltage is present, do not change the circuit board. Check the AC heating elements (see Sec. 3).

- C. **GAS MODE:** NOTE: The PAL tester will allow for proper testing of the integrity of the upper and lower circuit boards. PAL is available from your Dometic parts distributor.

ALL TESTS ARE TO BE DONE WITH THE REFRIGERATOR IN THE COOLING MODE.

Before checking the circuit board for gas operation, verify that the following components are good: Upper Circuit Board (see Sec. 5.6), Thermistor (see Sec. 5.1) and 3 Amp Fuse (See Sec. 5.9)

First, check for voltage during **trial-for-ignition** (approximately 45 seconds) at Plug 3, Terminals 1 (white wire) and 2 (yellow wire) to the solenoid. If no voltage is present, change the circuit board. If voltage is present, check for voltage at the solenoid. If voltage is not present, check the wires and connections.

Next, check for voltage to the igniter. If no voltage is present, check the wires. If good, then change the circuit board. If voltage is present, this portion of the board is good.

NOTE: When millivolts to the lower circuit board are 10 ± 3 , the power to Plug 3, Terminal 4 (blue wire) will be shut off. If flame extinguishes during the cooling mode, the circuit board will not supply voltage to Plug 3, Terminal 4 (blue wire) again until the millivolts have decreased to 10 ± 3 . This process could take up to 15 seconds or longer.

To check the flame sense circuit of the lower circuit board, operate the refrigerator on GAS mode, then measure the millivolts between J3 terminal and the other wire connection from the thermocouple. The millivolt meter should read between 25 to 35 millivolts with the gas flame burning. Next, turn the manual shutoff valve to OFF and watch the millivolt reading as it drops. Note the millivolt reading when Plug 3, terminal 4 (blue wire) receives power. It should be 10 ± 3 millivolts or 7 to 13.

Repeat this test several times. If the igniter fails to spark on any test sequence, it should be replaced.

If the millivolt readings vary more than 1 to 2 MV from one test to the other when power is supplied to Plug 3, terminal 4 (blue wire), replace the lower circuit board.

NOTE: Verify all connections are clean and tight before replacing either component.

5.8 DOOR SWITCH (Only on Models Equipped with Interior Lights)

The door switch is an open switch when the switch arm is depressed (interior light should be off). When the refrigerator door is open the switch is closed (interior light should be on). Check that the switch assembly is properly aligned and that it is not broken. Check the switch assembly for continuity.

NOTE: To do a continuity check, first be sure all power is disconnected or OFF to the refrigerator. Second, remove all wires from the switch assembly, then check the switch. After the check, be sure the switch assembly is wired properly per the wiring diagram.

When the switch arm is depressed, there should not be continuity. When the switch arm is **NOT** depressed, there should be continuity. If any of these checks are incorrect, replace the switch.

5.9 FUSES

The fuses are to protect the circuit board and the integrity of the heater circuit(s) against shorts. They are located on the lower circuit board.

The 3 amp DC fuse is designed to protect the circuit board from internal shorts. The 5 amp AC fuse is designed to protect the integrity of the AC heater circuit from shorts.

To check the fuses, remove from the holder and do a continuity check. If no continuity, replace with a proper amperage fuse.

NOTE: Determine the cause of the fuse failure and correct before replacing fuse.

5.10 CLIMATE CONTROL HEATER

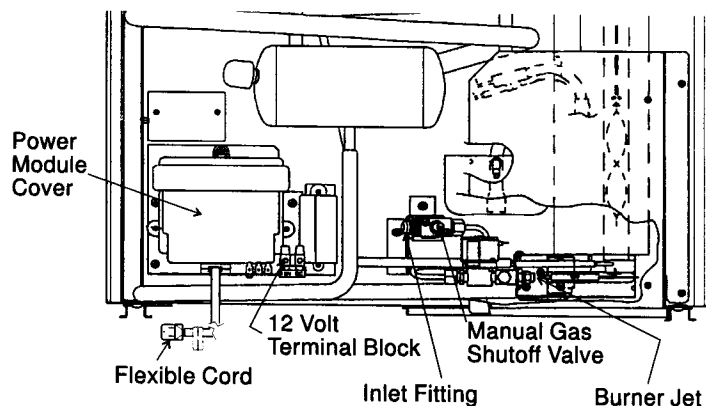
The climate control is a switch operated DC electric heater. Its primary function is to warm the frame of the refrigerator during high temperature/high humidity conditions. This prevents the formation of condensation on the metal frame.

