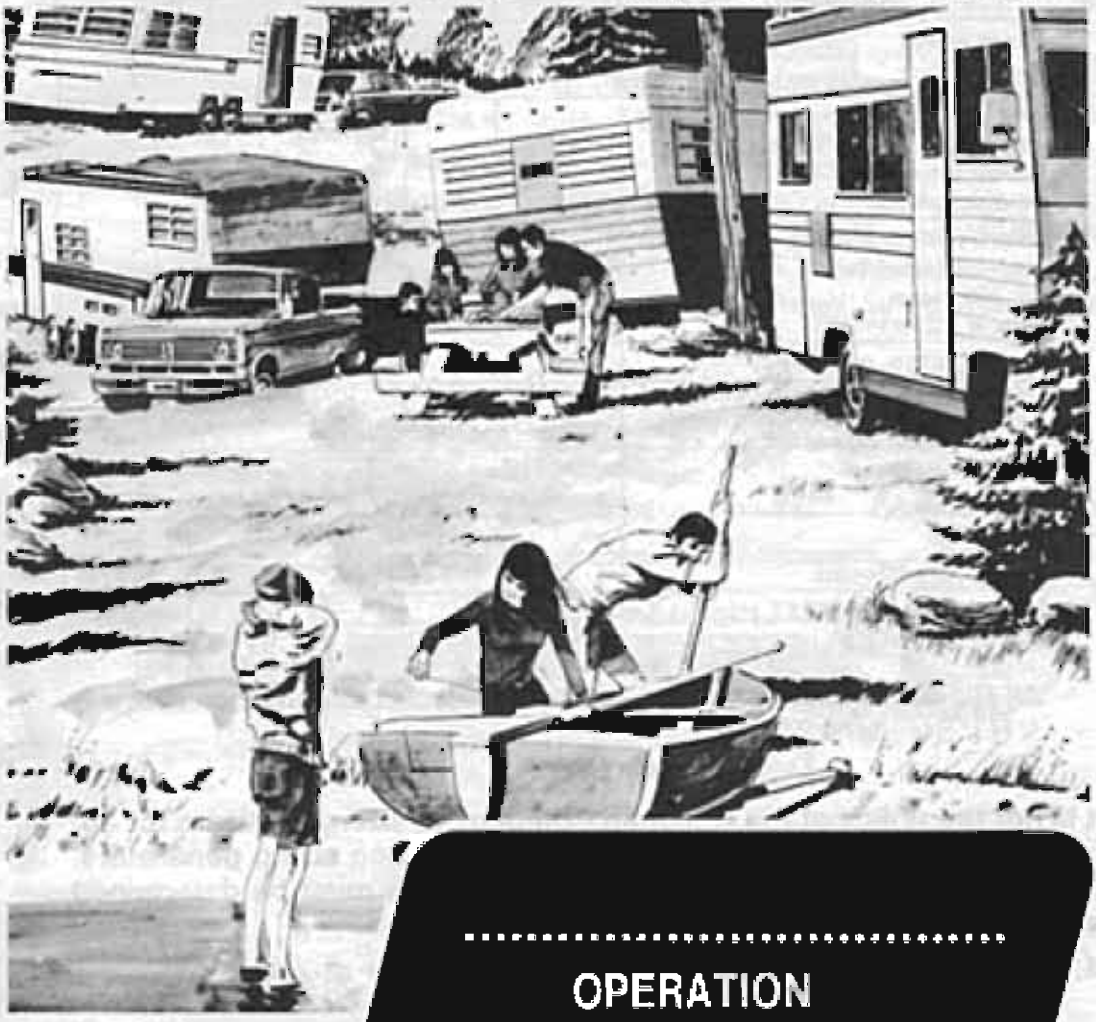
RV

Coleman

RECREATIONAL VEHICLE AIR CONDITIONERS

DELUXE MODELS	6747 MACH® 1 ROTARY SERIES 6749 MACH® 3 ROTARY SERIES
MODELS	6744A MACH® I "EL" SERIES 6746A MACH® III "EL" SERIES All With "ELECT-A-HEAT" Option
USED WITH	6723A713 "Heat/Cool" Ceiling Assemblies 6723A716 6723A714 "Cooling Only" Ceiling Assembly



