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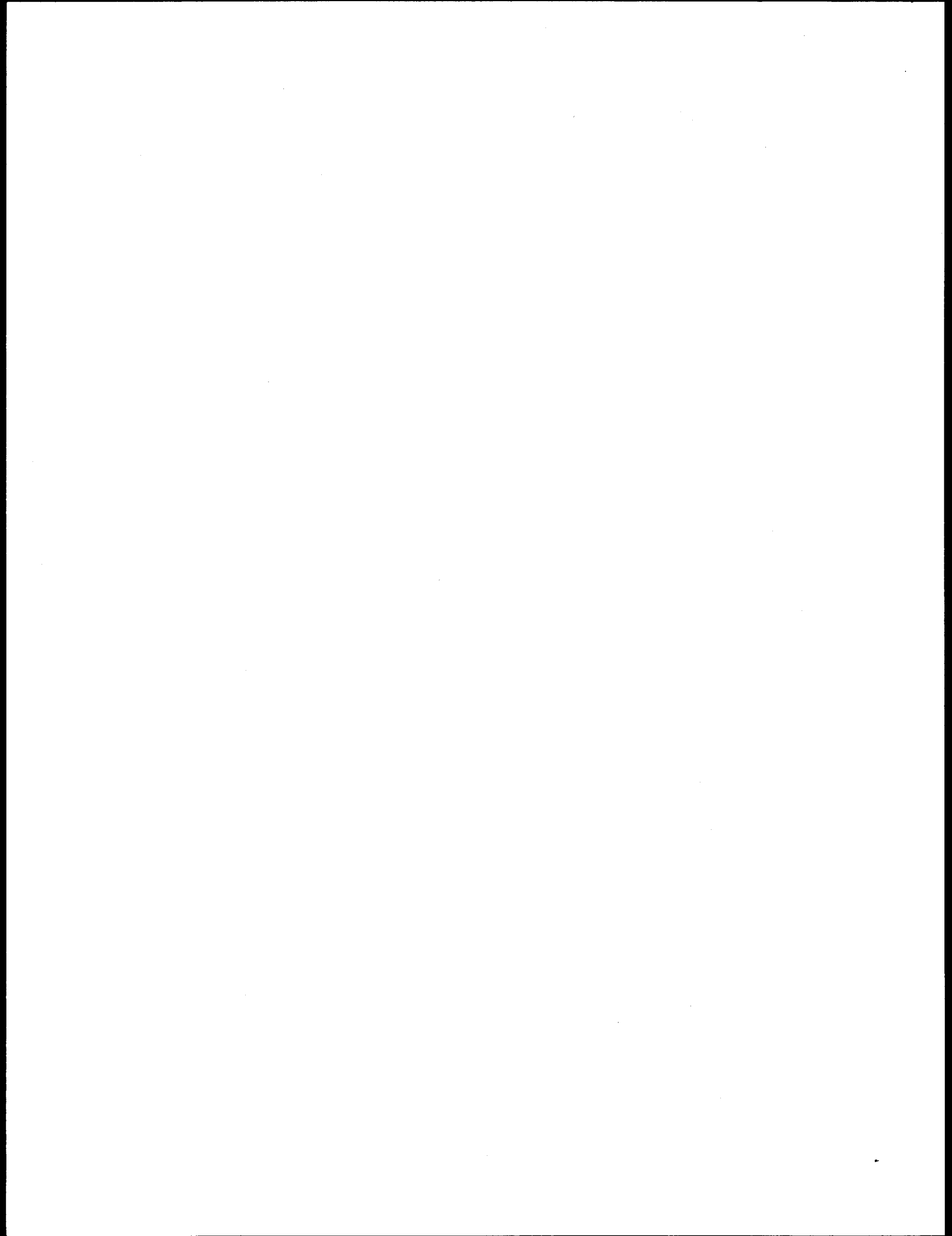


COACHMEN RECREATIONAL VEHICLE COMPANY, LLC



TOWABLE

OWNER'S MANUAL



WELCOME TO "RV'ING" WITH COACHMEN

Welcome to Coachmen's* growing family of satisfied RV owners. Hours of relaxation, adventure and enjoyment await you in your new Coachmen RV. Thousands of Coachmen RV owners have been enjoying their purchase for many years.

