



HOLIDAY RAMBLER®

Owner's Manual Questionnaire



MONACO

Your suggestions are very important to us. We are continuously improving our manuals to help make traveling as enjoyable as possible. We appreciate your taking the time to answer the following questions. When you are finished simply fold the questionnaire and return it, postage paid, to our technical publications department. Please feel free to add an additional page if you need to.

1. Was the information presented in this manual helpful in acquainting you with your new recreational vehicle? If not please list any area(s) we need to expand or improve on.

2. Were the operating instructions clearly written, and were you able to follow the steps without any difficulty?

3. Was the overall appearance and lay-out of this manual what you expected to see in your new RV?

4. Is there any additional information you would like to see added to the Owner's Manual?

Additional Comments: _____

Name _____

Model & Year _____

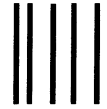
Address _____

Serial Number _____

Phone _____

Is this your first RV? Yes No

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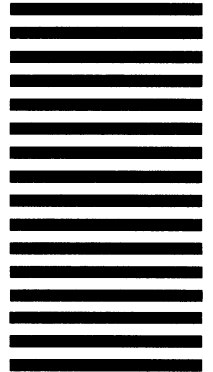
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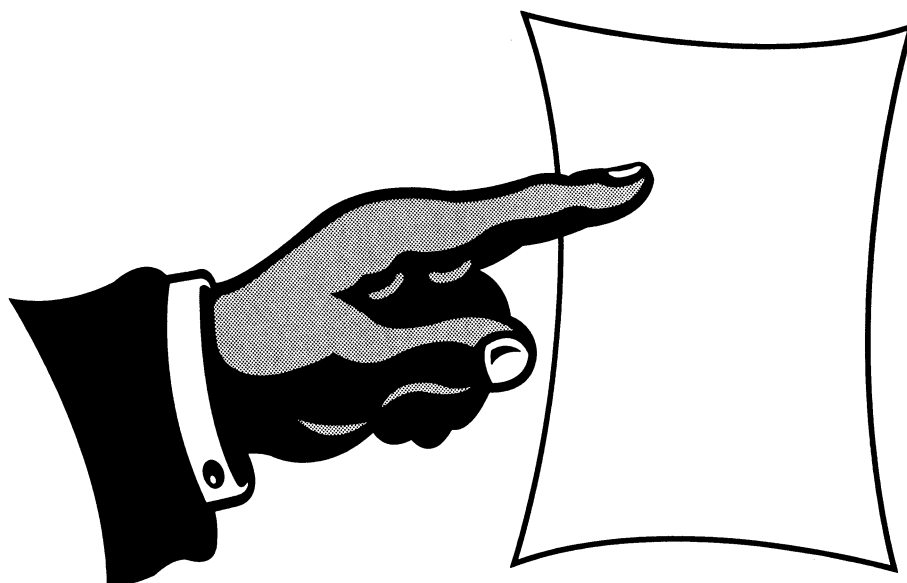
MONACO COACH CORPORATION
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P.O. Box 465
Wakarusa, IN 46573

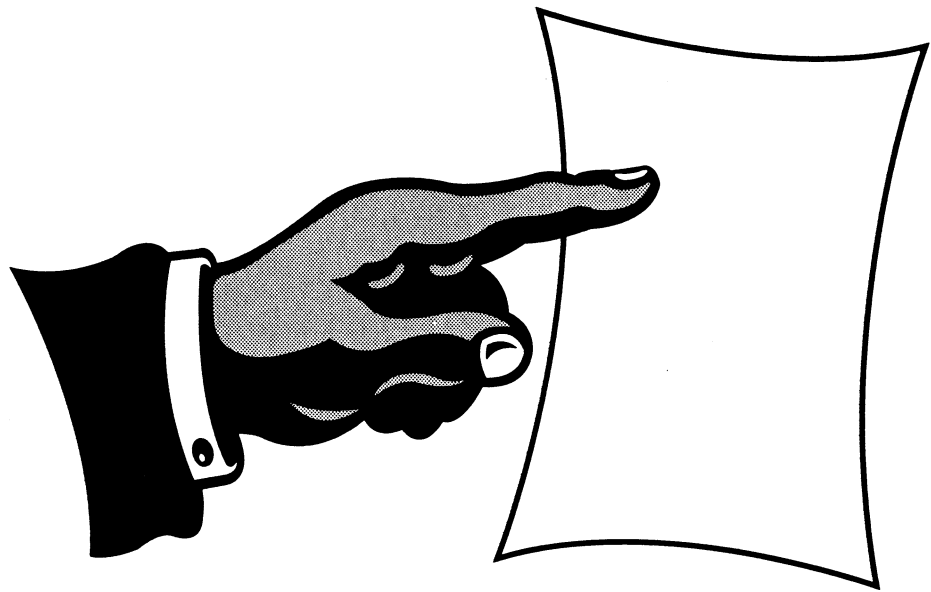
Attn: Technical Publications



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CHAPTER 1

WARRANTY & INFORMATION







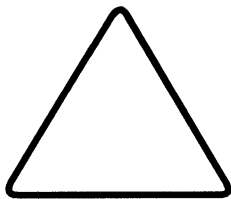
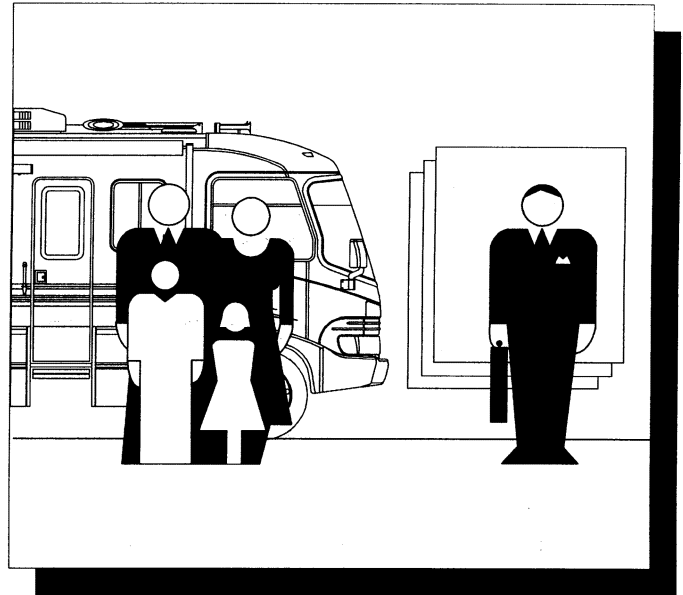
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Warranty & Information

General Information

In time you will develop a knack for spotting wonderful little roadside locations by turning off the main highway and exploring. There are many modern recreational vehicle parks (including state, county, and federal parks) with good facilities where you can obtain hook-ups for electrical, water, and sewage connections. Directories are published which describe these parks and the availability of services and hook-ups. On overnight or weekend trips chances are you will not fill up sewage holding tank, deplete the water or LP gas supply, or run down the batteries which supply the living area 12 volt DC current. On longer trips when you have stayed where sewer connections and utility hook-ups were not available it will be necessary

for you to stop occasionally to empty the holding tanks, and to replenish your water and LP gas supply. Many gas stations have installed sanitary dumping stations. Publications are available which list these dumping stations. When you stop for the night your Holiday Rambler motor home is built to be safely parked in any spot that is relatively level and where the ground is firm. Your facilities are with you. You are self-contained.



This safety alert symbol means **CAUTION** or **WARNING** - "Personal Safety Instructions". Read and understand instructions where this symbol is displayed in this manual. Failure to comply with specific instructions may result in personal injury or death. Many instructions are required by National Safety Associations.

Customer Relations

Only by insuring your confidence and satisfaction with our products and services can we have continued success as a manufacturer of motor homes. We believe a good relationship with our customers is just as important as improving the technical excellence of our products. Your authorized dealer is pleased to help you with instructions about your motor home and to offer service when you need it. Most problems arise from misunderstandings about warranty or

Continued⇒⇒⇒



service needs. If problems remain after you have consulted your dealer you are invited to contact our Consumer Affairs Department. We will work with the dealer and see that every attempt to resolve the matter is made.

Holiday Rambler Consumer Affairs Department
606 Nelson's Parkway
Wakarusa, Indiana 46573

For assistance, please call the Consumer Affairs Department at 219-862-7278 or 877-466-6226. Please have all pertinent information (serial numbers, model number, etc.) when calling.

Reporting Safety Defects

If you believe that your motor home has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying Holiday Rambler. If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of motor homes, it may order a recall or remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer or Holiday Rambler. To contact NHTSA you may either call the Auto Safety Hot line toll-free at 1-800-424-9393 (or 366-0123 in Washington DC area) or write to:

NHTSA
400 Seventh Street
US Department of Transportation
Washington, DC 20590

Taking Delivery

Your motor home has been inspected by factory personnel throughout the manufacturing process. Your dealer performs additional pre-delivery inspections and system checks, and will help you understand the limited warranty and complete any necessary forms.

Dealer Responsibilities Include:

1. A customer orientation to the motor home, its systems, and components, and their operation.
2. Ensuring that customer receives a complete Owner's Packet with warranty cards and registrations for the motor home and separately warranted products including detailed operating and maintenance instructions.



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Warranty & Information

3. Reviewing limited warranty provisions with the customer stressing the importance of mailing warranty cards and registrations to the manufacturers within the prescribed time limited to avoid loss of warranty coverage. Assisting the customer in completing these forms and assist in locating serial numbers if they wish. Requesting that the customer reads all warranty information when possible and explaining any provision not clearly understood.

4. Instructing the customer on how to get local and out-of-town service on the motor home and its separately warranted components whether in or out of warranty.

Customer Responsibility

As a new motor home owner you are responsible for regular and proper maintenance. This will help you prevent conditions arising from neglect that are not covered by your Holiday Rambler limited warranty. Maintenance services should be performed in accordance with this Owner's manual, and any other applicable manuals. As the owner, it is your responsibility and obligation to return the motor home to an authorized dealer for repairs and service (See Limited Warranty). Since the authorized dealer where you purchased your new camping vehicle is responsible for its proper servicing before delivery, and has an interest in your continued satisfaction, we recommend that Inspection, Warranty and Maintenance Services be performed by the dealership. We suggest that you take your new motor home on a weekend shake down before leaving on an extending trip.

Warranty Information File

In addition to this Owner's Manual you will find a Warranty Information File in your motor home. This file contains valuable documents about your motor home systems and equipment. Be sure you read and understand all the information in this file to help you safely operate, maintain and trouble shoot those items.

Suggestions for Obtaining Service for Your Motor Home

Give Thought to the Appointment Time

Know when to take your motor home in for service. Monday and Friday are busy days for most dealers. Therefore, it makes sense to make a mid-week appointment whenever possible.

Prepare for the Appointment

If you're having warranty work done be sure to have your warranty registration papers with you. All work to be performed may not be covered by the warranty; be sure to discuss additional charges with the service manager. Keep a maintenance log of your motor homes service history. This can often provide a clue to the current problem.



Prepare a List

Make a written list of specific repairs needed. It is important the service manager be aware of all previous work which has been done on your motor home. For example: if the motor home has been repaired due to an accident. While this may not seem important it could have a significant effect on the dealer's diagnosis of a problem.

Be Reasonable With Your Requests

Don't leave a list of 20 items to be serviced and expect to have your motor home back by five o'clock. If you list a number of items, and you must have your motor home back by the end of the day, discuss the situation with the service manager and list your items in order of priority. Expect to make a second appointment for work not completed or for the parts that may need to be ordered.

You Can't Look Over the Technician's Shoulder

Please don't be offended when you are told you cannot watch the work being done. Insurance requirements forbid the admission of customers to a service area.

Inspect the Work Properly

Check out the service or repair job when you pick up your motor home and notify the service manager of any dissatisfaction. If circumstances prevent returning for immediate corrective work make an appointment as soon as possible.

Vendor List

AIR CONDITIONER

Dometic Corp.
219-463-7712
Information: Section 3

ATTIC FAN

Fan-Tastic Vent
800-521-0298
Information: Section 3

AWNINGS

Carefree of Colorado
303-469-3324
Information: Section 3

BATTERIES

Battery Pro's
541-683-1810
Information: Section 6

**CARBON MONOXIDE
DETECTOR**

MTI Industries, Inc.
800-383-0269
Information: Section 2

DIESEL ENGINES

Cater Piller Inc.
800-447-4986
Information: Section 9

ELECTRIC STEP

Kwikkee
503-836-2126
Information: Section 3

FIRE EXTINGUISHER

The Fire Extinguisher Co.
919-563-5911
Information: Section 2

FURNACE

Atwood Mobile Products
801-972-4621
Information: Section 3



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Warranty & Information

GENERATOR

Onan
219-271-0303
Information: Section 6

GFI OUTLET

Kevco
219-522-8820
Information: Section 6

HITCH RECEIVER

Reese Products
219-264-7564
Information: Section 2

LEVELING JACKS

Power Gear
800-334-4712
Information: Section 2

LIGHTS

RB Gustafson
219-522-0871
Information: Section 9

LP GAS DETECTOR

MTI Industries Inc.
800-383-0269
Information: Section 5

MICROWAVE

Sharp Electronics Corp.
800-447-4700
Information: Section 3

MONITOR

PANEL-STORAGE TANKS

KIB Enterprises
219-294-1504

POWER CONVERTER

Progressive Dynamics, Inc.
616-781-7802
Information: Section 6

POWER HEATED MIRROR

Velvac
219-294-7691
Information: Section 9

RANGE

Atwood Mobile Products
219-262-2655
Information: Section 3

REAR VISION SYSTEM

Intec
800-468-3254
Information: Section 3

REFRIGERATOR Norcold

800-543-1219
Information: Section 3

ROOF VENT

Ventline
219-848-4491
Information: Section 3

SEATING

Flexsteel Industries
219-831-4050
Information: Section 3

SMOKE DETECTOR

Bob Gunn Associates
616-467-8705
Information: Section 2

TELEVISION ANTENNA

Winegard company
319-753-0121
Information: Section 3

TIRES

Goodyear Tire & Rubber Co.
800-847-3638
Information: Section 9

TOILET

Sealand
330-496-3211
Information: Section 4

WASHER & DRYER

Splendide Westland Sales
219-295-0234
Information: Section 3

WATER FILTER

Everpure Inc.
800-323-7873
Information: Section 4

WATER HEATER

Atwood Mobile Products
219-262-2655
Information: Section 4

WATER PUMP

Shurflo
800-762-8094
Information: Section 4

WINDOW

Excel Window
219-264-2131
Information: Section 2



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Glossary Of Terms

AC ELECTRICITY - Alternating current also known as household power.

BLACK WATER - Term associated with sewage holding tank. Toilet drains directly into this tank.

CAMPSTORE - A store that usually has bread, milk and other essentials but not fresh meats, fruits or vegetables.

CITY WATER - A term associated with water supply that you hook-up to when you are at camp grounds. It is called city water because you pull water from a central source (like in a city) and not from fresh water tank.

CURBSIDE - This refers to side of motor home which faces curb when it is parked. Often called door side.

DC ELECTRICITY - Direct current also known as battery power.

DRY CAMPING - Camping in motor home when there is no city water hook-up or shore power. In other words using only water and power that is in motor home and not anything from another source.

DUMP STATION - Sites where you can drain your waste (gray) and sewage (black) tanks. In most states it is illegal to drain your tanks anywhere except at dump stations.

DUMP VALVE - Another name for T-handle valve used to drain sewage (black) and waste (gray) tanks.

EGRESS WINDOW - Formal name for emergency window located in rear of motor home. Egress windows can be easily identified by their red handles.

FULL HOOK-UP SITE - A camp ground that has city water, shore power and sewer hook-ups or connections available.

GRAY WATER - Term associated with waste water holding tank. Water from sink drains, shower and washer/dryer (if equipped) go into this tank.

ICC BLINK LIGHTS - This switch enables you to blink lights on motor home. It is commonly used as a way of indicating your thanks for a courtesy shown to you by another driver.

LOW POINT - Lowest point in plumbing system. Drains are placed here so that water will drain out of lower end of motor home. These drains must be closed when you fill water tank.



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Warranty & Information

PRIMITIVE SITE - A camp ground that may have either city water, shore power or sewer hook-up but not all of them. Primitive sites may have no hook-ups or connections at all.

DRAIN TRAP - This is a curve that is in all drains. Water is trapped in curve and this creates a barrier so tank odors cannot escape through drain.

PULL-THROUGH SITES - Camp sites that you pull motor home through without having to back up into site.

ROAD SIDE - This refers to side of motor home which faces road when it is parked. Often called off-door side.

SHORE LINE - This is electrical cord which runs from motor home to camp ground 120 volt electrical supply.

SHORE POWER - This is 120 volt outlet that you can plug your motor home into at a camp ground.

STABILIZING JACKS - These jacks are extended after you have parked motor home.

STINGER - An arm attachment on a tow truck that is used to lift motor home slightly so that it can be towed.

TAG AXLE - A non-drive axle located behind front axle. A tag axle increases weight carrying capacity of chassis.

WINTERIZED - If you see this on a motor home it means that motor home has been prepared for storage. All water systems are drained and RV antifreeze has been added to protect water lines and drains. Low point drains will be open.



HOLIDAY RAMBLER

Warranty Statement

**HOLIDAY RAMBLER
606 Nelson's Parkway
Wakarusa, Indiana 46573
Telephone 219/862-7278 or 877-466-6226
2000 Model Year
MOTOR HOME LIMITED WARRANTY**

Holiday Rambler, a division of Monaco Coach Corporation warrants that this motor home, when used for its intended purpose of recreational travel and family camping, will be free from defects in materials and workmanship for a period of 12 months or 24,000 miles, whichever occurs first. **EXTENDED ALUMAFRAME® STRUCTURE WARRANTY:** Holiday Rambler warrants that the Alumaframe structure of the side walls, roof, rear and front walls will be free from defects in materials and workmanship for a period of 60 months or 50,000 miles, whichever occurs first. The warranty periods shall begin on the date the motor home is delivered to the first retail purchaser or, if the motor home is first placed in service by the dealer for personal use prior to sale at retail, on the date the motor home is first placed in such service.

This coverage applies to all owners of the motor home. However, to obtain any remaining warranty benefits for subsequent owners, a warranty transfer form must be submitted through an authorized Holiday Rambler dealer and a \$25.00 transfer fee paid to Holiday Rambler to cover administration costs. The warranty transfer forms are available from the Consumer Affairs Department upon request.

In the event that a defect in material or workmanship is found to exist, Holiday Rambler will bear the cost of the repair or replacement of such defective materials or workmanship; provided that the owner:

- A) notifies Holiday Rambler or one of its authorized dealers of the defect **within five (5) days discovery of it;**
- B) returns the motor home to a dealer promptly, as scheduled; and
- C) pays any freight costs, or import duties or fees involved.

Note: Holiday Rambler does not control the scheduling of service work at the dealerships. You may encounter some delay in scheduling or completion of work.

Defects or damage to paint, flooring, cabinetry, fabrics or other appearance items that may occur prior to delivery usually are corrected during the inspection process at the assembly plant and the dealership. In the event you find any of these concerns when you receive your motor home, notify your dealer without delay.

If you need assistance in obtaining the benefit of this Limited Warranty, please contact Holiday Rambler at the above telephone number between 7:30 a.m. and 4:00 p.m. EST on regular business days.

Holiday Rambler does not authorize any person to create for it any other obligation or liability in connection with this motor home. **ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE APPLICABLE TO THIS MOTOR HOME IS LIMITED IN DURATION TO THE DURATION OF THIS WRITTEN WARRANTY. THE PERFORMANCE OF REPAIRS IS THE EXCLUSIVE REMEDY UNDER THIS WRITTEN WARRANTY OR ANY IMPLIED WARRANTY. HOLIDAY RAMBLER SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES (FOR OTHER THAN INJURY TO THE PERSON) RESULTING FROM BREACH OF THIS WRITTEN WARRANTY OR ANY IMPLIED WARRANTY.**



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Warranty Statement

Some states do not allow limitations on how long an implied warranty will last or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

THIS WARRANTY DOES NOT APPLY TO:

- A) Any motor home sold or registered outside the United States or Canada.
- B) Items added or changed after the motor home left the possession of Holiday Rambler.
- C) Any motor home used for rental or other commercial purposes.
- D) Normal wear and usage, such as fading or discoloration of fabrics, or the effects of moisture condensation inside the motor home.
- E) Minor imperfections which do not affect the suitability of the motor home for its intended use.
- F) Damage resulting from tire failure.
- G) Costs incurred for transportation of the motor home to a dealer, or cost incurred as the result of the consumer's request to have repairs performed at other than a dealership.
- H) This limited Warranty does not apply to or cover any component which is warranted separately by its manufacturer. Examples are:

Tires	VCR	Generator	Inverter	Microwave	Chassis and other items supplied
Batteries	Television	Washer	Cellular Phone	Dryer	by chassis manufacture

The written warranty provided by the component manufacturer is a direct responsibility of that manufacturer. **Holiday Rambler makes no warranty as to those components.** Please refer to the written warranties issued by such component manufacturers for the terms and provisions of their written warranty undertakings.

Note: This motor home, like your car or your boat, requires proper care and maintenance by the owner. The accessories and appliances must be properly used. Failure to provide the proper care and maintenance, or to observe the proper handling and use of accessories and appliances will result in damage to the motor home or its components. Instructions regarding care and maintenance, and proper usage of appliances and accessories are contained in the Owner's Manuals and the Appliance Manuals which accompany the motor home. Holiday Rambler **will not pay** for the cost of repairing or replacing items or components which are damaged as a result of lack of care or proper use, nor for the damage to other parts of the motor home which result from such lack of care and proper use.

It is important that when a defect is noted, the dealer be promptly notified, and that you comply with his instructions and scheduling regarding corrections. Further damage to the motor home resulting from the failure or refusal of the consumer to give prompt notification and comply with schedules and instructions regarding the correction of defects **will not be paid** for by Holiday Rambler.

Wheel Alignment is as important to this motor home as any other vehicle which suffers the shocks and impacts of deteriorated roads. Wheel alignment must be checked and corrected periodically. Holiday Rambler does not bear the cost or expense of wheel alignment, or damage to the motor home because of failure to have this important service item performed.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.

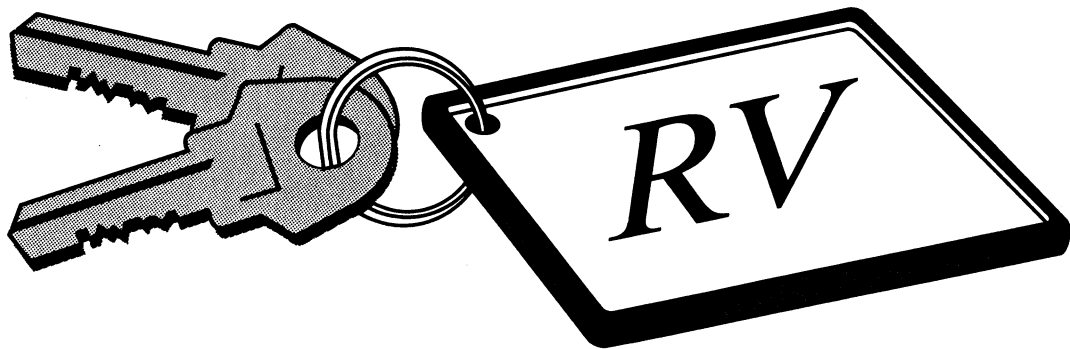


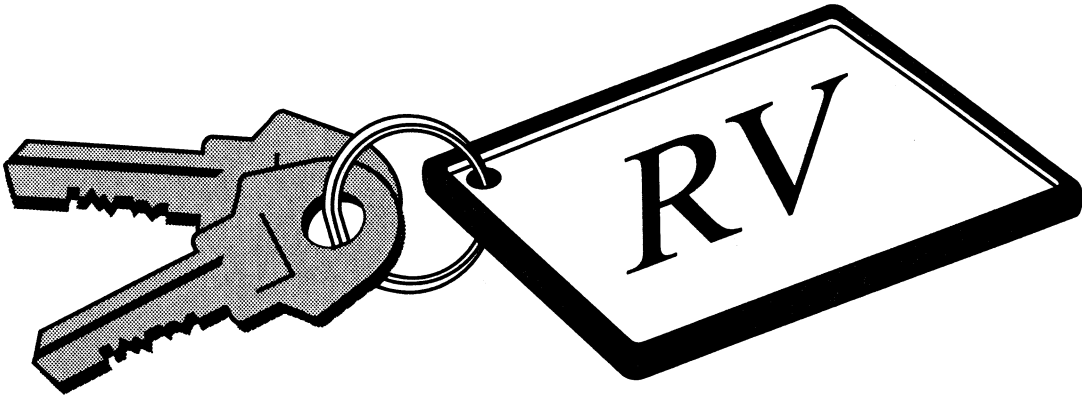
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CHAPTER 2

OPERATING & SAFETY TIPS







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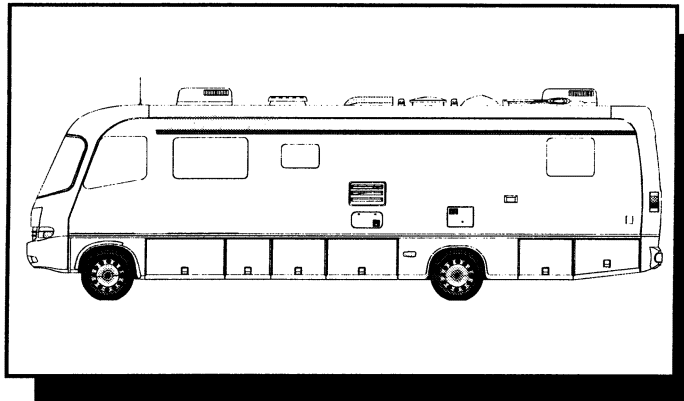
Driving & Safety Tips

Driving Safety

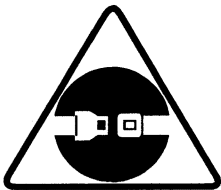
There are differences between your motor home and passenger automobiles. You should always be aware of those differences.

Before You Start Out

As you first sit down in driver's seat you will notice that you are sitting up higher and further to the left than in a passenger automobile. Your perspective of the road will therefore be different. Because of driver's seat location and configuration of motor home you will rely on outside mirrors to line up with your lane and to check conditions behind you. Your dashboard may contain more gauges and controls than are normally found in passenger automobiles. You should become familiar with these devices and how they operate before starting out.



Safety Seat Belts



All occupants must be furnished with and use seat belts while motor home is moving. Driver's seat and all other seats designed to carry passengers while motor home is in motion are equipped with safety seat belts. While traveling do not occupy beds or any seats that do not have a safety belt. Seat belts must only be used on permanently mounted seats. Driver's seat must be locked in the forward facing position while motor home is in motion. Do not use a seat belt on more than one person.

To fasten seat belt, pull belt out of retractors and insert tab into buckle; you will here a click when tab locks into buckle. Seat belt length automatically adjusts to your size and setting position. Do not route seat belts over armrests.

△ WARNING △

Seats must be pointed in a forward position and seat belts fastened while motor home is in motion. Avoid seat rotation while in transit.

Children must not be transported unrestrained. Infants must be placed in approved safety seats. Small children must be restrained in child safety seats.

Failure to comply with these rules can cause injury or death.



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While Driving



Because your motor home is longer than the average automobile turning radius will be wider. Therefore it is always a good idea to take care when turning motor home. Keep a close eye on rear of motor home making sure it will clear potential obstacles. Your motor home is also heavier than an average automobile with a higher center of gravity. Those factors may make it difficult to change momentum of your motor home. Swerves and sharp turns, especially at high speeds, could result in loss of control of motor home. You should always keep that in mind and drive with extra caution necessary to avoid situations which might require quick momentum changes. You will find that your motor home will travel safely and comfortably at highway speed limits. However, it will take longer to reach that speed and you must always bear this in mind when overtaking and passing another vehicle. Allow more time to go around vehicle because you cannot cut back as quickly due to longer length of your motor home. When descending a long hill, drop down into second gear. Transmission and engine will help in controlling down hill speed and can lengthen brake life. Distance required to stop motor home will be greater than an automobile's. Even though your motor home is equipped with brakes designed for Gross Vehicle Weight Rating (GVWR) we suggest that you practice stopping away from traffic until you become accustomed to motor home's stopping distance. When backing up have your co-pilot get out of the motor home and walk to driver's side rear corner. Co-pilot can watch for any obstacles and give hand signals to you as you back up. When traveling make sure that bridges you cross can support the weight of your motor home. Check tonnage limit of bridges before crossing them, signs are normally posted at bridge entrances. Know and observe the laws where you will be traveling as they may vary from state to state.

Emergency Stopping

Always carry road flares or reflective warning signs to display if necessary. Pull off roadway as far as possible for emergency stopping or tire changing. Turn ON your motor home hazard warning flashers when parked along side traffic lanes. Set the parking brake.

Backing In

If your destination does not have drive through sites, pick a good level site and back in carefully. We suggest that you stop near the site, get out of motor home and observe the surrounding area. Check for low-hanging tree limbs, posts, large rocks or other obstacles. Try to choose a site that is on the driver's side, so that you can see what the rear of motor home is doing. With site on the passenger side you would be backing into site on your blind side which is more difficult. When site conditions are satisfactory, maneuver motor home into a position for backing into the site space. Back up motor home slowly using side mirrors as a guide or have another person outside to help guide you, until motor home is in desired position.