To check the switch, disconnect the wires and do a continuity check. In the OFF position, there should be no continuity. In the ON position, there should be a continuity reading.

To check the heater itself, do an ohms resistance reading on the heater wire by using a properly calibrated ohm meter. The proper ohms reading is 24 ohms $\pm 10\%$. The approximate amp draw is less than .5 (1/2) amp.

NOTE: On some models, the climate control will draw DC power continuously. It should be turned off when charging source is not available.

RM2612 & RM2812

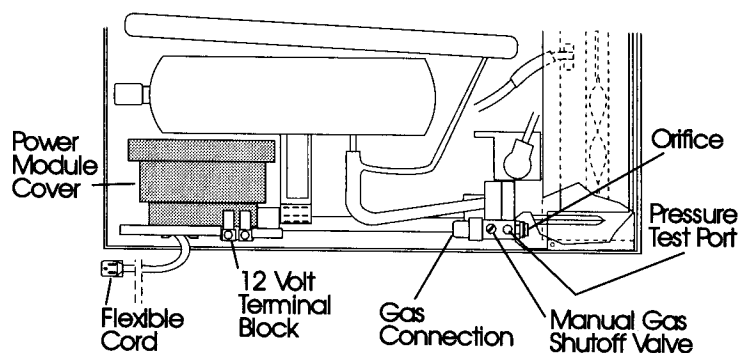


RM2652 & RM2852

SECTION 6

LP GAS REQUIREMENTS

The LP gas pressure to the refrigerator should be 11 inches water column with half of all BTU's of the RV turned on. With all other appliances off, the pressure to the refrigerator should not exceed 12 inches water column. To check the gas pressure when the refrigerator is operating, there is a pressure test port on the solenoid.



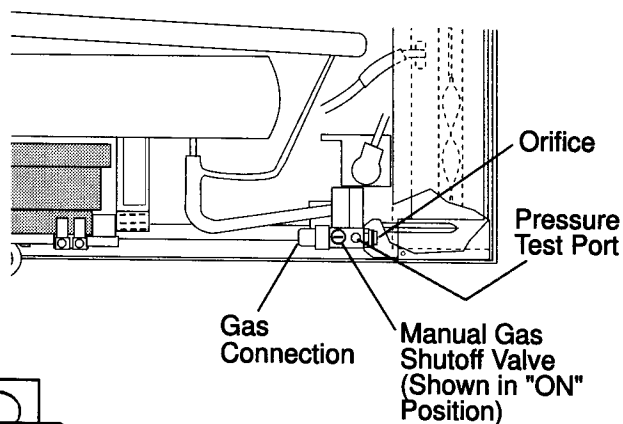
SECTION 7

LP GAS COMPONENTS

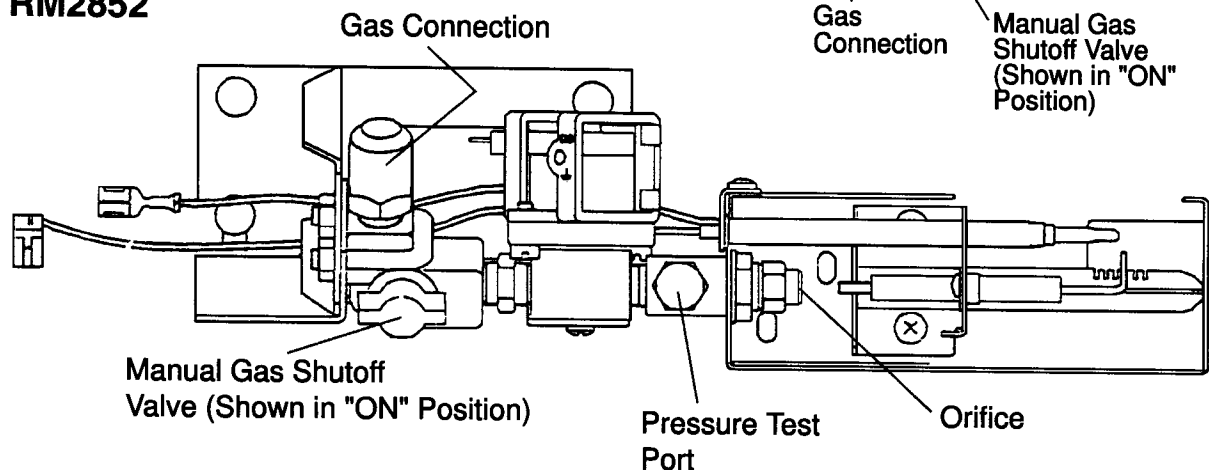
7.1 MANUAL GAS SHUTOFF VALVE

The manual gas shutoff valve is where the incoming LP gas supply is attached. To check the shutoff valve, remove and inspect for any obstructions. The valve must be turned to "ON" before any gas operation can occur. NOTE: If gas pressure is within proper range at test port (see Sec. 6), the shutoff valve is good.