This Owner's Manual has been prepared to help you and your family enjoy your new Coachmen RV by providing basic instructions for the operation and maintenance of the appliances, accessories and RV systems. Please read it carefully and follow the instructions. Also read and follow the instructions contained in the appliance and accessory manufacturers' instruction booklets provided with your RV.

If you have any questions regarding operation, maintenance, or service, please contact Coachmen RV or your Coachmen dealer so we can assist you. Your complete satisfaction is of the utmost importance to your dealer and to Coachmen.

Operation and maintenance instructions regarding appliances in this manual were obtained from the manufacturer's booklets and are used with the permission of those various manufacturers. Coachmen Recreational Vehicle Company, LLC reserves the right to present edited portions of these materials.

Coachmen offers a wide variety of recreational vehicle models and choices of standard and optional equipment; therefore, certain descriptions in this manual may not apply to your RV. Ask your authorized dealer, or see the current brochure for information on the availability of standard or optional equipment.

Thank you for selecting our product. The entire Coachmen family wishes you many safe and enjoyable journeys in your new Coachmen RV.

Sincerely,

The Coachmen Team

NOTE:

Coachmen Recreational Vehicle Company, LLC works year round to improve its' product. As a result, all specifications and equipment are subject to change without notice.

All information contained in this Owner's Manual is believed to be accurate at the time of publication, however; during the model year, it may be necessary to make revisions and Coachmen reserves the right to make all such changes without notice.



LEGEND

THE FOLLOWING LEGEND IS INTENDED TO EXPLAIN THE VARIOUS ICONS (PICTURES) WHICH ARE USED THROUGHOUT THE MANUAL. THEY ARE USED PRIMARILY FOR YOUR CONVENIENCE AND TO BRING ATTENTION TO THE INFORMATION AT HAND.



WARNING!!!

THIS SYMBOL IS USED TO ALERT THE USER TO PRECAUTIONS THAT INVOLVE YOUR PERSONAL SAFETY AS WELL AS VEHICLE DAMAGE.



CAUTION !!!

THIS SYMBOL INDICATES THAT A FAILURE TO OBSERVE OR FOLLOW THE INSTRUCTIONS COULD RESULT IN DAMAGE TO THE VEHICLE OR EQUIPMENT.

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SECTION ONE

Safety Features and Driving Tips

COMMENTS

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INTRODUCTION

Congratulations on the purchase of your new Coachmen® recreational vehicle. We sincerely thank you for choosing our product. You'll find many useful tips for the basic operation and maintenance of your Coachmen vehicle's systems and appliances in this Owners Manual.

If you are a first-time RV'er, we want you to learn to operate your vehicle correctly and be able to use components, appliances and any optional equipment in the most efficient manner and with confidence. If you are a veteran RV'er, you know that things change and a quick review of this manual will bring you up to date on what's new.

We would recommend you take a short trip first. The experience you will gain from this will help make your future RV'ing more enjoyable. While there are many accessories available to complement the standard and optional equipment you've chosen for your Travel Trailer or Fifth Wheel, you may wish to use your vehicle several times before you invest in these accessories. What may be a necessity for one RV'er could prove to be of no value to you. Remember, your dealer is always ready to help and advise you.

NOTE: Due to individual taste and optional floor plans offered, your vehicle may not have all of the components illustrated or described in this manual. Ask your dealer for details concerning the specifics of your travel trailer or fifth wheel recreational vehicle.

