



INSTALLATION AND OPERATING INSTRUCTIONS

682 683 662 663 652 653
6182 6183 6162 6163 6052 6053

WARNING

Improper installation, adjustment, alteration, service, or maintenance can cause injury or property damage. Refer to this manual. For assistance or additional information consult a qualified installer, service agency, or the gas supplier.

FOR YOUR SAFETY

Do not store or use gasoline or other flammable vapors and liquid in the vicinity of this or any other appliance.

FOR YOUR SAFETY

If you smell gas:

- 1. Open windows**
- 2. Do not touch any electrical switches**
- 3. Extinguish any open flame**
- 4. Immediately call your gas supplier**

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These refrigerators are designed to operate on the following energy sources:

LP GAS OPERATION - 11.0 inches Propane & 12 volt DC control voltage (15.4 volts max., 10.5 volts min.).

AC OPERATION - 120 volts AC (132 volts max., 108 volts min.) and 12 volt DC control voltage.

DC OPERATION - [3-WAY MODELS] 12 volts DC (15.4 volts max., 11.5 volts min.).

Operation where these specifications are exceeded will void the refrigerator warranty.

MODEL NO. _____ SERIAL NO. _____

The refrigerator's model number and serial number are on the serial plate located in the refrigerator.

Safety Precautions

Read this manual and become thoroughly acquainted with it before installing or starting the refrigerator. The following safety precautions and recommendations contained herein are for your protection.

Improper installation, adjustment, or operation can cause injury or property damage.

The safety symbols used in this manual contain Safety Alert information. Understand their meanings and be safety conscious.



DANGER

A SITUATION WHICH, IF NOT AVOIDED, WILL RESULT IN DEATH OR SERIOUS INJURY.



WARNING

A SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN DEATH OR SERIOUS INJURY.



CAUTION

A SITUATION WHICH, IF NOT AVOIDED, MAY RESULT IN MINOR OR MODERATE INJURY.

General

- Keep the unit and surrounding area clean. Never use the area behind refrigerator for storage; in particular, storing flammable materials (oily rags, paper, aerosol cans, and chemicals.). Stored materials not only present a safety hazard but could block the ventilation to the system.
- Provide appropriate fire extinguishers installed in convenient locations. Consult your local fire department for the correct type to use. Do not use foam on electrical fires. Use extinguisher rated by NFPA.
- Make sure all fasteners, supports, seals, electrical covers are secure.

LP Gas System

- LP gas is highly flammable. Gas connections must be leak tight. Do not smoke, create sparks or use an open flame when checking gas connections. Do not ignore the "rotten egg" smell of gas fumes.
- Protect all gas lines from physical damage, vibration, or excessive heat.
- Insure that the supply gas pressure is within the tolerance specified on the front cover of this manual. The gas controls are designed for safety. Never tamper with the adjustment or function of the controls other than as directed by the Lighting and Shutdown Instructions. All repairs must be done by a qualified service person.

Exhaust Gases

- Proper ventilation to remove exhaust gases is extremely important. These gases, generated in the GAS mode at the rear of the refrigerator, replace the oxygen in the air and in extreme cases can produce dangerous levels of carbon monoxide. This manual contains installation instructions to safely remove the exhaust gases and seal the zone from the living area. The installation instructions are certified by American Gas Association and Canadian Gas Association and must be followed.
- Check the burner for proper flame characteristics at the initial start-up and at least once every year. The information for this check is located in this manual and must be performed by a qualified service person.

Safety Precautions - continued

Electrical Circuits - AC and DC

- The 120 volt AC circuit must be properly grounded. Never cut or remove the round grounding prong from the refrigerator's AC cord. Do not use a two-prong adapter. Do not use an extension cord to connect to the approved AC receptacle.
- Protect all wiring from physical damage, vibration, or excessive heat.
- Always disconnect both AC and DC sources of power when working on either circuit (only a qualified service person).
- Insure all terminating connections are clean and tight to prevent arcing or over-heating.
- Never allow Leak Detecting fluids or any other liquids to spill on electrical connections. Many liquids are electrically conductive and could cause serious arcing damage and, in some case, fires.

Refrigerant System

- Never physically bend, drop, drill, weld, or hammer the refrigerant system. Doing so could cause the system to rupture and release dangerous chemicals which can cause severe burns to the eyes or skin. If ignited, these chemicals will burn with intense flame. A leaking system can release certain chromium components which, if inhaled, can cause cancer.
- Never apply direct heat in excess of 240° F to the refrigerant system. Because the refrigerant is hermetically sealed under pressure, a temperature sensitive safety device opens to protect the system from erupting under excessive pressure. However, the expelled refrigerant could ignite and burn if an ignition source were near.
- Never attempt to repair or recharge the refrigerant system. If defective, it must be replaced.

Child Entrapment

- Never install door locks or other restraints which could entrap small children within the refrigerator. The Travel Latch system must not be modified.

Handling the Refrigerator

- Never lift the refrigerator without assistance. Protect yourself from body strain.
- Avoid hot surfaces at the rear of the refrigerator when operating. The absorption type refrigerator produces several hot areas at the rear of the unit. This is true whether in GAS or ELECTRIC mode.
- Take care to avoid brushing against the irregular shapes and sheet metal parts at the rear of the refrigerator. Cuts or abrasions could result.



E.S.P.

EXTENDED COOLING UNIT SERVICE PROTECTION PLAN

An additional four year Service Contract is now available to original purchasers of Norcold refrigerators. For only \$40.00 you get:

- * Four extra years protection against cooling unit failure.
- * Automatic replacement of defective cooling unit.
- * Pre-paid freight from your dealer to Norcold and return.
- * Labor free of charge.

The E.S.P. (Extended Service Protection) plan can be obtained by mailing your check for \$40.00*, U.S. funds to:

**NORCOLD
P O BOX 4248
SIDNEY OH 45365-4248**

If mailing in Canada:

GREG LUND PRODUCTS LTD
P O BOX 760
OAKVILLE ONTARIO CANADA L6J 5C4
E.S.P. is a service contract between Norcold and

the original purchaser. The contract provides replacement of a defective **cooling unit only** for this refrigerator (freight, parts, and labor) for an additional period of four years after expiration of the original Limited Warranty. The refrigerator must be delivered to Norcold Service Center together with the Norcold E.S.P. card showing E.S.P. coverage. An E.S.P. card will be mailed to the original purchaser upon receipt of a completed Service Contract Application form and a check covering the E.S.P. charge. **E.S.P. coverage is non-transferable and non-refundable.**

To register your refrigerator, fill out the warranty Service Contract Application - i.e.: Tear Sheet Form in yellow envelope or include the following information (Please Print Clearly):

1. Owner's name and address.
2. Refrigerator model number.
3. Refrigerator serial number.
4. Date of purchase.
5. Refrigerator proof of purchase
6. Check for \$40.00* (payable to Norcold).

Applications will be accepted only if they are mailed within ninety (90) days after date of purchase.

*Ohio residents, add \$2.60 sales tax.

General Instructions - All Models

The refrigerators described in this manual are designed for built-in installations and require cut out dimensions as indicated on page .

The refrigerators must be placed on a solid and level floor away from heat generating sources. The floor must be strong enough to support the combined weight of the refrigerator and its food load.

Never install the refrigerator directly on carpeting. To protect carpeting, the refrigerator must be placed on a metal or wood panel extending at least the full width and depth of the refrigerator.

Keep the refrigerator and the surrounding area clear

and free of combustible materials, gasoline, and other flammable materials.

Note: These appliances are not approved for use as a Free-Standing refrigerator. The refrigerator must be used in the manner for which it was designed. Refer to this manual for installation, operating procedures, and the refrigerator intended use. This appliance is equipped for LP gas and cannot be converted to any other fuels (Natural Gas, Butane, etc.).

VENTILATION REQUIREMENTS

⚠ WARNING: Carbon Monoxide can cause nausea, fainting, or death. Inadequate ventilation or partial blockage of the refrigerator's flue can result in increased carbon monoxide emissions when operating in the gas mode. To prevent the emission of levels of carbon monoxide, installation must assure complete isolation of the living space of the R.V. from the refrigerator's combustion system. Follow Norcold's Ventilation and Installation recommendations explicitly.

Venting is required in an R.V. refrigerator installation to remove the products of combustion, to isolate the living space of the vehicle from the combustion system of the refrigerator, to remove the excess heat from the generator area of the refrigerator's cooling system, and to remove the heat that is extracted from the refrigerator cabinet.

Certified installation requires that one intake (lower) and one exhaust (upper) be used. For the models 6052, 6053, 652, and 653, the installer has the option of exhausting through the roof or through an upper side wall vent. Whether roof or side wall exhaust venting, the specified vent kit must be installed as directed by this manual. To insure adequate refrigerator performance, a continuous air flow is required across the refrigerator's cooling system.

The air passage from the intake vent to the refrigerator coils and from the refrigerator coils through the exhaust vent **must be unobstructed**.

The vents for these refrigerators are certified by A.G.A. and CGA and must be installed as directed by this manual **without modification**. **Any deviation or substitution:**

- * Can result in carbon monoxide levels in the living space of the vehicle.
- * Will void the agencies' certification.
- * Will void the refrigerator warranty.
- * Will effect refrigerator performance.

The intake vent (lower) also serves as a access (service entrance) door. The bottom of the intake vent opening must be flush with the surface on which the refrigerator is mounted. This configuration allows any leaking propane to ventilate to the outside.

A.G.A. And CGA certification permits installing the refrigerator with zero (0) inches minimum clearance between the refrigerator and any adjacent walls. This certification does not specify any maximum clearance. However, to insure adequate air flow across the cooling system, the clearance must be minimized. The combination of the two vents and the minimum clearances provide the necessary air flow through the creation of a natural draft, or "chimney effect" across the cooling system.