RM2652 & RM2852



RM2652 & RM2852



7.2 ORIFICE

The orifice is a small brass fitting that has a ruby membrane that is laser beam drilled and is mounted on the gas line just prior to the burner. The orifice is cleaned by using an alcohol based solvent and allowing to air dry.

IMPORTANT

NEVER USE A DRILL BIT OR JET TIP CLEANER TO CLEAN ANY ORIFICE AS THESE DEVICES WILL DAMAGE THE FACTORY MACHINED PART AND CREATE A POTENTIALLY DANGEROUS CONDITION.

If there is a lack of cooling on gas operation, verify the orifice is the proper size per the chart below:

RM2612 #53
RM2812 #58
RM2652 #58
RM2852 #58

7.3 THERMOCOUPLE

The thermocouple is a component extending above the burner assembly so the tip is in the path of the flame. During normal gas operation, the thermocouple should produce 25 to 35 millivolts when connected to the lower circuit board. Any reading below 18 millivolts could cause erratic gas operation. NOTE: A reading of 18 or less could be caused by low gas pressure or improper thermocouple location or defective thermocouple.

7.4 BURNER

The burner is a slotted metal tube located below the flue tube on the cooling unit. It should be level, and the slots in the burner should be directly below the flue tube. The burner should be cleaned periodically, at least once a year. To clean the burner, remove from the refrigerator and check for any foreign residue that could cause a deflection of the gas flow or the flame. Next, soak the burner in an alcohol-based solvent and allow to air dry. After cleaning, reinstall in the refrigerator.

7.5 FLUE BAFFLE

The flue baffle is designed to concentrate the heat (from the gas flame) at a certain area of the flue tube. It should be cleaned periodically, at least once a year. To clean, remove from the flue tube and check for any damage, then clean thoroughly.

The length of the flue baffle assembly (flue baffle and wire) should be as follows:

RM2612	31-9/16"
RM2812	37-1/8"
RM2652	31-5/8"
RM2852	38"

The flue baffle itself should measure as follows:

RM2612	3/4" wide	5-1/4" long
RM2812	3/4" wide	6" long
RM2652	13/16" wide	5-3/16" long
RM2852	13/16" wide	5-3/16" long

The proper position of the baffle above the burner should be as follows:

RM2612	1-5/8"
RM2812	1-3/4"
RM2652	1-7/8"
RM2852	1-7/8"

7.6 FLUE TUBE

The flue tube is a component of the cooling unit. It must be cleaned periodically, at least once a year. To clean, remove flue cap and flue baffle, then cover the burner and clean by using a flue brush, Dometic Part No. 0151404001. If the flue tube becomes coated with scale or residue from combustion of LP gas, the efficiency of the gas operation decreases.

SECTION 8 WIRING

8.1 EXTERNAL WIRING

A. 120 volts AC Connection

The refrigerator is equipped with a three-prong (grounded) plug for protection against shock hazards and should be plugged directly into a properly grounded three-prong receptacle. Do not cut or remove the grounding prong from this plug.

B. 12 Volt DC Connection

This refrigerator model is not designed for 12 volt DC operation of the cooling system; however, 12 volt DC must be supplied to the refrigerator to operate the controls. Use a minimum of a 14 gauge wire between the battery and refrigerator to supply the control voltage. The connection is made to the positive (+) and negative (-) terminals of the terminal block on back of refrigerator. The 12 volt DC supply circuit must be fused, and the maximum fuse size is 5 amps.

DO NOT use the chassis or vehicle frame as one of the conductors. Connect two wires at the refrigerator and route to the DC supply.

Clean Direct Current (DC) power is mandatory for high-tech circuits to operate as designed. The sources for DC power are a battery and a converter.

A battery will provide straight line DC power, but extended operation will require recharging of the battery by the converter or the alternator.

The converter and alternator produces DC power by a series of diodes that rectify alternating current to DC. A battery or capacitors can be used to clean up the AC ripple that is present after AC voltage has been rectified.