Driving & Safety Tips

Parking

Put motor home gear shift in park and set hand brake. Turn off the ignition switch. Block all four wheels securely. Level motor home as directed under "Leveling Jacks".

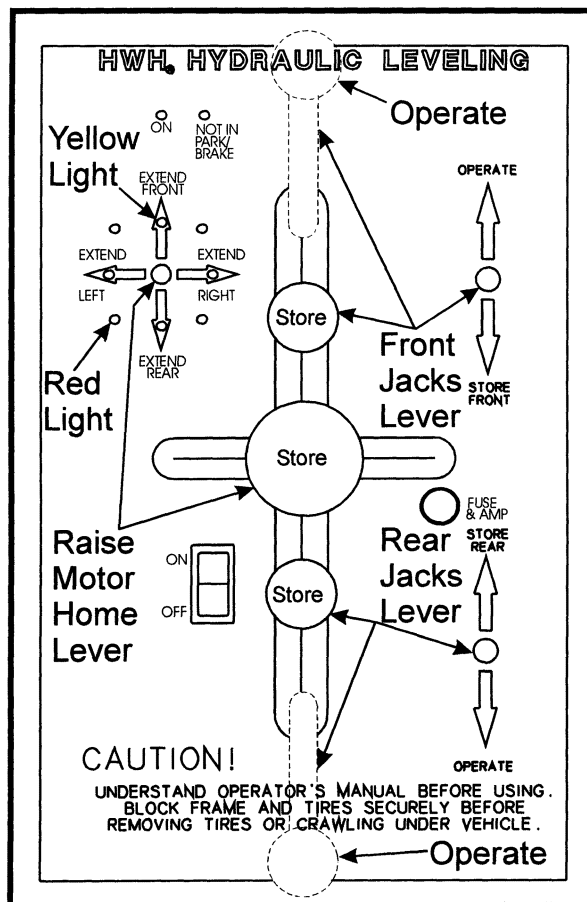
Full Hook-Up Camping - Connect 120 volt AC power cord. Open LP gas tank valve. Connect fresh water supply or turn water pump on. connect waste drain hose to sewer hook-up. If applicable start refrigerator, water heater and furnace. If applicable light oven pilot light.

Dry Camping - Open LP gas tank valve. Turn on water pump. If applicable start refrigerator, water heater and furnace. If applicable light oven pilot light.

To Level Motor Home

To level motor home turn ignition switch to ACC or ON position. Transmission shift lever must be in park position and parking brake must be set. If "NOT IN PARK/BRAKE" indicator light is lit check that shift lever and parking brake are in their proper positions. Push ON button, ON indicator light should be lit. Move FRONT and REAR JACKS LEVERS to OPERATE positions. Move RAISE MOTOR HOME LEVER to raise rear of motor home slightly so that both rear jacks contact the ground; do not extend jacks all the way. Move RAISE MOTOR HOME LEVER to raise front of motor home slightly so that both front jacks contact the ground; do not extend jacks all the way. If yellow indicator light on any arrow is lit, move RAISE MOTOR HOME LEVER in direction of arrow until light goes out. If ground is too uneven jacks may not have enough stroke to level motor home, therefore motor home may have to be moved to another location. After motor home is level push OFF button and turn ignition switch to OFF position.

Continued⇒⇒⇒



**To Retract Leveling Jacks**

To store leveling jacks turn ignition switch to ACC or ON position. Move FRONT and REAR JACKS LEVERS to STORE positions; all jacks should raise all the way up. All four red indicator lights should not be lit and warning buzzer should not be sounding. After jacks have been retracted push OFF button and turn ignition switch to OFF position.

△ CAUTION △

Do not rely solely upon warning lights or warning buzzer to determine the position of leveling jacks. It is the operator's responsibility to check that all jacks are raised all the way up before moving motor home.

FRONT and REAR JACKS LEVERS should be kept in stored position while traveling to keep jacks raised all the way up.

Vehicle Loading

There are two important factors to consider when loading your motor home; total weight and balance. When loading heavy objects keep them as low as possible, preferably on the floor. Load weight must be distributed as evenly as possible.

Gross Vehicle Weight Rating (GVWR)

GVWR means maximum permissible weight of this motor home. GVWR is equal to or greater than the sum of UVW plus NCC.

Unloaded Vehicle Weight (UVW)

UVW means weight of this motor home as built at factory with full fuel, engine oil, and coolants. UVW does not include cargo, fresh water, LP gas, occupants, or dealer installed accessories.

Net Carrying Capacity (NCC)

NCC means maximum weight of all occupants including driver, personal belongings, food, fresh water, LP gas, tools, tongue weight of towed vehicle, dealer installed accessories, etc., that can be carried by this motor home. (NCC is equal to or less than GVWR minus UVW).



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Driving & Safety Tips

Gross Combination Weight Rating (GCWR)

GCWR means value specified by motor home manufacturer as maximum allowable loaded weight of this motor home with its towed trailer or towed vehicle.

Gross Axle Weight Rating (GAWR)

GAWR means load-carrying capacity specified by manufacturer of a single axle system, as measured at tire ground interfaces.

MOTOR HOME WEIGHT INFORMATION:		CONSULT OWNER'S MANUAL FOR SPECIFIC WEIGHING INSTRUCTIONS AND TOWING GUIDELINES.	
MODEL		GVWR	
UVW	NCC	GCWR	

THIS MOTOR HOME IS CAPABLE OF CARRYING UP TO _____ GAL.

OF FRESH WATER (INCLUDING WATER HEATER) FOR A TOTAL OF _____ LBS.
 REFERENCE: WEIGHT OF FRESH WATER IS 8.33 LBS/GAL; WEIGHT OF LP GAS IS 4.5 LBS/GAL (AVERAGE).

GVWR *GROSS VEHICLE WEIGHT RATING* MEANS THE MAXIMUM PERMISSIBLE WEIGHT OF THIS MOTOR HOME. THE GVWR IS EQUAL TO OR GREATER THAN THE SUM OF THE UNLOADED VEHICLE WEIGHT PLUS THE NET CARRYING CAPACITY.

UVW *UNLOADED VEHICLE WEIGHT* MEANS THE WEIGHT OF THIS MOTOR HOME AS BUILT AT THE FACTORY WITH FULL FUEL, ENGINE OIL, AND COOLANTS. THE UVW DOES NOT INCLUDE CARGO, FRESH WATER, LP GAS, OCCUPANTS, OR DEALER INSTALLED ACCESSORIES.

NCC *NET CARRYING CAPACITY* MEANS THE MAXIMUM WEIGHT OF ALL OCCUPANTS INCLUDING THE DRIVER, PERSONAL BELONGINGS, FOOD, FRESH WATER, LP GAS, TOOLS, TONGUE WEIGHT OF TOWED VEHICLE, DEALER INSTALLED ACCESSORIES, ETC., THAT CAN BE CARRIED BY THIS MOTOR HOME (NCC IS EQUAL TO OR LESS THAN GVWR MINUS UVW).

GCWR *GROSS COMBINATION WEIGHT RATING* MEANS THE VALUE SPECIFIED BY THE MOTOR HOME MANUFACTURER AS THE MAXIMUM ALLOWABLE LOADED WEIGHT OF THIS MOTOR HOME WITH ITS TOWED TRAILER OR TOWED VEHICLE.

CD-126



Weighing Your Motor Home

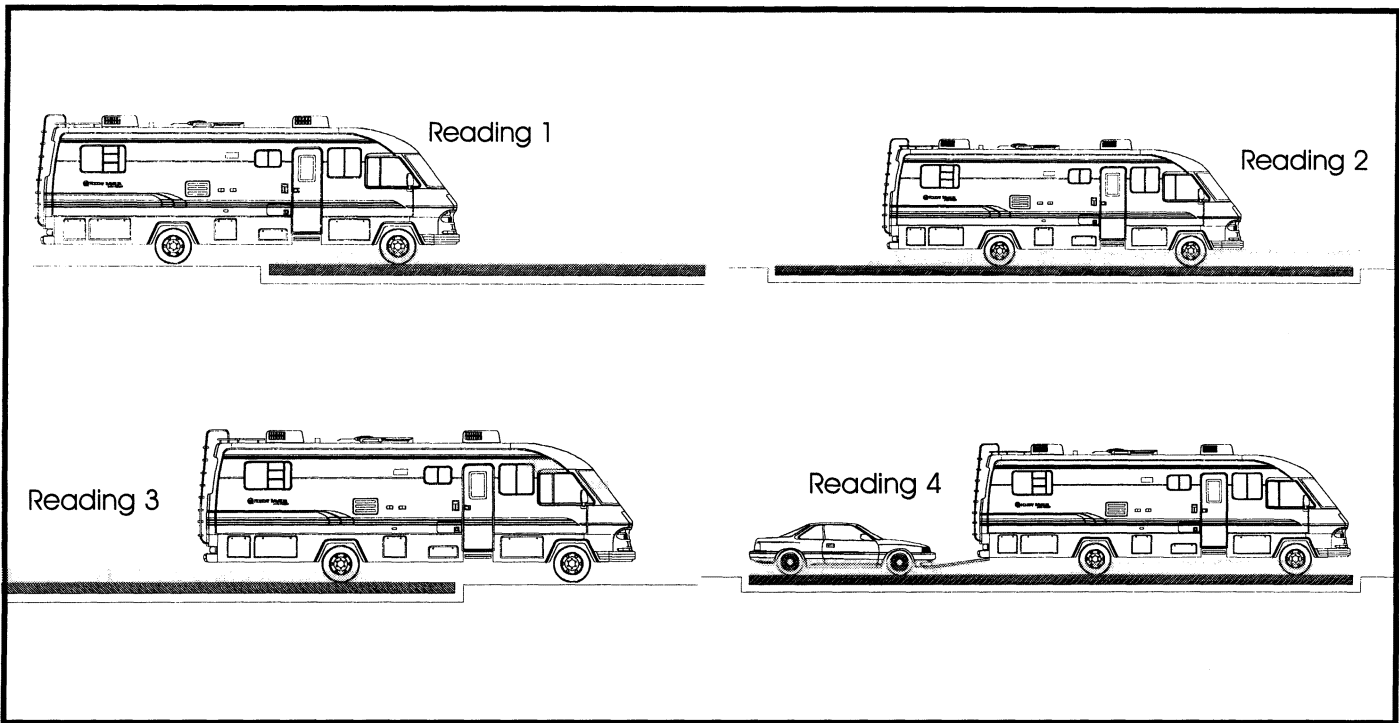
Reading 1 - GAW (Gross Axle Weight) front axle on scale only (loaded for travel).

Reading 2 - GVW (Gross Vehicle Weight) entire unit on scale (loaded for travel).

Reading 3 - GAW (Gross Axle Weight) rear axle on scale only (loaded for travel).

Reading 4 - GCW (Gross Combined Weight) entire unit on scale with towed vehicle (loaded for travel).

NOTE: Compare actual weights to ratings to ensure you are below maximum ratings.



Smoke Detector

Statistics show that most fire casualties are not caused by direct flame, but by the less visible smoke (products of combustion). Smoke detector responds to both visible and invisible products of combustion. Smoke detector will automatically return from alarm to normal state when the reason for activation, the presence of smoke, is completely removed. Three of the most common fire killers are: smoking in bed, leaving children unattended and cleaning with flammable fluids. Please be safety conscious and avoid unnecessary risk.



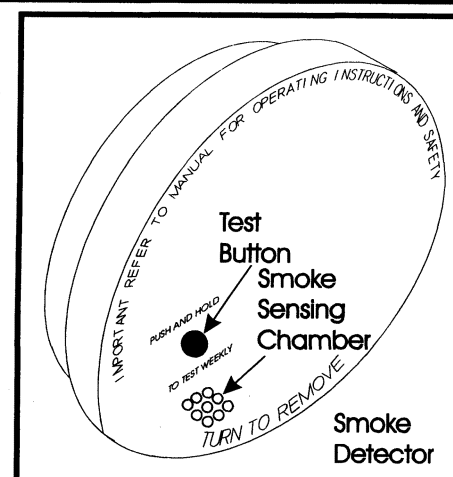
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Driving & Safety Tips

How to Test

To test electronics of alarm press test button on cover of smoke alarm for a few seconds. Smoke alarm will sound by making a continuous loud beep. To complete test sequence release button and alarm should stop.

To test if smoke is able to reach the ionization/sensing chamber you must blow smoke into the sensing chamber, in a careful fire safe manner, until the alarm sounds. Do not use an open or direct flame of any kind or you may damage your detector. Smoke alarm will stop sounding once smoke has cleared the ionization chamber.



NOTE: Test smoke alarm operation after motor home has been in storage, before each trip, and at least once a week during use.

△ WARNING △

There is no way to guarantee against injury or loss of life in a fire, however, this smoke detector is intended to help reduce the risk of tragedy. Additional smoke detectors may further help reduce the risk. Proper use and care of your smoke detector could save your life.

Maintenance

Vacuum slots in the cover and sides with a soft brush attachment every month. Your smoke alarm should be cleaned every six months to help keep the unit working efficiently. Do not paint the detector.

Only acceptable batteries for use in the smoke alarm are the Eveready 216 or equivalent. Battery should power smoke alarm for at least one year under normal use. When battery reaches the end of its normal life a low battery warning (intermittent beeping) will indicate the need for battery replacement.

Trouble Shooting

- If alarm does not sound when test button is pushed or with the smoke test, try the following:
- Inspect for obvious damage.

Continued⇒⇒⇒



- Check for recommended battery type.
- Check battery for proper connection, or replace battery if needed.
- Gently vacuum as recommended.

If these procedures do not correct the problem, do not attempt repairs. If smoke alarm is within the warranty period and terms indicate the nature of problem, return unit to your dealer. Smoke detectors beyond warranty cannot be economically repaired.

Abnormal air conditions may cause the highly sensitive smoke alarm to give a false alarm. If no fire is apparent ventilate the room and/or blow fresh air into motor home until alarm stops. Once cleared the smoke alarm will automatically reset. Dust can lead to excessive sensitivity; vacuum as recommended.

Carbon Monoxide Detector

△ **WARNING** △

Activation of this device indicates the presence of carbon monoxide (CO) which can be fatal to you. A concentration of 60 PPM within 67 minutes will cause warning condition. Individuals with medical problems may consider using detection devices with lower carbon monoxide alarming capabilities. Prolonged exposure to horn at a close distance may be harmful to your hearing.

Your motor home is equipped with a carbon monoxide detector. Carbon monoxide (CO) is a colorless, odorless and tasteless gas. Even low levels of CO have been known to cause brain and other vital organ damage in unborn infants with no effect on the mother. In cases of mild exposure symptoms include a slight headache, nausea, vomiting, and fatigue. Symptoms for medium exposure are severe throbbing headache, drowsiness, confusion and fast heart rate. Extreme exposure can result in unconsciousness, convulsions, cardio-respiratory failure and death. Young children and household pets may be the first effected. Your CO detector is designed to detect the toxic CO fumes that result from vehicle exhaust and incomplete combustion sources like a furnace, gas stove, or water heater. Consequently, it is uncommon for household smoke from cigarettes or normal cooking to cause the alarm to sound.

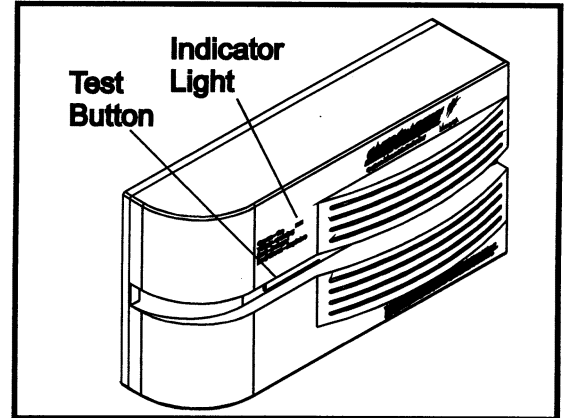
Operating Instructions

Detector is equipped with self-cleaning CO sensor and requires a ten minute initial warm-up period to clean the sensor element and achieve stabilization. Green power light should be lit when power is on. If light is not lit, turn off power and check all wire connections. If power is on and connections are correct but indicator still does not light, detector should be returned for service. Do not attempt to fix detector yourself.

Driving & Safety Tips

Indicator light displays a specific color to monitor conditions as follows:

- GREEN color indicates an “ON” or normal condition: CO detector has power and is sensing air for presence of CO gas. Alarm horn will not sound.
- YELLOW color indicates a “TROUBLE” or malfunction condition; alarm horn will sound and cannot be reset by TEST/RESET button. CO detector is not working properly and must be immediately replaced or repaired.
- RED color indicates an “ALARM CONDITION”, detector has sensed presence of a hazardous level of carbon monoxide. Alarm horn will sound continuously until reset by the RESET switch.



When the Alarm Sounds

When alarm sounds you should have detector and motor home checked by an authorized service technician as soon as possible. Never disconnect a CO detector to silence a nuisance alarm. Evacuate motor home immediately when RED light is lit and alarm sounds. Do a head count to check that all persons are accounted for. Call the nearest fire department and ask them to determine source of carbon monoxide. Do not re-enter motor home until it has been aired out and problem corrected.

Testing Your Carbon Monoxide Detector

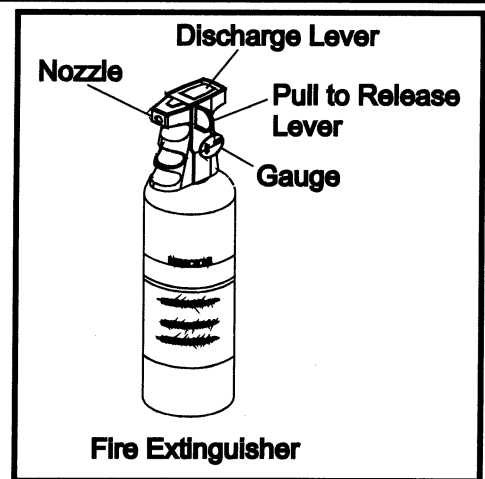
Test carbon monoxide detector operation after motor home has been in storage, before each trip, and at least once a week during use. You can test alarm by holding test button in until alarm sounds. Alarm will stop beeping in about 30 seconds.

Cleaning Detector

Use a vacuum cleaner to remove dust and any other build-up on detector, do not wash it. Wipe detector with a damp cloth and dry it with a towel. Do not open detector for cleaning. Do not paint the detector. We recommend replacing your carbon monoxide detector every 10 years.

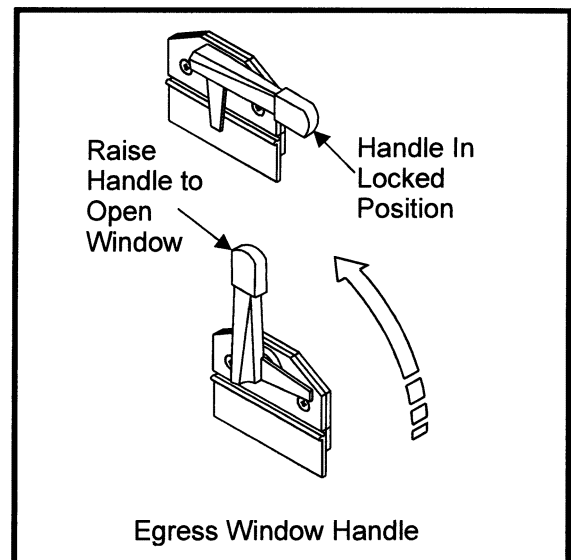
Fire Extinguisher

Fire extinguisher in your motor home is located near the main entrance door. Please read the operating instructions that are printed on the fire extinguisher. If there is any doubt on the operation of the fire extinguisher you and your family should practice using it then replace or recharge it. Inspect the fire extinguisher at least once a month; more frequently if it is exposed to weather or possible tampering. Check gauge for extinguisher level. Partially discharging will cause a loss of pressure.



Egress Exit Window

Motor homes are equipped with an egress exit window. This window is designed to be used as an additional exit for the motor home in the case of an emergency. It can easily be identified by the red color of the handle. You open egress window by lifting handle and pushing outward on the window. Window can be closed by pulling window closed and lowering handle to the down or locked position.



Towing Procedure

It is recommended that if a towing company is called make sure they use a stinger (an arm that goes under motor home and hooks to front cross member). This is the safest and most efficient way to tow a motor home. It also protects front bumper and cap from damage. Generally, if your motor home ever needs to be towed follow these instructions.

- Secure any loose or protruding parts if motor home is damaged.
- Inspect points of attachment on disabled motor home. If attachment points are damaged, select other attachment points at a substantial frame structural member.
- Never allow anyone to go under a motor home while it is being lifted by towing equipment unless the disabled motor home is adequately supported by safety stands.
- Do not tow motor home from the rear. Towing from the rear will cause front tires and suspension to be seriously over loaded, possibly resulting in tire or front suspension failure. Rear frame extensions are not designed to withstand loads imposed by lifting the rear of motor home.



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Driving & Safety Tips

- If rear wheels are disabled place motor home on a flat bed trailer, or use a heavy duty dolly under rear wheels and tow from the front of motor home.
- Drive shaft should be removed to protect transmission.

Towing Without Stinger

Make sure tow truck can safely pull the weight of your motor home. It is recommended that you give the tow company the weight of your motor home when you call them. If your motor home is going to be towed without a stinger do the following:

- Wrap chains around both A-arms or front axle on each side.
- Pass chains beneath tow bar below bumper.
- Position a 6" x 6" timber between ends of main frame rails and tow vehicle transfer plate to maintain clearance to body parts.
- Attach safety chains, which are completely independent of primary lifting device, to main frame rails.
- When motor home is under tow, allow enough room between front of motor home and rear of tow vehicle while turning corners.

Using Rear Hitch

△ WARNING △

Any trailer being towed by your motor home must have adequate brakes. Follow chassis Owner's manual instructions if you intend to tap into motor home's braking system. Failure to follow these instructions will create a safety hazard and may result in an accident.

When using rear hitch remember that your motor home is intended for towing light loads. Motor home is designed to be used primarily as a recreational vehicle, towing will affect durability and economy. Your safety and satisfaction require proper use. Avoid excessive loads or any other abuse. Instructions for towing are listed in chassis Owner's manual provided in your Owner's packet. You should not use your motor home to tow anything until your motor home has been driven 500 miles (800 kilometers). Weight pushing down on rear hitch must not exceed 300 pounds. We recommend weighing your motor home as it will be operated to be certain that there is proper weight distribution. When weighing your motor home be sure to take the passenger locations into consideration. Total weight of your motor home and any vehicle towed by it must not exceed the GCWR.



Ready to Leave Checklist

- Drain and flush out holding tanks. Close valves all the way and install cap securely. Disconnect sewer hose and store it in an outside compartment.
- Fill fresh water tank. Disconnect and store fresh water hose.
- Disconnect shore line and store it in an outside compartment.
- Disconnect cable TV and phone hookups and lower TV antenna.
- Retract any awnings and secure them for transport.
- Close all roof vents.
- If applicable retract leveling jacks to their travel position.
- Check engine oil, transmission fluid, brake fluid, engine coolant, power steering fluid, windshield washer fluid and tire inflation.
- Secure any loose, heavy or sharp objects in motor home or service compartments.
- Turn off interior lights, water heater, furnace and water pump.
- Check LP gas tank gauge to make sure there is LP gas available.
- Check fuel gauge and lights on motor home.
- Fasten bifold and pocket doors securely.
- Walk around your motor home one last time to make sure everything is stored away and outside compartments are closed and locked. Pull forward, clean site if necessary and check for forgotten items.
- Secure and lock entrance door.

To Temporarily Store Motor Home (Between Weekend or Monthly Trips)**To Store:**

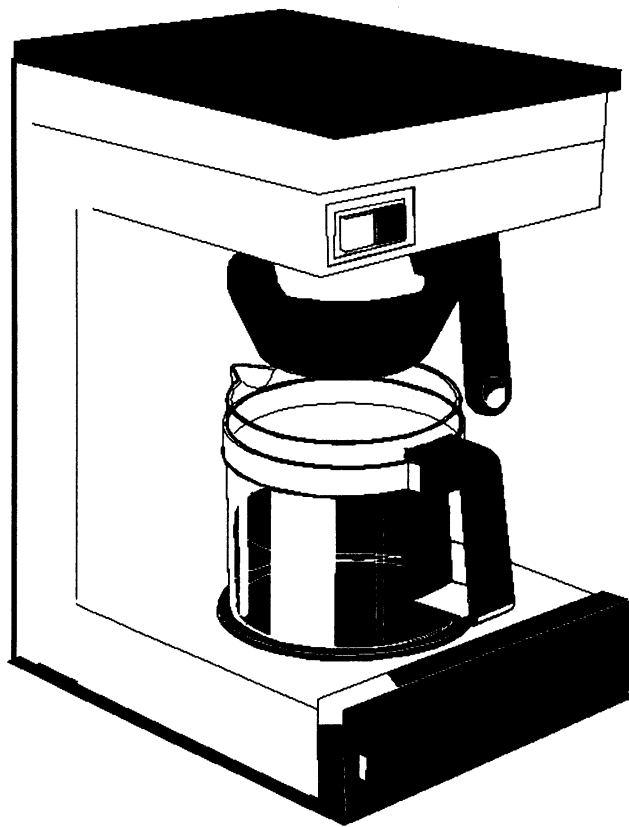
- Drain holding tanks
- Shut off all appliances and water heater. Close LP gas valve.
- Turn water pump OFF.
- Close all roof vents.
- Remove articles from refrigerator/freezer and clean thoroughly. Leave door ajar to prevent mildew.
- Retract any awnings and secure them for transport.
- Turn battery disconnects to OFF.
- Secure and lock entrance door.

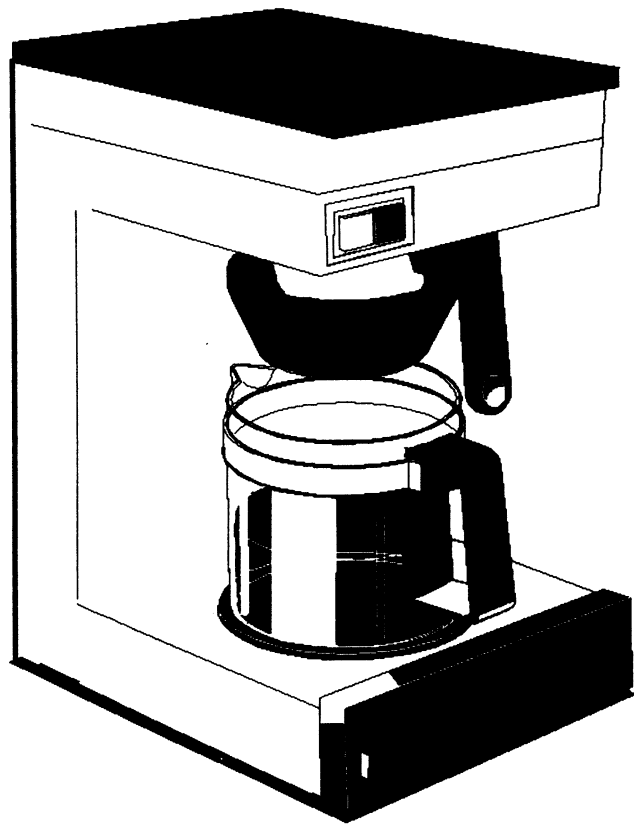
To Take Out of Storage:

- Turn battery disconnects to ON.
- Turn on LP gas valve and check operation of appliances and water heater.
- Perform "Ready to Leave Checklist".

CHAPTER 3

APPLIANCE & EQUIPMENT





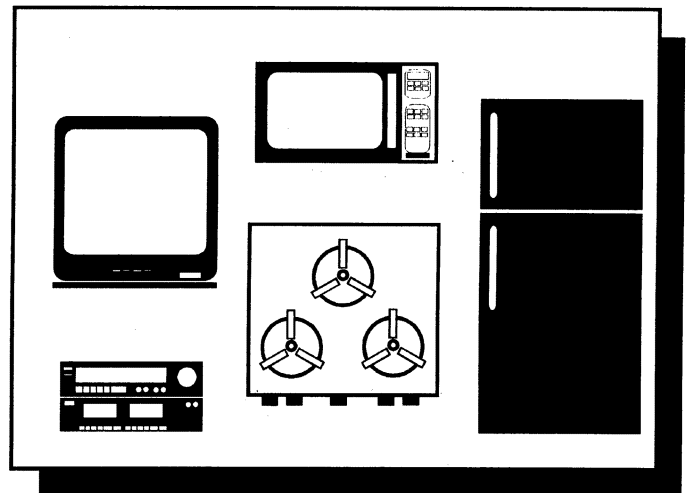


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Appliances & Equipment

General Information

This chapter covers operation and care of various appliances and types of equipment found in your motor home. Your motor home can be equipped with many different kinds of equipment such as: refrigerator, range, microwave, television, VCR, stereo, furnace, water heater, air conditioning, awning and slide out room. Appliances found in your motor home are similar to those you have in your home. Many operate on LP gas, AC/DC current, or a combination of all three. Detailed information, CAUTION and WARNING instructions for your various appliances and electronic components, other than what is in this chapter, can be found in manufacturer's manuals in your motor home information file.