Certified Vent Kits

Kit Number	Certified Lower Vent Door	Certified Roof Jack	Models
2 & 3	615998 616009 616010 617778	615791	All Models
Kit Number	Certified Lower Vent Door	Certified Upper Side Exhaust	Models
4	615998 616009 616010 617778	617485	6052, 6053 652, 653 ONLY

TABLE 1
DIMENSIONS (INCHES) for Vent Kits 2, 3, and 4

Cut - Out Dimension (inches)							
		Roof Jack		Lower Intake Vent			Approved Models
Part No.	Type	Length	Width	Height	Width	Radius	
617778	Plastic	--	--	13 3/4	21 1/2	--	All Models
616010	Sq. Corner	--	--	13 3/4	21 3/4	--	All Models
616009	Rad. corner	--	--	13 3/4	21 7/8	3 1/4	All Models
615998	Rad. Corner	--	--	13 3/4	21 7/8	3 1/4	All Models
617485	Upper Side vent	--	--	7 1/4	18	--	6052, 6053 652, 653
615791	Roof Jack	24	5 1/4	--	--	--	All Models

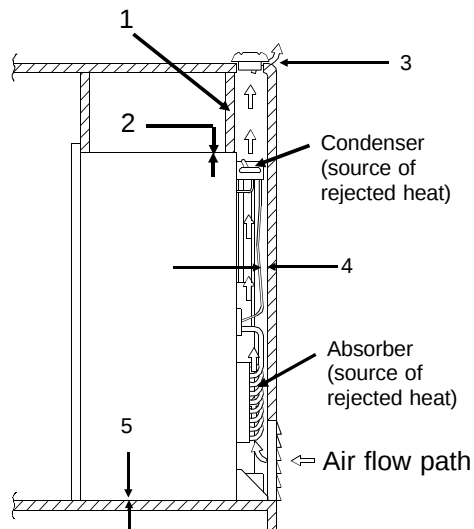


Figure 1

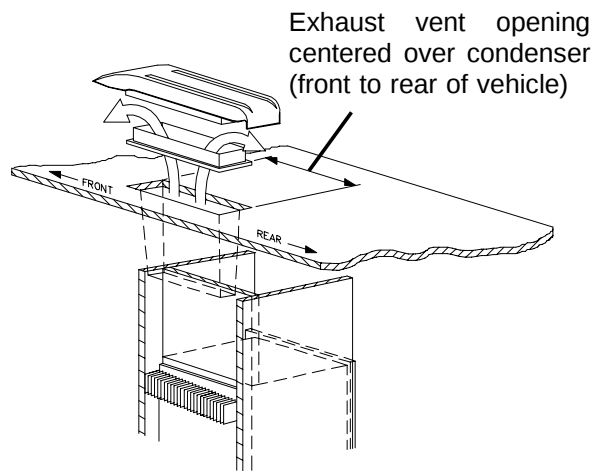


Figure 2

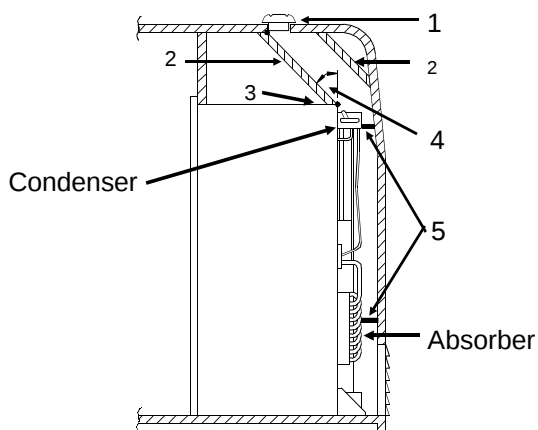


Figure 3

Optimum Installation - Figure 1

The optimum installation is illustrated in Figure 1.

1. Area above refrigerator blocked (baffled) off to prevent trapping of hot air above the refrigerator.
2. 0 - 1/4 inch clearance at the top of the refrigerator.
3. Exhaust vent centered directly over refrigerator's condenser.
4. 0 - 1 inch at rear of the refrigerator.
5. 0 inch clearance at bottom of refrigerator.

Exhaust Vent Centered - Figure 2

Figure 2 further illustrates the requirement to center the exhaust vent opening over the condenser of the refrigerator.

Alternate Construction Requirements Figure 3

1. Exhaust vent opening is inboard in relation to the rear of the refrigerator.
2. Baffles added to the top of the refrigerator to assist in directing air flow out the exhaust vent.
3. 0-1/4 inch clearance at the top of the refrigerator.
4. Angle between baffles and rear top edge of the refrigerator not to exceed 45 degrees.
5. Deflectors added at rear in strategic locations adjacent to the cooling units condenser and absorber coils to reduce clearance to 0 to 1 inch.

Side Wall Clearance - Figure 4

1. Figure 4 illustrates the requirement to minimize the clearance at the sides of the refrigerator. The clearance is not to exceed 1/2 inch. Side clearances in excess of 1/2 inch must be either filled with Fiberglass batting or blocked with paneling, etc.

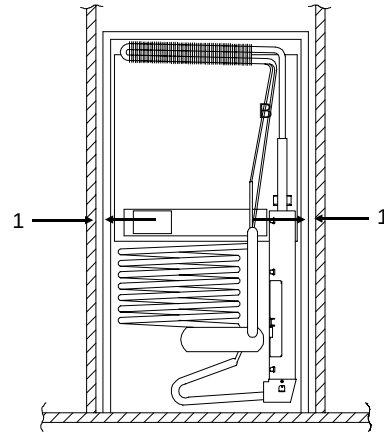


Figure 4

Upper Side Wall Exhaust Vent For Models 6052, 6053, 652, and 653 ONLY Figure 5 and 6

1. Area above refrigerator blocked (baffled) off to prevent trapping of hot air above the refrigerator.
2. 0 - 1/4 inch clearance at the top of the refrigerator.
3. Upper Side vent Location. See Table 1 for vent dimensions,
4. 0 - 1 inch clearance at the rear of the refrigerator. (See Figure 3 when clearance exceeds 1 inch).
5. Intake (lower) vent installed flush with the surface on which the refrigerator is mounted.
6. 0 inch clearance at bottom of refrigerator.

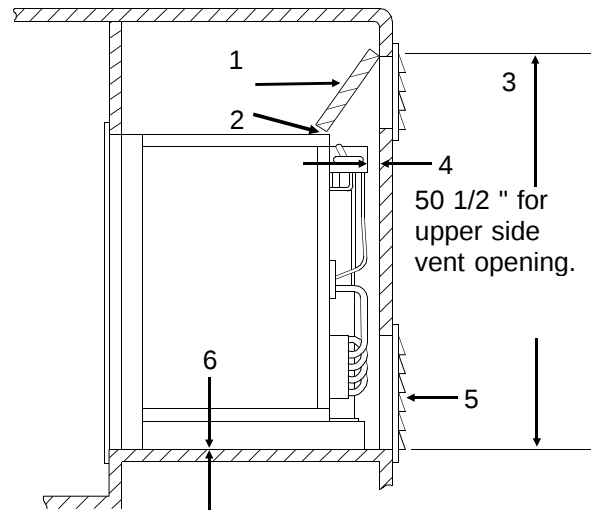


Figure 5

Top and Side Wall Clearance

1. Top baffle fills the total area above the refrigerator and is properly aligned with the side wall construction.
2. 0 - 1/2 inch at the sides of the refrigerator.

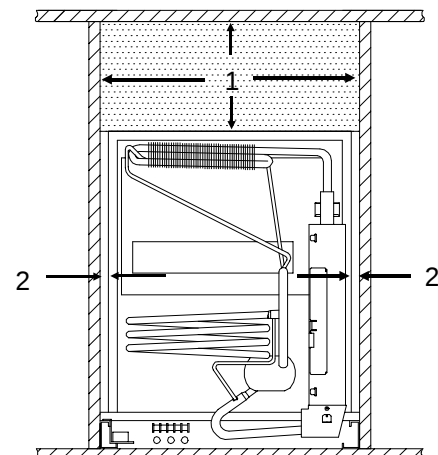


Figure 6

INSTALLATION INSTRUCTIONS

Certification and Code Requirements

The refrigerators described herein are certified under the latest edition of ANSI Z21.19 Standards by the American Gas Association (A.G.A.) for installation in mobile home or recreational vehicle and approval by the Canadian Gas Association (CGA).

Installation must be made in accordance with these standards and with the installation instructions provided in this manual for the Norcold factory warranty to be in effect.

Installation must conform with local codes, or in the absence of local codes, with the following standards as applicable:

In the United States:

- National Fuel Gas Code, ANSI Z223.1.
- Manufactured Home Construction and Safety Standard, Title 24 CFR, Part 23-80.
- Standard for Recreational Vehicles, ANSI A119.2, latest edition.

When an external electrical energy is utilized, the refrigerator must be electrically grounded in accordance with local codes, or in the absence of local codes, the National electrical Code, ANSI/NFPA 70.

In Canada:

- Current CGA B149.1 and B149.2 installation code for Propane Appliances and Equipment..
- Current CSA Z240.4.2 installation code for Propane Appliances and Equipment in Recreational Vehicles.
- Current CSA Z240.6.2/C22.2 No. 148 Electrical Requirement for Recreational Vehicles.

When installed, the appliance must be electrically grounded in accordance with the current Canadian Electrical Code C22.2 Parts 1 and 2.

Cut-Out Dimensions

The refrigerators certified for built installation and requires cut-out dimensions as indicated in Table 2 below.

TABLE 2
REFRIGERATOR CUT-OUT OPENINGS (INCHES)

<u>Model</u>	<u>Height</u>	<u>Width</u>	<u>Depth</u>
662,3	52 7/8	23 1/2	24
6162,3	52 7/8	23 1/2	24
682,3	59 7/8	23 1/2	24
6182,3	59 7/8	23 1/2	24
652,3	43 1/4	23 1/2	24
6052,3	43 1/4	23 1/2	24

Combustion Seals

Combustion seals (foam strips) are attached to the back surface of the refrigerator's mounting flanges. These seals isolate the products of combustion from the vehicle's living space. **The seals must be continuous between the wall and the mounting flanges to assure a complete combustion seal.** When installing or removing the refrigerator, insure that the seals are not missing or damaged.

Lower Flange Installation

The lower mounting flange and mounting screws are located in a clear plastic bag positioned in the coils at the rear of the refrigerator. After removing the plastic bag, slide the refrigerator partially into the enclosure and attach the lower mounting flange. Install the lower mounting flange by maneuvering it under and behind the bottom hinge and secure with the screws provided. Refer to Figure 7. **Do not omit installation of the lower mounting flange. This flange is part of the combustion seal.**

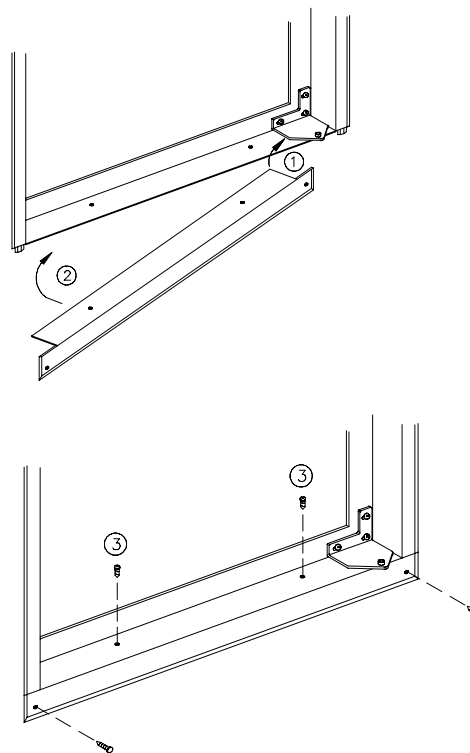


Figure 7

Securing the Refrigerator

Secure the refrigerator with screws through the mounting flange holes at the front of the refrigerator and the holes at floor level at the rear of the refrigerator. Screw covers are provided to cover the front mounting flange holes.

The refrigerators are designed to operate on propane gas at a supply pressure of 11 inches water column. A pressure regulator is required between the refrigerator and the main gas tank. *Do not connect the refrigerator directly to the main propane tank without a pressure regulator.*

Route the gas supply piping to limit vibration and abrasion. The gas supply piping should enter the refrigerator enclosure near the gas connection at the rear of the refrigerator. The hole through which the gas piping enters should be of sufficient size (approximately 1/2 inch diameter) to provide adequate clearance for the piping. Once the gas piping is in place, apply a sealant around the piping at its point of entry to minimize abrasion and vibration, and to serve as a barrier to external moisture.