OPERATION and MAINTENANCE INSTRUCTIONS

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SPECIFICATIONS Model Number		MACH® 1 EL 6744A SERIES	MACH® III EL 6746A SERIES	MACH® 1 ROTARY 6747 SERIES	MACH® 3 ROTARY 6749 SERIES
BTU Capacity (nominal)	Cooling	11,000	13,500	11,000	13,500
	Heating①	5,600			
Electrical Rating		115 Volts/60 Cycles/1 Phase			
Locked Rotor AMPs (cooling)		50.0	72.5	56.6	63.5
Full Load AMPs	Cooling	13.3	16.0	13.2	13.8
	Heating①	16.0			
RUNNING WATTS: (cooling) A.R.I. Standard Condition (80° F. DB/ 71° F. WB Indoor, 115° F. DB Outdoor at 115 VAC)		1460	1800	1420	1600
RUNNING WATTS: (cooling) A.R.I. Maximum Condition (95° F. DB/ 71° F. WB Indoor, 115° F. DB Outdoor at 103.5 VAC)		1850	2350	1600	1930
RUNNING WATTS: (heating)①		1,800			
Evaporator Air Delivery CFM		Infinite adjustment between 330 CFM maximum and 150 CFM Minimum.			
Condenser Air Delivery		Constant condenser air flow regardless of evaporator air flow.			
Generator Size		See Important Notice Below			
Installed Weight (pounds)		127	133	115	118

① Optional ELECT-A-HEAT Heating Assembly.

NOTE

All RV air conditioners are tested and rated in accordance with A.R.I. Standard 250-74.

IMPORTANT

It is not the policy of the Coleman Company to size generators for application in Recreational Vehicles. However, when sizing generators, the total electrical power consumption in Watts must be determined and taken into consideration, such as:

A. Maximum running watts of the air conditioner at A.R.I. maximum operating conditions (See specifications).

B. Power consumption of electronic ovens, electric toasters, electric coffeemakers, television sets, refrigerators, lights, etc.

NOTE

Generators do lose capacity under the following conditions: 1. Altitude increases above sea level. 2. Temperature increases above certain outdoor design temperatures. 3. Lack of maintenance.

GENERAL INFORMATION

Your RV air conditioner is operated totally from the control panel located in the ceiling assembly. There are four controls on the ceiling assembly that help you control the air conditioner. They are as follows:

A. The Selector Switch (system switch) — The selector switch determines which mode of operation the air conditioner will be in; "OFF", "FAN or FAN ONLY (2 positions)", "COOLING" or "HEATING (on models 6723A713 and 6723A716 ceiling assemblies only)". See Figure 1.

B. The thermostat (temperature control) — In the cooling mode the thermostat regulates the "ON" and "OFF" temperature setting at which the compressor will operate.

   For "Elect-A-Heat" models the thermostat also controls the "ON" and "OFF" temperature settings of the heater assembly. See Figure 1.

C. The Air Volume Regulator (damper) — The damper regulates the volume of air that your air conditioner will be handling when it is in operation. When the lever is in the "up position" maximum air volume is achieved, in the "down position" minimum air volume is the result. See Figure 1.

D. Louvers — The louvers are located at both ends of the ceiling assembly shrouds and are used in directing the discharge air from the unit. See Figure 1.

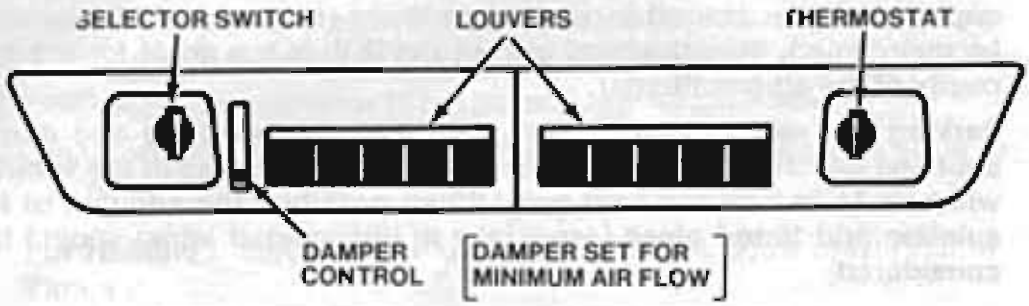


FIGURE 1

NOTE

*The optional Elect-A-Heat is intended to take the chill out of the indoor air when the air is a few degrees too cool for comfort. When properly sized, the Elect-A-Heat is an effective "chill chaser". **It is not a substitute for a furnace.***

In addition to these controls your Coleman RV air conditioner also has other features that are designed for your personal comfort. First is the long life non-allergic natural fiber filters which can be cleaned and re-used, and which completely filter the circulated air when the air conditioner is in operation. Second, the air conditioner, if sized correctly to your RV and locale, will condition the air to the temperature that is most comfortable for you.