△ WARNING △

Most LP gas appliances and equipment used in recreation motor homes are vented to the outside. When parked close to a gasoline pump it is possible that gasoline fumes could enter this type of appliance or equipment and ignite the burner flame causing a fire or explosion. Shut off these appliances when refueling motor home.

Carbon Monoxide can cause nausea, fainting, or death. Inadequate ventilation or partial blockage of LP gas appliances and equipment flues can result in increased carbon monoxide fumes when operating in LP gas mode.

Do not store cigarette lighter fluid, petrol, ether, etc. in refrigerator, they can cause a fire or explosion.

Refrigerator

Operating Instructions

A 12 volt DC supply is required to operate refrigerator; if indicator lights are not lit on control panel when refrigerator is turned on, check for loss of DC supply voltage. Shore line must be plugged in for 120 volt AC operation. Refrigerator AC power cord must be plugged in and LP gas valve must be open for operation (refrigerator AC power cord is located in refrigerator outside compartment). Refer to chapter 8 "Diagrams" for compartment locations. A 2-way refrigerator operates on AC current or LP Gas. A 3-way refrigerator (Optional) operates on AC current, DC current or LP Gas.

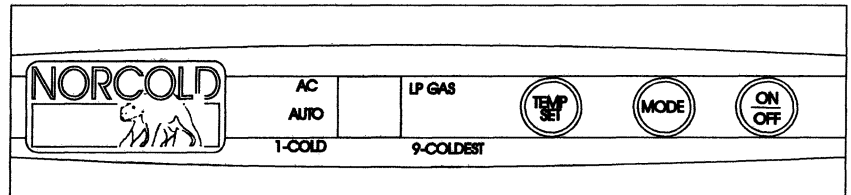


Door

Handle is equipped with a storage latch which enables doors to be left partially open to prevent buildup of odor during extended refrigerator shut down periods. To use storage latch, open door approximately ½ inch and slide storage latch into cut out on strike plate.

Control Panel

ON/Off Button - Press button to turn refrigerator ON. Press button and hold until no lights are lit to turn refrigerator OFF.



MODE Button - Pressing and holding button allows user to cycle through three choices; one “AUTO” and two manual modes (AC & LP GAS). Refrigerator will not switch to new operating mode until button is released.

TEMP SET Button - Press and hold button to select desired temperature setting. Temperature settings appear in display window, with highest number reading indicating coldest setting.

Manual Mode

To operate in “MANUAL” mode, press and hold “MODE” button until desired operating mode (AC & LP GAS) is displayed.

AUTO Mode

- Press main power ON/OFF button so that display light is lit.
- Press TEMP SET button and hold until coldest reading is indicated.
- Press and hold MODE button to select AUTO setting then release button. Operating control automatically selects one of the following:

1. When 120 volts AC is available, “AC” will be visible in display panel indicating refrigerator is operating on AC current.
2. If 120 volts AC is not available, refrigerator will switch to LP gas operation and “LP” will be visible in display panel. If gas burner does not ignite within 30 seconds refrigerator gas valve will automatically close. If gas burner does not light after several tries consult your authorized dealer for assistance. If AC electric becomes available while refrigerator is operating in “LP” mode, refrigerator will switch to “AC” operation.



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Appliances & Equipment

- After refrigerator is operating press TEMP SET button and adjust to desired temperature.

Shut Down

Press ON/OFF button and hold until no indicator lights are lit. If refrigerator will not be in operation for a period of weeks it should be emptied, defrosted, cleaned and doors left ajar. Ice trays should be dried and kept outside refrigerator.

Ice Maker Operation

Refrigerator must be allowed to pre-cool properly before starting ice maker. Refrigerator has to be connected to 120 volt AC before ice maker can operate.

- Water pump must be in ON position or system hooked to a water supply to furnish ice maker with water.
- Manual water shut off valve must be open, valve is located inside motor home under kitchen sink next to water filter.
- To start ice maker move ice level bail arm to down position.
- To shut off ice maker move ice bail arm all the way to up position.

When ice maker thermostat senses preset temperature for ejection of ice cubes, mold fins will start to rotate dumping ice cubes and mold will refill with water. First few cycles of ice maker may make small ice cubes due to air trapped in water lines. First container of ice cubes should be dumped if water system has been winterized or not used in several weeks.

Defrosting Refrigerator

- Shut down refrigerator.
- While emptying refrigerator leave a drip tray under cooling fins.
- Keep cabinet and freezer doors open.
- Defrosting time can be reduced by placing a pan of hot water in freezer.
- After frost has melted, empty drip tray and clean refrigerator.

△ CAUTION △

Do not use a hot air blower. Permanent damage could result from warping metal or plastic parts. Do not use a knife, ice pick or other sharp tools to remove frost from freezer, they can create a leak in ammonia system.



Cleaning Refrigerator

Cleaning refrigerator is usually done after it is defrosted or when it is put into storage.

- To clean interior lining of refrigerator use a luke warm weak soda solution.
- Use only warm water to clean cooling fins and ice trays.
- Never use strong chemicals or abrasives to clean these parts as protective surfaces will be damaged.

Microwave Oven

Microwave oven operates on AC current only. For instructions on how to operate special features on microwave oven refer to manufacturer's manual in your motor home information file.

Cleaning Microwave Oven

- To clean inside walls, ceiling and floor, wipe up any splatters or spills with a soft damp cloth or sponge after each use or clean with mild detergent and water.
- Clean outside surface with mild soap and water, rinse and dry with a soft cloth.
- Never use strong chemicals or abrasives to clean microwave oven or surfaces will be damaged.

Cooktop - (Optional)

Cooktop burners use electronic ignitors to light burners. Inverter must be ON, shore power plugged in or generator running to supply current to ignitors.

- To light burners, make sure LP gas is turned on.
- Push in and turn burner knob to HI position.
- Ignitors will spark until burner lights.
- Turn burner knob to desired setting.
- Turn burner knob to OFF when finished.

If burner does not light within 4 to 10 seconds, turn burner knob to OFF. Check that LP gas is present, cooktop cord is plugged in, circuit breaker is not tripped and electronic ignitors spark. If burner does not light after three attempts, contact your servicing dealer.

△ WARNING △

Do not heat motor home interior with cooktop, range or oven. Gas combustion consumes oxygen inside motor home.



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Appliances & Equipment

Range w/Oven

Range - Top burners use electronic ignitors to light burners. Inverter must be ON, shore power plugged in or generator running to supply current to ignitors.

- To light burners raise burner cover and fold it to the back of range.
- Push in and turn burner control knob counterclockwise to turn gas on, wait two seconds, and turn left spark igniter control knob clockwise until a flame appears.
- After burners have been shut off and range has cooled, fold cover over range.

Oven:

- To light oven pilot push in oven control knob and rotate counterclockwise to PILOT ON position.
- Light oven pilot light located at bottom and back of oven to the left of oven burner. Oven pilot may be slow in lighting due to initial air in gas line.
- Oven pilot has been factory adjusted and no further adjustment is necessary.
- To light oven push in on oven knob and turn to desired temperature.
- To extinguish oven pilot push in oven control knob and turn clockwise to OFF.

Cleaning Cooktop or Range

- Clean all surfaces as soon as possible after spills or spotting.
- Use warm soapy water only. Grit or acid-type cleaners should never be used.
- Use oven cleaner in oven; follow directions for any oven cleaner used.
- To remove range top lift top upward by front edge and pull top up and away from rear trim.
- To install range top, lower top into place. Apply a slight downward pressure on both sides of top to engage retaining clips.

Washer/Dryer Prep (Optional)

Water supply plumbing, waste water drainage plumbing, and 120 VAC electrical wiring have been installed at the factory for a combination washer/dryer. If installing such equipment, be sure to follow appliance manufacturer's installation instructions. Also, adhering to following directions will ensure safe and reliable operation of your after market washer/dryer.

- Do not connect clothes dryer moisture-line exhaust duct to any other duct, vent, or chimney.
- Do not terminate moisture-lint exhaust duct beneath motor home.

Continued⇒⇒⇒



- Do not attach moisture-lint exhaust duct to dryer vent connection or exterior termination vent with sheet metal screws or other fastening devices that extend into interior of duct that may catch lint.
- Locate and install backer for moisture-lint exhaust duct and exterior termination vent in accordance with appliance manufacture's printed instructions.

Washer/Dryer (Optional)

Operating Instructions

Before using washer/dryer for the first time, wipe inside with a damp cloth to remove any dust that has accumulated and run rinse cycle to rinse out washer.

- Turn hot and cold water faucets on.
- Place clothes and measured amount of detergent in washer/dryer and turn cycle selector to desired temperature setting.
- Turn wash timer clockwise to desired wash setting.
- Select drying time and half heat if required (half heat is selected by pushing in heat button).
- Press ON/OFF button to ON position. Door lock light will light up as soon as washer starts.

△ WARNING △

Do not wash or dry articles that have previously been cleaned in, washed in, soaked in, or spotted with gasoline, dry cleaning solvents or other flammable or explosive substances. They give off vapors that could ignite or explode.

Do not add gasoline, dry cleaning solvents or other flammable or explosive substances to wash water.

Under certain conditions hydrogen gas may be produced in a hot water system that has not been used for 2 weeks or more.

Hydrogen gas is explosive. If hot water system has not been used for a long time turn on all hot water faucets and let water run for a minute before using washer/dryer. This will release any accumulated hydrogen.

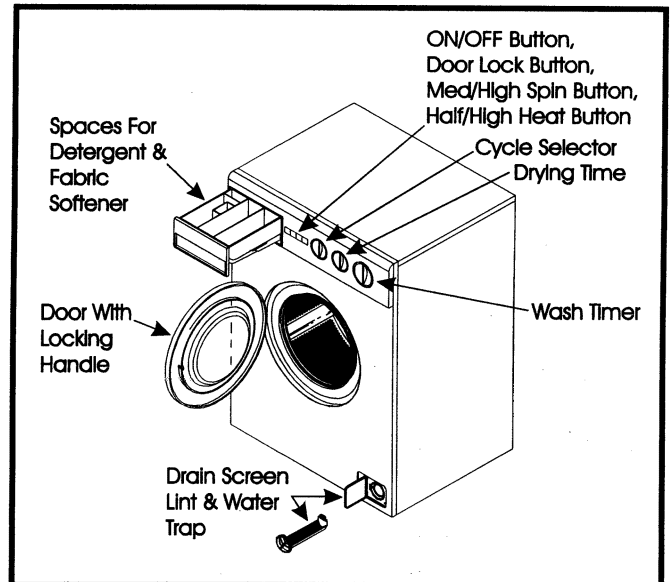
Do not use heat to dry articles containing foam rubber or similar textured rubber like materials.

Clean lint screen (located on back of washer in top left corner) after each use, and keep area around exhaust opening and adjacent areas free from accumulation of lint, dust and dirt.

Appliances & Equipment

- After wash cycle is complete wait 2 minutes for door lock to release before attempting to open door. Attempting to open door before lock releases could damage handle.
- Light will go out when it is safe to open door.
- After washing is complete hot and cold water faucets should be turned OFF and ON/OFF switch pushed to OFF position.

NOTE: If door must be opened during wash cycle:



- Open door by pushing door lock button to OFF position and wait until water is discharged.
- Turn washer/dryer OFF and wait at least 3 minutes for door lock to open.
- To restart washer/dryer push ON/OFF button to ON position.

Cleaning Drain Screen

Removable drain screen which protects pump from lint and foreign matter needs to be cleaned periodically. How often will depend on type of clothes that you wash. Cotton articles cause more lint to collect than nylon articles. Under no circumstances should drain screen be removed while washer is full of water.

- Run spin cycle to reduce amount of water in washer.
- To clean drain screen open service door by pressing on left hand side.
- Place a cloth or shallow tray under drain screen housing, as a small amount of water may run out.
- Turn drain screen counterclockwise and pull drain screen out.
- Clean screen to remove any dirt and lint.
- To replace screen slide it back into housing and turn it clockwise to secure.
- Close service door.

Cleaning Washer/Dryer

As you use washer/dryer, occasionally wipe exterior of cabinet with a damp cloth or sponge; wipe it dry with a soft cloth. Do not use polish on plastic trim.

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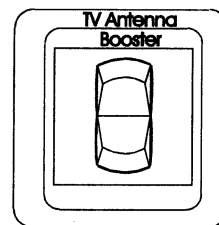


- Clean interior with 1 cup of chlorine bleach mixed with 2 cups of detergent.
- Run washer through a complete cycle using hot water.
- Repeat process if necessary.
- Remove hard water deposits using only cleaners labeled as washer safe.
- Wipe inside of washer/dryer door with a soft cloth to remove any moisture.
- Periodically, a thin coat of paste wax should be applied to inner door; especially to area which is immediately next to door window. This will protect door finish from laundry spills and discoloration.

Television Antenna

Antenna Booster

Television antenna is designed for color and black-and-white televisions. If reception is poor make sure power supply switch is ON and connectors are tight. Power switch is located in an overhead compartment next to entrance door. If reception remains poor check with your authorized dealer.



To Raise Antenna

Before raising antenna check for clearance above motor home.

- To raise antenna to operating position, turn crank toward UP arrow until you feel resistance.
- Turn power booster switch to ON position.
- Rotate antenna only when antenna is fully raised; to rotate antenna, pull down on rotating knob until it disengages ceiling plate. Turn antenna clockwise or counter-clockwise for best picture and sound. Do not rotate antenna except when it is in fully raised position.

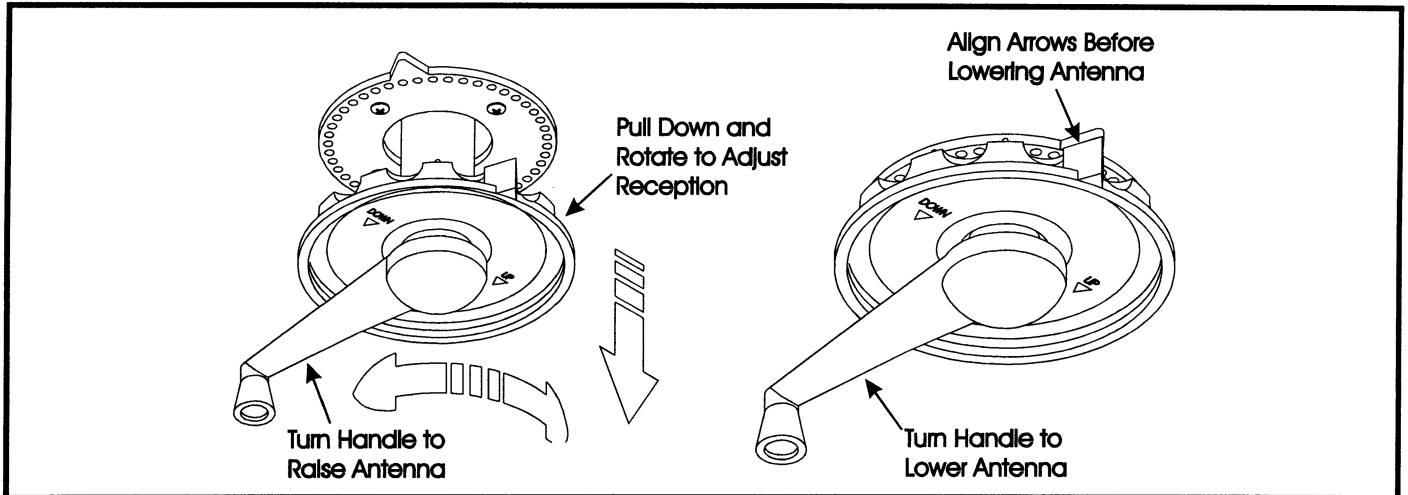
△ WARNING △

Do Not raise TV antenna near overhead electrical wires as contact may cause serious injury or death.

Do Not move motor home when TV antenna is up. There is a red warning light on operator's dash panel. When ignition switch is turned to ON position the warning light will be lit if antenna is up. When this light is lit lower antenna before moving the motor home.

Appliances & Equipment

To Lower Antenna



Important: Never lower antenna without first aligning pointer.

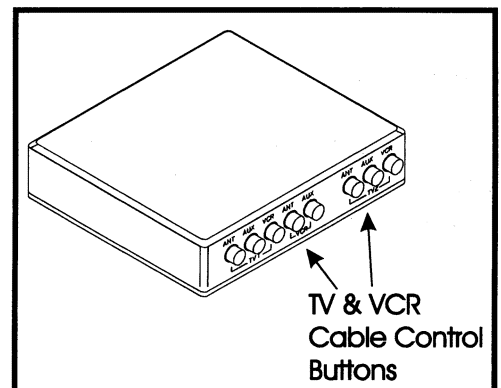
- To lower antenna, align arrow on rotating knob with pointer on ceiling plate. Do not force handle or you will damage antenna.
- Turn crank towards DOWN arrow position until you feel resistance.

Satellite System Prep (Optional)

If your motor home does not have a satellite dish, check to see if optional satellite system prep wiring has been installed. If your motor home is equipped with a satellite dish system, refer to manufacturer's Owner's manual in your Owner's information file for operating instructions.

VCR & TV Cable Switch Box

VCR can be used by either or both TV's. Cable switch box is located in an overhead compartment in front of motor home. This box allows you to choose whether you want TV's to use VCR, cable hookup, roof antenna or any combination of the three. For detailed information and operating instructions on cable switch box refer to manufacturer's manual in your Owner's information file.





Television and VCR

Your motor home is equipped with a color TV located above operator's seat. There is also a color TV in bedroom. VCR is located in an overhead compartment in front of motor home. VCR and TV's are powered by 120 volt electricity only. For detailed information and operating instructions on VCR and TV's refer to manufacturer's manual in your Owner's information file

Cable and Telephone Hookups

Your motor home is equipped with cable TV and telephone hookups. These hookups can be used to connect to cable TV and telephone services at campgrounds (hookups are located in outside water control and center compartments).

Stereo & CD Player

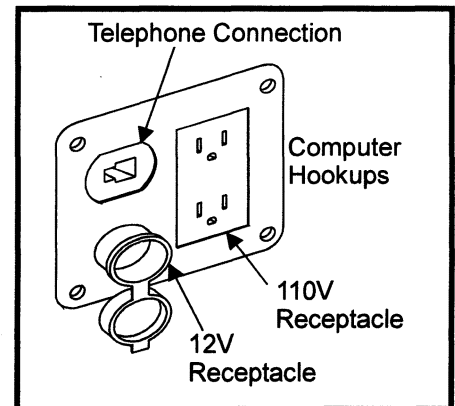
Your motor home is equipped with an Am/FM CD Player stereo located in dash. Stereo receives 12 volt power directly from house battery. You may also have an (Optional) stereo available with a built in cassette player. For detailed information and operating instructions on stereo and CD player systems refer to manufacturer's manual in your Owner's information file.

Citizens Band (CB) Radio Prep

Located under dash next to two pin dash accessory connector is a two pin connector labeled Citizens Band Radio. Red wire is at 12VDC DC and is fused at 2 amps through front distribution panel. White wire is connected to chassis frame.

Computer Station Hookups

Your motor home is equipped with necessary plugs, 12V or 110V and telephone, to operate your computer. Plug panel is located in front of motor home.



Rear Vision System

If your motor home does not have a rear vision system, wiring is provided behind dash and rear cap for vision system installation.

Rear vision system consists of a camera located on rear of motor home and a monitor located in dash. Operator can see what is behind motor home when backing up motor home. Rear vision monitor system is equipped with the ability to be ON all the time when ignition switch is On or only activated when motor home gear shift is in reverse when backing up motor

Appliances & Equipment

home. For detailed information and operating instructions on rear vision system refer to manufacturer's manual in your Owner's information file.

Roof Air Conditioner

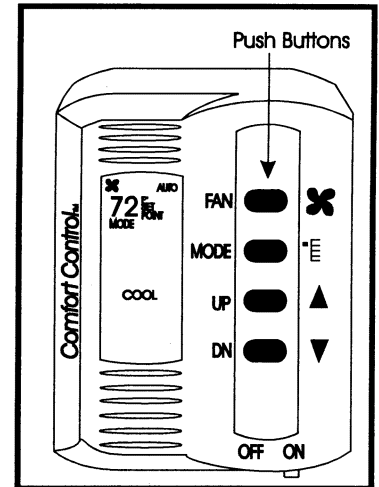
Roof mounted air conditioner filters, circulates, cools and dehumidifies air inside your motor home. Air conditioner operates only on 120 Volt AC current from shoreline or electric AC generator. A small amount of water from dehumidification will collect and is dispelled outside motor home. Air flow inside motor home is controlled by adjusting louvers located on ceiling.

To Operate Air Conditioner:

- Slide ON/OFF switch to ON position.
- Push fan button until desired AUTO, LOW or HIGH appears on display.
- Push MODE button until COOL appears on display.
- Push UP or DN buttons to adjust desired temperature and setting appears on display.
- To shut off air conditioner slide ON/OFF switch to OFF position.

To Operate Air Conditioner Heat Pump (Optional):

- Slide ON/OFF switch to ON position.
- Push MODE button until HEAT STRIP appears on display.
- Push fan button until desired AUTO, LOWER HIGH appears on display.
- Push buttons to adjust desired temperature and setting appears on display.
- To shut off heat pump slide ON/OFF switch to OFF position.



Return air filters should be cleaned frequently and are located on motor home ceiling inside air intake vent covers. Never run air conditioner without return air filters in place. This may plug evaporator core with dirt and may substantially affect performance of air conditioner. Remove vent covers and filters. Wash filters and covers in warm soapy water, DO NOT use solvents. Rinse filters and covers thoroughly with fresh water and allow them to dry. Reinstall filters and covers.

Bathroom Exhaust Fan

Exhaust fan is powered by 12V DC. Always close dome lid when motor home is stored or unattended for an extended period of time. High winds and moisture leakage could cause serious damage to motor home. Fan is for ventilation only, it will not cool motor home.

Continued⇒⇒⇒

- To open or close vents turn crank handle.
- To operate power air vent crank open vent and push in power button.
- To close power air vent push in power button to stop fan and close vent.

Attic Air Vent

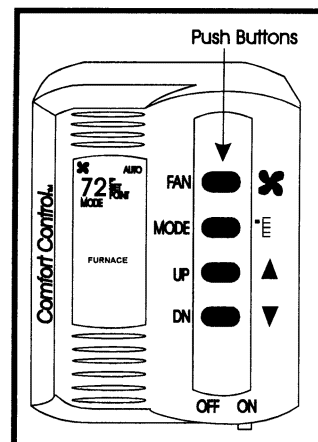
Attic fan will either pull air in or extract air from inside motor home. There are 3 controls located in ceiling attic vent. Knurled knob opens vent. Round knob controls fan speed settings. IN/OUT switch controls air flow to inside or outside of motor home. Fan will run only when cover is open at least 3 inches.

- To operate open vent and turn fan ON to desired speed.
- To change direction of fan turn fan OFF, wait for blades to stop moving, push IN/OUT switch to desired position and turn fan ON to desired speed.
- If you motor home has a thermostat set it at desired temperature for ON/OFF fan operation.

Furnace

Operating Instructions

- Slide ON/OFF switch to ON position.
- Push fan button until desired AUTO, LOW or HIGH appears on display.
- Push MODE button until FURNACE appears on display.
- Push UP or DN buttons to adjust temperature at 10° higher than motor home temperature and setting appears on display.
- Allow 40 to 60 seconds for furnace to begin operating.
- Push UP or DN buttons to adjust desired temperature and setting appears on display.
- If furnace does not light, and you do not smell gas, repeat the above procedure.
- If furnace does not ignite after three attempts slide thermostat control to OFF and call a qualified service technician or your gas supplier.
- To shut down furnace slide thermostat control to OFF. After you have turned furnace off or burner has shut down fan will run for approximately 30 to 60 seconds to cool down furnace.





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Appliances & Equipment

△ WARNING △

Never attempt to modify this furnace. Fire, explosion, asphyxiation or carbon monoxide poisoning may result in serious bodily harm or death.

If you smell gas (a rotten egg or sulfur smell) at any time, perform the following steps immediately:

- Turn off main gas supply.
- Do not touch any electric switch.
- Extinguish any open flames.
- Open windows and doors.
- Do not try to light any appliance.
- Exit the motor home and contact a service center or a gas supplier.

Do not store combustible or any other material next to the furnace. Storage of any materials may restrict the air flow and affect the efficiency of your furnace or result in a fire.

Be careful when washing your motor home so that water is not aimed directly into furnace outside vent. If water is forced into vent and past fan baffles in furnace, rusting and improper combustion could occur. For your safety do not use gasoline or other flammable vapors and liquids in vicinity of furnace.

Electrical power to furnace should be turned off while cleaning control compartment to avoid shock or damage to furnace.

Cleaning Furnace

Clean entire furnace and air tube passageways periodically to remove dust, lint, etc. Check gas systems for leaks at least once a year. Check and clean blower wheel annually. Control compartment of furnace must be kept clean; failure to do so could result in operational or fire hazards.

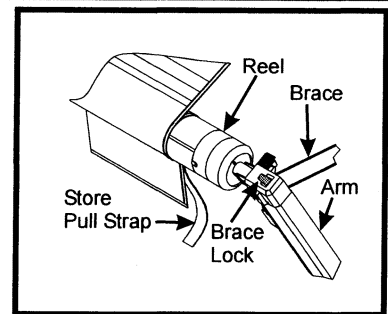
Before each heating season starts furnace should be thoroughly cleaned of wasp and spider nests, lint accumulations and other debris. Debris will restrict air flow for combustion, bind up combustion air impeller and keep blower fan from running. Check burner pilot orifices for debris. Lint accumulations will cause blower to become unbalanced and vibrate, restrict ability of blower to move air, and if blown onto heat exchanger will cause odor and fire hazard. Contact your authorized dealer service technician for annual cleaning.



Side Awning (Optional)

To Extend Awning

- Have someone help you extend awning.
- To extend awning loosen black brace locking knobs located on inside lower front and rear braces. Failure to loosen black knobs will prevent awning from fully extending.
- Lift and move arm storage locks, top handle on front and rear arms, all the way up to unlocked position.
- Slide brake control, center handle located on front arm only, all the way up to unlocked position; red warning will be visible at top of arm.
- Hook loop of pull strap, located in center of reel, with catch rod and draw awning, reel assembly and arms all the way out away from motor home.
- Hold awning out and have someone push both front and rear braces, attached to black knobs, all the way out to reel end of arms and lock braces in place.
- Tighten black locking knobs. Braces that are left in down position or not locked to reel end of arms will allow awning to retract inadvertently.
- Slide center pull strap to one end of awning and store.
- Raise arm extension lock handles, located on bottom of front and rear arms, all the way up to unlocked position. Extend arms up to position awning at desired height and lower lock handles to secure arms.



To Retract Awning

△ CAUTION △

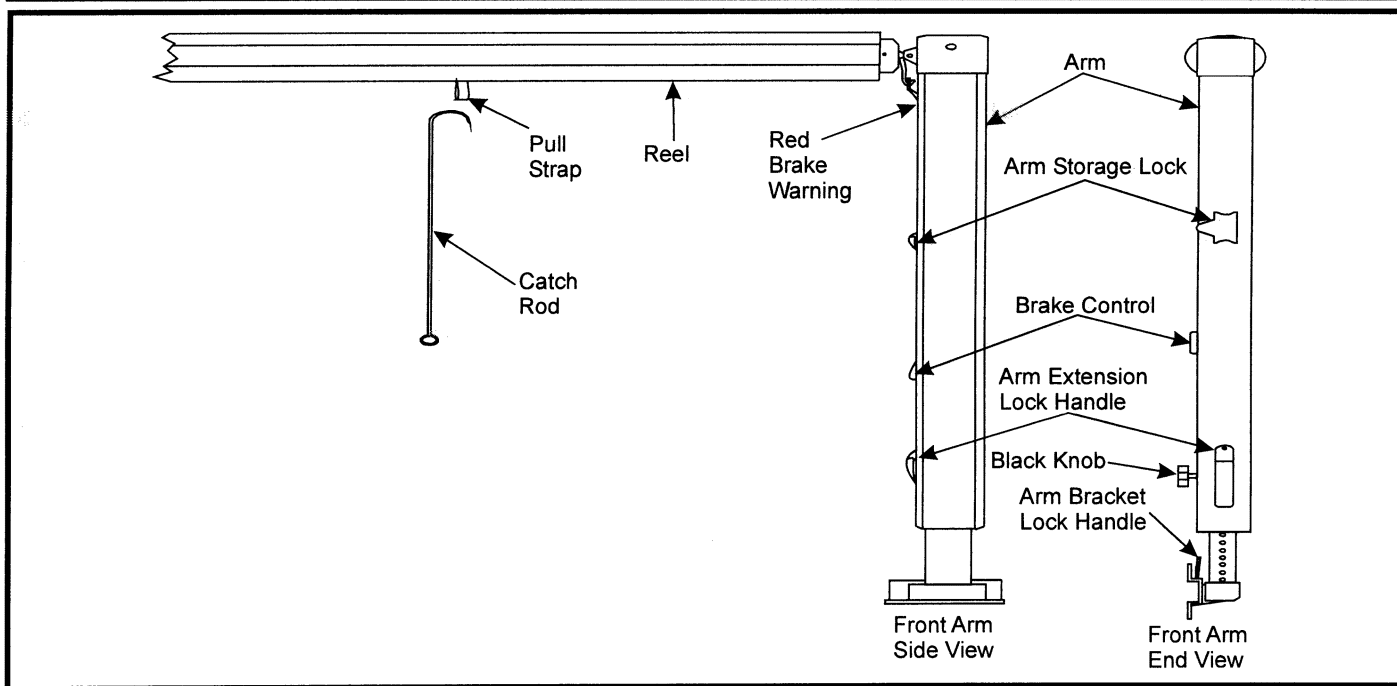
Awning is under extreme spring tension when extended. If pull strap is released quickly or let go completely, awning will abruptly roll up to stored position and can cause bodily injury or damage to awning.