At 12 volts DC, a refrigerator equipped with a climate control and interior light will draw approximately 1.2 amps maximum with the climate control and interior light on. Refrigerators equipped with a climate control only will draw approximately .5 amps maximum.

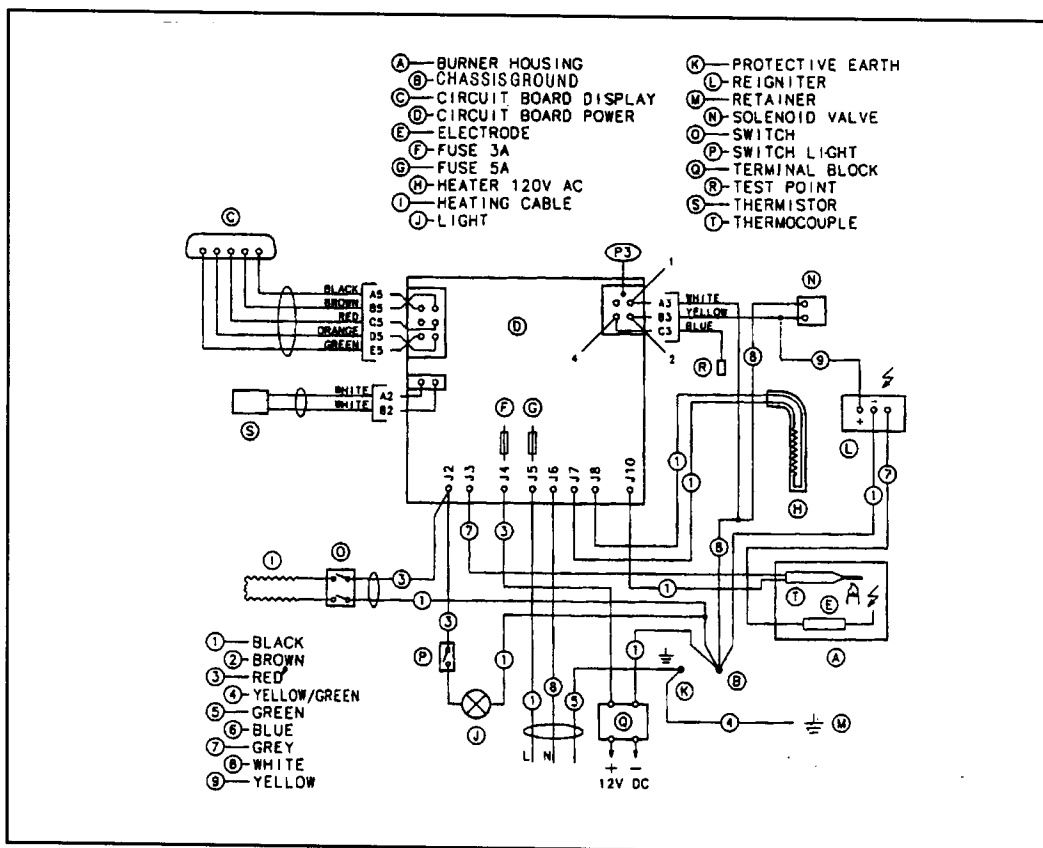
8.2 INTERNAL WIRING

Check all wires at the connectors to be sure of a proper and tight connection. Also verify the refrigerator is wired per the wiring diagram for the **exact** model you are working on. See the following typical wiring diagram. **NOTE:** Improper wiring at the lower circuit board could cause erratic operation and lower circuit board failure.