IMPORTANT NOTICE

The size of recreational vehicle air conditioners is generally limited to about 13,500 BTUH (approximately one ton) of cooling.

This is due to the limited electrical power normally available in most trailer parks and/or economic limitations on the use of generators with enough capacity to handle large air conditioners.

If more than 1 ton of cooling is desired, then the use of two air conditioners is recommended.

The ability of the air conditioner to maintain the desired inside temperature depends on the heat gain of the recreational vehicle.

The size of the vehicle, amount of window area, amount of insulation, direct exposure to the sun, outside temperature and the number of people in the recreational vehicle may increase the heat gain to such an extent that the capacity of the air conditioner is exceeded.

As a general rule, air entering the air conditioner will be cooled about 15 to 20 degrees, depending on the outside temperature and humidity conditions.

For example, if the air entering the return air grilles in the air conditioner is 80°F., the air leaving the discharge grilles in the air conditioner will be 60° to 65°F.

As long as this temperature difference is being maintained between the return air and discharge air, the air conditioner is operating at its capacity. If the desired inside temperature (normally 80°F.) cannot be maintained, then the heat gain of the R.V. is too great for the capacity of the air conditioner.

Parking the vehicle in a shaded area, keeping windows and doors shut and avoiding the use of heat producing appliances in the vehicle will help to reduce the heat gain. When possible, the addition of insulation and tinted glass (especially in uninsulated vans) should be considered.

OPERATION

I. **For Air Recirculation Only** (refer to Figure 2).

A. Turn the selector switch to the "FAN" or "FAN ONLY (2 positions, one speed)" position.

B. Adjust the damper lever to the desired volume of air flow.

C. Position the louvers to the desired direction the discharge air is to flow.

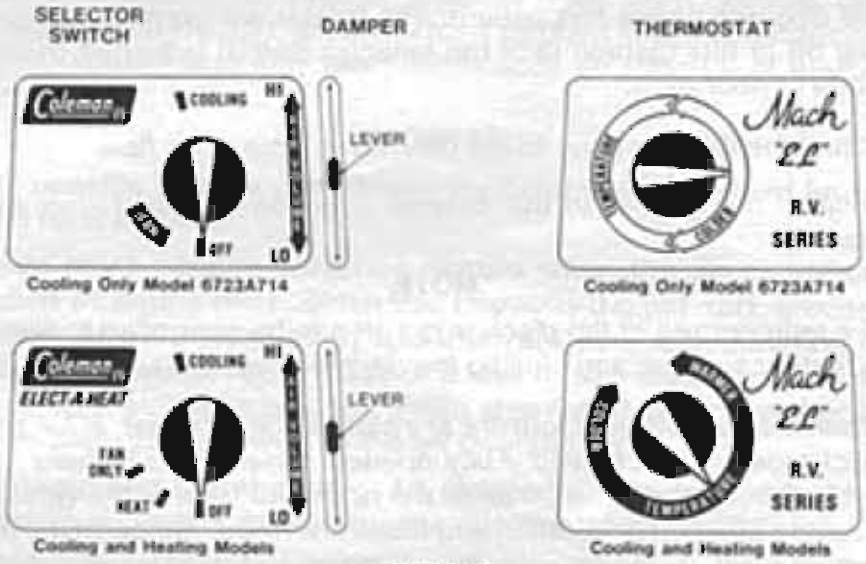


FIGURE 2

NOTE

The Thermostat does not operate when the selector switch is set on "FAN" or "FAN ONLY".

II. **For Cooling** (refer to Figure 2).

A. Turn the selector switch to the "COOLING" position.

B. Rotate the thermostat (temperature control) switch to the position that is the most comfortable to you. The compressor will automatically turn on when the temperature of the air entering the air conditioner rises a few degrees above the setting you have selected. When the temperature of the air entering the air conditioner drops below the selected setting the compressor will automatically turn itself off. The air conditioner, while in the cooling mode, will continue to cycle the compressor on and off in the above mentioned fashion until the selector switch is turned to another mode of operation.