Manual Shut-Off Valve

Hold

Turn

3/8 " Gas Supply

The diagram shows a hand holding the handle of a manual shut-off valve. An arrow labeled 'Turn' indicates the handle should be rotated upwards. The valve is connected to a pipe labeled '3/8 " Gas Supply'. The label 'Manual Shut-Off Valve' points to the valve assembly.

The gas supply is connected to the refrigerator at the inlet to the manual gas valve located at the bottom rear of the refrigerator. Access to this area is obtained through the vehicle's lower vent door. Care must be taken when connecting the gas piping to the refrigerator to insure the fittings are secure.



WARNING: The refrigerators are designed to operate on a 120 volt, 60 Hertz grounded AC circuit. The refrigerator's AC power cord is equipped with a three-prong grounding plug which must mate with a three-prong grounded receptacle to protect against possible electrical shock hazards. Operating the refrigerator without proper ground can cause property damage, severe personal injury, or death. It is the installer's responsibility and obligation to provide a properly grounded electrical circuit to the refrigerator accordance with local codes, or in the absence of local codes, the National Electrical Code, ANSI/NFPA 70. Do not cut or remove the round grounding prong from the refrigerator's AC power cord. Do not use a two prong adapter or an extension cord.

A 12 volt DC supply is required to maintain the refrigerator's operating control functions. The DC supply connects to the refrigerator at the power supply

board located at the rear of the refrigerator (Figure 9). The 12 volt DC should enter the refrigerator's enclosure near the refrigerator's power supply board. The 12 volt DC connects at (2) one quarter inch quick connects. The positive DC input lead connects to terminal J4, and the DC ground input lead connects to terminal J3.

⚠ CAUTION: Correct polarity must be observed when connecting the DC supply. Do not use the chassis of the refrigerator or the vehicle frame as one of the conductors. Connect DC supply wires at the battery and route to the refrigerator.

The distance the current travels from the battery to the refrigerator dictates the wire size. Undersized wire can result in a voltage drop, which will affect the wattage output of the DC heater and result in reduced refrigerator performance. Norcold recommends the installation of a fuse in the supply wiring between the battery and the refrigerator. For optimum protection, install the fuse as close to the battery as possible.

⚠ WARNING: A circuit overload can result in an electrical fire when undersized wires or improperly sized fuses are used. To prevent a possible electrical fire, follow R.V.I.A. A119.2 Standards, Norcold's wire size and fuse specifications, or applicable state and local codes.

TABLE 3
12 VOLT SUPPLY WIRING AND FUSE SIZE

	6162, 6182 662, 682 6052, 652		6163, 6183 663, 683		6053, 653	
	min. wire size	max. fuse size	min. wire size	max. fuse size	Min. wire size	max. fuse size
0 - 20'	18 AWG	6 Amp	10 AWG	30 Amp	12 AWG	20 Amp
over 20'	18 AWG	6 Amp	8 AWG	40 Amp	10 AWG	30 Amp

If a wire size is installed which is larger than the minimum size indicated the table above, it must be fused in accordance with the R.V.I.A. A119.2 standard or local governing codes.

Hypot Test

A Dielectric Strength test (hypot) has been conducted at the factory; this refrigerator does not re-

quire an additional test. If hypot tests are conducted on the vehicle's 12 volt circuit, the 12 volts **must** be disconnected from the refrigerator to protect the flame ignition circuit.

Testing the Vehicle's Gas Supply Piping

When installation of the refrigerator is complete, the propane gas supply piping must be inspected and tested for leaks from the refrigerator to the main gas supply tank. Use a leak detection solution. **Do not test for leaks with an open flame.**

If compressed air is used for leak testing, the gauge pressure must not exceed 1/2 pound per square inch (14 inches water column).

The appliance and its individual shut-off valve (Figure 10) must be disconnected from the gas supply system during any pressure testing of that system at test pressures greater than 1/2 psig (14 inches water column).

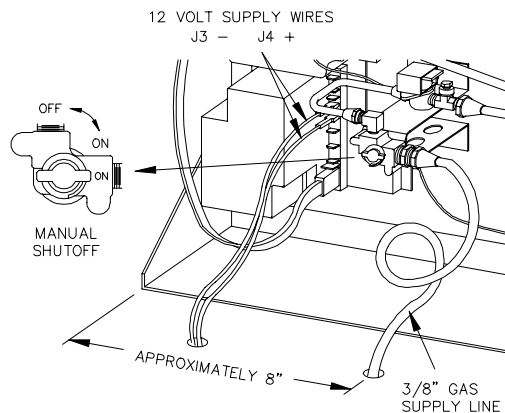


Figure 10

The appliance must be isolated from the gas supply system by closing its individual manual shut-off valve (Figure 9) during any pressure testing of that system at test pressure equal to or less than 1/2 psig (14 inches water column).

Check the gas pressure to the refrigerator without other gas appliances operating. The pressure should not exceed 11 inches water column. With other appliances operating the pressure should not be less than 10.5 inches water column.

Check Out - Flame Failure Safety Device

Before placing the refrigerator into operation, the gas safety device must be tested (see Operating Instructions on page). The purpose of the gas safety device is to prevent the escape of unburned gas from the burner if the burner flame is extinguished. While there is a flame present at the burner, disconnect the electrode wire to ignition module (see Figure 11).

Within 20 seconds the flame will go out, indicating the safety lock-out circuit is operational. Reconnect the wire to the ignition module upon completion of the test.

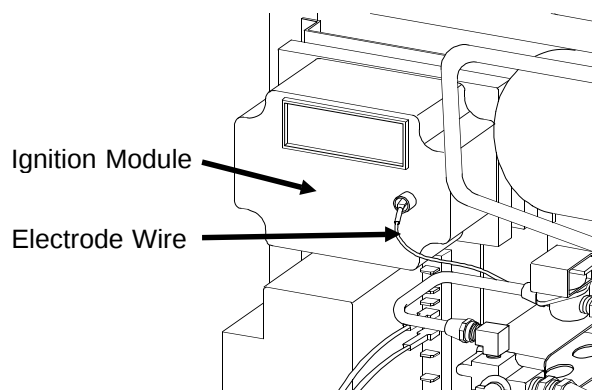


Figure 11

Door Panel Installation

The Norcold refrigerator doors provide slots for inserting decorative panels. Installation of the panels is accomplished by removing the handle assembly, inserting the decorative panel, and re-inserting the handle assembly. This procedure applies to both doors. (See Figure 12)

The frame slots are designed to accept panel thickness up to 3/16" maximum.

TABLE 4
PANEL DIMENSIONS

	662, 663 6162, 6163	682, 683 6182, 6183
Upper Door	19 11/16" x 16"	19 11/16" x 16"
Lower Door	19 11/16" x 32 1/4"	19 11/16" x 39 1/4" Note: use this dimension for models 652,3 & 6052,3 outer door

INSTRUCTIONS

1. Prepare panel by cutting to size indicated in accompanying chart. (See TABLE 4)
2. Remove handle assembly (A) by removing four screws (B). (See Figure 12)
3. Slide panel into frame slots.
4. Replace the handle assembly.

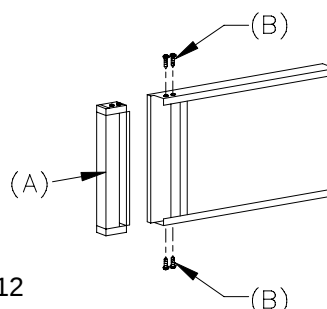


Figure 12

Instructions for Reversing Door Swing

Your refrigerator is equipped with convertible hinges which allows the door swing to be changed at any time.

TOOLS REQUIRED

Phillips Screwdriver - Size #2
Two Slotted Screwdrivers

REMOVING THE DOORS

1. Remove all items of food, juices, etc., from the doors. Remove the juice rack and storage bins. Close both doors before removing hinge pins.
2. Remove the top hinge pin using one of the slotted screwdrivers. Remove the center hinge pin (both pieces) using the two slotted screwdrivers; one on each end of the pin. Lastly, remove the bottom hinge pin. Be sure to save the pins for reassembly later. (See Figure 19)
3. Remove the upper door by opening the door slightly and pulling the bottom of the door away from the refrigerator. Allow enough room to slide the door down off of the upper hinge pin shoulder. (See Figure 13)

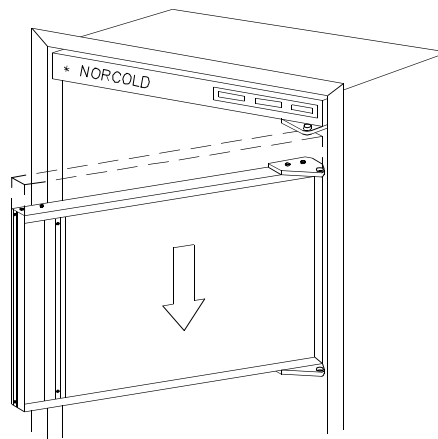


Figure 13

4. Remove the lower door by opening it slightly and pulling the top of the door away from the refrigerator. Allow enough room so the door can be lifted up and off of the bottom hinge pin shoulder (See Figure 14). Be sure to save the hinge plates along with the spacer used in the middle hinge bracket, for reassembly later. (See Figures 19A, 19B, and 19C)

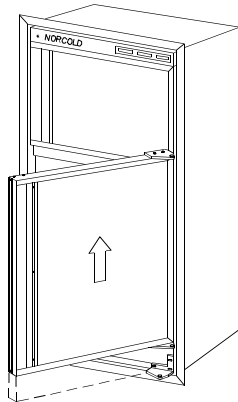


Figure 14

REMOVING AND RELOCATING THE HINGE BRACKETS

5. Remove the middle hinge bracket by using the #2 Phillips screwdriver and taking out the three screws holding it in place. Next, remove the three screws on the opposite side corresponding to the center hinge location. Relocate them in the holes just exposed by the removal of the hinge bracket. Attach the hinge bracket to the refrigerator on the opposite side. Do not tighten screws completely. (See Figure 15)

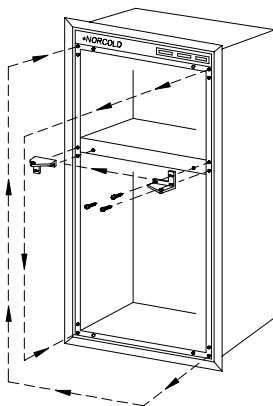


Figure 15

6. Remove the top hinge bracket and reposition it in the opposite bottom corner. Use the same technique as outlined in Step #5.
7. Remove the bottom hinge bracket and reposition it in the opposite top corner. Use the same technique as outlined in Step #5.