SECTION 9 OTHER

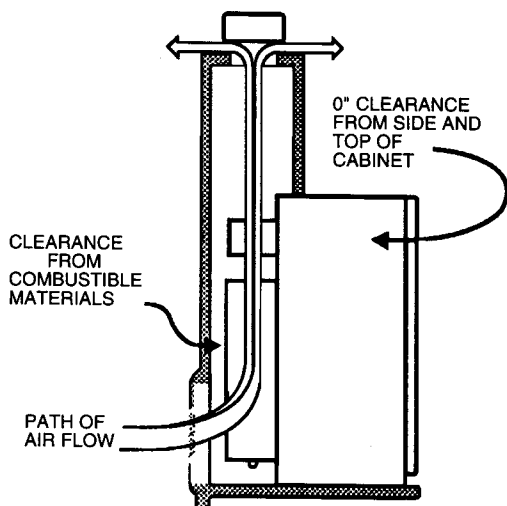
9.1 LEVELING

Leveling is one of the requirements for proper operation with absorption refrigerators. The absorption design utilizes no mechanical pumps or compressors to circulate the refrigerant within the system, so proper leveling must be maintained to provide the correct refrigerant flow. Without proper leveling refrigerant within the cooling unit will collect and stagnate at certain areas. Without proper refrigerant flow, the cooling process will stop. Refrigerators have a type of cooling unit that utilizes an enclosed pump tube surrounded by a solution to protect the assembly. To ensure proper leveling with these models, the vehicle needs to be leveled so it is **comfortable to live in** (no noticeable sloping of floor or walls). When the vehicle is moving, leveling is not critical as the rolling and pitching movement of the vehicle will pass to either side of level, keeping the refrigerant from accumulating in the piping.



9.2 VENTILATION

Ventilation is one of the requirements for proper cooling unit operation. The coach vent system must be able to provide a way to direct the hot air produced by the action of the cooling unit, out away from the installation of the refrigerator. The refrigerator extracts heat from the interior of the refrigerator cabinet and dissipates the heat out through the vent system. In a proper installation, there should be as little open space as possible surrounding the sides and top of the refrigerator to achieve proper air flow. All potential dead air pockets should be blocked or baffled to ensure that heat won't be trapped in these spaces and reduce efficiency.



NOTE: Refrigerators should be installed in accordance with appropriate installation instructions received with the refrigerator.

9.3 AIR LEAKS

Check the gasket on the doors to be sure of a positive air seal. A simple method to check gaskets is to close the door on a dollar bill, then pull the dollar bill out. If no resistance is felt, the gasket is not sealing properly. This should be done on all four sides of the door. If a gasket is not sealing properly, first warm the gasket material with a hair drier.



DO NOT OVERHEAT AS YOU CAN MELT THE MATERIAL.

Then close the door and the magnetic strip should pull the gasket to the metal frame. Leave door closed until the material has cooled. Then recheck for a positive seal. If a positive seal cannot be achieved, replace the gasket. Also check that the cooling unit is installed

properly. **The cooling unit's foam block**, the portion that surrounds the evaporator coils, must be flush to the cabinet at the back of the refrigerator and have a positive seal. If the cooling unit is not installed properly, remove and install properly.

MODELS RM2612 & RM2812:

The refrigerator is secured in the enclosure with six screws and they must be installed in the following order:

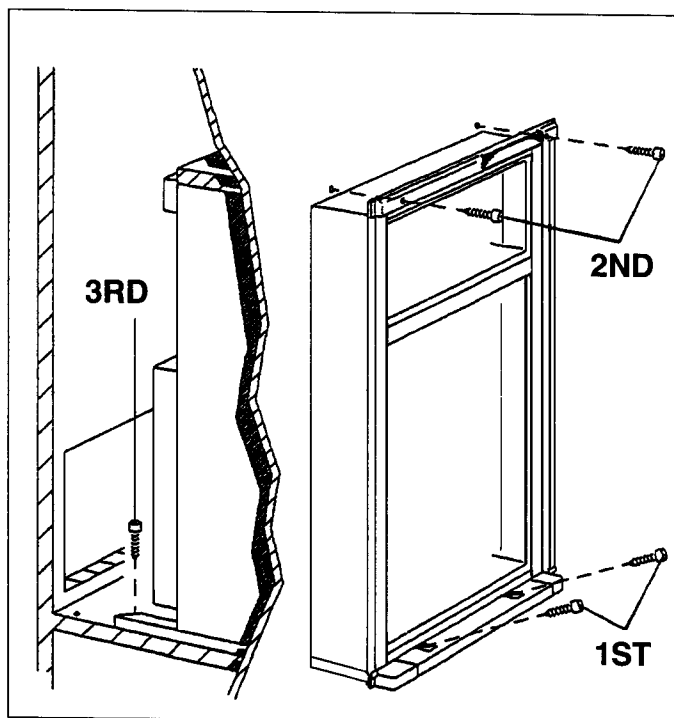
First Two Screws installed on front base;

Second Two Screws installed in the top frame;

Third Two Screws installed in the rear base.

Failure to follow the sequence in securing refrigerator in enclosure can cause leakage between the frame and cabinet.

NOTE: Air leaks will cause insufficient cooling as well as rapid formation of frost.