C. Adjust the damper lever to the desired volume of air flow.

D. Position the louvers to the desired direction the discharge air is to flow.

III. **For Heating** ("Elect-A-Heat" ceiling assembly models only) refer to Figure 2.

NOTE

*The optional Elect-A-Heat is intended to take the chill out of the indoor air when the air is a few degrees too cool for comfort. When properly sized, the Elect-A-Heat is an effective "chill chaser". **It is not a substitute for a furnace.***

A. Turn the selector switch to the "HEAT" position.

B. Rotate the thermostat (temperature control) switch to the position that is the most comfortable to you. The heater will automatically turn on when the temperature of the air entering the air conditioning unit

drops below this setting a few degrees and automatically turns off when the temperature of the air entering the air conditioner rises a few degrees above this setting. The heater will continue to cycle on and off in this fashion until the selector switch is turned to another mode of operation.

C. Adjust the damper lever to the desired volume of air flow.

D. Position the louvers to the desired direction the discharge air is to flow.

NOTE

The temperature of the discharged air can be controlled to some extent by opening and closing the damper and/or louvers.

When the damper and louvers are closed the warmest, localized discharge air is achieved. Fully opened damper and louvers will throw the warm discharge air to the back and front of the vehicle for more efficient circulation and faster warm-up. Although the air temperature is lower with the damper and the louvers fully opened, the heating capacity is still the same.

IV. Damper Operation

When relative humidity conditions are high, set the air damper at either a medium or high setting. In high humidity conditions we do not recommend operation of the air conditioner with the damper in the down position (minimum air) as this may cause the cooling coil to become iced-up and the air conditioner to stop cooling.

V. Operation During Cooler Nights (Cooling operation)

It is important, when the outdoor temperature drops in the evening or during the night to below 75°F., that the thermostat (temperature control) be set at a midpoint between "Warmer" and "Colder". If the setting is at "colder" the cooling (evaporator) coil may become iced-up and stop cooling. During the day when the temperatures have risen above 75°F. reset the thermostat switch to the desired setting.

NOTE

Should icing-up occur it is necessary to let the cooling (evaporator) coil defrost before normal cooling operation is resumed. During this time operate the unit in the "Fan" or "Fan Only" position with the dampers at maximum air flow. When increased or full air flow is observed, the cooling coil should be clear of ice.

MAINTENANCE

I. Owner

One of the biggest advantages to your new Coleman RV air conditioner is that the maintenance needed to keep the unit in good care is minimal. In fact about the only thing you, the owner, must take care of is the cleaning and replacement of the filter.

The filter is a vital part of every air conditioning system. If the filters are not cleaned at regular intervals they may become partially clogged with lint, dirt, grease, etc. A clogged filter will produce a loss of air volume and may eventually cause an icing-up of the cooling (evaporator) coil.

IMPORTANT

Do not operate your air conditioner for extended periods of time without the filter installed.

An even more serious condition occurs when the air conditioner is operated without a filter. When this happens the lint, dirt, grease, etc. that are normally stopped by the filter are now accumulating in the cooling coil. This not only leads to a loss of air volume and a possible icing-up of the cooling coil, but could also result in serious damage to the operating components of the air conditioner.

We recommend that the filters be cleaned or changed at least every two weeks when the air conditioner is in operation.

A. Cleaning and/or changing the filters.

1. Remove the Selector switch and Thermostat knobs from ceiling assembly.
2. Remove the two screws that secure the ceiling assembly shroud to the ceiling assembly. See Fig. 3.

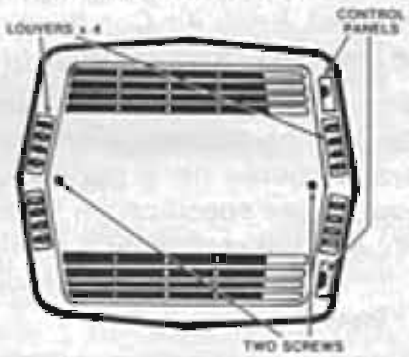


FIGURE 3

3. Lower the shroud and gently slide it off the control knob shafts and damper lever.
4. Take filters out and either clean or exchange with other filters.