RELOCATING THE TRAVEL LATCHES

8. Remove both travel latches by taking out the two screws holding each to the refrigerator. Use the #2 Phillips screwdriver. Remove the two screws from each of the corresponding holes on the opposite side of the refrigerator. Relocate them in the two holes just exposed by the removal of the latches. Attach the latch in the new position so the tab points towards the opposite side of the refrigerator. Do not tighten screws completely. (See Figure 16)

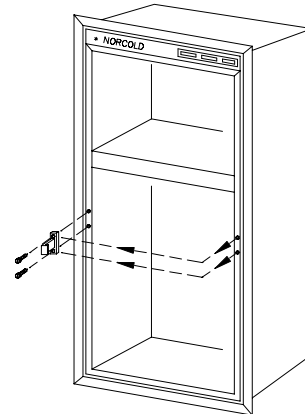


Figure 16

9. Turn the door over so that the end previously at the bottom is now at the top. Relocate the bottom of the door on the bottom hinge pin shoulder. Close door and align holes in top hinge brackets. The magnetic gasket will hold the door in place. Before reinstalling the top door, check to insure that the spacer is in place. (See Figures 17 and 19C)

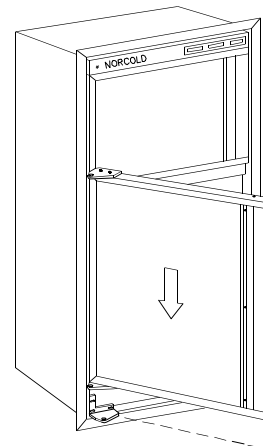


Figure 17

10. Reposition the upper door in a similar manner as described in Step #9, except the top of the door must be engaged into the hinge pin shoulder before setting the door in place. (See Figure 18)

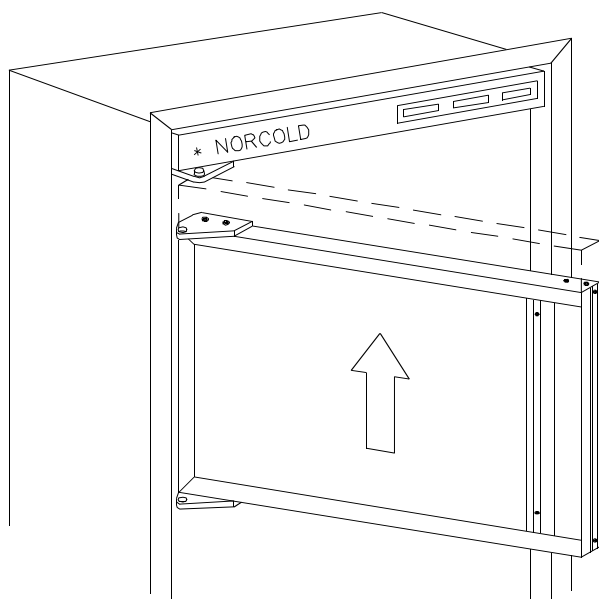


Figure 18

11. Starting at the top, replace the hinge pins using the slotted screwdrivers as in the removal procedure. Tighten all screws.

ALIGNMENT OF THE DOORS

12. Align the upper door with the lower so that there is a parallel gap between the doors and around the frame. Adjust the doors to the cabinet so the gaskets seal but do not bind. Tighten the screws holding the hinge brackets in place.
13. Door Seal: The door seal can be checked by closing the door on a 1" x 6" strip of paper. A slight drag should be noticed when the paper is pulled out from between the gasket and the cabinet. Repeat the process around all four sides of the door. If the door does not seal properly, readjust the hinge brackets.
14. Position the travel latches so that they secure the doors when closed but does not prevent the doors from closing properly. Tighten the two screws in each travel latch.
15. Replace the juice rack and storage bins into the door. Make sure that the milk bins (wider storage bins) are installed in the lowest door position.

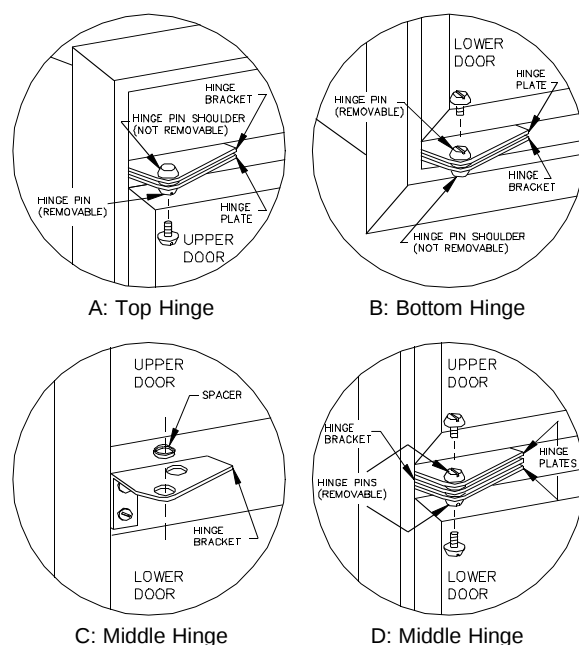


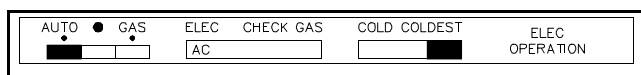
Figure 19

LIGHTING AND START UP INSTRUCTIONS

- a) 12 volts DC supply is required to maintain the operating controls function.
- b) The NORMAL-OFF-HIGH HUMIDITY switch must be set to NORMAL or HIGH HUMIDITY.

(2-Way Models)

Start Up Instructions - Auto Mode



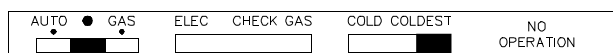
1. Move thermostat to COLDEST position. Set AUTO-GAS switch to AUTO.
2. If 120 volts is active, Mode Control panel will display AC, indicating refrigerator is operating in 120 volt AC mode.
3. If 120 volts AC is inactive (power failure, disconnected, etc.), Mode Control panel will display LP, indicating refrigerator has automatically switched to LP gas mode.
4. If Mode Control panel displays LP and a red X continuously, the refrigerator has failed to ignite burner on gas mode. Restart gas operation by moving AUTO-GAS switch to the center position and back to AUTO (See steps 3, 4, and 5 under Gas Mode.). Note: Unit operation will automatically return to AC when 120 volts AC is restored, even if the unit is locked out on gas operation.
5. Move thermostat to desired setting, usually a mid setting.

4. On the initial refrigerator start-up, it may take longer than 10 seconds to allow air to be purged from the gas line. If gas does not ignite within 20 seconds, valve will automatically shut off and the red X will be displayed at the CHECK position.

5. To restart when the X is displayed, move AUTO - GAS switch to the center position then return switch to the GAS position.

NOTE: If the gas does not ignite after several attempts, contact your dealer or a Norcold authorized service center.

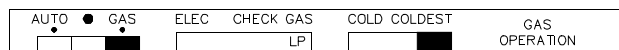
Shut Down Instructions - Gas or Electric



Short Duration: Set AUTO-GAS switch to OFF.

Long Duration: Set NORMAL-OFF-HIGH HUMIDITY switch (located on Mode Control panel - See Figure 24) to OFF.

Start Up Instructions - Gas Mode



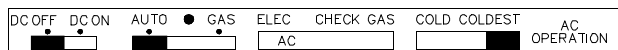
1. Move thermostat to COLDEST. Set AUTO-GAS switch to GAS.
2. Mode Control panel will display LP, indicating LP gas mode (If LP is not displayed, check for loss of DC supply voltage.). Initially, the red X will be displayed for about 2 seconds; after which, sparking will start at the burner and the red X goes off.
3. After 10 seconds, the burner should be ignited and operating normally.

Operating the refrigerator on the DC mode will override all other operating Modes

The DC mode design is to maintain an established temperature for short (4 to 6 hours) durations when gas or AC is not available. The DC mode cannot be used for initial cooling. Only use while in transit.

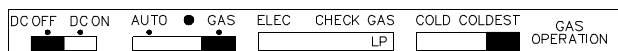
(3-Way Models)

Start Up Instructions - Auto Mode



1. Move thermostat to COLDEST position. Set AUTO-GAS switch to AUTO. Set DC OFF/DC ON to DC OFF.
2. If 120 volts is available, Mode Control panel will display AC, indicating refrigerator is operating in 120 volt AC mode.
3. If 120 volts AC is not available (power failure, disconnected, etc.), Mode Control panel will display LP, indicating refrigerator has automatically switched to LP gas mode.
4. If Mode Control panel displays LP and a red X continuously, the refrigerator has failed to ignite burner on gas mode. Restart gas operation by moving AUTO-GAS switch to the center position and back to AUTO (See steps 3, 4, and 5 under Gas Mode.). Note: Unit operation will automatically return to AC when 120 volts AC is restored, even if the unit is locked out on gas operation.
5. Move thermostat to desired setting, usually a mid setting.

Start Up Instructions - Gas Mode

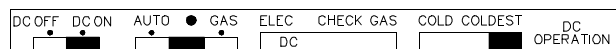


1. Move thermostat to COLDEST. Set AUTO-GAS switch to GAS. Set DC OFF/DC ON to DC OFF.
2. Mode Control panel will display LP, indicating LP gas mode (If LP is not displayed, check for loss of DC supply voltage.). Initially, the red X will be displayed for about 2 seconds; after which, sparking will start at the burner and the red X goes off.
3. After 10 seconds, the burner should be ignited and operating normally.

4. On the initial refrigerator start-up, it may take longer than 10 seconds to allow air to be purged from the gas line. If gas does not ignite within 20 seconds, valve will automatically shut off and the red X will be displayed at the CHECK position.
5. To restart when the X is displayed, move AUTO-GAS switch to the center position then return switch to the GAS position.

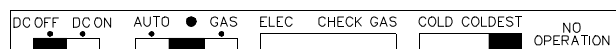
Note: If the gas does not ignite after several attempts, contact your dealer or a Norcold authorized service center,

DC Mode



1. Move thermostat to COLDEST position.
2. Set DC OFF/DC ON switch to DC ON. (DC ON will override the AUTO-GAS switch.)
3. Mode Control panel will display DC, indicating operation in DC mode.

Shut Down Instructions - All Modes



Short Duration: Set AUTO-GAS switch to center position. Set DC OFF/DC ON switch to DC OFF.

Long Duration: Set NORMAL-OFF-HIGH HUMIDITY switch (located on Mode Control panel) to OFF.

OPERATING AND USER INSTRUCTIONS

THIS APPLIANCE HAS BEEN DESIGNED FOR STORAGE OF FOODS, STORAGE OF FROZEN FOODS AND MAKING ICE WHEN INSTALLED AS DIRECTED BY THIS MANUAL.

Location of Controls

Figure 20 illustrates the locations of the refrigerator's operating controls. The operating control panel is located above the door. The panel includes the Thermostat, the Mode Selector switches, Mode Display Area, and the NORMAL-OFF-HIGH HUMIDITY switch.

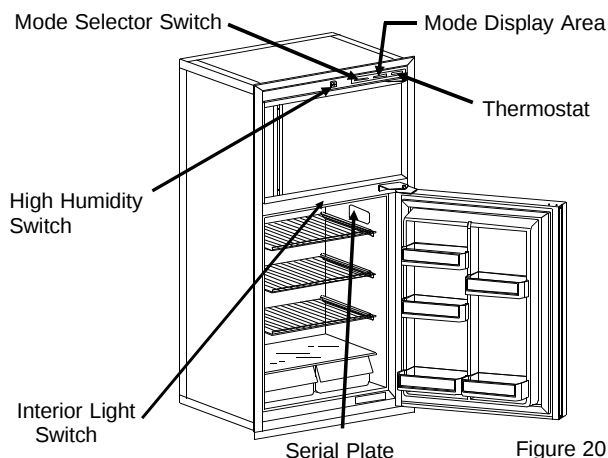


Figure 20

Operating Control Function

A 12 volt DC supply is required to maintain the refrigerator's operating control functions. The refrigerator receives its DC power from the vehicle's 12 volt system; either an auxiliary battery, a converter or the engine battery. The 12 volt DC system not only supplies power to the refrigerator, but to other DC components in the vehicle.