MODELS RM2652 & RM2852:

CONDENSATE WATER DRAIN HOSE: A 3/4" hole must be drilled through the flooring in the opening of the base plate on the rear of refrigerator. The installer must make sure that the hose does not kink when run through the floor. Seal around the hose where it goes through the hole. If a longer hose is required, follow the illustration shown on

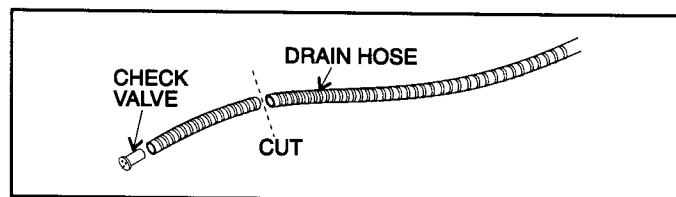
next page:

OPTION A:

- 1) Remove black water check valve from hose.
- 2) Add additional hose
- 3) Reinstall black water check valve

OPTION B:

- 1) Cut drain hose at location shown below.



- 2) Install new drain hose between pieces cut.

NOTE: Black water check valve must be reinstalled to ensure proper refrigerator operation. **DO NOT KINK HOSE.**

OPTION C:

In vehicles where routing the drain hose through the floor is not possible, a metal clip is available. The clip is used to drain water out through the side vent.

Part No. 3106590.015 Clip for plastic side vent

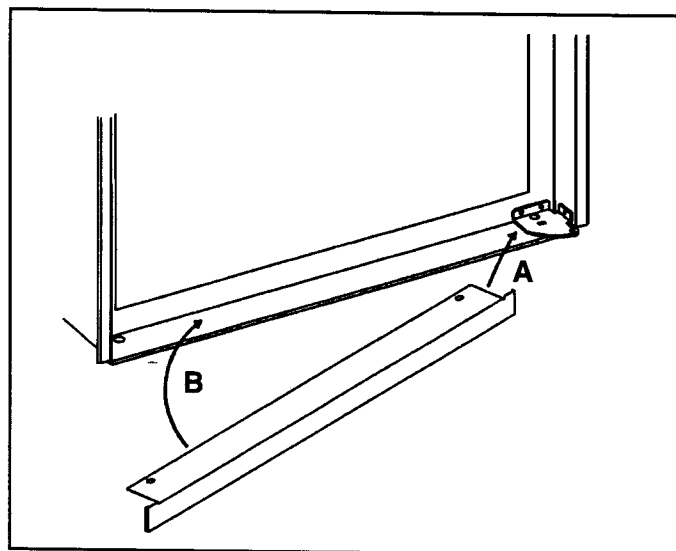
Part No. 3106559.010 Clip for metal side vent

The refrigerator is secured in the enclosure with six screws.

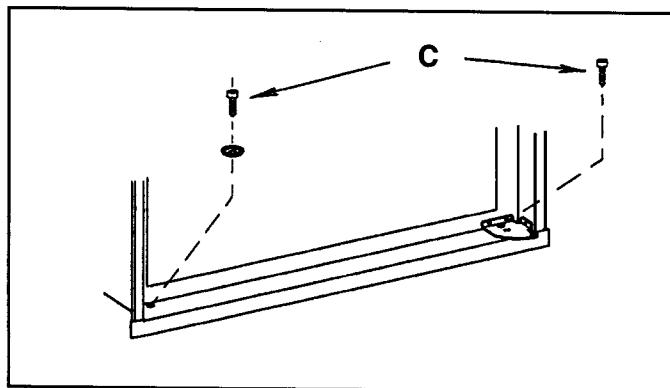
They must be installed in the following order:

First: Two screws are installed in front decoration strip and through the front base.

- A. The front strip is to be installed after the refrigerator is set into the alcove. The strip is shipped as a loose part.
- B. Install the lower front strip by sliding it under the bottom hinge plate as shown. The hinge plate can be on the right or left side depending on the door swing.

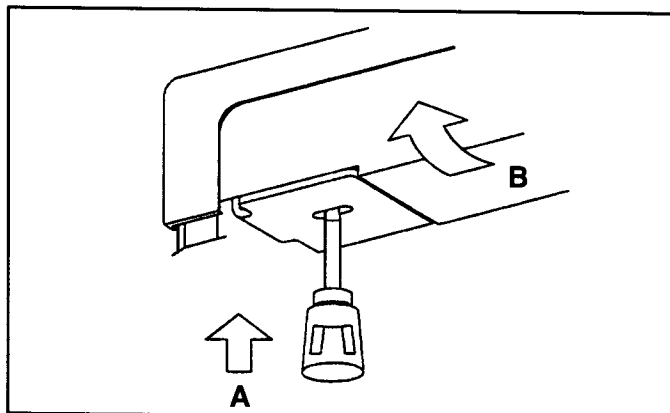


- C. When the front strip is in place, install one screw through the hinge and into the floor. The second screw is installed with a washer on the opposite side.