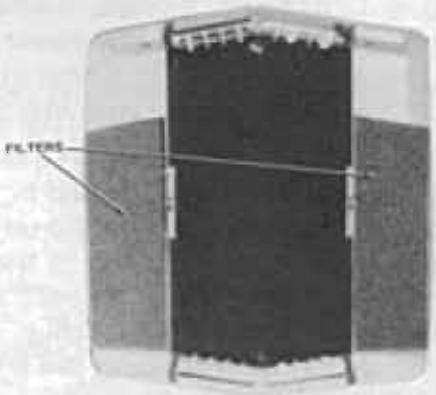


FIGURE 4

NOTE

If replacement filters are necessary, the filters can be purchased from most Coleman Authorized Service Centers or from The Coleman Company directly. It is recommended that spare filters be carried with the RV at all times to replace worn, torn or deteriorated filters.

6. Replace the filters and reinstall the ceiling shroud in reverse order starting with step 4.

II. Service Person

A. Electrical - All electrical work and/or inspection should be performed only by qualified service personnel. Contact your nearest Coleman Service Center if electrical problems should arise.

B. Check Points - Failure to start or to cool the air are sometimes problems with air conditioning units. The Coleman RV air conditioner is designed to operate on 115 volt electrical power. If the compressor on the air conditioner fails to start, check with your Coleman Service Center to determine that the proper wire size is connected to the unit, the proper circuit breakers are installed as protection devices on the electrical circuit and the proper sized extension cord is being used for the distance covered from the utility outlet to the RV. The required minimum wire size is #12AWG got lengths up to 25 feet (larger wire size for greater distances). Each Air Conditioning unit must be protected with a 20 amp time delay fuse or circuit breaker.

If the air conditioner continues to trip off the circuit breaker, have an electrician check the starting amperage and running amperage on the unit. The amperage figures for a particular air conditioner by model number is shown in the specification table found on page 2 of the booklet. If the circuit breaker continues to trip off and the electrical consumption is found to be normal, it will require the replacement of the faulty circuit breaker.

If all electrical power to the air conditioner is normal but neither the fan or the compressor will operate, the connector plug located behind the ceiling assembly control box should be checked to determine whether it is faulty.

On the heating-cooling air conditioner models, if all electrical power to the unit is normal and the fan runs but you never get any heated air, then the electrical plug to the heating unit should be checked for a secure connection. If this does not correct the malfunction, the heating thermostat or limit switch may be faulty.

C. Mechanical Integrity - The air conditioner should be inspected periodically to be sure that the bolts which secure the unit to the roof are tight and in good shape. Also, an examination of the plastic shroud covering the air conditioner on the top of the roof should be made periodically. Be sure the four acorn nuts are snug and holding the shroud to the air conditioner. While examining the tightness of these acorn nuts, also examine the shroud to be sure it is not developing cracks or has suffered damage from impact.

D. Lubrication

DANGER

DISCONNECT THE POWER SUPPLY TO THE UNIT BEFORE SERVICING TO PREVENT A SHOCK HAZARD OR POSSIBLE INJURY FROM MOVING PARTS.

The blower drive motor on some units, may include oiling cups at the top of the motor. There is no requirement to oil the journals under normal operating conditions. However, if lubrication to the unit is desired use only SAE 20 non-detergent type oil. DO NOT OVER OIL, three to four drops in each oil hole once a year is sufficient.

WARRANTY SERVICE

Let's face it, sometimes even the best products may need service. If that's true of your Coleman RV air conditioner, you can get service on your unit at most of the firms listed in the Authorized Service list included with your product.

If you fail to receive your RV service center list or are in need of getting qualified factory trained service, simply contact by phone or letter The Coleman Company, Inc., Heating and Air Conditioning Group, 3050 N. St. Francis, Wichita, Kansas 67219.

NOTE

Carefully read your limited one year product warranty which is packed with the product.

An optional limited four year parts contract on the motor compressor ONLY is available at an additional charge of $15.00. To obtain this optional four year parts contract, fill out the application included in this book and send it with a check or money order to: The Coleman Company, Inc. Attention Warranty Department, Heating and Air Conditioning Group, Wichita, Kansas 67219. The optional four year parts contract begins upon the expiration of the initial warranty. BEFORE APPLYING, CAREFULLY READ THE SAMPLE PARTS CONTRACT PACKED WITH THE PRODUCT.