Mode Display Area

The display area provides a continuous indication of the refrigerator's operating mode. A description of each indication is as follows:

- AC: Indicates 12 volt DC and 120 volt AC is available to the refrigerator. Also indicated the refrigerator is operating on AC electric.
- LP: Indicates 12 volt DC is available to refrigerator and the gas burner is operating normally.
- X: When a red "X" appears with "LP", this indicates the gas burner is off and the operating controls are "locked" out. "Lock" out (red "X") is a design safety feature which

prevents the escape of unburned gas from the burner if the flame is extinguished. The controls must be reset to continue operation in the gas mode. See "Operating Instructions" on page 13 and 14.

DC: (3-WAY Models Only) Indicates 12 volt DC is available to the refrigerator and the refrigerator is operating in the DC electric mode.

Auto Mode

Note: On 3-Way models, the DC ON/DC OFF switch **must** be set to DC OFF.

When the "AUTO" mode is selected, the operating control automatically selects the energy source using the following scheme:

- When 10 volts AC is available to the refrigerator, "AC" will be visible in the Display Area, indicating the refrigerator is operating on AC electric.
- If 120 volt AC is not available the refrigerator will switch to the gas operation and "LP" will be visible in the Display Area.
- When neither 120 volts AC nor LP gas are available, the user can select DC electric (3-Way models only). The DC ON/DC OFF switch must be set to DC ON. DC will appear in the Display Area, indicating DC electric operation. Selecting the DC electric mode overrides **all** operating modes. If a fault occurs during the DC operation the controls **will not** automatically switch to an alternate power source. DC electric operation is not as efficient as AC electric or LP gas operation and should therefore be used only to maintain temperatures when the other modes are unavailable (for example; while in transit - 4 to 6 hours).

During operation in the "AUTO" mode, when a higher priority energy source becomes available, the operating controls will cease using the current energy source and will switch to the higher priority energy source. For example, if AC electric becomes available while the refrigerator is operating in the "LP" gas mode the refrigerator will switch to "AC" electric operation.

GAS Mode

Selecting GAS allows the refrigerator to operate on gas only. If DC power or the LP gas supply is lost, the operating controls will not automatically switch modes. Operation will lock out (red X) and requires to be manually reset (turning AUTO-GAS switch to the center position then back ON).

Thermostat

The thermostat controls both the gas and electric operation thereby eliminating the necessity of re-setting each time a different energy source is employed. After the initial start-up, the thermostat should be moved from "COLDEST" to the desired temperature setting, usually about mid setting.

Normal Operation-Off-High Humidity Switch on Models 682, 683, 662, 663, 6182, 6183, 6162, 6163 Only

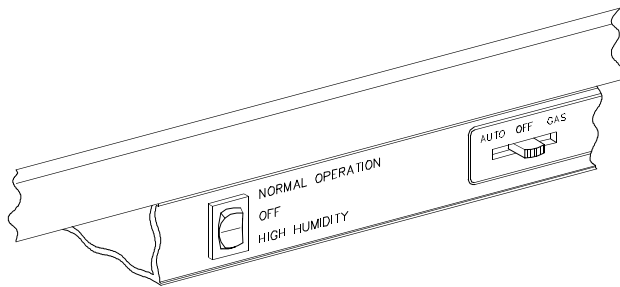


Figure 21

The models identified above are equipped with a heater that prevents moisture from forming on the center divider located between the freezer and the fresh food compartment. The heater is activated by turning the "Normal Operation-Off-High Humidity" switch (Figure 21) to the "High Humidity" position. The switch should be left in the "Normal Operation" unless moisture is observed on the center divider. Pressing this switch to "HIGH HUMIDITY" will keep the surface between the door openings dry during high humidity conditions. The switch should be left in the "NORMAL OPERATION" position unless condensation is observed in this area.

When your RV is being stored for the winter, the "Normal Operation-Off-High Humidity" switch should be placed in the "Off" position. This position shuts off all DC power at the refrigerator's operating controls allowing the refrigerator doors to be left open for airing without chance of battery drain during storage. (See "Information Regarding Battery Drain".)

Interior Light - Model 682, 683, 662, and 663 Only

The models identified above are equipped with an interior light. The light is located inside of the fresh food compartment on left side. The light will turn on when the door is opened and off when the door is closed. Power to light is activated when the "Normal Operation-Off-High Humidity" switch is set to either "Normal Operation" or "High Humidity" positions.

To replace the light bulb, disconnect the 12 volt DC from the refrigerator's power supply located at the rear of the refrigerator (see Figure 9 on page 8).

Remove the plastic light cover by sliding it towards the rear of the fresh food compartment. Remove the

bulb from the its bracket.



Caution: Do not replace with a bulb of higher wattage. Higher wattage bulbs can damage the interior surface of the fresh food compartment.

Replace the bulb with a NO. 168 which can be purchased from most retail automotive outlet centers. The bulb can also be ordered from any Norcold service center. Norcold's part number is 617609. Reinstall the light cover. Reconnect the 12 volt DC.

Interior Light - Models 6182, 6183, 6162, and 6163

The models identified above are **not** equipped with an interior light. The refrigerators identified above are equipped with a plug-in receptacle located inside the fresh food compartment on the left wall. A light kit can be purchased as optional equipment for these models from your dealer or a Norcold service center (see service center listings provided with the refrigerator). The Light Kit's part number is 61763237 (see insert provided with the refrigerator).

Information Regarding Battery Drain

A 12 volt DC source is required to maintain the refrigerator's operating control functions in all modes.

For the gas operation, the DC power source supplies voltage for the electronic ignition. The current draw is less than 500 milliamps. For models those models equipped with the moisture reduction heater and the heater is energized, this adds 240 milliamps for a total current draw of 740 milliamps (.74 amps). This indicates that the drain on the battery is very low and has little effect on "battery run down" unless these switches are on for long periods of time without recharging the battery.

During AC electric operation 12 volt DC is required to operate the interior light (for those models equipped), moisture reduction heater (those models equipped), mode display area, and the electronic thermostat.

For the DC electric operation, the DC power source supplies voltage for the cartridge heating element. For models 653 and 6053 the DC electric operation draws approximately 9 amps at 12 volt DC. For models 683, 663, 6183, and 6163, the DC electric operation draws approximately 14 amps at 12 volt DC. If the battery charging means is lost during DC operation switch the refrigerator to Gas or AC electric (if connected).

The DC voltage should be checked while operating in the DC mode. The voltage at the refrigerator should never drop below 11.5 volts.

During periods when the refrigerator is not used (seasonal storage, etc.) the "Normal Operation-Off-High Humidity switch should be switched to "OFF".. This disables the 12 volt DC to the "Operating Control Panel" and the "Normal Operation-Off-High Humidity" switch.

Operation in Transit

While the refrigerator should be level when the vehicle is stopped, performance during transit is not normally affected.

Refrigerator Storage Volume

Double Door Models

Models	6182, 6183	6162, 6163
Storage Volume	7.5 cu. ft.	6.3 cu. ft.
Models	682, 683	662, 663
Storage Volume	7.5 cu. ft.	6.3 cu. ft.

Single Door Models

Models	6052, 6053	652, 653
Storage Volume	4.3 cu.ft.	4.3 cu. ft.

Leveling

Comfortable vehicle leveling is well within the refrigerator's operating requirements of 3 degrees off level side-to-side and 6 degrees off level front-to-back (looking at the front of the refrigerator). Continued operation outside of these limits can result in irreparable damage to the cooling system.

Freezer Compartment

This compartment is not designed for the quick freezing of food but designed to retain food in a frozen state. Foods purchased for storage in the freezer compartment should be frozen when purchased to reduce the load on the refrigerator system.

IMPORTANT: Ice trays must be placed on the bottom freezer surface when making ice.

Water will freeze more rapidly if the thermostat is at it's coldest setting.

For the double door models, the freezer shelf can be adjusted or removed to meet your storage needs.

Fresh Food Compartment

The fresh food compartment stores and cools food.

For best cooling performance, air must be free to circulate within the fresh food compartment. **Do not cover the shelves with paper, plastic, etc.**

To reduce frost formation on the cooling fins, cover liquids and moist foods, do not place hot foods in the compartment, and do not leave the door open longer than needed.

Allow the refrigerator to cool for 8 hours before loading foods. Loading a warm refrigerator with warm food increases the cool down period.

Defrosting and Cleaning the Refrigerator Interior

Your refrigerator is not frost free and will require periodic defrosting. To defrost, turn the refrigerator off. Empty the freezer and the fresh food compartments. Placing a pan of hot water in the freezer will reduce the defrosting time. Leave the drip tray under the cooling fins. After frost has melted, empty the drip tray and clean the refrigerator.

Add a small quantity of mild dish detergent to lukewarm water and wash the interior of the refrigerator. **Do not use abrasive cleansers; they can damage the interior surfaces of the refrigerator.** Rinsing both compartments in a solution of baking soda and water (one table spoon of baking soda to one quart of water) will freshen the interiors and neutralize odors. Wipe the refrigerator interior dry with a soft cloth to remove excess moisture and to prevent water spots. Clean the door gaskets in the same manner as the refrigerator interior. This will help to prolong the life of the gaskets.

Door Latch

The refrigerator's built-in door latch prevents the door from flying open during transit. There are no chains or slides to remember to actuate when the vehicle starts moving. Always close the door to the closed latched (audible clicks) position to prevent cooling loss and heavy frost.

Important Notice:

Read and understand this notice before removing this refrigerator, re-installing this refrigerator, or performing any maintenance on this refrigerator. Norcold will not accept responsibility for improper installation, adjustment, alteration, service, or maintenance performed by anyone other than a qualified dealer or a Norcold service center. Costs or related consequential problems resulting from improper installation, adjustments, alteration, service, or maintenance are the refrigerator owner's responsibility.

Refrigerator Maintenance

1. Leak test gas supply piping and fittings at least once a year. This procedure should only be performed by your dealer or a Norcold service center. These facilities are familiar with gas refrigerators and propane gas systems.
2. Check the main line gas pressure periodically and adjust if necessary. The correct input gas pressure is 11 inches water column. It is recommended that your dealer or a Norcold service center perform this task.
3. Clean the refrigerator's burner and burner orifice. This procedure is required once a year minimum and should only be performed by your dealer or a Norcold service center. These facilities are familiar with gas refrigerators and propane gas systems.
4. Insure that the LP gas supply is Propane, not another fuel such as Butane or Butane mixtures.
5. Periodically inspect the burner flame appearance during gas operation. See "Burner Flame Inspection on page .
6. Inspect the electrode assembly to insure it is secure to the burner bracket.
7. Inspect the flue of the refrigerator's cooling system. This area must be free of foreign materials. Foreign materials observed in the flue indicate the burner requires cleaning.
8. Insure the area directly behind the refrigerator is not being used for storage. Keep the refrigerator area clear and free from combustible materials, gasoline, and other flammable vapor and liquids.
9. Periodically inspect the ventilation system. The air passage from the bottom intake vent to the refrigerator coils and from the refrigerator coils through the upper exhaust vent must be unobstructed.
10. Inspect combustion seals (visual check without removing the refrigerator). Combustion seals are attached to the back surfaces of the refrigerator's mounting flanges to assure a complete seal.
11. Periodically inspect door seals. See "Checking Door Seals" below.