COMMENTS

NOTES: _____

TAKING DELIVERY

Your recreational vehicle has been inspected by factory personnel throughout the manufacturing process. Our final factory check by quality control inspectors is not the last one. Your dealer performs additional pre-delivery inspections and systems checks. They will also help you understand the Warranty and complete any necessary forms.

DEALER RESPONSIBILITIES:

1. Orienting the customer to the recreational vehicle, its' systems and components as well as their operation.
2. Insuring the customer receives a complete Owner's Packet with warranty cards and registrations for the recreational vehicle and for separately warranted products, including operation and maintenance instructions.
3. Review Limited Warranty provisions with the customer, stressing the coverage. Assist the customer in completing these forms if needed and request that the customer read all warranty information as soon as possible, explaining any provisions not clearly understood.
4. Instruct the customer how to obtain local or out-of-town service for the recreational vehicle and its separately warranted components.



COMMENTS

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IMPORTANT DOCUMENTS

Always carry your vehicle registration, insurance policy card(s) and owner warranty registration. If you lend your vehicle, it is best to give the borrower a notarized letter authorizing him to be in possession of the vehicle.

LICENSES

Vehicle licensing laws vary from state-to-state. Check with your state license bureau or the nearest licensing branch office for the requirements of your state.

INSURANCE

Consult your insurance agent about personal liability, property damage, collision and theft of contents insurance for your new recreational vehicle. Always carry your insurance policy and/or card with you when you travel. Obtain current road maps and tourist information for each state you'll visit or drive through

TOWING/HOOK-UP

Tow Vehicle Requirements

If you plan to tow your RV with an automobile or truck you already own, you might wish to upgrade your vehicle by adding heavier-duty shocks, heavier-ply tires, larger battery, larger alternator, etc. Contact your tow vehicle dealer to find out your vehicle's towing capacity. If you plan to purchase a new tow vehicle, be certain to tell your dealer the size and type of RV the vehicle will be towing. Some automotive manufacturers publish brochures that discuss towing considerations. Ask your dealer how to obtain a copy of this information. **To operate the electric brakes installed on your RV, a brake control system must be installed in your tow vehicle.**

Engine Size

The engine must have enough horsepower to handle the tow vehicle, passengers, the RV unit and all of its cargo. Most automotive manufacturers offer a trailer towing package that usually includes the following: larger alternator and battery, heavier-ply tires, side view mirrors, heavier electrical wiring and larger engine and transmission cooling systems. Consult your tow vehicle's owner's manual for specific recommendations for your particular vehicle.

Note: Use of heavier suspension components, springs, shocks, axles or heavier-ply tires does not increase the weight ratings printed on the tow vehicle's "certification" plate.

The Gross Axle Weight Rating (GAWR) of each axle is determined by the axle system components with the lowest weight-carrying capacity. To avoid overloading your vehicle, check the Gross Vehicle Weight Rating (GVWR) and the GAWR.

COMMENTS**WARNING !!!**

THE TOW VEHICLE BATTERY
WILL NOT SUPPLY POWER TO
YOUR UNIT'S BRAKES IF A
SEPARATION OCCURS.

NOTES: _____

Front Jack

Turn the crank counterclockwise until the dolly wheel/jack foot is off the ground. Remove the wheel or foot and store it. Continue turning the crank until the front jack is as high as possible; this will prevent it from hitting the ground during travel. If you have a power front jack, activate the switch and fully retract the jack. Depending on the model of your power jack, you may have to remove the switch cover before activating the switch; be sure to replace the switch cover after use.

Safety Chains/Electrical Connections

Cross the safety chains under the "A" frame and attach them to the tow vehicle's hitch platform. Plug the pigtail into the tow vehicle's electrical harness. Leave enough slack in the chains and the pigtail to allow the unit to turn freely. Safety chains and pigtails should **not** touch the ground.