- Have someone help you retract awning.
- If applicable move awning out of carport position (see "Using Carport Feature").
- Retract arms to lower awning until arms rest on lower stop bolts and lock in position.
- Position pull strap in center of reel.
- Hold pull strap and have someone loosen black knobs and lower braces all the way toward motor home; **do not tighten black knobs**.
- Pull down slightly on pull strap, have someone release slide brake and allow awning to roll up to stored position.



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Appliances & Equipment

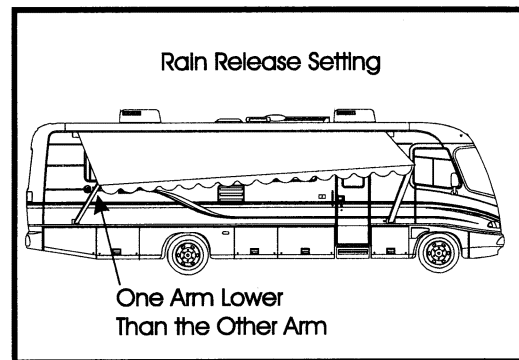


- Lower arm storage locks, top handle on front and rear arms, to lock awning in place.
- Tighten both front and rear black knobs.

Rain Release Setting

After you have extended awning you can choose to position it in rain release position. This position will prevent water build up on awning.

- To position awning lower one arm of awning and leave other arm in normal position. This will create enough of a slope for adequate water run off.



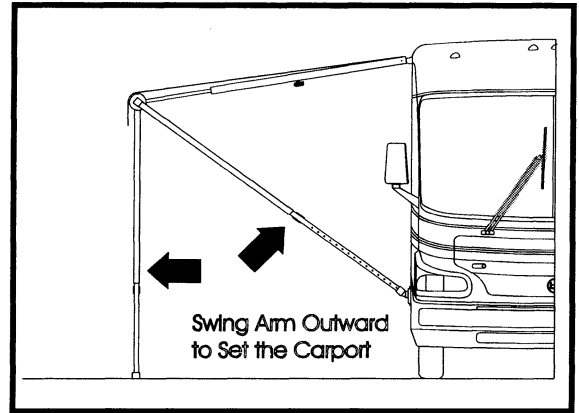
Using Carport Feature

In order to use carport feature safely, braces must be extended and locked to end of side arms and black knobs tightened.

- Extend awning as described under "To Extend Awning".

Continued=>>>

- Unlatch bottom of rear arm by pushing in on lock handle on arm bracket and swing arm away from motor home to an upright position.
- Raise rear arm extension lock handle all the way up to unlocked position, extend arm to position awning at desired height and lower lock handle to lock arms in place. **Drive stakes through bottom holes in arm.**
- Unlatch bottom of front arm by pushing in on lock handle on arm bracket and swing arm away from motor home to an upright position.
- Raise front arm extension lock handle all the way up to unlocked position, extend arm to position awning at desired height and lower lock handle to lock arms in place. **Drive stakes through bottom holes in arm.**
- To move awning out of carport position reverse above steps.



Securing Awning For Travel

Before travel, check the following:

- Awning is fully retracted to side of motor home.
- Black locking knobs are tightened.
- Storage locks are down in locked position.
- Brake control is in full down (locked) position and no red warning is showing.
- Bottom of front and rear arms are latched properly into bottom brackets.
- Catch rod is stored away.

Slide-Out Awning (Optional)

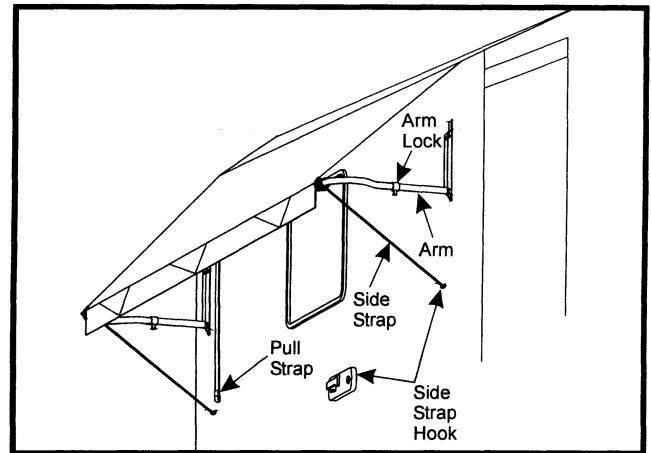
To Extend Awning

Slide-out room must extend equally at both ends so that awning fabric will be taut when room is fully extended.

- Move slide-out room all the way out.
- Find pull rod.
- Using pull rod push arm locks (one on each end arm) up all the way to unlocked position.

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- Hook pull rod end into pull strap of awning and pull awning and arms out all the way. Hook end of side strap loops (one on each end of awning) onto side strap hooks on slide-out room.
- Slowly release awning.
- Pull strap to one side, remove pull rod and store strap.
- Store pull rod.



To Retract Awning

- Find pull rod.
- Using pull rod, position pull strap in center of awning.
- Pull awning out all the way.
- Unhook side strap loops (one on each end of awning) from side strap hooks on slide-out room.
- Slowly release awning and allow it to roll up all the way.
- Pull arm locks (one on each end arm) down into locked position. Make sure arms are locked securely, wind can pull awning away from motor home and damage awning if not locked properly.

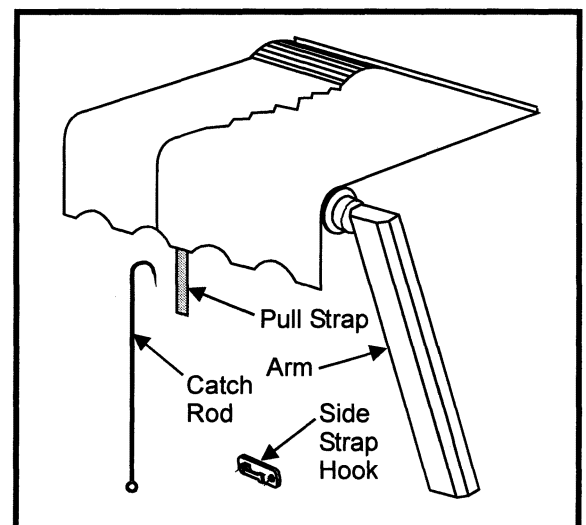
Window Awning (Optional)

To Extend Awning

- Hook loop of pull strap with catch rod and pull awning, reel assembly and side arms to extend fully away from motor home.
- Hook pull strap on side strap hook, remove catch rod from pull strap and store.

To Retract Awning

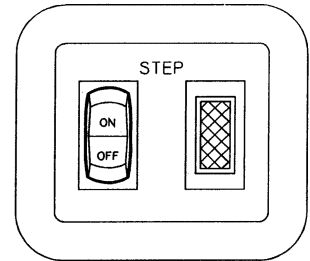
- Hook catch rod on pull strap, remove pull strap from side strap hook and slowly allow awning to retract.
- Remove catch rod from pull strap and store.





Electric Entry Step

Your electric entry step features amber lighting under step, automatic retraction with ignition key in RUN position and a last out benefit. Located just inside door is a switch with indicator light. Indicator light will be illuminated when step switch is in ON position.



Operation (Normal)

- With ignition key in off position, move step switch to ON position. Indicator light will illuminate and step will extend and retract with opening and closing door.
- If switch is turned off with step in retracted position, step will not extend when opening door.
- If step switch is turned off after step has been fully extended for approximately 5-10 seconds, step will not retract when closing door.
- When motor home ignition key is in RUN position, step will always extend and retract with door regardless of step switch position.
- Any time step switch is on and door is open, amber light under step will be illuminated placing a drain of approximately 1/2 amp on chassis battery.

Operation (Last Out)

- If step is in extended position with step switch off and door closed, starting engine or placing ignition key in RUN position will cause step to automatically retract.
- When engine is stopped and ignition key is returned to OFF position, opening door will cause step to extend.
- Allow step to fully extend and wait approximately 5-10 seconds before closing door.
- Step will remain extended until step switch is returned to ON position or ignition key is rotated to RUN position.

NOTE: Not allowing step to fully extend and remain extended for 5-10 seconds before closing door may cause step to retract. Opening door after this will cause no step extension until step switch is returned to ON position.

To Convert Dinette Into a Bed

- Remove dinette seat cushions from seats.
- Lift up on end of table and release lock on leg.
- Swing table leg back until it locks.
- Pull table away from ledge and lower it down until table lays on ledge of dinette seat.
- Table is hinged for easy movement. Lay table on dinette seat ledges and spread cushions out to form a mattress.
- To return dinette to its original position lift table back onto ledge.



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Appliances & Equipment

- Release lock on leg and allow it to lock in outstretched position.
- Lower table until leg rests on floor.

To Convert Sofa Into a Bed

- Grab front edge of sofa under cushions and pull up and out. Sofa will extend into a fold-out bed.
- To return bed to sofa position lift up on front edge and push in.

Securing Dinette Chairs for Travel

- Tie down chairs securely so that it is not possible to sit in any chairs.

△ WARNING △

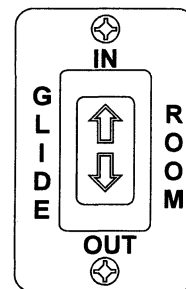
Do not occupy any of these chairs while motor home is in motion. Chairs are not equipped with occupant restraint systems. In addition, chairs must be stored in an enclosed area or secured with tie-down straps prior to setting motor home into motion to avoid risk of personal injury to motor home occupants resulting from a crash or sudden stop.

Slide-Out

To Extend Slide-Out Room

- Check that you have at least five feet of clearance outside motor home for slide-out room.
- Locate two locking bar mechanisms on top of slide-out room inside motor home.

Continued⇒⇒⇒



△ WARNING △

Make sure you have 5 or more feet of clear space on outside of your motor home before moving slide-out in the OUT position. Be sure you have sufficient clearance on inside of motor home before you retract slide-out. Do not operate slide-out when the battery has been removed from the motor home. Use with the converter only may damage the slide-out's electrical components. Continuous operation of the slide-out could cause battery drain and damage to slide-out motor from over heating.

Never move motor home without having slide-out retracted.

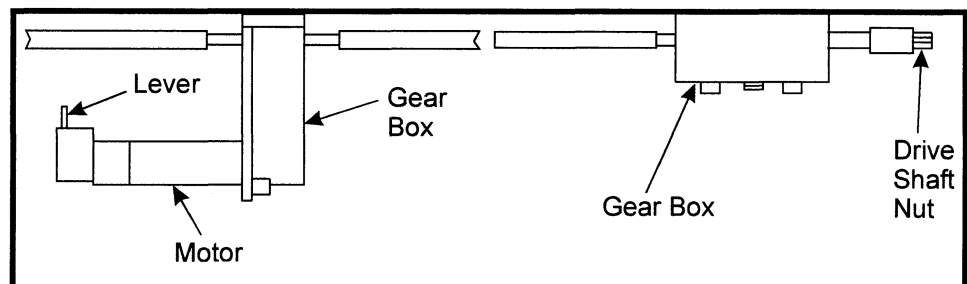
- Remove bars from between wall and top of slide out room.
- Store bars for reuse before motor home is in motion.
- Press and hold slide-out room switch in the OUT position. Switch is located in a side overhead compartment near entrance door. Slide-out room will move slowly to the OUT position and drive motor will not stop automatically.
- To stop slide-out room before room reaches OUT position, release switch.
- To continue room movement push and hold switch in.

To Retract Slide-Out Room

- Check that there is sufficient clearance inside motor home for slide-out room.
- If applicable clean floor.
- Press and hold switch in the IN position. Slide-out room will move slowly to the IN position and drive motor will not stop automatically.
- To stop slide-out room before room reaches IN position, release switch. To continue room movement push and hold switch in.
- After slide-out room is all the way retracted locate two removed locking bar mechanisms.
- Place bar mechanisms between wall and top edge of slide-out room. Secure bars so that slide-out room cannot move.

Manual Operation

- To move slide-out room manually open outside storage compartment doors underneath slide-out room
- Remove plastic covers from top of compartments to gain access to drive shaft and drive mechanisms.
- Move lever on motor to opposite side and turn end of shaft next to gear box with wrench to move slide-out room.
- Move lever to original position for normal operation.

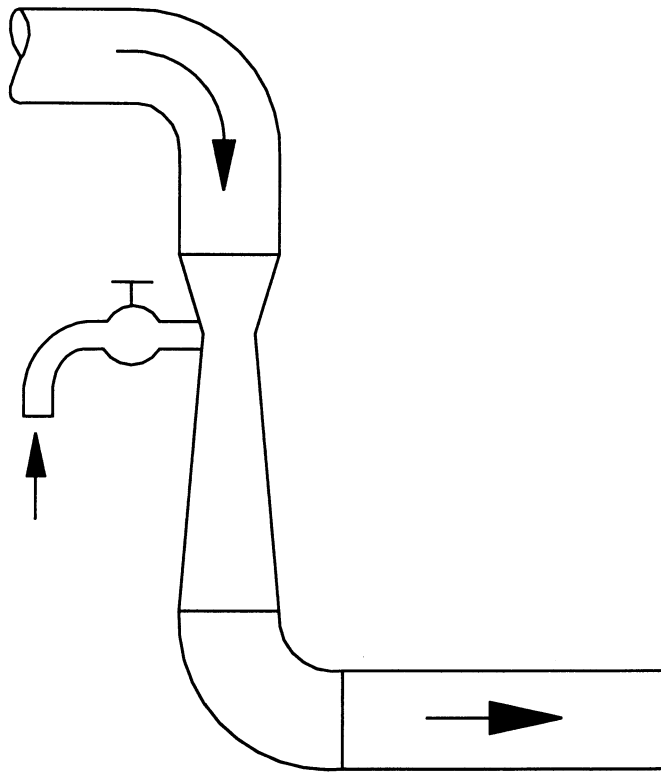


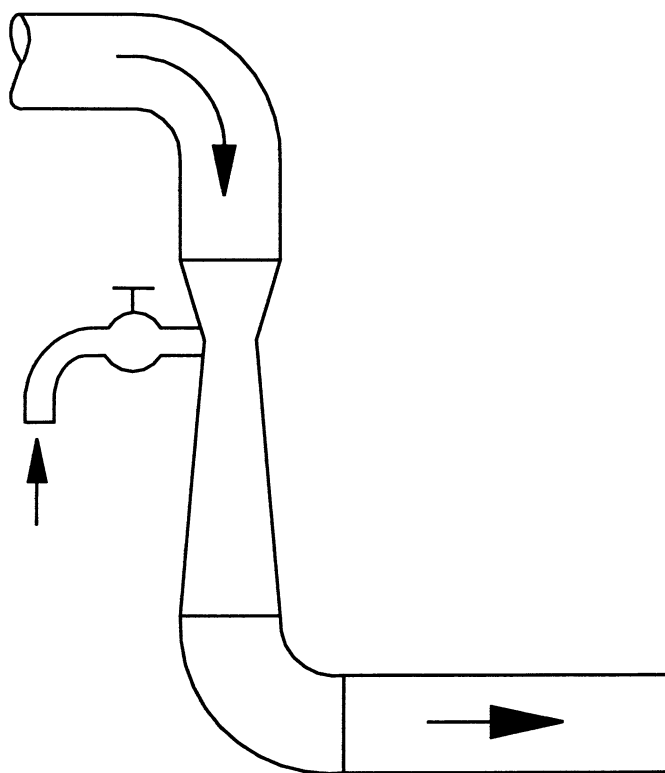
Slide-out Room Maintenance

Before retracting slide-out room remove any debris from outdoor top of room. Periodically treat outside seals with talcum powder.

CHAPTER 4

WATER SYSTEMS







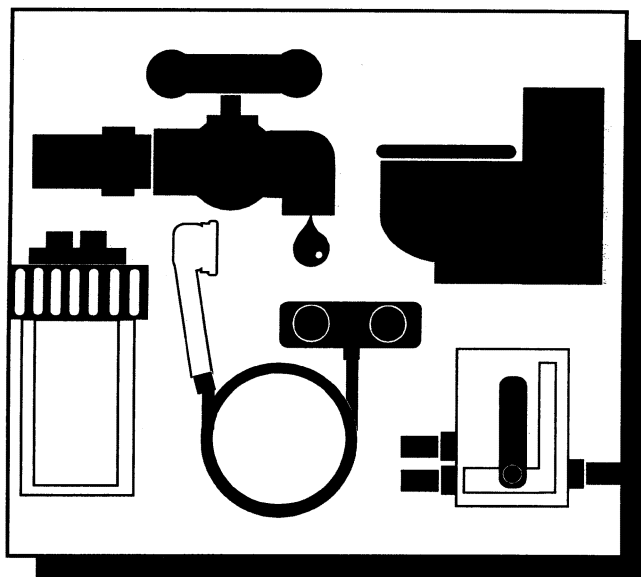
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Water Systems

General Information

It is hard to imagine how much water you use everyday when you are at home. Newcomers to self contained motor homes soon discover that water does not last very long unless consumption is drastically reduced. For instance, you can use less water for showering if you wet down; turn off water while soaping; then turn on water to rinse. This way a good shower uses a gallon or less of water. There is plenty of water to meet your needs once you adjust your habits.

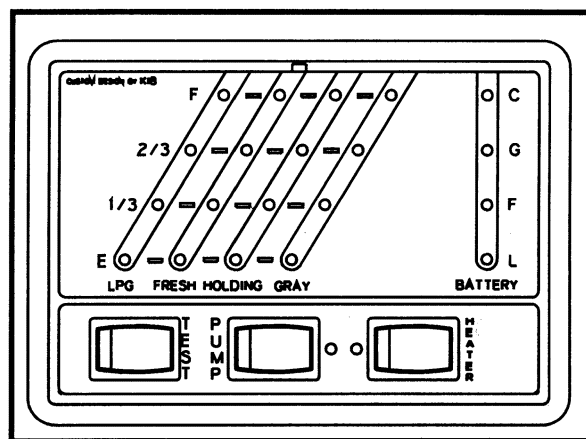
There are two different water systems in your motor home. Fresh water system consists of fresh water tank, water pump, water heater, filters (if so equipped) and a city water connection. Waste water system consists of a waste holding tank (gray water), a sewage holding tank (black water), toilet and drains.



Control panel for these two systems has a water pump switch, water heater switch and level indicator lights for tanks. To check water level of all tanks push test button on left side of panel.

Water Pump

A water pump is used to pressurize fresh water system when it is not connected to city water. Water pump is totally automatic and self-priming, operating on demand as water is used. Pump is located in outside water connection panel compartment on road side of motor home. To operate pump check water level in tank from control panel; refill if necessary (see "Fresh Water Tank Fill"). Open all valves and faucets except drain valves. This includes hot and cold water valves, all faucets, and shower. Make sure water heater bypass valve is set to NORMAL FLOW position (see "Water Heater Bypass System") so that water can run into your water heater. Turn pump on by pushing switch on control panel and wait for water lines and hot water tank to fill. Close each faucet when it delivers a steady stream of water (cold



Continued=>>>



water faucets first). Pump is now ready for automatic operation. It will start when a faucet is opened and stop when faucet is closed. Do not allow pump to run when fresh water supply tank is empty. Continued operation with a dry tank may open an electrical circuit and/or damage pump. For more detailed information see manufacturer's brochure in your Owners Information File.

City Water Hook-up

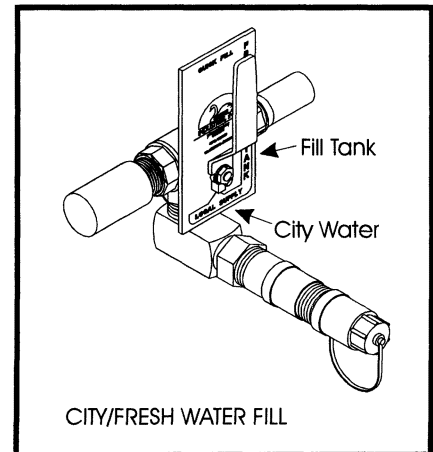
△ CAUTION △

Some water sources develop high pressure, particularly in mountainous regions. High pressure is anything over 55 psi (pounds per square inch). Excessive pressure can cause leaks in water lines and/or damage water heater. Water pressure regulators are available to protect water system against high pressures. See your dealer for more information.

When connecting your motor home to city water be sure to use a hose manufactured and labeled for potable water to insure that hose will not flavor water. To hook-up city water attach hose to CITY/FRESH WATER FILL connection on water connection panel located in outside service compartment on roadside of motor home and to water source. Turn valve to LOCAL SUPPLY position. Shut off water pump on control panel. Turn on water supply and open faucets to purge any trapped air in water system.

Fresh Water Tank Fill

To fill tank close tank drain valve and connect hose to CITY/FRESH WATER FILL valve and to water source. Fill and drain valves are located in outside water connection panel compartment on roadside of motor home. Turn valve to FRESH WATER TANK position. Turn on water and check level of tank on control panel while filling so that tank does not overflow. There is no automatic shut off on valve. There is a overflow drain in tank. Shut off water and unhook hose when tank is full.



Disinfecting Fresh Water System

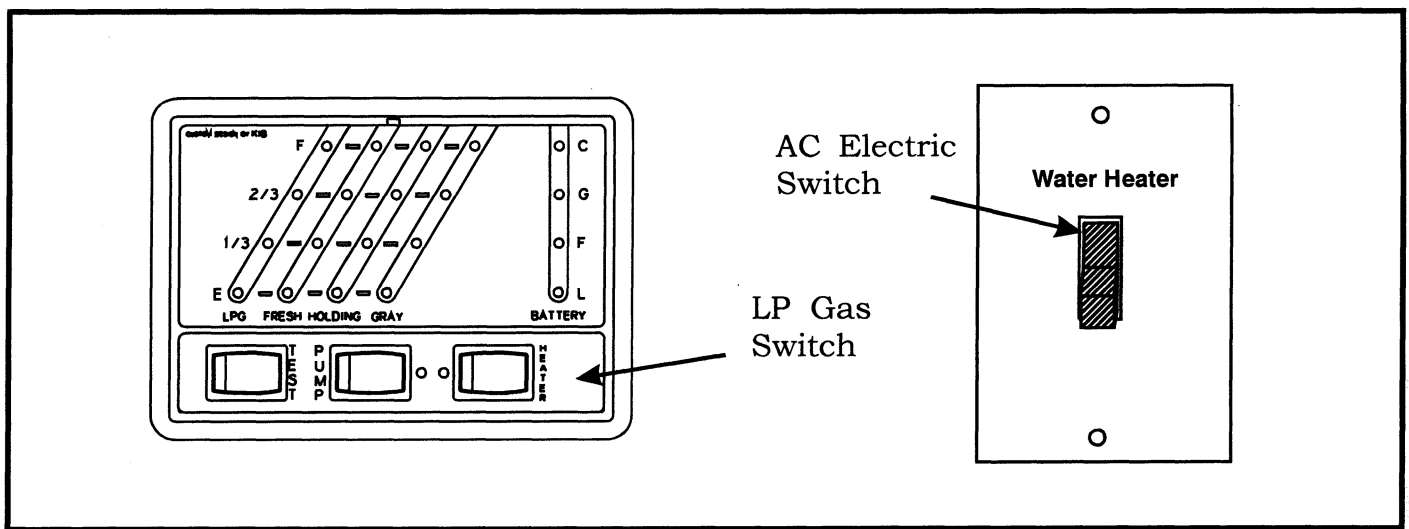
Disinfecting water system with chlorine bleach (superchlorination) protects you and your family from bacteriological or viral contamination from any common water source. You should disinfect water system if your motor home is new or hasn't been used in a long time. Use following procedure to disinfect water system.

Water Systems

- If applicable replace water filter element with diverter cap (see “Water Filter-Optional”).
- Prepare a chlorine solution using 1 gallon water and 1/4 cup of chlorine bleach (sodium hypo chlorite solution). Pour chlorine solution into empty fresh water tank using 1 gallon of solution for every 15 gallons of tank capacity.
Example: Add 2-2/3 gallons solution to a 40 gallon tank. Add 4-2/3 gallons solution to a 70 gallon tank. This mixture puts a 50 ppm (parts per million) residual chlorine concentration in motor home’s water system. This concentration will act as a quick-kill dosage for harmful bacteria, viruses and slime-forming organisms. Concentrations higher than 50 ppm may damage water lines and/or tanks.
- Fill tank with fresh water. Open each faucet in turn and run water until you smell a distinct chlorine odor. Do not forget hot water, tub and shower faucets.
- Allow system to stand for 4 hours.
- Drain system and flush with fresh water. Drain is located in outside water control compartment. If applicable install new water filter. Flush with fresh water repeatedly, if necessary, until no chlorine taste or smell is left in water system.

Water Heater

Your motor home can be equipped with a six gallon (standard) or ten gallon (optional) water heater. Water heater operates on either LP gas or AC current and is controlled by switch on control panel (LP gas only) or wall switch (AC current only). Before operating water heater be sure fresh water tank and water heater are filled with water. Purge any air from water heater by opening all faucets until water flows steadily from each.



**△ CAUTION △**

Do not operate water heater unless water covers heating element. Failure to do so may damage water heater and void warranty.

LP Gas Operation

To light water heater turn on LP gas supply and push control switch to ON. If no flame is established within a 10 to 15 second period system will go into lock-out. This means that water heater is not igniting. To reset system push switch to OFF and back to ON position. If water heater fails to ignite after three tries, contact your authorized dealer for service. Lock-out can occur when LP gas tank has been refilled. If water heater goes into lock-out frequently during regular use contact your authorized dealer for service. To turn off water heater push control switch to OFF.

AC Electric Current Operation

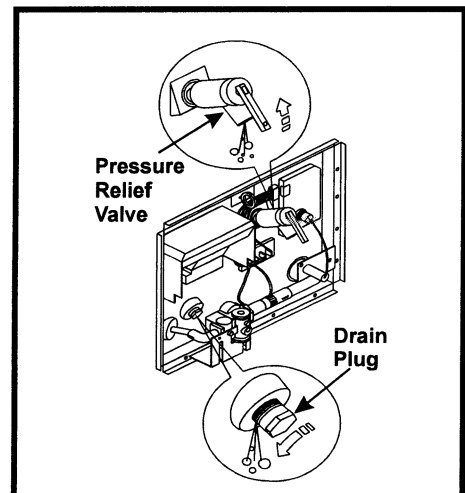
Shut off LP gas switch on control panel. Shoreline must be plugged in. Move wall switch to ON position so that switch light is lit. To turn off water heater move wall switch to OFF position.

Draining and Storage

If motor home is to be stored for a long period of time or during winter months water heater must be drained to prevent damage from freezing. Refer to Chapter 7 "Winterizing" for instructions. Be sure to refill water heater with water before resuming operation.

Temperature/Pressure Relief Valve

Water heater is equipped with a temperature and pressure relief valve which is designed to open if temperature of water within heater reaches 210°F (98.8°C), or if water heater reaches 150 pounds. Motor home water systems are closed systems and during heating cycle pressure build-up in system may reach 150 pounds. If this pressure is reached pressure relief valve will open and water will drip from valve. This dripping will continue until pressure is reduced below 150 pounds and valve closes.



Water Systems

Burner Compartment

Periodically check service compartment and screen in door on outside of motor home (refer to Chapter 8 "Diagrams" for location) to see that no foreign material has accumulated to prevent flow of combustion and ventilating air.

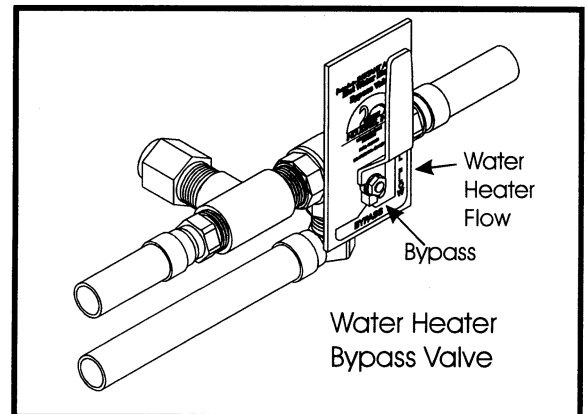
△ WARNING △

Do not store any combustible materials or liquids near or adjacent to this heater. Do not plug pressure temperature relief valve under any circumstances. A severe explosion or fire could result causing bodily injury or death.

Water Heater Bypass System

Water heater bypass is a valve located on back of water heater. By turning handle on valve to BYPASS position you can divert water away from water heater. Do this when you winterize unit. Bypassing water heater keeps antifreeze out of water heater.

For water heater operation turn valve so that handle points to NORMAL FLOW.