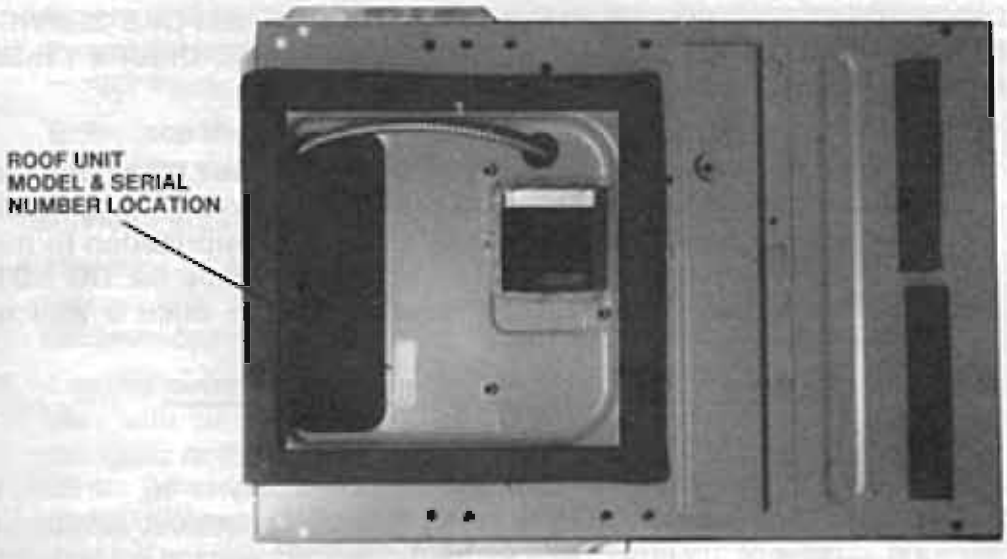
IMPORTANT

Any applications for the extended motor compressor parts contract must be made WITHIN NINETY DAYS of purchase date of the air conditioner or the recreational vehicle if the air conditioner is original equipment.

NOTE

Inquiries to your Coleman Representative or The Coleman Company on this unit should contain, the MODEL NUMBER and SERIAL NUMBER. The model number and serial number can be found on the I.D. Label located at the bottom of the roof unit. Access to this label is accomplished by lowering the ceiling plate

(same procedure as used for filter service). USE ONLY THE ROOF UNIT MODEL AND SERIAL NUMBER WHEN SENDING IN THE OPTIONAL FOUR YEAR PARTS CONTRACT, see Figure 5.



BOTTOM OF ROOF UNIT
FIGURE 5

A model and serial number may also be found on the rating plate fastened to the condenser coil on the roof unit.

Inquiries on the Ceiling Assembly should contain the ceiling assembly part, serial or code date number. This information can be found on the I.D. label, see Figure 6.

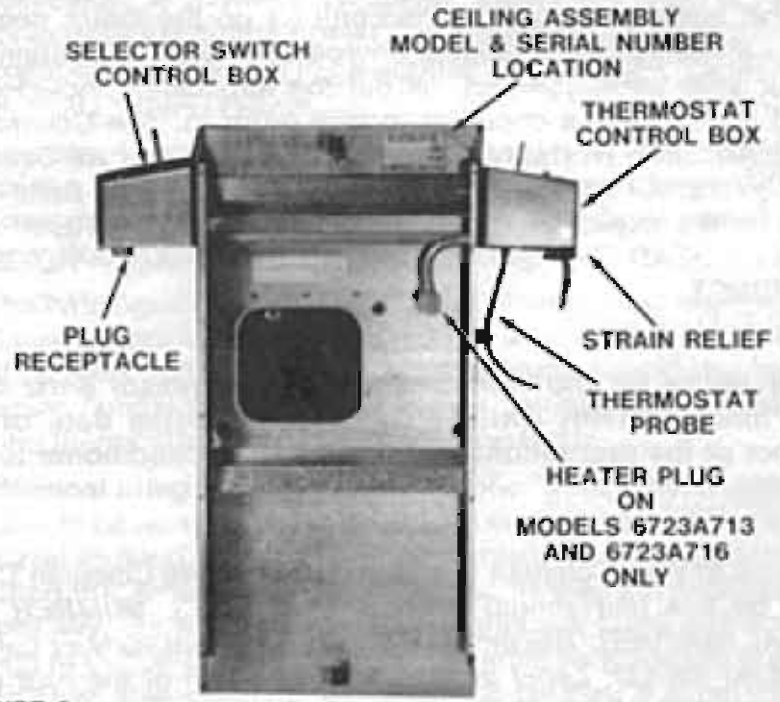


FIGURE 6