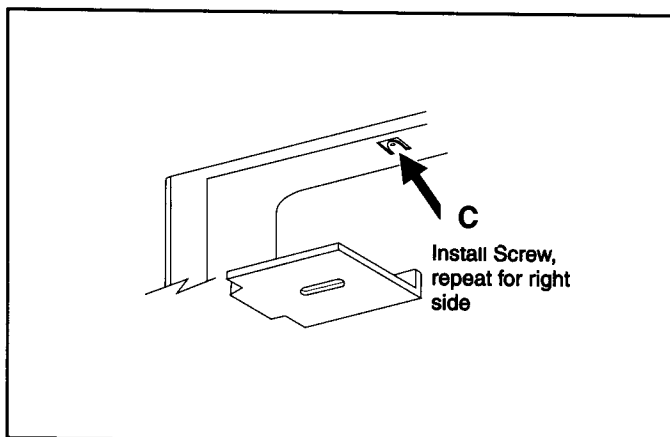


Second: Install the two screws in the top frame.

- A. The top decoration panel must be removed from the refrigerator before the screws can be installed. Open refrigerator door and gently push the tabs out of the hole in the hinge with flat blade screwdriver.
- B. Carefully tilt the top decoration panel and lift up to remove from top frame.

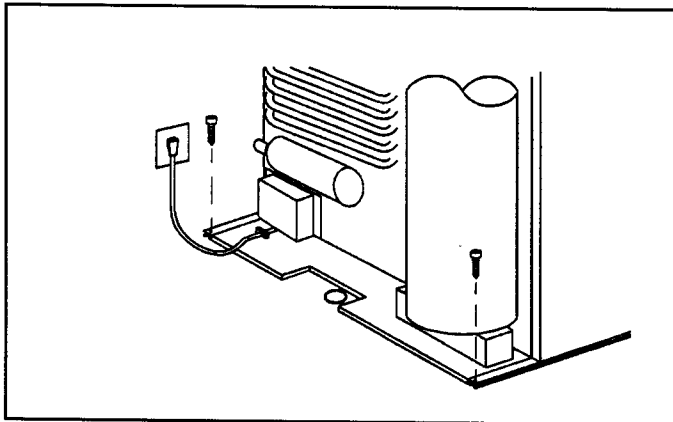


- C. Install the second two screws in the top frame as shown.



D. Replace the top decoration panel. Be careful not to pinch the wires. Make sure the tabs snap back into the holes in the hinge plate.

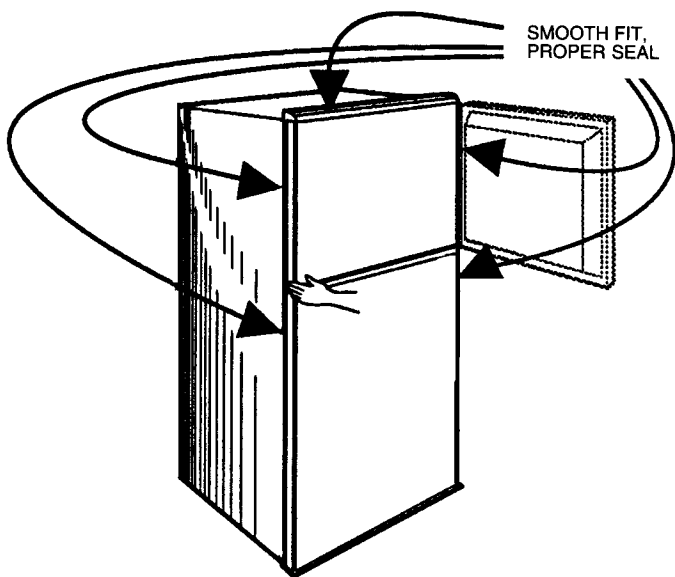
Third: Two screws installed as shown in rear base.



Failure to follow the sequence in securing the refrigerator in the enclosure can cause leakage between the frame and cabinet.

9.4 DOOR POSITION

The door position can be checked by observing any misalignment of the door in relation to the frame.