Checking Door Seals

To insure cooling efficiency and to prevent frost formation, the door gasket must seal completely.

To check for proper door seal, lay a strip of paper between the gasket and the refrigerator. Close the door and withdraw the paper. A frictional drag should be noticed. Repeat all around the door. If the paper does not have a noticeable drag, the gasket is not

sealing. Contact your dealer or a Norcold service center for corrective procedures.

Refrigerator Storage

When the refrigerator will not be in use for an extended (seasonal) period of time, it is recommended that all power to the refrigerator be disconnected. Unplug the refrigerator's AC power cord from the wall receptacle and disconnect the 12 volt DC from the refrigerator's terminal block located at the rear of the refrigerator. Clean the refrigerator interior and leave the door(s) open to keep the interior odor free. After the extended shut-down period, the burner, burner orifice, and flue must be inspected before igniting the burner flame. These areas must be free from dust, spider webs, or other obstructions which might restrict the combustion system.

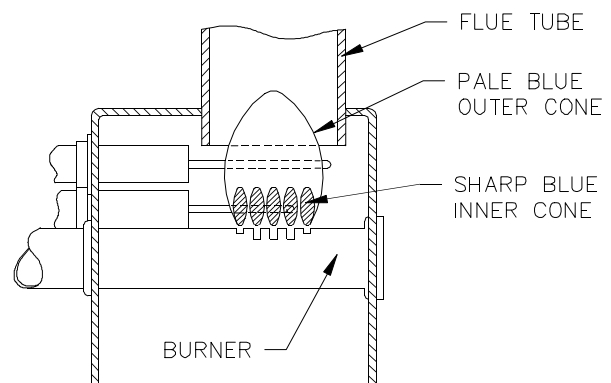


Figure 22

Burner Flame Inspection

The efficiency of your refrigerator while operating in the gas mode is independent upon the correct burner flame. The burner flame provides energy to the refrigerator's cooling system.

The burner flame efficiency is a function of correct input gas supply pressure, air input, and burner and burner orifice cleanliness.

A visual check of the burner flame should be made regularly. The flame should be sharp blue with a stable burning appearance (Figure 22). If there is a constant yellow component observed or if the flame appears erratic or unstable, switch the refrigerator to electric or turn the refrigerator "OFF" and contact your dealer or a Norcold service center.

Refrigerator Removal and Replacement

1. Turn off the gas at the main supply tank(s).
2. Turn the refrigerator off.
3. Turn the refrigerators manual shut-off to off.

4. Disconnect the refrigerator's AC power cord from the wall receptacle.
5. Disconnect the 12 volt DC supply from the refrigerator's terminal block.
6. Disconnect the LP gas supply line from the refrigerator.
7. Remove the mounting screws securing the refrigerator or to the enclosure.
8. Remove refrigerator from the enclosure.

To Reinstall the Refrigerator:

1. Before reinstalling the refrigerator, inspect the areas behind the mounting flanges for damaged or missing seal strips (combustion seals). These seal strips serve as a combustion seal which isolates the living space of the vehicle from the refrigerator's combustion system.
2. Reinstall the refrigerator by reversing the above procedures.
3. After reinstalling the refrigerator, check the gas fitting connections for leaks. **Do not check for leaks with an open flame. Use an approved leak detection solution.**

Failure of Refrigeration

Failure of refrigeration does not necessarily indicate that the cooling system is defective. Other factors governing its operation must be checked.

If the refrigerator is operating on gas and a loss of cooling is noticed, switch the refrigerator to AC electric operation. (See "Operating Instructions on page 13). If the refrigerator has been operating on electric, switch to gas operation.

After the refrigerator has been switched from one power source to the other, allow several hours to assure the refrigerator is cycling properly. This will determine if a component failure in the electric or gas controls is causing the cooling fault. If no cooling is evident after eight hours (overnight), you must contact your dealer or a Nocold service center to determine the cause of failure.

Note: Do not attempt to operate the refrigerator on DC when analyzing the cooling unit performance. The DC electric mode of operation is designed for short periods of operation only and will not power the cooling unit to its full capabilities.

TABLE 5 - CONDITIONS FOR DESIRED OPERATING MODE (NORM.-,OFF- HUMID. must be on NORMAL or HIGH HUMID.)

IF YOU HAVE THESE CONDITIONS:				YOU WILL OBSERVE THIS:		REMARKS
MODE SWITCH POSITION	AC SUPPLY CONNECTED?	DC SUPPLY CONNECTED?	GAS SUPPLY CONNECTED?	CONDITION OF UNIT:	CONTROL PANEL INDICATORS	
AUTO	YES	YES	YES OR NO	AC MODE	"AC"	OPERATIONAL
AUTO	NO	YES	YES	GAS MODE	"LP"	OPERATIONAL
AUTO	YES OR NO	NO	YES OR NO	OFF	ALL OFF	NOTE 1
AUTO	NO	YES	NO	OFF	"LP", "CHECK"	NOTE 2
GAS	YES OR NO	YES	YES	GAS MODE	"LP"	OPERATIONAL
GAS	YES OR NO	YES	NO	OFF	"LP", "CHECK"	NOTE 3
GAS	YES OR NO	NO	YES OR NO	OFF	ALL OFF	NOTE 1
DC*	YES OR NO	YES	YES OR NO	DC MODE*	"DC"	OPERATIONAL
DC*	YES OR NO	NO	YES OR NO	OFF	ALL OFF	UNIT OFF

NOTE 1: Both GAS and AC modes require a 12 volt DC control voltage; Therefore, unit cannot start without the 12 volt DC source.

NOTE 2: Without 120 volts AC connected, unit will automatically try to start up in GAS mode; If gas is not present (bottle could be empty), unit will try to start, then lock out. ("CHECK" light)

NOTE 3: No gas supply to burner, unit will try to start, then lock out. ("CHECK" light)

* 3-Way Models Only

Replacement Parts

The following is a list of parts which are owner replaceable and can be obtained through all Norcold service centers.

Description	Models	Models	Description	Models	Model
	6162,3	662,3		6052,3	652,3
	6182,3	682,3			
Ice Cube Tray	61630422	61630422	Ice Cube Tray	61630422	61630422
Crisper	61571325	617758	Crisper	61571325	617758
Juice Rack	---	62580525	Storage Bin	61564025	617759
Storage Bin	61564025	617759	Dairy Keeper Lid	---	617760
Milk Bin	61579425	617757	Milk Bin	61579425	617757
Dairy Keeper Lid	---	617760	Outer Door Gasket	61567930	61567930
Freezer Door Gasket	61567830	61567830	Freezer Door Gasket	61618730	61618730
Lower Door Gasket	61568030	61568030	Knob - Thermostat	61587422	61587422
Interior light Bulb*	---	617609	Owners Manual	618483	618483
Knob - Thermostat	61587422	61587422			
Owners Manual	618483	618483			
Interior Light Kit	61763237	---			

**Le manuel de langue anglaise est disponible sur demande, par l'intermédiaire de votre revendeur.
N° de pièce: 618506.**

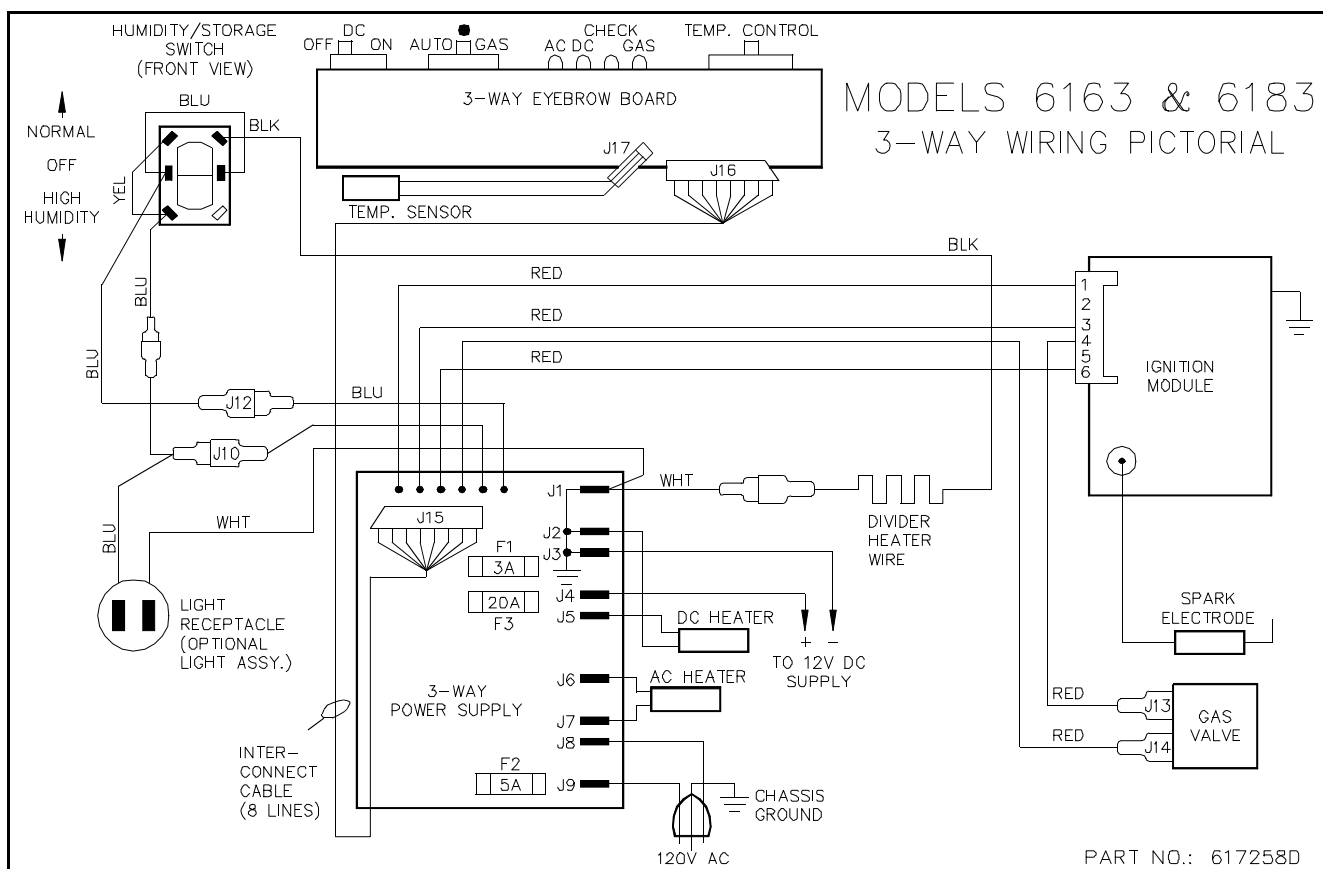
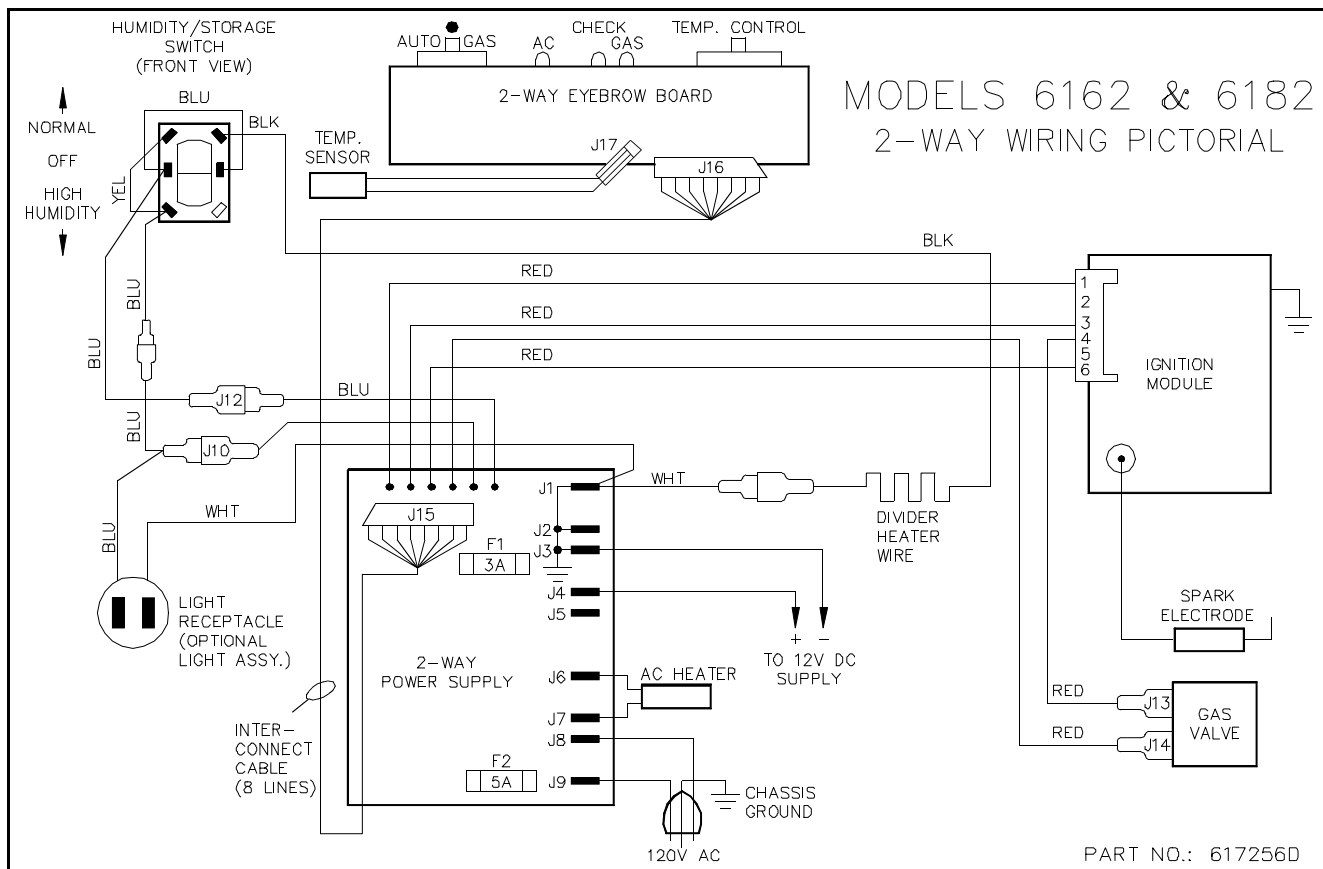
*SYLVANIA NO. T-168 OR EQUIVALENT
Available at Hardware/Auto Supply