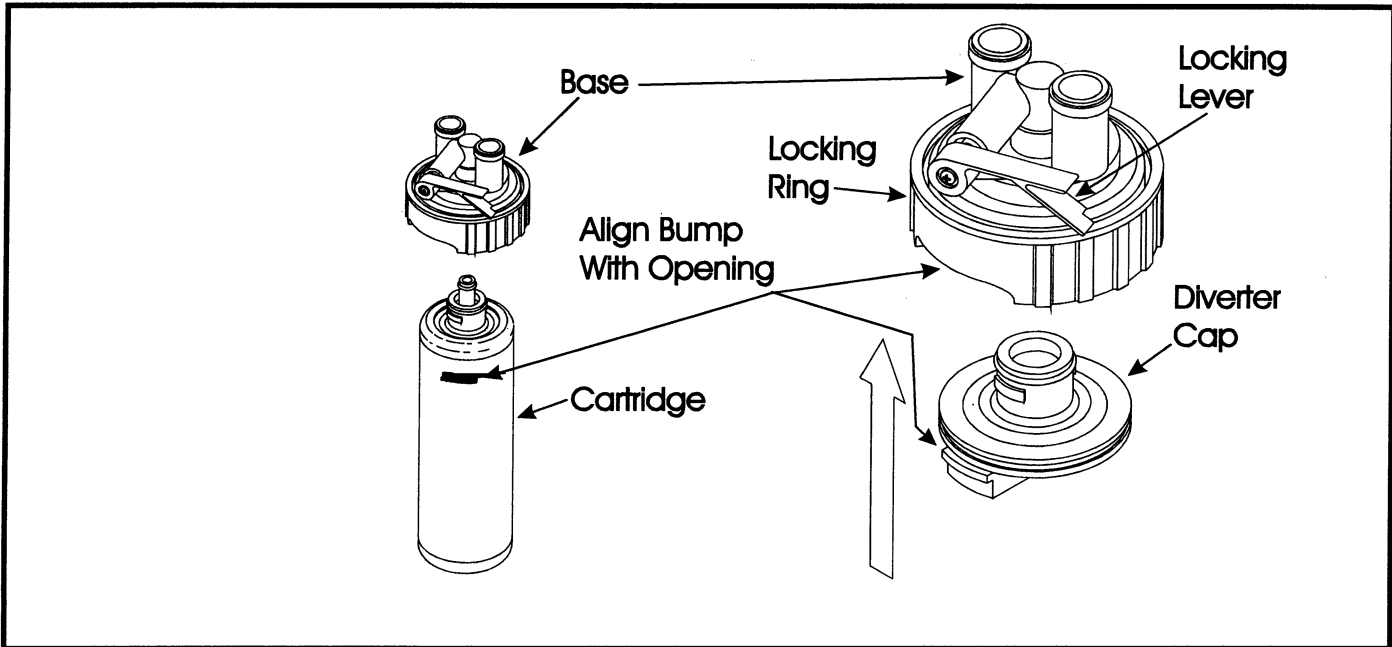


Water Filter

Water filter will remove dirt and colloidal matter, and eliminate most chlorine and phenol from water for drinking and cooking. Water filter in your motor home is not guaranteed to remove tastes and odors of iron and sulfur. To remove these tastes you will need to chlorinate water. Replacement filters are available that will filter iron and sulfur. Ask your dealer or motor home store about acquiring an iron/sulfur filter. If you are traveling in an area where water has a high iron content add 1 tablespoon of chlorine bleach for every 10 gallons of water in your tank. This will precipitate iron so that filter can remove it along with chlorine. If you are at a site where your motor home is hooked up to city water you will not be able to chlorinate system because water goes straight to faucets rather than through fresh water tank. Filter should be changed every 6-12 months depending on amount of water that is used in your motor home. If you notice that water is flowing much slower from faucets then filter will need to be changed. Filter used in your motor home is Everpure AC Quick Change Cartridge #9592-01. These cartridges can be bought from any motor home supply store.

Change Water Filter or Diverter Cap

You need to replace filter with diverter cap before you disinfect water system with a chlorine solution. To change filter or replace filter with diverter cap use the following procedure.



• **To Remove**

- Turn off water supply and water pump then open faucet to bleed off pressure.
- Lift locking lever up to a vertical position.
- Turn locking ring all the way left.
- Turn cartridge or diverter cap all the way left and pull down to remove.

• **To Install**

- Check that locking ring is all the way left and down. Align bump on cartridge or diverter cap with opening in locking ring. Push new cartridge or diverter cap up into base and turn right until it stops.
- Turn locking ring right until it stops and lower locking lever so that it locks ring.
- Turn on water pump or city water.

Trouble Shooting Fresh Water System

Water system problems and leaks usually fall into two categories: System problems and problems caused by improper use or lack of attention. These problems usually stem from improper winterization, poor maintenance, road vibration and campsite water pressure variations. Check all plumbing connections for leaks at least once a year. If water pump runs



Water Systems

when a faucet is not open check for a water leak; be sure tank drain valves are closed. If system continues to leak take your motor home to an authorized dealer for service.

Waste Water Systems

Waste drainage system was designed to provide adequate and safe storage and/or discharge of waste materials. All materials used in fabrication and installation of system is tested by a nationally recognized testing laboratory. Entire fabricated waste system is factory tested in accordance with American National Standards Code A119.2. Drainage system uses ABS plastic piping and fittings connected to sinks, shower, toilet and holding tanks and provides for their drainage to an outside termination. Motor home should be reasonably level for best operation of system. There are two separate systems, one for waste water (gray water) and one for sewage waste (black water). Each one has its own control valve and both empty through the sewer drain hose. When traveling, we recommend holding tanks be empty or less than half full.

Drain Traps

Sinks and shower drains have a water trap to prevent holding tank odor from entering motor home. These traps must have water in them to trap odors. During travel water can spill out of sinks and shower drain traps. Also, during storage water can evaporate and allow odor into motor home. If odor is detected run water into sinks and shower to fill drain traps.

Toilet Operating Instructions

Toilet operates from either fresh water tank or city water supply. Water pump must be turned on or city water connected. Toilet flushes directly into black water holding tank. Toilet uses high velocity water injection to produce a swirl effect in bowl.

- To flush toilet push lever down all the way, hold for 4-8 seconds and release lever.
- Push thumb lever on hand spray water saver to direct spray toward desired area of bowl while flushing.
- If additional water is needed in bowl raise flush lever to add water.

Water is retained in bowl using a sailing blade attached to foot pedal. If sealing blade does not move freely after extended use apply a light film of silicone spray on blade. If toilet water is running blade could be partially open or sealing groove of blade could be clogged. Clean seal groove taking care not to damage rubber seal.

To clean toilet use any good quality non-abrasive cleaner. Avoid highly concentrated or acidic household cleaners which might damage rubber seals.

Waste Holding Tank - Gray Water

Waste water tank is located under floor. Waste tank stores sinks and shower drain water. Chemical is not required in this holding tank.

△ CAUTION △

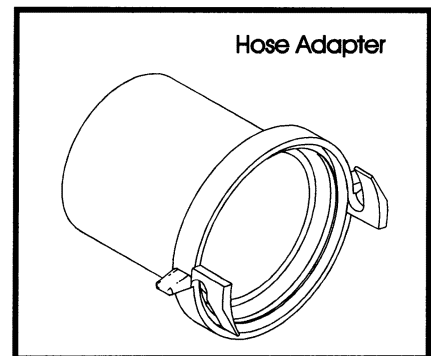
Do not use any products that contain petroleum or ammonia in place of an RV odor controlling chemical. Petroleum and ammonia will damage ABS plastic holding tanks and seals.

Sewage Holding Tank - Black Water

Sewage holding tank is located directly beneath toilet. Before using toilet you need to treat holding tank with water that is mixed with an odor controlling chemical. Chemical is readily available at any RV supply store. Be careful not to spill chemical on your hands, clothing, or carpet; chemical can cause a permanent stain. To treat tank flush toilet to allow chemical to mix with water. Continue to flush toilet until there is at least 1 inch of water/chemical solution in tank directly under toilet.

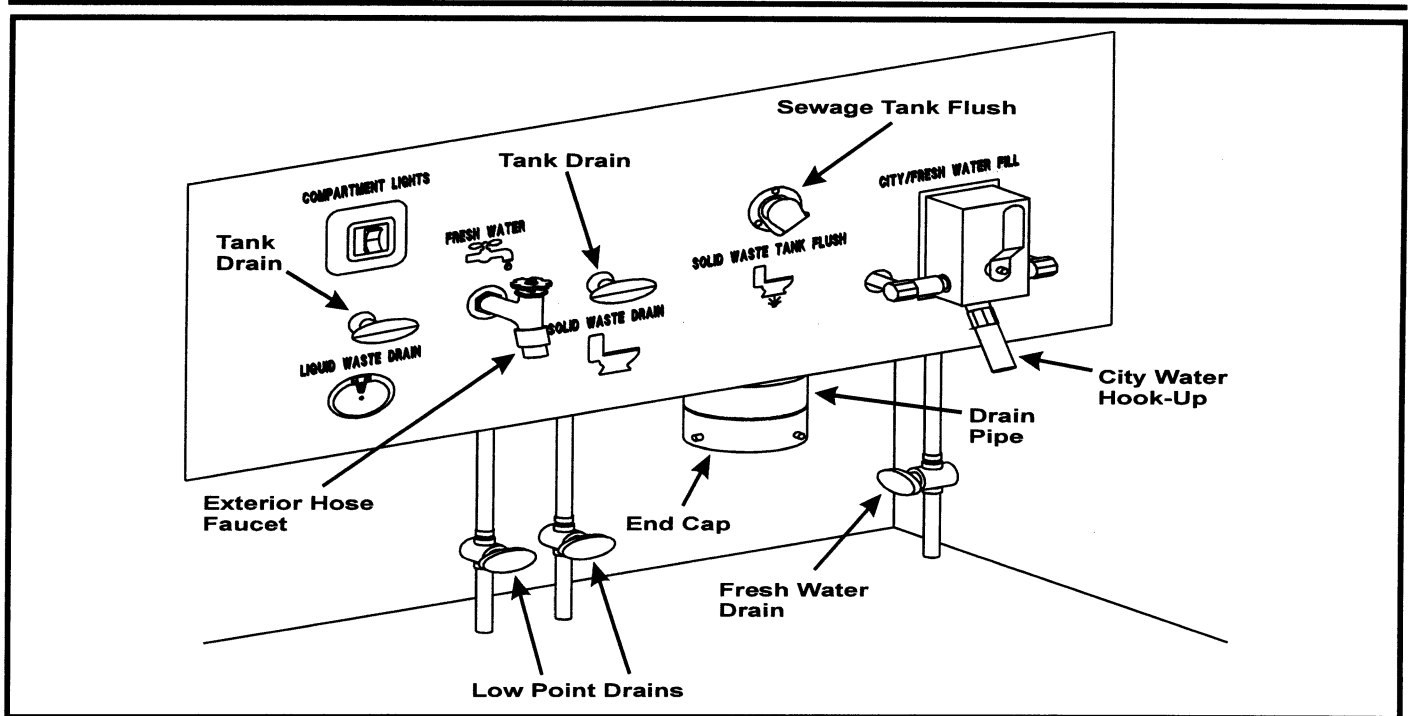
To Drain Waste and Sewage Tanks

To empty tanks connect adapter to drain hose. You will find adapter stored in a drawer inside motor home. Once you have placed adapter on drain hose it can remain there for life of hose. T-handle drain valves are located on water control panel in outside service compartment on roadside of motor home.



To drain tanks turn drain end cap counterclockwise and remove it from drain pipe. Unscrew bottom access hole plug from service compartment, feed adapter end of hose up through hole and install hose adapter on drain pipe. Attach other end of drain hose to sewer connection at dump station. Drain sewage tank first by pulling T-handle out (SOLID WASTE DRAIN) on water control panel. If so equipped flush holding tank with optional flush system (see "Sewage Holding Tank Flush System") After you have drained sewage tank drain waste water tank by pulling T-handle out (LIQUID WASTE DRAIN) on water control panel. When tanks are empty, you need to flush them with a fresh water rinse before you close valves. Waste water tank is flushed by pouring two gallons of water down a sink drain. Run toilet water to flush sewage tank. Always push both T-handles in and install end cap (required in some states) when in transit to prevent leakage.

Water Systems



Sewage Holding Tank Flush System

Flush sewage holding tank after draining tank and before draining waste water tank (see "To Drain Waste and Sewage Tanks"). Flush system hook up is located on water connection panel in outside service compartment on roadside of motor home. Connect water supply hose to SEWAGE TANK FLUSH connection on water connection panel. Turn water on and flush system for approximately two minutes or until water runs clear from drain hose. Turn water off and disconnect hose when finished flushing system.

Proper Waste Disposal

Most state and parks have strict regulations about discharging wastes except into authorized disposal systems. Dumping raw sewage from toilet holding tanks except at authorized dumping stations is universally prohibited. Illegal dumping along roadside by a minority of recreational vehicle users has resulted in tough laws, and has unfairly labeled all camping vehicle trailers as unwelcome in some areas. Most states, national and private parks have either a central dump facility or campsite hook-up for sewage. You will find a list of dumping stations from coast to coast in Woodall's Campground Directory, Trailer Life's RV Campgrounds and Services Directory, Rand McNally's Campground and Trailer Park Guide, Good Sam Park Director (Good Sam Club), and other publications. Some major oil companies offer dump facilities at selected stations. Plan ahead, and you will find few inconveniences in proper and legal disposal of holding tank wastes.

**When Connected to Sewer Hook-Up**

Keep holding tank (black water) valve closed at all times, except when dumping. Waste holding tank (gray water) can remain open to drain when parked; connect drain hose to sewer hook-up. Before emptying, be sure there is enough liquid in tanks to provide a smooth flow through valve and drain hose. Sufficient liquid in tanks cause a swirling action that should take with it accumulated solid wastes. Empty tanks when they are 1/2 to totally full.

What Not to Put in Holding Tanks

- Do not flush facial tissues. They are treated chemically to give them wet strength and they will not dissolve like toilet paper. Special holding tank tissues are available at most RV supply stores. Also, white toilet paper dissolves faster than colored papers.
- Do not use strong detergents or full strength bleach to deodorize and disinfect. Use odor control chemicals made especially for holding tanks.
- Do not put automotive antifreeze, ammonia, alcohol or acetone in holding tanks. Some chemicals will dissolve plastic.
- Do not put large table scraps in tanks. They could get stuck in or damage valve seals.

Cold Weather Use

Your motor home was not designed for extended use in below freezing (32°F - 0°C) weather. However, you may not experience any problems as long as temperature doesn't fall too low. Interior water lines, fixtures, water storage tank and pump are normally protected from moderate freezing temperatures as long as furnace operates. Exposed drains may freeze quickly. If you are in doubt about what temperatures your motor home will tolerate then winterize with a potable antifreeze.

CHAPTER 5

L.P. GAS SYSTEMS





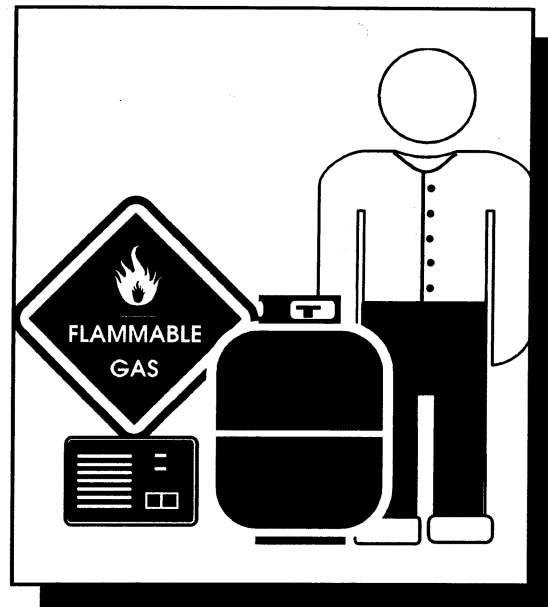


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LP Gas Systems

General Information

Components for motor home LP gas systems are approved for use in camping vehicles by a nationally recognized testing laboratory. When properly handled LP gas is a clean-burning dependable fuel for heat producing components. LP gas tank mounted in your motor home contains liquid petroleum gas under high pressure. As fuel is used liquid gas vaporizes and passes through the tank valve to a regulator that automatically reduces pressure. Low-pressure gas is then distributed to components through a pipe manifold system. Component lighting problems are commonly caused by an improperly adjusted gas regulator. Never attempt to reset regulator yourself. Have your dealer or an authorized service person make adjustments. In high altitudes or extreme cold weather (10° F or lower) you may experience a shortage



of LP gas. You can adjust to this by not running more than one component at a time, such as turning off furnace while using the range. If you are going to be in higher altitudes or cold climates for a long period of time an authorized service person can adjust your LP regulator for these conditions.

We recommend that you have the LP gas system checked by an authorized dealer at least once a year, and thereafter every extended trip. Although manufacturer and dealer both test carefully for leakage, travel vibrations could loosen fittings. Leaks can be easily found by applying leak detector solution at connections. If leak detector solution is not available a soapy water solution made with dish soap can be used. Tightening fittings usually stops any leaks. If not, shut off main gas valve at tank and see your authorized dealer for repairs immediately. Hand tighten tank valves only, do not use a wrench or pliers as over tightening may damage valve seats and cause them to leak. If you have a leak identifying odor, smells like rotten eggs (sulfur), never light a match or have an open flame where you suspect leaking gas.

LP Gas Consumption

Each gallon of LP gas produces approximately 92,000 BTU's of heat. One 27 gallon tank produces 2 million BTU's. Total consumption depends on the rate of usage by each appliance and operating time. Oven and heating systems use the most gas. With sub-freezing temperatures and high winds consumption by furnace can be very high. Check tank level often in cold weather.

**△ WARNING △**

Fire or explosion from ignited gas or gas fumes can seriously injure you or cause death.

Shut off all LP gas tank valves when motor home is not in use. Since introduction of DSI boards in appliances it is very important to shut off all LP gas valves, pilot lights and appliances and disable igniters (see operating instructions in Chapter 3) during refueling motor home and filling LP gas tanks to prevent a fire or explosion.

If you smell gas (a rotten egg or sulfur smell) at any time, perform the following steps immediately.

- Turn off main gas supply.
- Do not touch any electric switch.
- Extinguish any open flames.
- Open windows and doors.
- Do not try to light any appliance.
- Exit motor home and contact service center or gas supplier.

Do not transport or store LP gas tanks, gasoline, or other flammable liquids inside motor home. If this warning is ignored, a fire or explosion could result.

If you are storing LP gas tanks that are not connected to a LP gas system install an approved plug in tank outlet holes to prevent leaks. Do not store empty LP gas tanks. Keep open flame and spark producing materials away from LP gas area.

Gas Distribution Lines

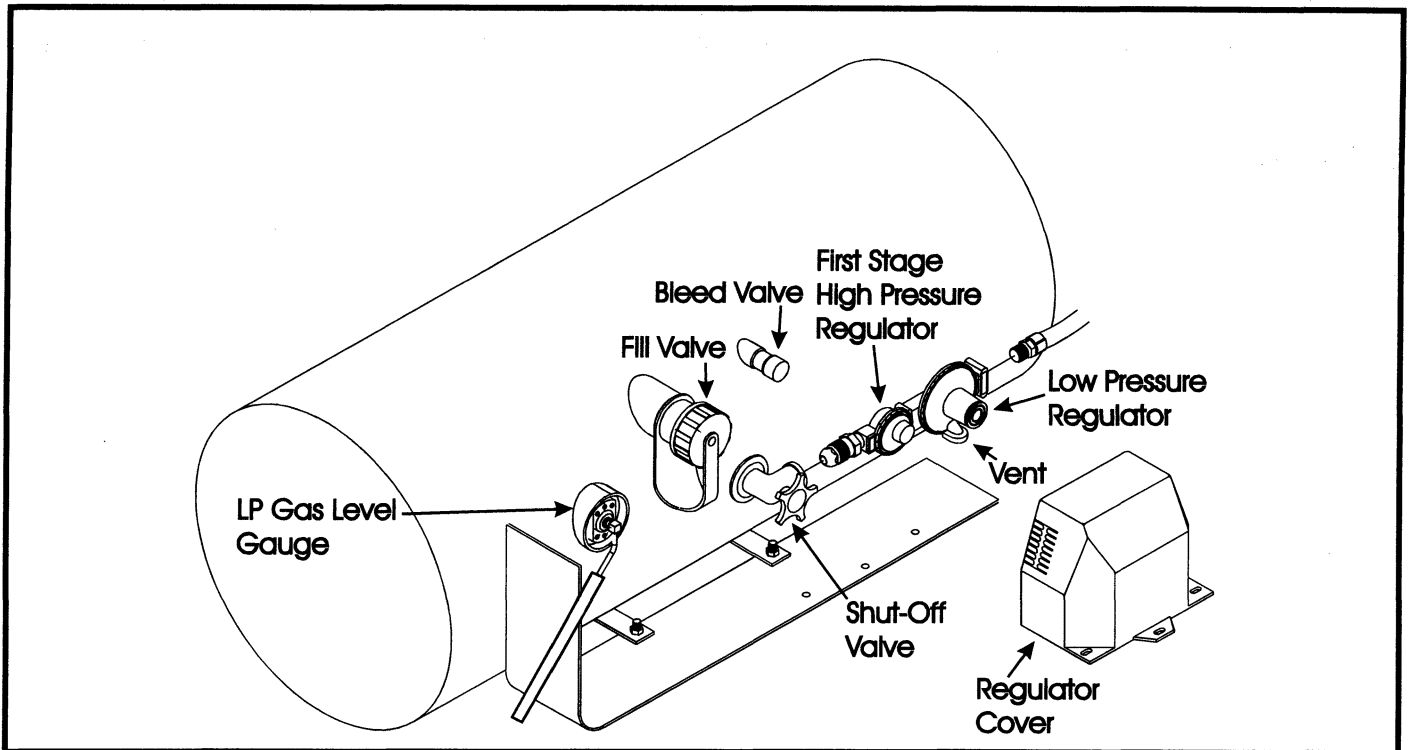
The primary manifold is a black steel pipe running throughout motor home. All secondary lines leading to gas appliances are made of copper tubing with flared fittings. If any of these lines rupture do not attempt to splice them. Always run a new line. We recommend gas distribution work be performed by an authorized dealer or an authorized service technician. When removing or servicing any gas appliance close main valve at LP gas tank. This will prevent dangerous gas leakage that could result in an explosion and possible serious injury. If you suspect a leak get system inspected and repaired by a qualified service technician as soon as possible.

Filling LP Gas Tank

Woodall's Campground and Trailer Guide and other publications list refueling stations. Many travel parks sell LP gas. Shut off pilot lights, appliances and igniters (see operating instructions in Chapter 3) before filling LP gas tank to prevent a fire or explosion. Have a trained service person fill LP gas tank. Caution service technician that if your tank is new and being filled for the first time to purge any air from tank before filling. When tank is filled to the proper level there is space available for conversion of liquid into gas. If a tank is over filled it may

LP Gas Systems

vent pressure. When this happens you may detect a strong rotten egg odor near tank and/or hear a hissing noise. Tank has a LP gas level gauge to aid in filling tank.



LP Gas Regulator

Regulator is the heart of an LP gas system. LP gas in tank is under high pressure. Regulator reduces pressure of gas so that it is safe to use with various appliances. Regulator is equipped with a vent so that it can breathe. This means that if pressure in LP tank is too high regulator will allow gas to escape through the vent until pressure returns to a normal range. It is important to keep vent clean and clear of obstructions or corrosion. If vent becomes clogged pressure from LP tank could cause a failure of components. If you notice any corrosion contact a qualified LP gas service technician. Regulator is mounted so that vent faces downward. If vent becomes clogged you can clean it with a toothbrush.

△ WARNING △

Do not attempt to adjust regulator, it is preset at factory. If adjustments need to be made contact a qualified LP gas service technician. Adjustments can only be made by using special equipment. Failure to follow these instructions may result in a fire or explosion and cause severe personal injury or death.



Operating Instructions

Open shut-off valve for use. Tank has a LP gas level gauge to monitor gas usage. Turn off valve when motor home is between trips and when in storage. Hand tighten valve, do not use a wrench or pliers to close valve. Valve is designed to be closed by hand. Over tightening may permanently damage valve seat.

LP Gas Detector

Liquid Propane (LP) Gas is heavier than air and will settle to the lowest point which is generally the floor of your motor home. Detector is also sensitive to other fumes such as hair spray, of which most contain butane as the propellant. Butane, like propane, is heavier than air and will settle to the floor level where it will be detected. When this occurs, press reset button to stop alert sound for 60 seconds.

Other combustibles which will be detected include alcohol, liquor, deodorants, colognes, perfumes, wine, adhesives, lacquer, kerosene, gasoline, glues, most of all cleaning agents and propellants of aerosol cans. Most are lighter than air in their vapor state and will only be detected when motor home is closed up.

LP Gas Detector Operation

Detector only indicates presence of Propane Gas at sensor. Propane Gas may be present in other areas. This device is intended for detection of Propane Gas leaks only. LP gas detector is operating at all times when it is connected to its power source. This detector is a safety device, and must not be connected in such a way as to allow it to be switched off or become disconnected from its power supply. When motor home is equipped with a master cutoff switch, detector will be turned off when this switch is turned OFF. When detector is powered or turned ON green indicator light will be lit. After 60 seconds detector will begin monitoring immediate environment for combustible vapors. Propane you use to cook, refrigerate, and heat with is combustible. Should a leak occur, when gas reaches detector in sufficient concentration, your detector will produce a pulsating alarm sound and RED indicator alarm light will flash. This alarm (4 rapid beeps per second) will continue to sound until gas has dissipated or until reset button is pressed. Reset button only stops alarm from sounding for 60 seconds.

△ WARNING △

When alarm sounds open all doors and windows to air out motor home and turn gas off at LP tank. Do not reenter motor home until alarm stops sounding. If alarm sounds a second time after gas is turned back on, leave gas off and contact a qualified service technician to find source and repair gas leak.

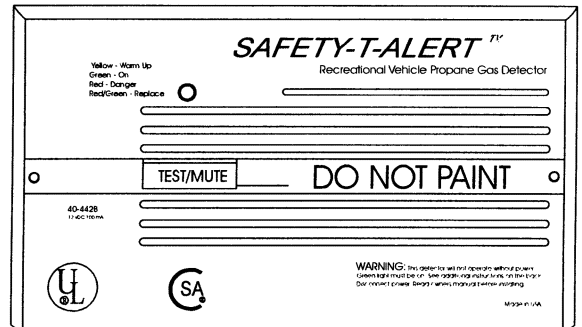


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LP Gas Systems

Gas detector is powered by your motor home battery and/or your converter. It draws less current than drawn by one instrument panel lamp. Your detector will operate to detect gas until your battery is drained down to 9 volts. (Your low battery condition is 10.4 volts). If power source (battery and/or converter) is disconnected, or if power is otherwise interrupted, detector will not operate.

Gas detector has a self check circuit which runs at all times while detector is powered. In the event that circuitry fails, a fault alarm will sound and fault indicator light will flash. Fault alarm is a short beep tone once every 45 seconds and is distinctively different from alarm sound.



Testing LP Gas Detector

Detector must be operating for at least 60 seconds before it can be tested. To test detector push test button and alarm will sound. When LP gas is detected, alert will continue to sound until:

- Gas mixture at detector returns to a safe level.
- Reset button is pressed. When reset button is pressed, detector cannot be tested again for at least 60 seconds.