NOTE: On refrigerators equipped with an interior light, improper position of the lower door can cause the interior light to stay on when the door is closed.

To adjust either door, loosen the hinge bracket screws, reposition the door then tighten the hinge bracket screws.

To adjust up or down, remove the door and add or remove washers from the lower hinge pin. Reinstall door and check for correct clearances.

9.5 AMBIENT TEMPERATURE

This is the temperature surrounding the recreational vehicle, as well as the temperature of air at the back of the refrigerator. As the ambient temperature increases, the air temperature in the area of the cooling unit increases. The double door refrigerators should maintain approximately 43 degrees food storage temperature at 110 degree ambient temperature. As the ambient temperature increases, it is possible for the interior temperature of the refrigerator to increase. This means proper installation, ventilation and leveling are important for proper operating temperature of the refrigerator.

9.6 COOLING UNIT

The cooling unit is a self-contained, hermetically sealed set of coils where the refrigeration process takes place. The chemicals involved in the cooling process include hydrogen, ammonia, water and a rust inhibiting agent. There are no repairs recommended on the cooling unit. If it is defective, replace with a new cooling unit.

To check the cooling unit, first verify the AC heating element is good (see Sec. 3). Then place approximately one gallon of water inside the refrigerator and place a thermometer in one of the containers of water. Next, supply 115 volts direct to the AC heating element and operate for at least 12 hours. Then check the temperature on the thermometer. It should be at 45 degrees or lower depending on test conditions (see Sec. 9.2 and 9.5). If so, the cooling unit is good. If the temperature of the water is above 45 degrees, replace the cooling unit.

9.7 FOOD STORAGE

Proper refrigeration requires free air circulation within the food storage compartment. Restricted air circulation within this compartment will cause higher cabinet temperatures. To remedy this situation, simply rearrange your food items. It is also essential that the shelves are not covered with paper or large storage containers. Always remember to allow for proper air circulation.

Odorous or highly flavored foods should always be stored in covered dishes, plastic bags or wrapped in foil or waxed paper to prevent food odors. Vegetables, lettuce, etc., should be covered to retain their crispness. **NEVER PUT HOT FOOD INTO THE REFRIGERATOR.**

To reduce frost formation in and on the freezing compartment, cover stored liquids and moist foods and do not leave the door open longer than necessary.

When the refrigerator is heavily loaded, it takes longer to lower the refrigerator temperature, and longer to make ice. A very heavy load may also cause defrosting.

9.8 HIGH HUMIDITY

High humidity may cause a small amount of condensation to form on the frame of the refrigerator. In extreme cases, the condensation may actually run off the frame. As the humidity is reduced, the "sweating" will decrease. High humidity can also be a factor in rapid formation of frost.

Some refrigerators have climate controls installed (see Sec. 5.10). Use of the climate control will reduce the formation of condensation on the frame.

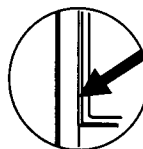
9.9 INTERIOR LINER SEAL TO FRAME

There is a seal that is applied to the liner in the area where the metal frame makes contact with the interior liner. If this seal is incomplete, cold air can migrate out to the metal frame. If this happens, condensation could form on the frame and could promote rapid formation of frost. If you suspect an improper seal, apply a small bead of silicone all the way around the perimeter where the frame meets the interior liner.

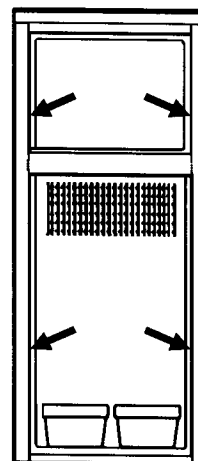
Remove all screws securing the refrigerator into the cabinet and slide the refrigerator out approximately 2–4 inches. Clean the metal frame and foil-backed insulation around the refrigerator. Apply a foil-backed adhesive tape to the joint between outer frame and foil-backed refrigerator insulation.

Make sure the refrigerator is dry and that the surface temperatures are above 50°F. Use a clear silicon caulking compound and seal the seam between the refrigerator's plastic liner and the metal frame. See Apply the silicon in a continuous bead around both the refrigerator freezer and food compartments.

NOTE: TO FORM A PROPER SEAL, IT IS IMPORTANT NOT TO LEAVE ANY GAPS.



**CAULK SEAM
 BETWEEN
 PLASTIC LINER
 AND METAL
 FRAME**



(Refrigerator
 shown with
 doors removed)