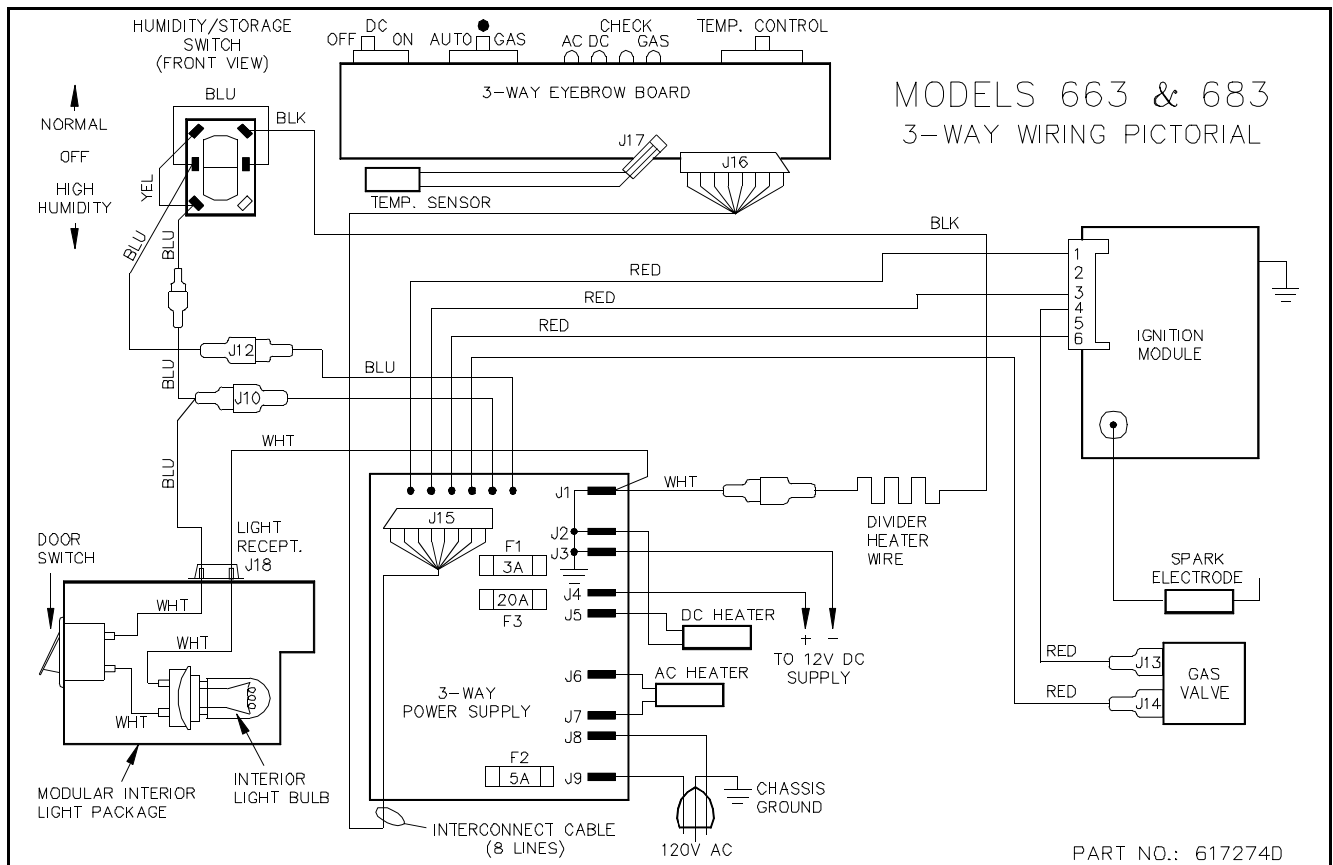
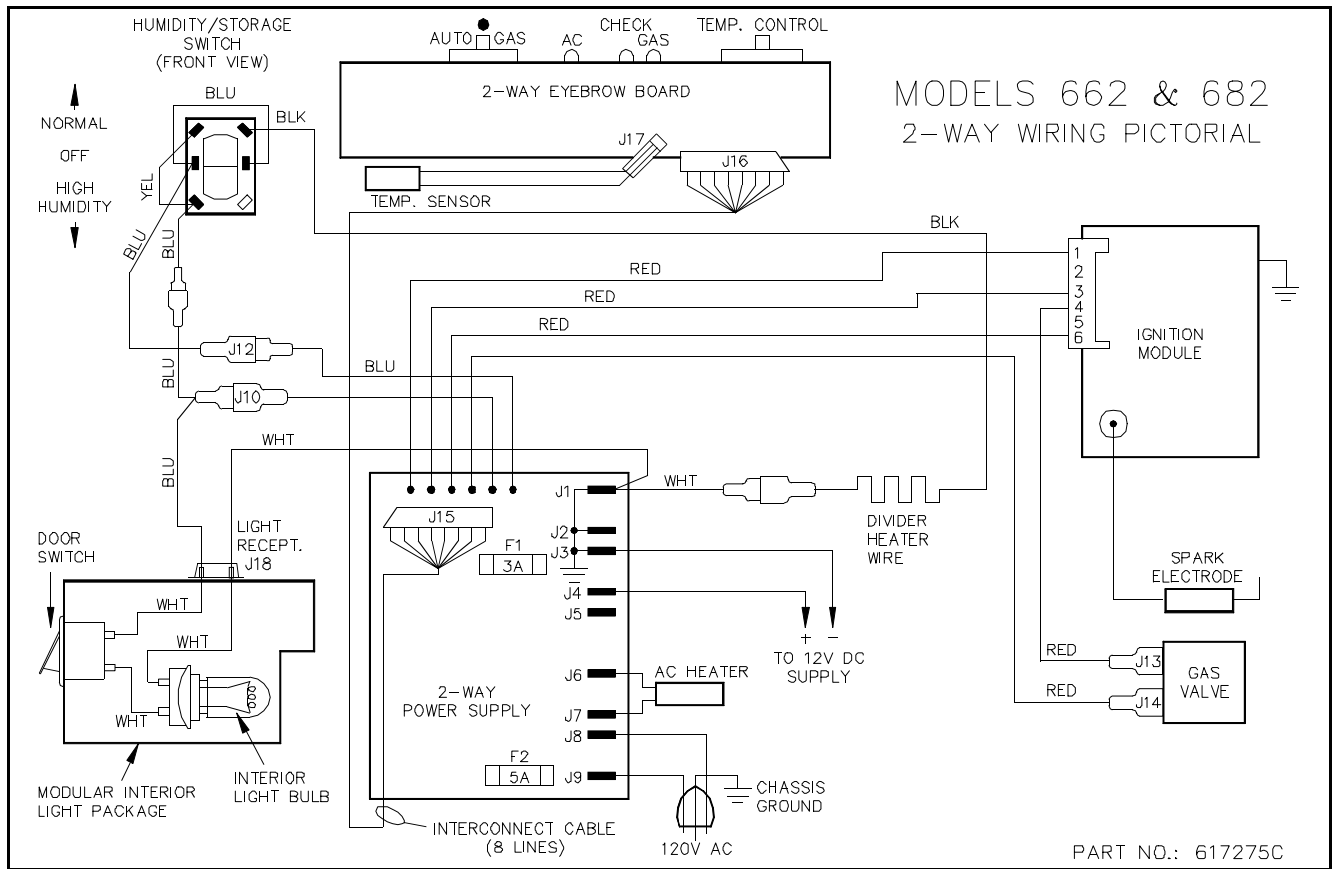
Also available at most auto supply companies.
20 Amp. Fuse Littlefuse SFE-20
3 Amp Fuse Littlefuse 1 AG-3
5 Amp Fuse Buss AGC-5