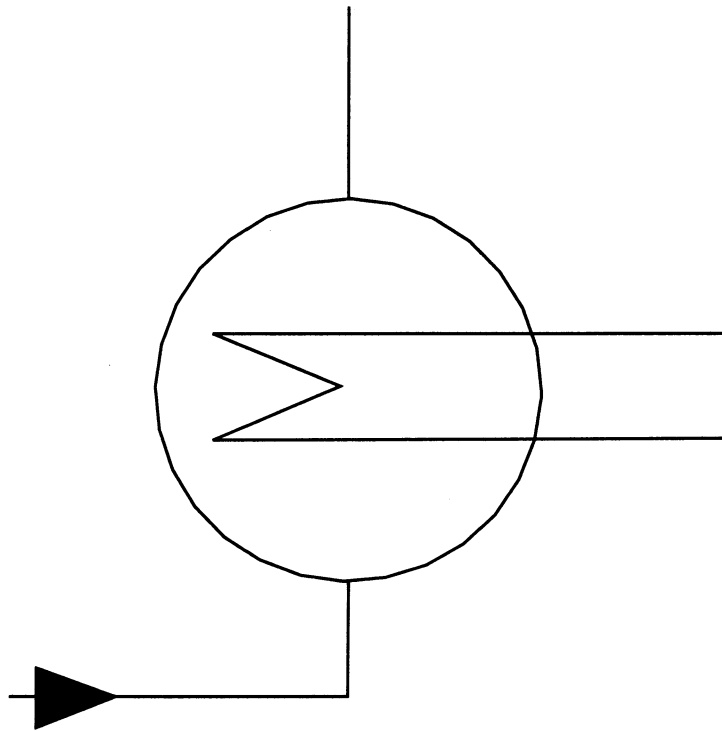


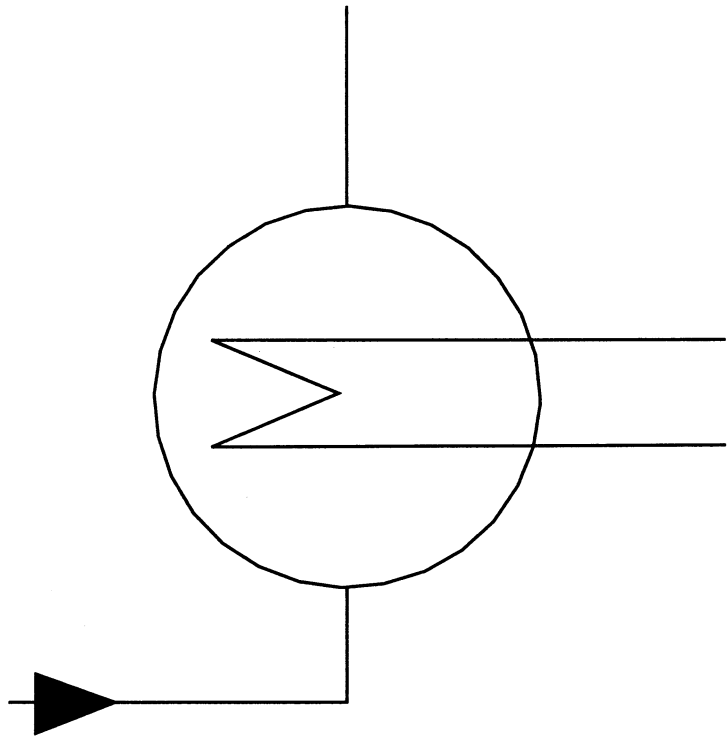
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NOTE

CHAPTER 6

ELECTRICAL SYSTEMS





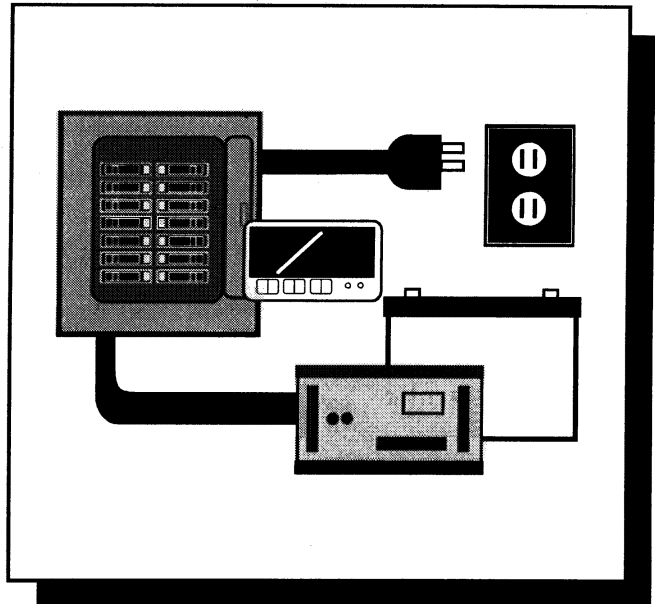
Electrical Systems

General Information

Motor home electrical system consists of 120 Volt AC and 12 Volt DC systems. For additional component information other than what is in this manual refer to each manufacturer's brochure in your Owner's information packet.

120 Volt AC system includes a UL listed power cord, UL listed distribution panel with transfer switch and generator package.

12 Volt DC system includes two 6 volt batteries connected in series, 55 AMP power converter, two 12 Volt DC fuse panels, two battery disconnects and a battery isolator system.



Fuses are installed to protect circuits from overloading. Do not change circuitry or add appliances yourself. See an authorized dealer. Always use motor home's built-in power supply cord (shore line) to connect with 120V AC source.

△ WARNING △

Disconnect 120V AC electric shore cord and negative terminal from 12V DC battery before working on electrical system.

Remove rings, metal watch bands, and other metal jewelry before working around batteries and connectors.

Use caution when using metal tools, if tool contacts a battery terminal or metal connected to it, short circuit could occur which could cause personal injury, explosion or fire.

Before hooking up to park shore power, verify that proper voltage and ground protection is present. After hooking up to park shore power, verify that proper voltage and ground protection is present in motor home. Inexpensive testers are available for this purpose.



Electrical Switch Chart - Some Switches Not On All Units

SWITCH	LOCATION - Varies Slightly On Some Floor Plans	FUNCTION/USAGE
Air Conditioner Thermostat	Dinette Wall	Regulates Cool Air Temperature
Battery Disconnects	Two Curbside Compartments	Turns ON/OFF All House and Chassis Electrical Circuits
Battery Level - House	Control Panel In Bathroom	Measures Battery Voltage
Electric Generator	Dash, Generator Outside Roadside Compartment	Starts/Stops Electrical Generator
Fan - Ceiling Exhaust - Bathroom	Fan Base	Turns Fan ON/OFF
Fan - Ceiling Exhaust - Kitchen	Fan Base	Turns Fan ON/OFF
Furnace Thermostat	Dinette Wall - LP Valve Must Be Open	Regulates Heat Air Temperature
Light - Toilet Room	Room Wall, Light Base	Turns Light ON/OFF
Light - Bath Ceiling	Bathroom Wall, Light Base, Vanity Base	Turns Light ON/OFF
Light - Bedroom Ceiling	Bedroom Wall, Light Base	Turns Light ON/OFF
Lights - Bedroom Wall	On Light Base	Turns Lights ON/OFF
Light - Dinette - Ceiling	Next To Entrance Door	Turns Light ON/OFF
Lights - Dinette - Side	Light Bases	Turns Lights ON/OFF
Light - Driver's Seat	Light Base	Turns Light ON/OFF
Light - Engine Compartment	Light Base	Turns Light ON/OFF
Lights - Kitchen and Living Room - Ceiling	Next to Entrance Door, Light Bases	Turns Lights ON/OFF
Lights - Kitchen	Light Base	Turns Lights ON/OFF
Lights - Living Room - Side	Light Bases	Turns Lights ON/OFF
Lights - Outside Compartments	Next To Entrance Door, Outside Water Compartment	Turns Lights ON/OFF
Light - Passenger Seat - Ceiling	Light Base	Turns Light ON/OFF
Light - Porch	Next To Entrance Door	Turns Light ON/OFF
Light - Water Control Panel	Automatic When Door Opens	Turns Lights ON/OFF



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Electrical Systems

SWITCH	LOCATION - Varies Slightly On Some Floor Plans	FUNCTION/USAGE
Slide Out Room	Wall	Moves Room OUT/IN
LP Tank Level	Control Panel In Bathroom	Measures Tank Level
Radio	Dash Panel, Bedroom	Turns Radio ON/OFF
Step - Entry	Next To Entrance Door	Turns Step ON/OFF
TV Power Booster	Front overhead Cabinet	Turns Amplifier ON/OFF
TV/VCR Control Box	Front Overhead Cabinet	Switches TV Options
Water Heater-Electric Operation	Bathroom Wall - Needs Shore Power	Turns Water Heater ON/OFF
Water Heater-LP Operation	Control Panel In Bathroom - LP Valve Must Be Open	Turns Water Heater ON/OFF
Water Pump	Control Panel In Bathroom	Turns Pump ON/OFF
Water Tanks Level	Control Panel In Bathroom	Measures Tanks Level

120V AC System

Power supply cord is located in roadside rear compartment and is permanently connected to motor home. When cord is plugged into AC power supply it supplies power to distribution panel (located in bedroom night stand) through the transfer switch. Generator also supplies AC power to distribution panel through the transfer switch.

30 AMP Distribution Panel

When 120V AC power supply cord (shore line) is used, only one (front or rear) air conditioner can be used at a time and is controlled with an air conditioner selector switch located next to 30 AMP distribution panel. Distribution panel supplies one air conditioner unit, microwave oven and three branch circuits. Refer to label on distribution panel for circuit assignments.

When generator 120V AC power is used a 30 AMP circuit breaker (located on generator) is used to supply power to 30 AMP distribution panel and a 20 AMP circuit breaker (located on generator) supplies power to second air conditioner allowing use of both front and rear air conditioners at the same time.



50 AMP Distribution Panel

When 120/240V AC supply cord (shore line) or 120V AC generator power is used, distribution panel supplies all circuits. Refer to label on distribution panel for circuit assignments.

Transfer Switch

Auto transfer switch automatically switches from shore power to generator power when generator is started. There is a 45 second delay after generator is started before motor home electrical load is connected. This delay allows generator to reach normal operating speed with no load connected.

Ground Fault Circuit Interrupter (GFCI) Outlet

For your protection certain circuits in motor home are protected by a ground fault circuit interrupter (GFCI). GFCI receptacle is located in bathroom. GFCI protected receptacles wired down stream of bathroom GFCI include kitchen receptacles, outside receptacle and all non-dedicated receptacles located within 6 ft. of any lavatory or sink.

Testing Instructions

Test GFCI at least once a month. To test GFCI be sure 120 volt electrical system is on. Before you start test be sure that reset button is pushed all the way in. Push test button in, this should cause reset button to pop out which means that protected circuit has been disconnected. Push reset button back in until you hear a click, this will reactivate protected circuit. If GFCI is working properly reset button should stay pushed in.

△ CAUTION △

If GFCI breaker continues to trip there is a loss in protection and a potentially dangerous condition. Have system repaired by a qualified electrician.

120V AC Generator

Generator is located in a service compartment on roadside of motor home. Generator may stop running before chassis fuel tank is completely empty. This is a safety feature to prevent motor home from completely running out of fuel.

A preheater control lever on generator needs to be set for changing temperature to prevent engine from erratic operation and over speeding. At temperatures below 40° F (4° C) move lever



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Electrical Systems

to WINTER position; between 40° F (4° C) and 70° F (21° C) lever can be in SUMMER or WINTER position; above 70° F (21° C) move lever to SUMMER position.

△ WARNING △

Do not block service compartment ventilating air inlets and outlets. Engine requires a constant supply of cooling air. Do not operate generator when motor home is parked in high grass or brush. Engine exhaust could ignite grass or brush and resulting fire could cause property damage, and/or personal injury or death.

When motor home is parked position dash air conditioner control in OFF position to prevent outside air from entering motor home.

Engine exhaust gases contain carbon monoxide which is an odorless and colorless gas. Carbon monoxide gas is poisonous and can cause unconsciousness and/or death. Inspect exhaust system thoroughly before starting engine. Do not block exhaust pipe or situate motor home in a place where exhaust gases have any possibility of accumulating either outside, underneath, or inside motor home or any nearby vehicles. Operate generator only when safe dispersion of exhaust gases can be assured and monitor outside conditions to be sure that exhaust gases continue to be dispersed safely.

When working in generator compartment, remove house battery ground cable and turn HOUSE BATTERY disconnect to OFF position to avoid personal injury.

Failure to turn off 120V AC appliances/equipment when starting and/or stopping generator may damage transfer switch and/or electrical appliances.

Starting Generator

Generator is controlled by either a remote switch on dash or switch located on generator. To start generator shut off all 120V AC appliances/equipment. Push start switch and hold until generator is running and release switch. Dash switch will be lit when generator is running. Normally generator will start running within 5 seconds; if it fails to start after cranking for 10 seconds release switch and wait 30 seconds before cranking again. If generator fails to start after 5 attempts allow starter motor to cool down for 5 minutes before cranking again.



Stopping Generator

Turn off all 120V AC appliances /equipment and run generator for at least 3 minutes before turning generator off. This lets lubricating oil carry heat away from combustion chamber and bearings. To stop generator, push switch to stop position for approximately one second then release. For in-depth information regarding low oil shutdown protection circuit breaker locations and maintenance procedures, refer to manufacturer's brochure in your Owner's information file.

12V DC System

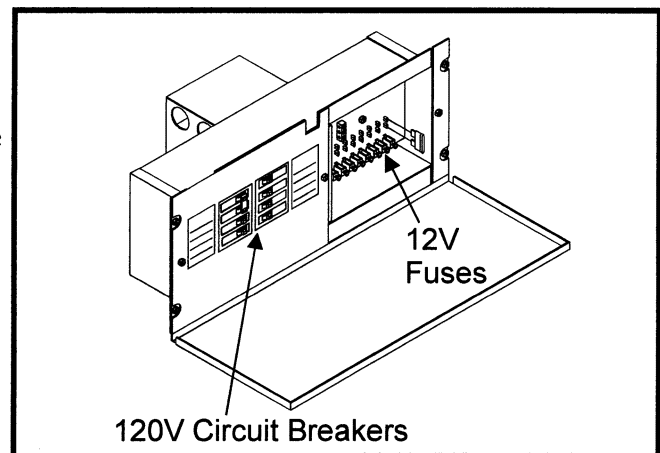
Two 6-volt batteries are located in first compartment behind curbside rear wheels. Positive battery lead is routed to an insulator post in generator compartment (generator starter motor/HWH pump), then to front 12V DC distribution panel on firewall.

Inside Motor Home Distribution Panel Circuits and Fuses

Fuse assignments are listed on a fuse label attached to inside cover of distribution panel. When replacing fuses, always replace with same size as listed for a particular location. Fuse sizes shown are maximum fuse sizes allowable, installing fuse sizes other than those listed can cause electrical wiring to become overloaded and create hazardous situations.

Fuse assignments are as follows:

1. Bath Lights/Vent - 15 amp Fuse
2. Dinette/Porch/Rt. Overhead - 15 amp Fuse
3. Bedroom /ODS Lights - 15 amp Fuse
4. Kitchen/Left Overhead, Stove Vent, Opt Vent - 15 amp Fuse
5. Ceiling Lights - 15 amp Fuse
6. Furnace - 15 amp Fuse
7. Monitor Panel - 15 amp Fuse
8. Slide-out - 15 amp Fuse
9. Radio - 5 amp Fuse



Circuit Breaker assignments are as follows:

Left Side:

- 50 AMP MAIN
- Front Air Conditioner
- Rear Air Conditioner

Right Side:

- Converter, Bedroom, TV, Dining Room
- Bathroom, Kitchen, Refrigerator, TV, VCR
- Water Heater
- Microwave

Electrical Systems

Outside Motor Home Distribution Panel

Distribution panel (12V DC) is located inside a roadside compartment. Fuse assignments are listed on a fuse label attached to inside cover of front distribution panel. When replacing fuses, always replace with same size as listed for a particular location. Fuse sizes shown are maximum fuse sizes allowable, installing fuse sizes other than those listed can cause electrical wiring to become overloaded and create hazardous situations.

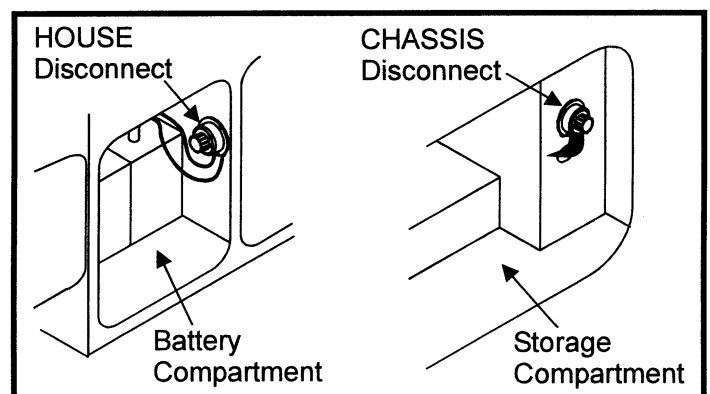
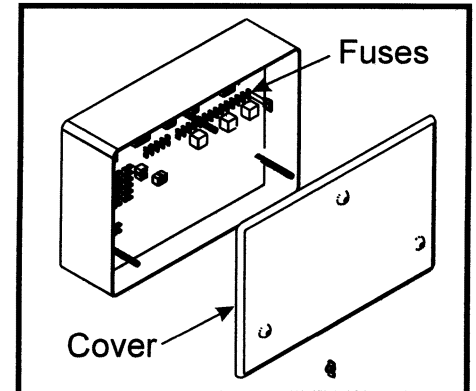
Fuse assignments are as follows:

- | | |
|--|---|
| 1. Slide-Out Room - 15 amp C.B. | 20. Rear Vision (Opt) - 5 amp Fuse |
| 2. LP Detector - 3 amp Fuse | 21. Leveling Jacks (Opt) - 5 amp Fuse |
| 3. Power Seat (Opt) - 15 amp C.B. | 22. Accessory Switch - 15 Amp Fuse |
| 4. Power Seat (Opt) - 15 amp C.B. | 25. Air Conditioner - 20 Amp Fuse |
| 5. Storage Lights - 15 amp Fuse | 26. Jack/Antenna Warning Lamp - 5amp Fuse |
| 6. Bedroom Slide-Out - 15 amp C.B. | 27. TV Cutout Relay - 7.5 amp Fuse |
| 7. Auxiliary Start/TV Amp - 7.5 amp Fuse | 28. Galley Slide-Out Room Ign. Relay - 7.5 amp Fuse |
| 8. Cigarette Lighter - 15 amp Fuse | 29. Mirror Heaters - 15 amp Fuse |
| 9. Map Lights - 7.5 amp Fuse | 30. Mirror Motors - 1 amp Fuse |
| 10. C.B. Radio - 2 amp Fuse | 33. Step/Isolator Relay - 7.5 amp Fuse |
| 11. Service Light - 7.5 amp Fuse | 34. Marker Lights - 7.5 amp Fuse |
| 12. 12V Receptacle - 15 amp Fuse | |
| 13. Step Switch - 7.5 amp Fuse | |
| 14. Step Motor - 25 amp Fuse | |

Note: #'s 15,16,17,18,19,23,24,31,32 not used.

Power Disconnects

Disconnects are mounted in outside roadside compartments; HOUSE BATTERY disconnect turns power ON or OFF from house batteries and CHASSIS BATTERY disconnect turns power ON or OFF from chassis battery. Both disconnects supply 12V DC power to fuses and circuit breakers inside distribution panel.



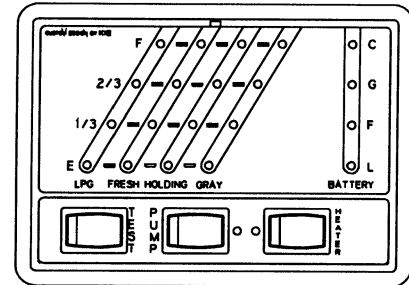
Batteries

House batteries power level can be checked by pushing test button on left side of control panel.

Batteries are located on curb side of motor home and are charged two ways:

1. When 120V AC shore line is plugged in, 55 amp converter supplies power to 12V DC circuits and charges house batteries.

2. Chassis charging system supplies power to house 12V DC circuits when engine is running. Chassis charging system will continue to supply power to house system unless excessive loading prevents chassis system from keeping up with demand. In this case chassis system takes priority and separates house system from its circuits.



Battery Inspection & Care

Check external condition of batteries periodically. Look for cracks in cover and case. Check vent plugs and replace them if they are cracked or broken. Keep batteries clean. Accumulations of acid film and dirt may permit current flow between terminals which could drain battery.

△ **WARNING** △

Do not allow battery electrolyte to come into contact with skin, eyes, fabric or painted surfaces. Electrolyte is sulfuric acid solution which could cause serious personal injury or property damage. Wear eye protection when working with batteries.

Do not store anything in battery compartment near batteries that might touch terminals. This could cause an electrical short circuit, drain battery's power or start a fire.

When not using your motor home for an extended period of time, remove batteries and store them in a warm dry place. Mark positive and negative cables for easy identification. Charge batteries periodically during storage. If you are putting your motor home into storage for a long time then it is recommended that you remove all batteries from clocks, radios, smoke alarms etc. that may be inside your motor home. This prevents unnecessary drain and corrosion of batteries. Motor home batteries are deep cycle marine batteries that consume water and they must be filled periodically. Use distilled water only.



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Electrical Systems

Chassis Fuses and Circuits

There are two fuse boxes in addition to front distribution box that supply your motor home chassis with 12V DC power. One fuse box is located under dash on curb side of motor home and the second fuse box is located outside motor home behind grille on chassis firewall. Fuse assignments are as follows:

Fuse Box Under Dash

Fuse assignments are as follows: Fuse #'s 1,3,10,11,12,15,16,17, are not used.

Fuse Location	Size	Circuit
2	8.25A	Interval Wiper/Washer Windshield Wiper Washer System
4	15A	Instrument Panel Warning Lights, Programmable Speedometer/Odometer Module, Warning Chime
5	20A	Instrument Panel Lamps, Prk/Marker Light Module (PSOM)
6	10A	Body Builders Accessory Feed (Accessory and Run)
7	20A	Overdrive Cancel Switch, Turn Signals
8	15A	Body Builders Accessory Feed (Run Only)
9	20A	Brake Pressure Switch, Hazard Lamp, Stop Lamps
13	5A	Instrument Panel Illumination
14	5A	Not Used (For Radio Feed - see Inside Fuse Panel)
18	15A	Not Used by Body Builder

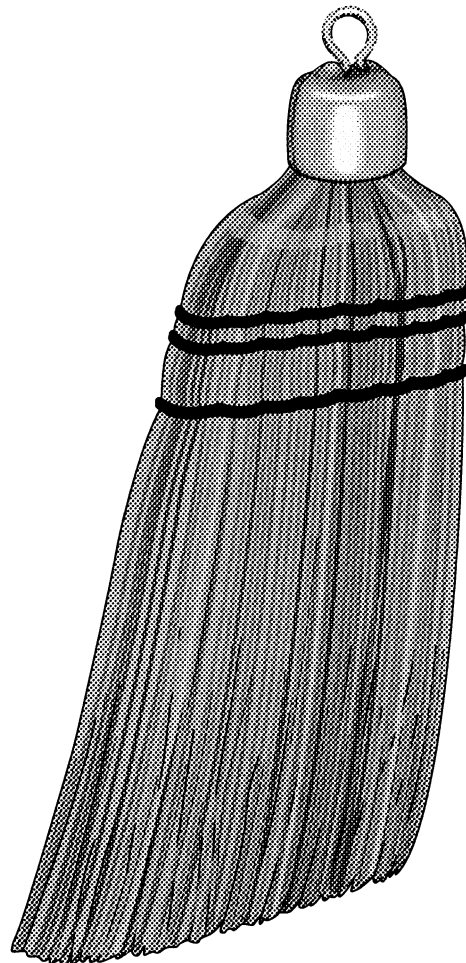
**Fuse Box Behind Grille on Firewall**

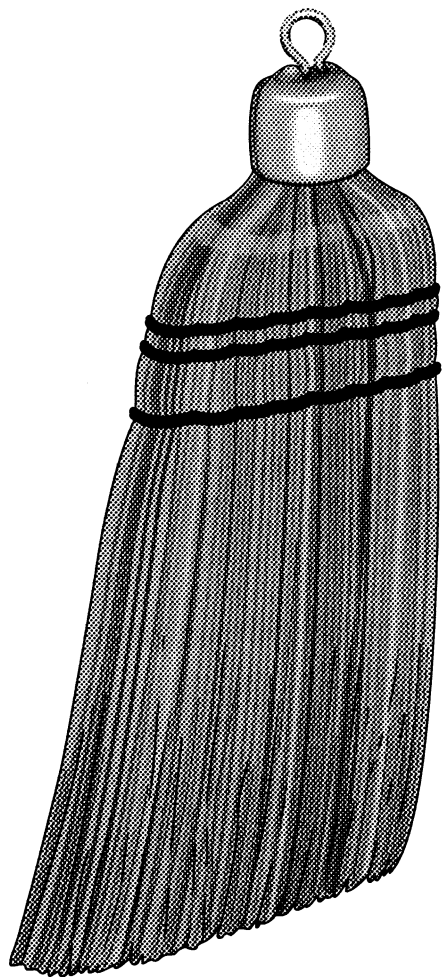
Fuses G,H,I,J,T,U are not used. Relay #5 is not used.

Fuse Location	Size	Circuit
A	15A	Not Used (For Cigar Lighter - see Front Distribution Panel)
B	20A	Flash to Pass, Daytime Running Lamps
C	20A	Horn Relay, Slip Ring Assembly
D	20A	Body Builder Battery Accessory Feed
E	15A	Heated Exhaust Gas Oxygen Sensor, Back-up Lamps, Blower Relay Coil
F	10A	Speed Control
K	20 MAXI	Prndl Sensor, Starter Motor Relay, T.F.I. Module
L	Diode	EEC Relay
M	30 MAXI	EEC Relay
N	60 MAXI	Ignition Switch
O	30 MAXI	Electric Brake
P	50 MAXI	Not Used (For Blower Motor Feed - see Front Distribution Panel)
Q	60 MAXI	Head lamps, Main Light Switch, PSOM
R	20 MAXI	Fuel Pump Relay
S	20 MAXI	Body Builder Battery Feed
V	20 MAXI	TFI Ignition Module, Ignition Coil, Distributor, Radio Capacitor, EEC Relay Coil
Relay #1		Electronic Engine Control (EEC)
Relay #2		Fuel Pump Relay
Relay #3		Horn Relay
Relay #4		Not Used

CHAPTER 7

UNIT CARE & MAINTENANCE

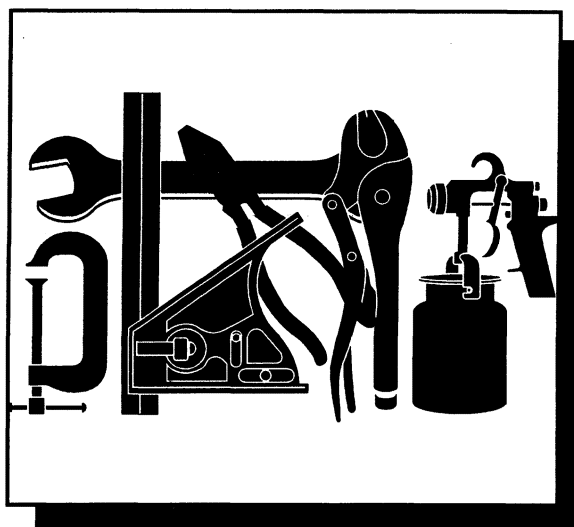




Unit Care & Maintenance

Exterior Care

Exterior of your camping motor home is made of pre-finished aluminum and fiberglass. Wash it frequently with a mild soap in lukewarm water. If you travel roads that have been salted for ice removal wash your motor home as soon as possible. Most common causes of corrosion are accumulation of road salt, dirt and moisture in hard to reach areas under your motor home. Undercarriage should be rinsed off periodically to prevent build-up of dirt or chemicals. To minimize chance of corrosion be thorough when you wash your motor home. Make sure you wash undercarriage and wheel wells as well as exterior of motor home. A good automotive cleaner/wash should be used to remove tree sap, road tars and insects that may damage surface. Do not use naphtha or turpentine. We recommend that you wash your motor home about every three weeks and wax it in the spring and fall.



NOTE: Aerosol cans of spray enamels are available from your dealer, for use on steel chassis parts. Do not use them on exterior aluminum or fiberglass.

Check seals around doors, windows and external seams at least twice a year. If a seal is cracked or dried out it should be replaced with new material to prevent leakage. Sealants can be purchased from your Holiday Rambler dealer. Check roof seals once a year to see if they are cracked or peeling, if so reseal seams. If you need to reseal roof use Dolphine 7547 Lo Thix UVR ElastiSeal in Off White. Be sure that you do not kneel on roof without a knee pad. Pressure from your knees will dent aluminum roof. Walking on roof will not dent it.

Interior Care

Fabrics have been manufactured with same quality you would expect to find in a furniture store. However, if abused fabric will be damaged. Special care is needed when your motor home is exposed to a very humid climate for an extended period of time. Cover upholstery and make sure window coverings are down to protect from any sun damage. This will protect fabric from any unnecessary exposure to moisture. Sofa, pillows, dinette cushions, living area chairs, driver/passenger seating, and window treatments have been treated with Scotch Guard to prevent overall water spots or soiling. Soiling may occur more frequently and items will probably need more attention than your furniture at home. Use following guidelines for cleaning your upholstery fabrics.

Continued⇒⇒⇒



- Water base cleaners are not recommended.
- If a spill does occur, blot up spot, do not rub it in.
- Some solvents are not recommended since they may have an adverse reaction on specific backings of your upholstery fabric.
- To prevent overall soiling frequent vacuuming or light brushing to remove dust and grime is recommended.
- Spot clean, using a mild water-free solvent or dry cleaning product.
- Clean only in a well ventilated area and avoid any product containing carbon tetrachloride or other toxic materials.
- Use a professional furniture cleaning service for an overall cleaning.

△ WARNING △

Urea-formaldehyde is used in production of particle board, hardwood plywood or paneling. Urea-formaldehyde resin may release formaldehyde vapors which may cause headaches, eye, nose and throat irritation in some people. Formaldehyde may aggravate some allergies or upper respiratory problems like asthma. Proper ventilation should reduce risk of such problems.

Bedsread/Draperies/Valance/Headboards

We recommend dry cleaning for your bedspread and draperies just as you would for your draperies and comforters at home. Although this is more expensive, proper care of material will help insure a longer life. Care of headboard and bedroom valance fabric should be done with same instructions given for upholstery fabrics. Laundering and improper cleaning may result in fabric shrinking or deteriorating prematurely.

Wall and Ceiling Coverings

Your decorative wall and ceiling coverings are not much different from vinyl wall paper that you may have in your home. They should be cleaned with a non-abrasive cleaner and a soft cloth.

Solid Wood Cabinetry

These products should be cared for as you would any fine piece of wood furniture. Apply a furniture polish when you clean your motor home to maintain natural beauty and luster of wood. This will keep your cabinetry looking new and keep wood from drying out.



Unit Care & Maintenance

Counter Tops

High pressure laminate counter tops are quite easy to keep clean. Waxing is not necessary. Glass rings, food spills, water spots and smudges usually wipe off with a damp cloth or sponge. Stubborn stains can be removed with a spray cleaner. Laminated surface resists alcohol, fruit acids, cosmetics and most household chemicals. Avoid contact with dyes, strong laundry bleaches and bluing solutions. Indelible inks used on food packages may leave a stain so take care when unpacking groceries on a damp countertop. Sharp knives can damage finish so confine slicing to a good cutting board. Counter top resists minor heat. Very hot pots and pans straight from oven or broiler should be placed on hot pads. Keep irons on an ironing board and lighted cigarettes in an ashtray. For lasting beauty avoid using harsh abrasives, scouring powders, peroxides or bleaches. These can dull surface and make it more likely to stain next time.

Appliances

Care for these as you would at home by using a kitchen cleaner.

Carpet

Your carpet is made of Nylon. Professional cleaning is recommended for major cleaning. Frequent vacuuming is recommended for daily accumulations.

Bath Fixtures

Clean your tub/shower, sinks, and toilets as you would at home. A non-abrasive cleaner is recommended. When cleaning mirrors or shower doors a vinegar and water solution works very well to remove hard water spots and stains.

Mini Blinds/Day Night Shades (Optional)

Your blinds will stay new looking by just using a soft cloth and cleaner. Vacuum blinds regularly. Use a mild detergent to spot clean as necessary.

Hardware/Accessories/Light Fixtures

Wipe clean as you would for daily cleaning. Use a non-abrasive cleaner to avoid damaging finish.



Cleaning Of Brass Fixtures

To clean fixtures wipe with a soft damp cloth. Warm water will remove dry water spots. Do not use cleaners which contain abrasive or harsh chemicals. Never use alcohol or other organic solvents.

Windows

Any glass will develop water spots if glass is not cleaned properly. Spotting effect is magnified when glass has a reflective finish. Use a squeegee immediately after washing to reduce water spotting. To remove stubborn water stains from reflective glass we recommend Cerium Oxide Polishing Compound. This compound is made by C.R. Lawrence and is available at most glass shops.

Condensation

Condensation is a natural phenomenon. Amount of condensation will vary with climate conditions, particularly relative humidity. Condensation occurs because there is water vapor present in air, and each of us adds more by breathing, bathing, cooking, etc. Water vapor collects wherever there is available air space, when air temperature reaches dew point level water vapor in air condenses and changes to liquid form.

Controlling Moisture Condensation

You can reduce or eliminate interior moisture condensation during cold weather by taking following steps:

Partially open roof vents and windows so that outside air can circulate into interior air. Increase ventilation when larger numbers of people are in motor home; even when it is raining or snowing air from outside will be far drier than interior air.

Cover ground under motor home with a vapor barrier such as 6 mil polyethylene.

Install a dehumidifier. Continuous use of a dehumidifier will be more effective in removing excess moisture from interior air. While use of a dehumidifier is not a cure-all, and ventilation and moisture reduction continue to be important, operation of a dehumidifier will reduce amount of outside air needed for ventilation.

Reduce moisture released inside motor home. Run range vent fan when cooking and bath vent fan (or open bath vent) when bathing to reduce water vapor. Avoid making steam from excessive boiling or use of hot water. Open flames add moisture to interior air increasing condensation.



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Unit Care & Maintenance

In very cold weather leave cabinet and closet doors partially open to warm and ventilate interior of storage compartments. Air flow will warm exterior wall surface reducing or eliminating condensation and preventing possible ice formation.

Winterizing

△ WARNING △

When draining low-point drain lines and water heater be sure water is not hot. Hot water from lines can burn you.

To use air pressure to winterize your motor home you will have to have access to an air compressor and adapter to connect air line to your water system. Adapters can be found at any RV supply store. You should not exceed 40 pounds p.s.i. when hooked to water lines. Higher pressures will damage lines.

1. A water filter is an option and may not be on all motor homes. If there is not a filter in motor home you can disregard this step. Remove water filter cartridge and replace filter with diverter cap (see Chapter 4 "Change Water Filter or Diverter Cap"). Diverter cap comes with motor home and will be stored inside. This creates a bypass in water lines so that antifreeze will not go into filter assembly.
2. Drain fresh water tank by opening drain valve located in exterior service compartment.
3. Open low-point drains. Turn knobs to open drains. Opening low point drains clear water out of hot and cold water lines. Leave low-point valves open until you are ready to use your motor home again.
4. Let all water drain. Turn on pump and allow it to run for 30 seconds to 1 minute so that all water is cleared out of pump and fresh water tank. Pump switch is located on control panel.
5. Remove water heater drain plug and open pressure release valve (both are located behind water heater cover on exterior of motor home).
6. After you have drained water lines hook an air hose to city water connection located outside motor home. Blow out water lines until no more water can be seen coming out of drain lines. Do not exceed 40 p.s.i. In water lines and faucets.
7. Open water heater bypass valve located on rear of water heater (see Chapter 4 "Water Heater Bypass System").

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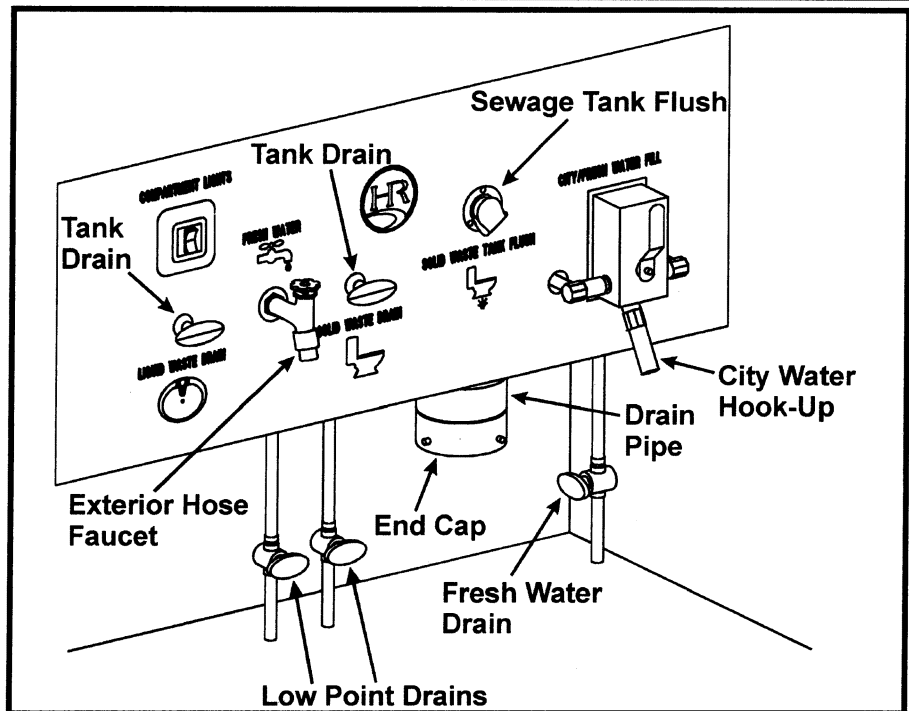
8. Replace water heater drain plug and close pressure release valve. Open all faucets (including outside spigot) one at a time while air is on to clear water from faucet supply lines, also do not forget to drain your shower.

9. While air is on, hold spray nozzle (located right next to toilet) open until water has quit running. Hold toilet flush pedal or handle down until water has stopped running.

10. Unhook air hose and close city water connection.

11. You will need 1 gallon of RV antifreeze to protect various water lines in your motor home. Pour 1 pint in both kitchen and bath shower drains, 2 pints go in bath sink drain with some of antifreeze going into gray tank to protect drain valve. While holding down flush pedal pour another 3-1/2 pints into toilet letting antifreeze run into black tank to protect valve located there. Pour last 1/2 pint of antifreeze into toilet after you have released flush pedal. Use a soft cloth to wipe out sinks and shower after you pour in antifreeze to protect surfaces from stains.

12. Leave low-point drains open until you are ready to use your motor home again.



Winterizing An Ice Maker

Make sure shut off water supply valve to ice maker is closed and place a shallow pan under water valve. Remove inlet fitting to ice maker water valve. Drain water from supply line. Remove plastic nut and water line from outlet side of water valve. Drain water from line. Cycle ice maker several times while blowing compressed air through water valve. Up to 40 p.s.i. air pressure can be used to clear valve. Be sure all water is out of valve. Reconnect and tighten lines on water valve. Leave water supply turned off until temperatures are above 32°F (0°C). Dry out ice maker mold assembly with a soft cloth. Place bail arm in up/off position.



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Unit Care & Maintenance

Winterizing a Washer/Dryer

Empty water from lint trap (approximately 1 cup). Do not put antifreeze in washer/dryer because it will damage rubber seals. There is also risk of clothing being stained when machine is used after it has been taken out of storage.

Winter Storage Check List

- Plumbing Lines - Drain and protect by filling with approved RV antifreeze.
- Water Heater - Drain
- Toilet - Hold pedal down until antifreeze appears in bowl.
- Fresh Water Tank - Drain
- Water Filter (if so equipped) - Remove and discard filter. Install diverter cap.
- Body - Clean and wax. Oil locks and hinges. Repair roof seams as needed. After each snowfall remove heavy wet snow accumulation with a push broom.
- Tires - Block up motor home with wooden blocks or manufactured jack-stands on a hard level surface. Partially deflate tires. Cover tires to protect against sunlight.
- Countertop and Cabinets - Wash with mild soap and water.
- Curtains - Remove and clean according to care specifications.
- Windows - To protect interior fabric from fading cover windows by pulling blinds, closing shades or use a separate cover such as a sheet.
- Holding Tank - Drain and rinse. Close valves. Add a small amount of antifreeze to keep valves and gaskets lubricated.
- Drain Traps - Pour RV antifreeze down all drains.
- Batteries - Add distilled water and recharge if needed. Disconnect cables. Remove batteries and store them in a cool dry place. Check and recharge as needed.
- Refrigerator - Clean and leave both doors propped open. Cover exterior panels and roof vents.
- Air Conditioner - Remove air filters and clean or replace. Cover shroud.
- Roof must be kept clear of snow accumulation or damage may occur.

Opening Motor Home Check List

If motor home was properly and carefully prepared for storage taking it out of storage will not be difficult. Following procedure check list assumes that you stored your motor home properly. If you didn't and extensive freeze damage or other serious deterioration has occurred consult your dealer or an authorized service center for advice.

Continued⇒⇒⇒



- Thoroughly inspect outside of motor home. Look for animal nests in wheel wells, furnace vent, water heater vent or in other out of the way places.
- Remove all appliance vents, ceiling vents and air conditioning covers. Be sure all furnace, water heater and refrigerator openings are free of debris, insect nests, webs, etc.
- Open all doors and compartments. Check for animal or insect intrusion, water damage, or other deterioration.
- Check all chassis fluids levels - engine oil, engine coolant, power steering fluid, brake fluid, transmission oil, rear axle oil.
- Check charge levels in batteries. Refill and recharge as necessary. Reinstall batteries if necessary. Be sure cable ends and terminals are clean and free of corrosion.
- Check tire pressures. Reinflate to specified cold pressure.
- Remove coverings from window if necessary.
- Open vents and windows for ventilation.
- Be sure engine instruments indicate proper readings. Start engine and allow it to reach operating temperature. Shut engine down. Check all fluids and fill as necessary.
- When engine is running check operation of headlights, tail lights, turn signals back-up lights, license plate light and emergency flashers. Operate motor home air conditioner. If air conditioner does not work, or unusual sounds occur, have system checked by a qualified air conditioner technician.
- Drain, flush, and sanitize fresh water system as outlined in water chapter 4. Inspect drain hose for leaks. Replace if necessary.
- Install a new water purifier cartridge (if so equipped).
- Operate all faucets and fixtures in fresh water system.
- Check for leaks at all joints and fittings. Repair if necessary.
- Check 12 volt circuit breakers and inspect fuses.
- Operate all 12 volt lights and accessories.
- Install new batteries in battery operated devices.
- Test carbon monoxide, LP gas and smoke detectors.
- Check monitor panel operation.
- Open and operate vents and vent fans including range hood fan.
- Inspect 120 volt electrical system which includes power cord, converter, all outlets, and exposed wiring. If defects are found refer to your dealer or an authorized service center.
- Prepare generator for operation following instructions in generator operating manual in your Owner's information file. Start and run generator.
- Operate 120 volt appliance's and air conditioners. Be sure to uncover air conditioner shrouds.
- Operate 120 volt appliances and air conditioners. Be sure to uncover air conditioner shrouds.



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Unit Care & Maintenance

- Inspect LP gas system and check for leaks. If LP tank shows signs of rust or corrosion have it inspected by a qualified LP technician.
- Operate each LP gas appliance. Observe all burner/pilot flames for proper color and size. In any case, have LP gas regulator adjusted for proper pressure by a qualified technician.
- Inspect and clean interior.
- Check sealant around all roof and body seams and windows. Reseal if necessary.
- Lubricate all exterior locks, hinges, and latches.
- Check windshield wiper blade condition. Check wiper/washer operation.
- Wash and wax exterior. Inspect body for scratches or other damage touch up or repair as necessary. Flush underside thoroughly.
- Run through operational checks for steering, brakes, engine and transmission. Operate motor home slowly during these checks to allow sufficient circulation of fluids and resetting of components.
- Your motor home should now be ready for a new traveling season. If you choose your dealer can double check your preparation and correct any defects or make any necessary adjustments.

NOTES



HOLIDAY RAMBER

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Unit Care & Maintenance

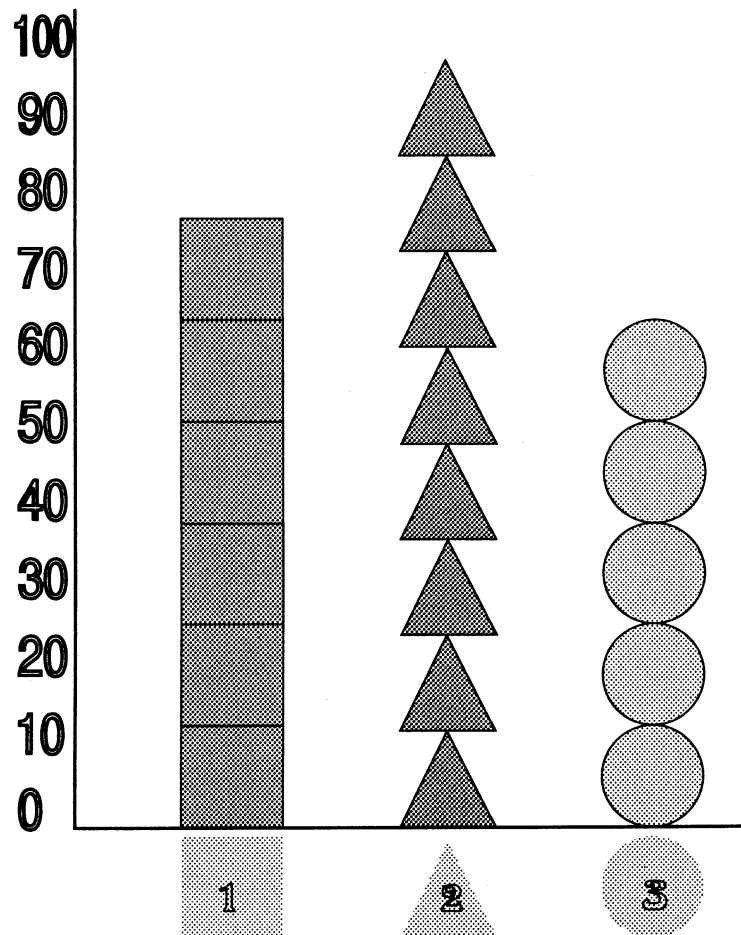
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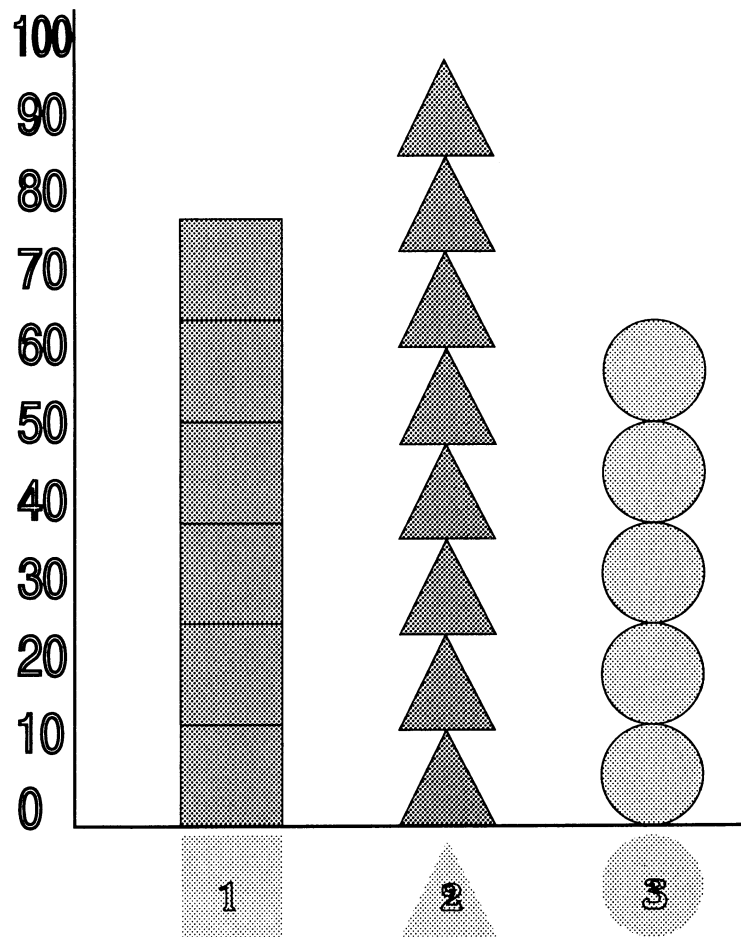
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VACATIONER

CHAPTER 8

DIAGRAMS & SPECIFICATIONS

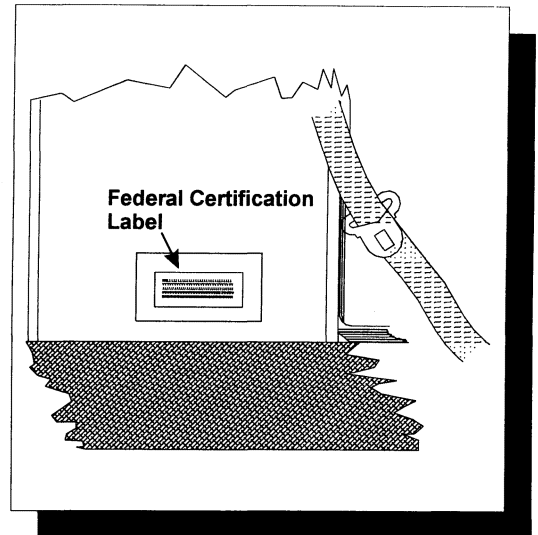




Diagrams & Specifications

General Information

This chapter is made up of drawings to identify locations of access doors, plug-ins, water connections, exterior views, dash views, etc. There are also charts of various capacities used in your motor home. For your convenience we have included pages that you can use to list personal property ID numbers and serial numbers. Federal Certification Label of your motor home is located near operator's seat on sidewall.



Serial Number Information

Refer to motor home information file for locations of component manufacturer serial number locations that are not listed below.

Motor Home Serial Number _____

Motor Home Federal Vehicle Identification Number (VIN) _____

Door Key Number _____

Range Model & Serial Number _____

Located under top burner plate.

Microwave Model & Serial Number _____

Located behind door on case.

Refrigerator Model & Serial Number _____

Located inside refrigerator compartment.

Furnace Model & Serial Number _____

Located in outside compartment on furnace.

Water Heater Model & Serial Number _____

Located in outside compartment on water heater.

Electric Generator _____

Located in outside compartment on generator.

Roof Air Conditioner _____

Located under top cover on air conditioner.



Personal Property Information

Item	Serial Number	Value
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
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Insurance Information

Company _____

Policy Number _____

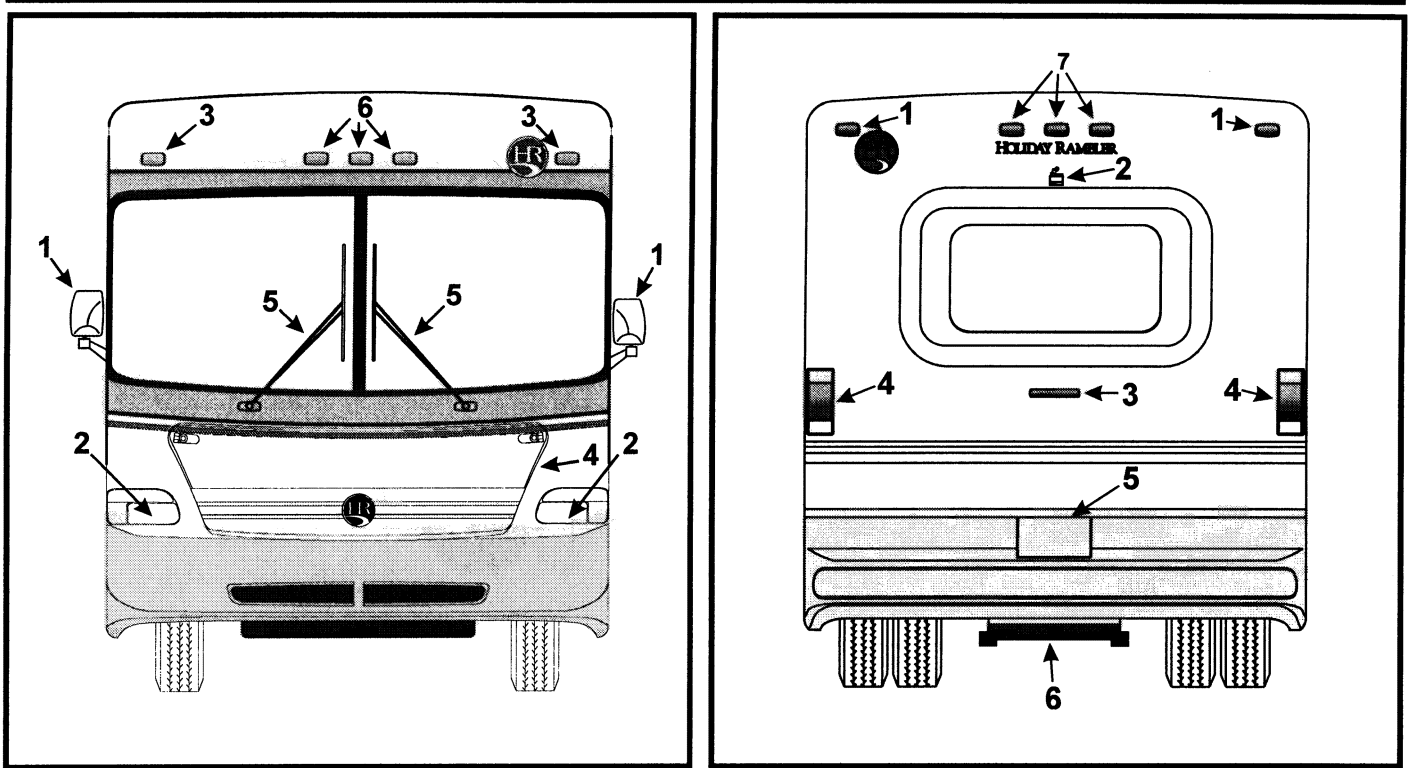
Agent's Name & Address _____

Business Phone _____

Emergency Phone _____

Renewal Dates _____

Diagrams & Specifications



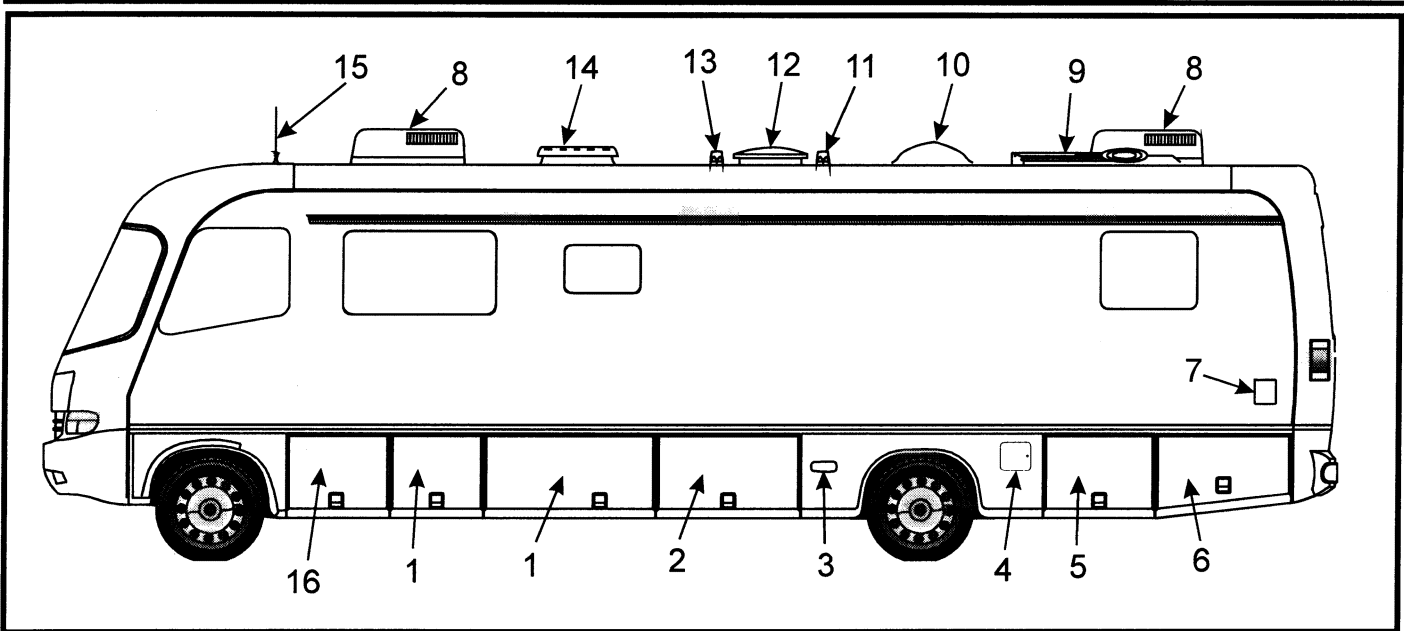
Locations vary from model to model. Identify each by their specific view.

Front View

1. Mirrors
2. Headlights
3. Clearance Lights
4. Engine Access Door
5. Windshield Wipers
6. Identification Lamps

Rear View

1. Clearance Lights
2. Camera
3. Third Brake Light
4. Tail Lights
5. License Plate
6. Rear Tow Hitch
7. Identification Lamps

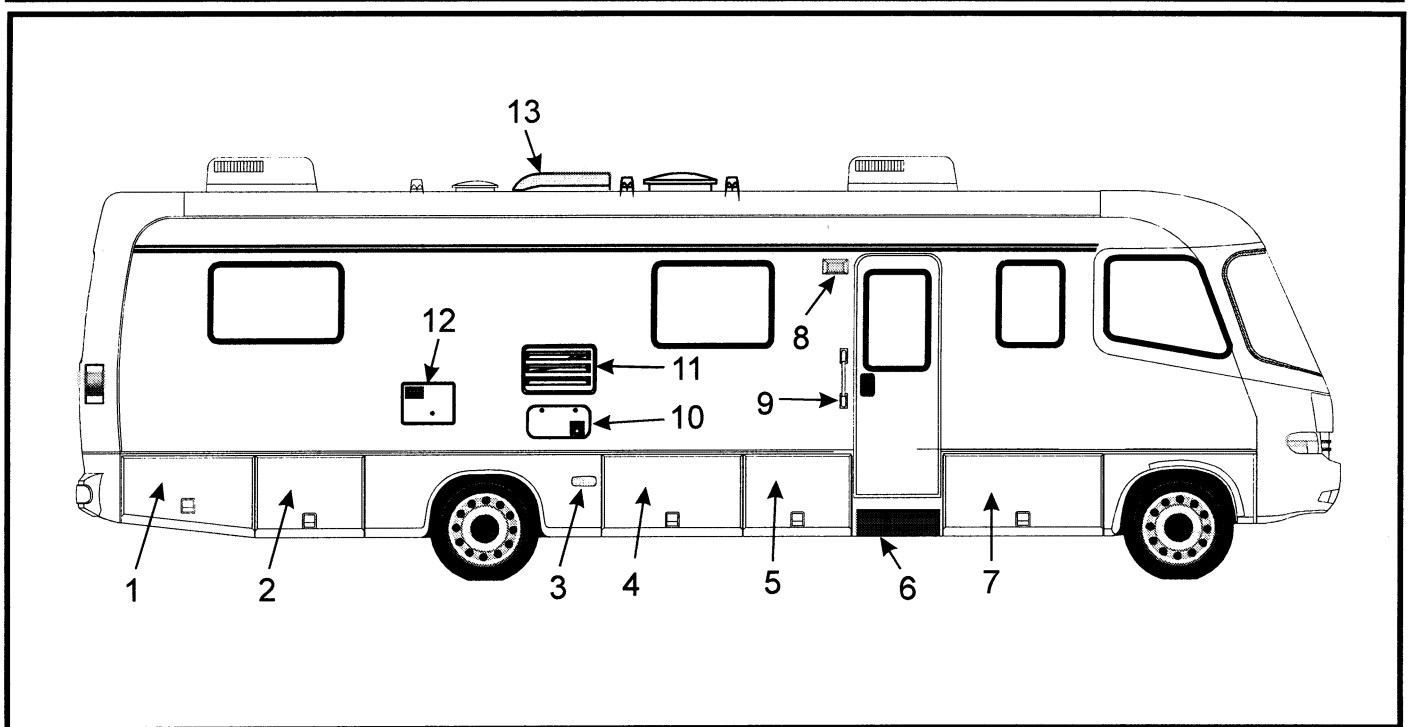


Locations vary from model to model. Identify each by their specific view.