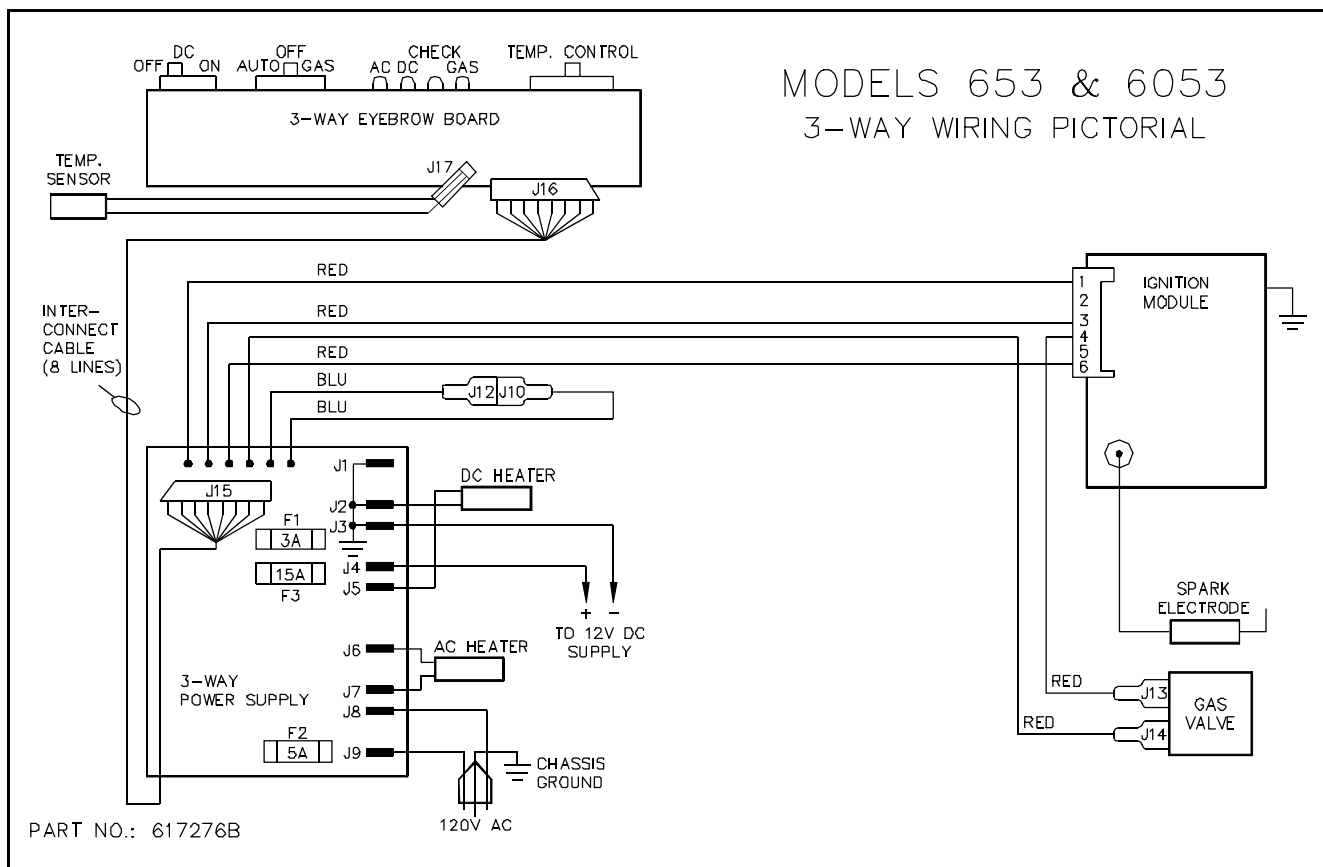
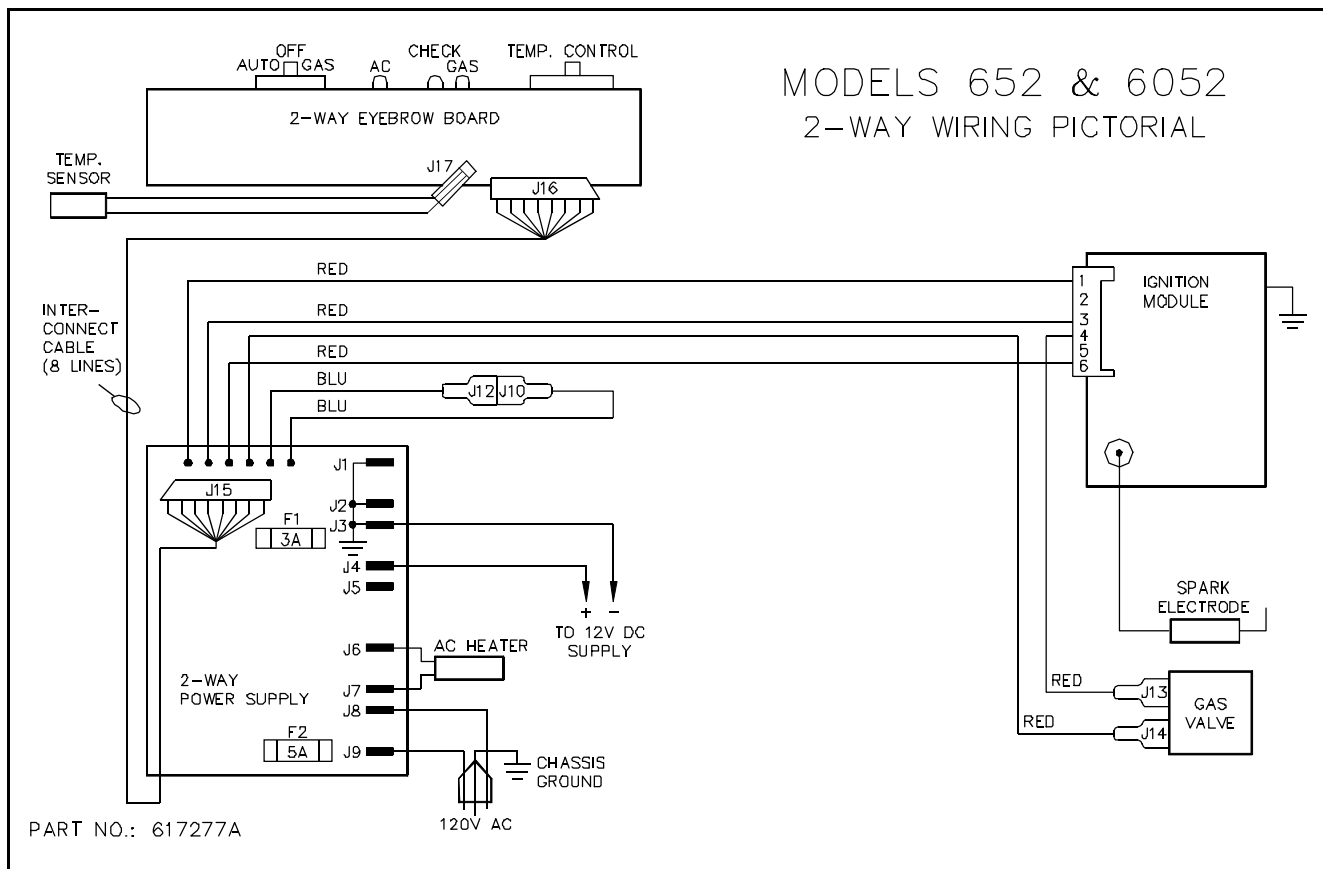
SERVICE INFORMATION

IF SERVICE OR PARTS ARE REQUIRED, CONTACT
THE NEAREST NORCOLD SERVICE CENTER.

A NORCOLD SERVICE CENTER BOOKLET HAS BEEN
INCLUDED WITH THE REFRIGERATOR INFORMATION
PACKET.







LIMITED WARRANTY

**NORCOLD
P O BOX 4248
SIDNEY OH 45365-4248**

This Limited Warranty is given by NORCOLD ("Company") to the original consumer-purchaser of any new refrigerating equipment ("Equipment") supplied by the Company, excluding glassware, electric light bulbs, replaceable fuses, and will be effective for a period of one year from date of original purchase. The Company warrants, provided that the Equipment shall at all times have been in possession of and used by the original consumer-purchaser, that:

- A. The Company will provide free service and replacement of defective parts at no charge at all authorized Norcold Service Centers for a period of one year from the date of original purchase. This Limited Warranty covers labor costs incurred in removing and re-installing the refrigerator only when necessary to replace a defective part. The Company will pay inbound and outbound transportation costs of any defective part, for a 1-year period commencing with date of purchase. The original consumer-purchaser must pay all expenses incurred in making the equipment available at one of the Norcold Service Centers. Any parts replaced under warranty (including cooling units) will be warranted for the duration of the original warranty period.
- B. The following procedure shall be followed by an original consumer-purchaser desiring to obtain performance under the terms of this Limited Warranty. The refrigerator must be brought to any of the Norcold Service Centers and the original consumer-purchaser must present evidence (1) to identify the original consumer-purchaser: and (2) that the item claimed to be defective is still within the warranty coverage. If the original consumer-purchaser is unable to accomplish this task, written notice should be immediately directed to Norcold and advice will be promptly given concerning the manner in which warranty service may be obtained. Inability to physically bring the refrigerator to a Norcold Service Center will not void the warranty, but any additional costs thereby incurred are solely for the account of the original consumer-purchaser.
- C. The Company will not be liable under this Limited Warranty for any of the following:
 - (1) Defects which arise by reason of transit damage, misuse, neglect or accident.
 - (2) Manufacturing defects found at the time of purchase, or parts replaced under warranty, and associated labor, which are not communicated to the Company within 30 days.
 - (3) Labor performed without need for parts replacements which is not communicated to the Company within 30 days.
 - (4) Defects in glassware, electric light bulbs, or replacement of fuses.
 - (5) Defects arising from improper installation or adjustment of the Equipment.
 - (6) The need for normal maintenance of this refrigerator according to the guidelines specified in the Installation and Operating Instructions.
 - (7) Defects arising from the improper use of parts or parts not manufactured or supplied by the Company in the course of repairs or replacements to the Equipment.
- D. Employees and agents of the Company, and its authorized service representatives, have no authority to vary the terms of the Limited Warranty, which applies only to Equipment purchased and installed in the United States of America and the Dominion of Canada. The Company reserves the right to make any improvements or changes in parts or models without notice to any original consumer-purchaser.
- E. The Company shall not be liable or in any way responsible for any loss or damage to person or property, or lost profits or other similar loss or damage that may result or be claimed to have resulted from a defect in any parts of the Equipment covered by this Limited Warranty. Some states do not allow the exclusion or limitations of any incidental or consequential damages, so the above limitation or exclusion may not apply to you.
- F. ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE:
 - (1) APPLICABLE TO A PART OR PARTS OF THE REFRIGERATOR IS LIMITED TO A PERIOD OF ONE YEAR FROM DATE OF PURCHASE.
 - (2) SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS. THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU.
- G. This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state.



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Follow proper safety practices. If in doubt, consult a professional RV technician.