Roadside View

- | | |
|--|--------------------------------------|
| 1. Storage Compartment | 10. Shower Vent |
| 2. Electric Generator | 11. Toilet Vent |
| 3. Side Marker Lamp | 12. Roof Air Vent |
| 4. Fuel Fill | 13. Holding Tank Vent |
| 5. Water Control Panel | 14. Attic Air Vent |
| 6. Electric Cord (Shore Line), Telephone
& TV Cable Hook-ups, Storage | 15. Radio Antenna |
| 7. Gravity Fresh Water Fill | 16. Chassis Electrical Panel/Storage |
| 8. Roof Air Conditioner | |
| 9. TV Antenna | |

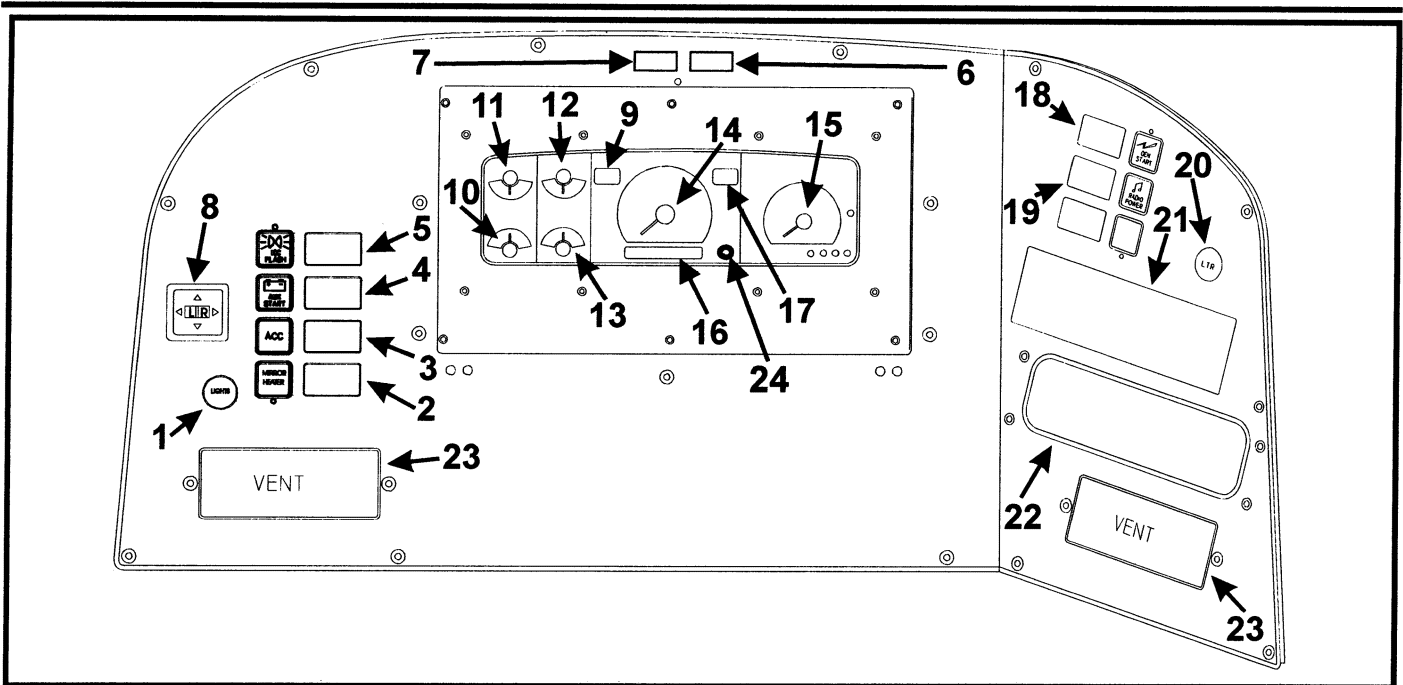
Diagrams & Specifications



Locations vary from model to model. Identify each by their specific view.

Curbside View

- | | |
|--|------------------------------|
| 1. Storage Compartment | 8. Porch Light |
| 2. House Batteries/HOUSE Disconnect | 9. Grab Handle |
| 3. Side Marker Lamp | 10. Furnace Compartment |
| 4. LP Tank Compartment, Spare Tire | 11. Refrigerator Compartment |
| 5. Storage Compartment, Telephone and Cable Hook-ups | 12. Water Heater Compartment |
| 6. Step | 13. Refrigerator Vent |
| 7. Storage Compartment, CHASSIS Disconnect | |



Dash Instruments Panel

1. Headlight Switch - Turns headlights on and off.
2. Mirror Defrost Switch - This switch will turn on heater in exterior power mirrors to defrost them for better visibility.
3. Accessory Switch.
4. Auxiliary Start Switch - If chassis battery cannot start motor home you can push this switch to borrow from coach battery to jump start motor home.
5. ICC Light Switch - This switch will flash lights. This is normally used as a courtesy to acknowledge another driver.
6. Antenna Up Warning Light - This light illuminates when TV antenna is in raised position. You should not move motor home until you lower antenna.
7. Jacks Down Warning Light - This light illuminates when leveling jacks are in down position. You should not move motor home unless jacks are in store position.
8. Power Mirrors Controls - Left lever controls movement of driver's side mirror and right lever controls movement of passenger's side mirror.



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Diagrams & Specifications

9. Left turn signal indicator light.
10. Voltmeter - Normal operating temperatures is 190°F to 240°F.
11. Oil Pressure Gauge - Registers oil pressure of engine. A reading in midrange area at average engine temperature is considered average.
12. Fuel Gauge - Voltmeter shows voltage of chassis electrical system.
13. Temperature Gauge - This gauge indicates approximate amount of fuel in fuel tank.
14. Speedometer - Speedometer indicates speed of motor home in both mile per hour (MPH) and kilometers per hour (KPH).
15. Tachometer - Registers RPM's of engine.
16. Gear shift indicator.
17. Right turn signal indicator light.
18. Generator Start Switch - This switch allows you to start generator from inside your motor home.
19. Radio power switch - Turns radio on and off independent of main switch on radio.
20. Cigarette Lighter - Can be used as a power source for a cellular phone.
21. Radio - Complete instructions for operation of radio are in your Owner's information packet.
22. Dash air conditioning and heater controls. These controls operate dash air and heat only.
23. Air Conditioner Vent - Louvers in vent will direct either air to the right, left, up or down.



Chassis Specs

Model	31CG	32CG	33PS	34PBD	34CG	35WGS	36SGS	36WGS
GVWR	18,000	18,000	20,500	20,500	20,500	20,500	20,500	20,500
GCWR	23,000	23,000	26,000	26,000	26,000	26,000	26,000	26,000
GAWR Front	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000
GAWR Rear	11,000	11,000	13,500	13,500	13,500	13,500	13,500	13,500
Wheel Base	208"	208"	208"	228"	228"	228"	228"	228"
Overall Length	31'8"	32'8"	33'2"	34'6"	34'6"	35'3"	36'	36'
Overall Height	11'9"	11'9"	11'9"	11'9"	11'9"	11'9"	11'9"	11'9"
Interior Height	6'6"	6'6"	6'6"	6'6"	6'6"	6'6"	6'6"	6'6"
Interior Width	94.5"	94.5"	94.5"	94.5"	94.5"	94.5"	94.5"	94.5"
Exterior Width	100.5"	100.5"	100.5"	100.5"	100.5"	100.5"	100.5"	100.5"



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Diagrams & Specifications

Tank Capacities (Approximate Gallons)

Model	31CG	32CG	33PS	34PBD	34CG	35WGS	36SGS	36WGS
Water Heater	6/10	6/10	6/10	6/10	6/10	6/10	6/10	6/10
Gray Holding Tank	45	45	45	45	43	45	45	45
Black Holding Tank	45	45	45	45	45	45	45	45
Fresh Water Tank	70	67	67	67	67	67	70	70
LP Gas Tank	27	27	27	27	27	27	27	27

Engine Specs

	Ford V10 Gas Fuel Injection
CAT Diesel Engine	6.8L V10
Cubic Inch Displacement	415
Tire Size	245/70R x 18.5F
Fuel Tank (Approx. Gal)	75
Alternator (Amp)	130
Rear Axle Ration	5.38:1



Bulb Usage

Interior Lights

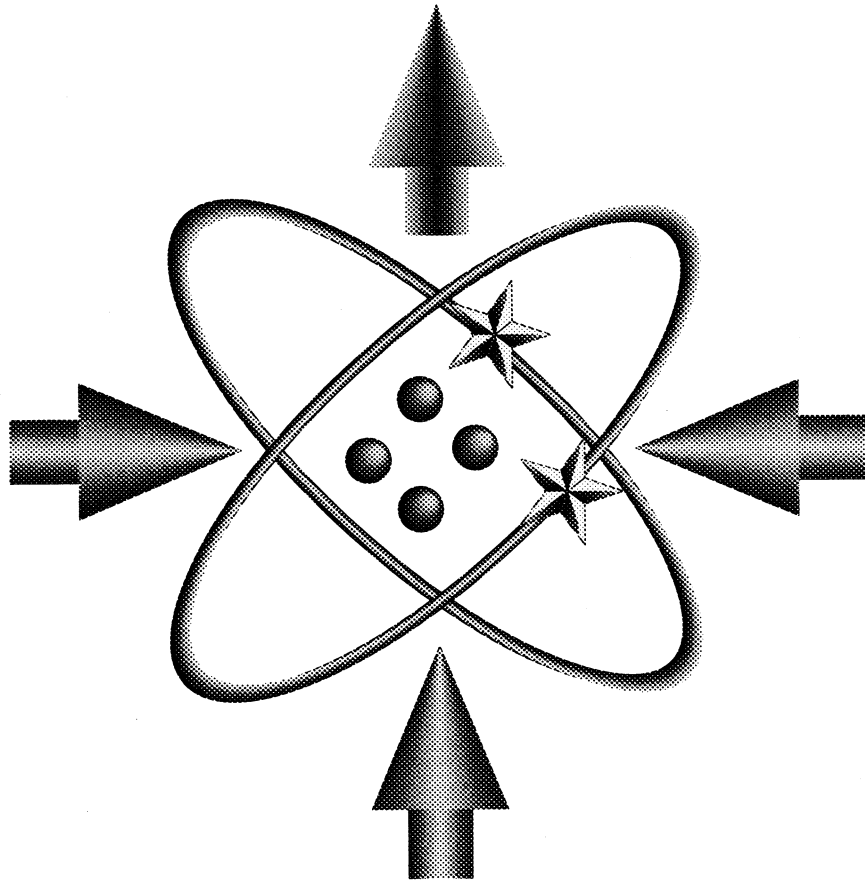
- Sidewall - 1076
- Dinette Light - 921CL
- Double Pancake - Bulb 1141
- Single Pancake - Bulb 1141
- Cosmetic Light - 9-019C
- Map Light - Bulb 1003
- Fluorescent Light - Philips F8T5/CW

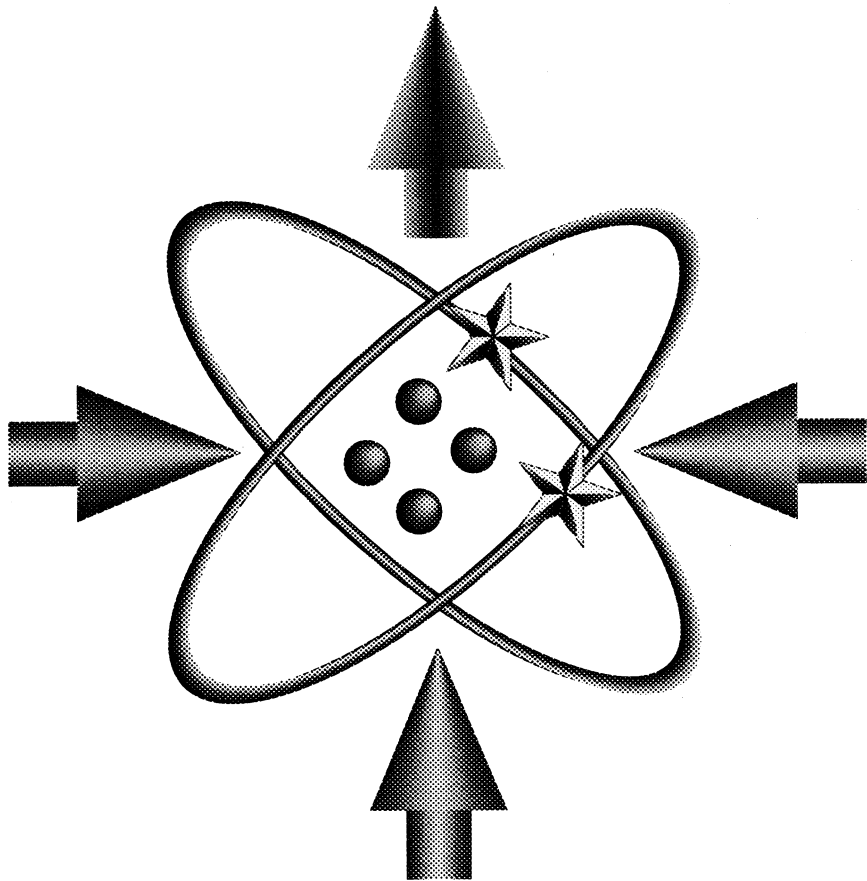
Exterior Lights

- Engine Light - GE 232
- Porch/Off Door Service Light - Bulb 1003
- Red Clearance - Bulb 194
- Amber Clearance - Bulb 194
- Storage Lights - 168
- Systems Compartment - 1141
- Tail Light Turn Signal (Top) - 3156
- Tail Light Brake/Tail (Center) - 3457
- Tail Light Back Up (Bottom) - 3156
- Third Brake Light - 562
- License Plate - Order Complete Assembly
- Front Amber Park (Outside Top) - 194
- Front Amber Turn/Park (Outside Bottom) - 1157
- Front Amber Turn (Inside Top) - 1156
- Front Headlight (Inside Bottom) - HB519007

CHAPTER 9

CHASSIS INFORMATION





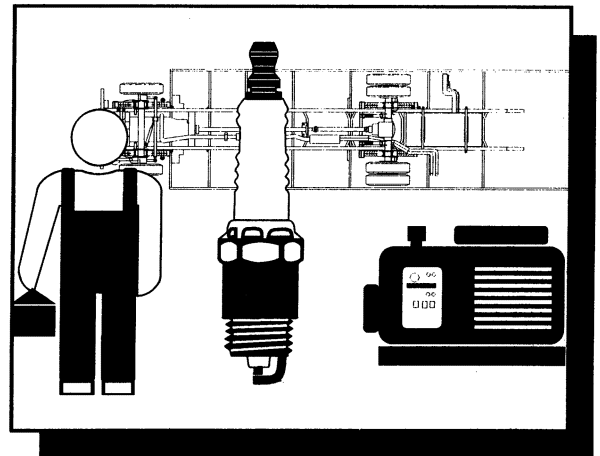


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Chassis Information

General Information

Your motor home can be built using one of two different chassis. Ford chassis have automatic transmissions and are fueled by unleaded gasoline. Motor homes equipped with tag axles have electric tag axle brakes that are set at the factory. Control box is located under dash and **MUST BE** adjusted by an authorized servicing dealer.



Tilt Steering Wheel

On Ford chassis tilt steering wheel control is a lever located on steering column near dash. When you pull lever you can freely move wheel. Move wheel to desired position and release lever.

Power Heated Mirrors

Motor home is equipped with power heated mirrors. A switch located on dash turns heater on and off. To defrost mirrors turn switch to ON position. There is a switch on dash for adjusting position of mirrors. Switch adjusts top half of mirrors. Bottom half of mirrors are concave mirrors and need to be manually adjusted on outside of motor home.

Wheel Covers

If your motor home comes with wheel covers you will need a special T-Handle wrench to remove and replace covers. This wrench is stored inside your motor home.

To Remove Covers & Hardware

Covers are retained with two extenders and hardware. Extenders are located in a straight line with valve stem and must be lined up when re-installed. Locate T-Handle wrench, pry off two chrome nut covers (in line with valve stem), remove nuts from extenders and pull off cover. Remove extender(s) from wheel lugs. When re-installing covers make sure valve stem cut out lines up with tire valve stem.

Care and Maintenance of Wheel Covers

Clean only with mild soap and water. Do not use harsh detergents, acids, or abrasives. Periodically check jam nuts and stud extenders for tightness.



Tires

Chassis manufacturer has equipped your motor home with tires for highway speeds at GVWR. Inflate to recommended cold tire pressure printed on manufacturer's federal certification label located on front fire wall next to steering wheel column. Check tire pressures often when traveling, always check when tires are cool. Do not overload motor home. Tires are covered by tire manufacturer's warranty. If you have a defective tire, refer to applicable warranty and go directly to nearest dealer for adjustment. Never discard a defective tire, return to dealer for inspection.

In Case Of a Flat Tire

△ WARNING △

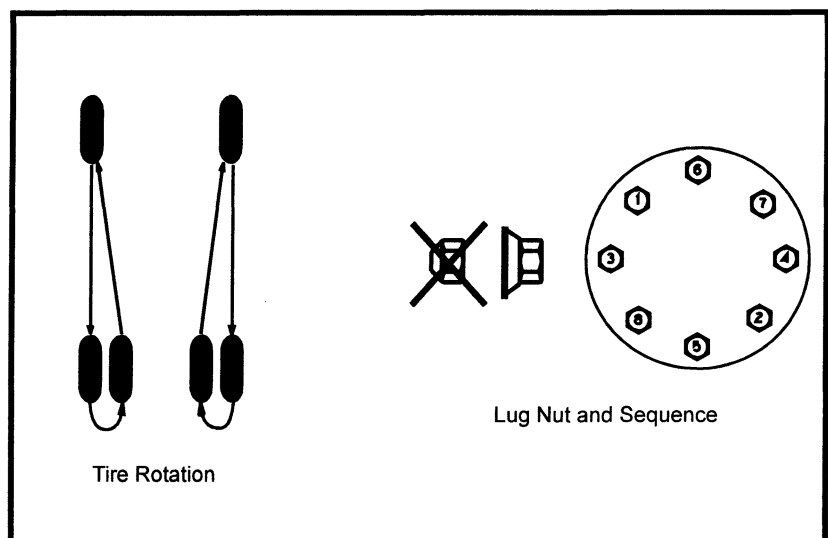
Tires are extremely heavy. To avoid personal injury and /or property damage obtain professional tire service help if you have a flat tire or tire blow out. Do not attempt to change tire yourself.

Be sure to tighten wheels in proper sequence. Ford uses a special lug nut. Do not use any other lug nut. Damage or injury could occur.

In case of a sudden tire failure avoid heavy braking. Gradually decrease speed, hold steering wheel firmly and move slowly to a safe off-road place. Park on a firm level spot, turn off ignition, and turn on hazard flasher system. Your motor home comes equipped with a conventional spare tire, you can use it as a spare or as a regular tire. Spare tire is located in a service compartment on curbside of motor home in front of rear axle. Spare tire is held in place with a safety lock nut. Safety lock nut tool must be used to remove tire. Tool is stored inside motor home. It is recommended that if your motor home develops a flat tire or blow out you should call for roadside service. Due to size and weight of motor home it is safer to rely on a professional service technician with proper equipment to change your tire. Your motor home does not come equipped with a jack and lug wrench.

Tire Rotation

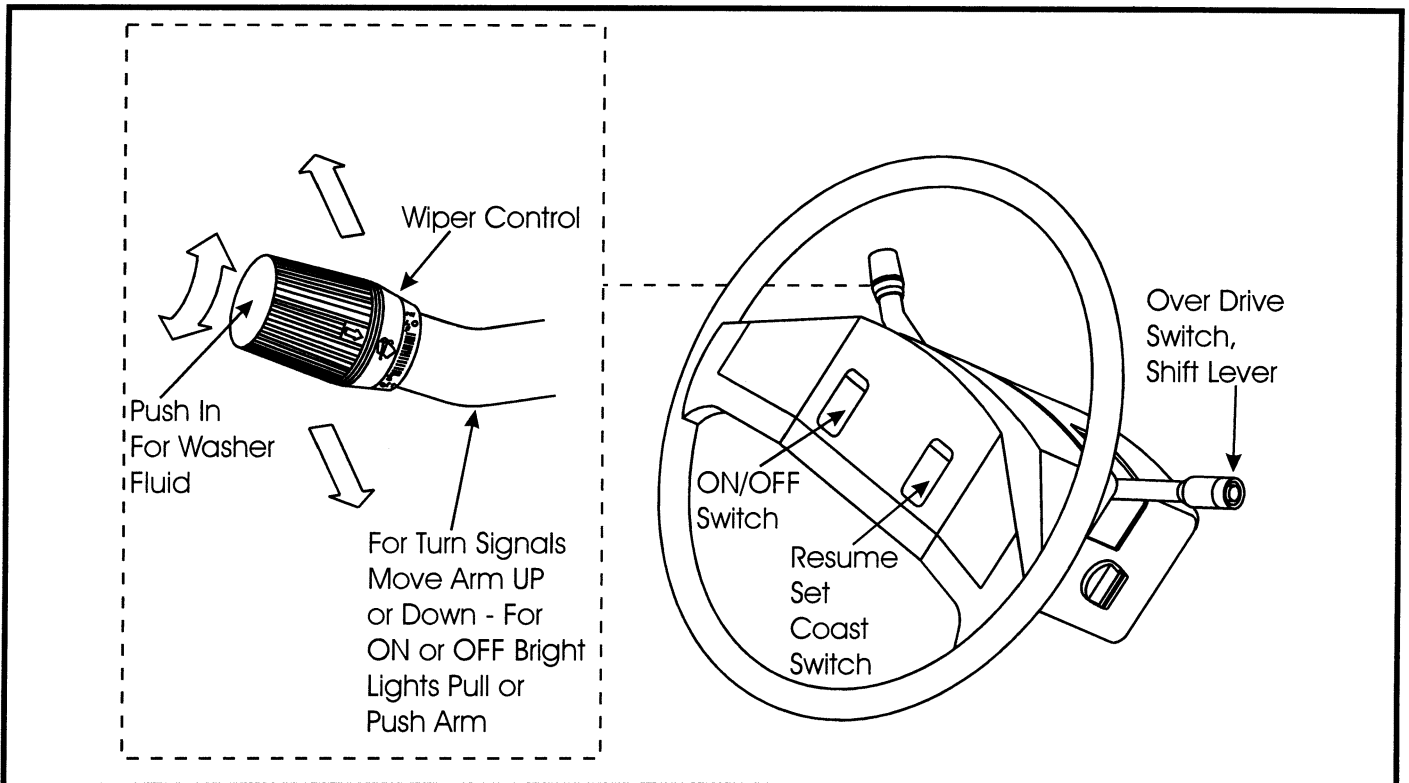
Rotate your tires every 6000 miles following one of above diagrams.



Chassis Information

Operator Controls

Controls on left arm are used to operate wipers, turn signals and head light dimmer (turns brights on and off). Cruise controls are located on steering wheel and Overdrive Lock-Out is located on end of shift lever.



Cruise Control

Cruise control has a safety switch which will not allow system to operate until your motor home is moving above 30 mph.

△ WARNING △

Do not use your speed control on slippery roads or in heavy traffic.

To Set Speed - Push and release ON switch on steering wheel and drive at desired speed above 30 mph. Hold desired speed with your foot while you press and release Set switch on steering wheel.

Continued⇒⇒⇒



One second after release, remove your foot from accelerator pedal. You can increase your speed at any time with accelerator pedal. When you release pedal you will return to set speed.

To Accelerate - Push and hold in on SET switch on steering wheel and your motor home will accelerate. When you release switch your motor home set speed will be automatically set to the accelerated speed.

To Coast - Press and hold in COAST switch on steering wheel and allow motor home to coast. When you release switch your motor home set speed will be automatically set to the coast speed.

To Disengage - Depress brake pedal and you are in control of motor home's speed. You can also disengage speed control by pressing and releasing OFF switch on steering wheel.

To Resume - When you disengage system with brake you do not erase set speed from memory even if you come to a complete stop. To return to your chosen speed drive to a speed above 30mph then push RESUME switch on steering wheel. Speed control will take you back to your original set speed. If rate of acceleration is faster or slower than you like use accelerator to obtain a speed close to set speed then push RESUME switch. Speed control will automatically be turned off when ignition switch is turned off.

Wiper/Washer Operation

Push in and hold end of arm to dispense washer fluid and release to stop fluid. Wipers will turn on and off automatically.

When rotating end of arm from OFF to delay, you will turn wipers on and a delay between wipes (ranging from 45 seconds to 2 seconds) will occur. Delay time changes as arm end is rotated. A continuous low or high speed can be obtained by rotating arm end to appropriate position. To turn wipers off rotate arm end to OFF position.

Headlight Beam Change & Turn Signals

Move arm upward for a right hand turn signal and downward for a left hand turn signal. Push arm away from steering wheel to switch from low to high beam, or pull towards steering wheel into detent position for high to low beam. Pull arm all the way up to turn headlights on for flashing.

Over Drive Lock-Out Switch

To lock out overdrive for towing or direct drive transmission operation push in on button located on end of shift lever, indicator light on lever will be lit. To return to over drive operation push button in and release it, indicator light on lever will go out.



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Chassis Information

Maintenance Check List

Check the following when refueling:

- Check engine oil level.
- Check windshield washer fluid level.
- Look for low or under inflated tires.

While driving your motor home look for the following:

- Note any changes in sound of exhaust or any smell of exhaust fumes in motor home.
- Check for vibrations in steering wheel. Notice any increased steering effort or looseness in steering wheel or change in its straight ahead position.
- Notice if your motor home constantly turns slightly or pulls to one side, increased when traveling on smooth level road.
- When stopping, listen and check for strange sounds, pulling to one side, increased brake pedal travel or hard to push brake pedal.
- If any slipping or changes in operation of your transmission occurs, check transmission fluid level.
- Check parking brake to make sure it keeps motor home in place.

If you notice any of the above items have your motor home inspected by a qualified motor home service technician.

Normal use of motor home may cause fittings and fasteners to loosen due to road vibrations and excessive use. Periodic inspection and maintenance should be performed on these items. If your motor home is placed in storage check it periodically. Batteries must be charged periodically even if they are not used.



Chassis Maintenance

Engine and Chassis specifics may change from unit to unit. See your chassis owners manual for more detailed information.

Ford Chassis Quick Reference Chart	Monthly	5,000 Miles	10,000 Miles	15,000 Miles	30,000 Miles	45,000 Miles	90,000 Miles	100,000 Miles
Check Lights, Tires, Engine Oil, Coolant Level, and Washer Solvent	✓							
Check Seat Belts, Seats, Spare Tire, & Wiper Blades	✓							
Change Oil, Oil Filter, and Rotate Tires		✓						
Replace Air Filter			✓					
Check Brakes, Replace Fuel Filter				✓				
Check Power Steering Fluid, Parking Brake, ABS, Air Bag, Battery Water Level, and Terminals	✓							
Check Exhaust Systems, and Service Transmission					✓			
Drain and Replace Engine Coolant, Inspect Steering Linkage, and Suspension						✓		
Replace Drive Belt							✓	
Replace PCV Valve and Spark Plugs								✓



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Chassis Information

Ford Chassis Quick Reference Chart	Monthly	5,000 Miles	10,000 Miles	15,000 Miles	30,000 Miles	45,000 Miles	90,000 Miles	100,000 Miles
Lubricate Exterior Doors, Locks, and Entrance Step		✓						
Check LP Lines with Leak Detector, and LP Appliances for Proper Operation		✓						
Check Parking Brake, Wheels, Nuts, and Lug Nut Torque		✓						
Inspect & Reseal Entrance Door Jamb Corners, Clean Window and Door Seals and Spray W/ Silicone Lubricant				✓				
Have a Service Tech. Check Fuel Tank Mounts, and Fuel Line, Check Engine, Transmission, and Radiator mounts, and Adjust valve Lash Clearance		✓						
Flush Fresh Water System					✓			
Check Brake Lining					✓			
Check/Repair Roof Seams					✓			