Breakaway Switch

The breakaway switch is a safety device that will automatically activate your RV's electric brakes if your RV unit accidentally separates from the hitch. Attach the switch-activating cable to the tow vehicle bumper or to the tow bar portion of the hitch platform. Do not loop the cable around the hitch ball. Adjust the cable length so that it pulls the pin out of the switch before the coupler drops onto the safety chains. Be sure to allow enough slack so that both vehicles turn freely without pulling the pin from the breakaway switch.

Lubricate the pin periodically to ensure good separation. Each time before using your trailer, be sure the pin is securely in place.

Do not use the breakaway switch as a parking brake; it is intended for emergency use only.

Note: The tow vehicle battery WILL NOT supply power to your unit's brakes if a separation occurs. If the pigtail also disconnects, THE RV'S BRAKES WILL NOT WORK UNLESS AN RV BATTERY HAS BEEN INSTALLED. Keep batteries charged at all times to ensure safe operation.

Hitch Ball Height

When the loaded trailer is hitched to the tow vehicle, check the ball height. This can be determined by measuring the distance from the top of the curved portion of the coupler to the ground. Adjust the equalizing bars of the hitch assembly so that the tow vehicle and the trailer are essentially level.

A high hitch will transfer weight behind the axle(s) and cause the vehicle to fishtail. A low hitch will transfer additional weight to the hitch. Refer to the hitch manufacturer's instructions to adjust the weight distributing hitch to the proper height.

COMMENTS

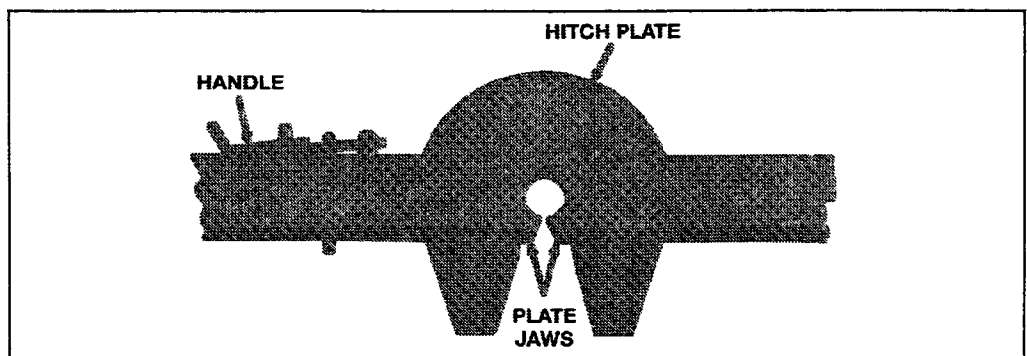
NOTES:

FIFTH WHEEL**Coupler**

The fifth wheel coupler fits a pin-type connection. The fifth wheel can be towed only by a pickup truck. Be sure the truck can carry the hitch weight of your RV. The hitch weight for your RV is listed in the sales brochure.

Hitch/Hook-Up

Fifth wheel hitch assemblies come in varying total weight and pin weight capacities. Please consult a local hitch supplier or the manufacturer for further information.



FIFTH WHEEL PLATE (TYPICAL)

1. Lower or remove the tailgate of the pickup truck.
2. To release the hitch plate jaws pull the handle until a snap is heard.
3. Back the truck up until the pin is caught by the plate jaws.
4. Once connected, activate your electric jacks or turn the jack crank handle counterclockwise to raise the jacks as far as possible.
5. Remove the pin in each jack.
6. Raise the adjustable part of the jack as far as possible and reinsert the pin to hold the jack in position.

There are several types of fifth wheel hitches. Although the one described here is typical, have your dealer demonstrate and explain the proper hitching and unhitching procedure for your vehicle's hitch.

Electrical Connection

Plug the pigtail into the electrical harness of the truck. Be sure there is enough slack to allow the vehicle to turn without disconnecting the pigtail.

Ground Clearance

When the loaded unit is connected to the tow vehicle, check the ground clearance. If the front of the unit is too high, weight will be transferred behind the axle(s). This could cause the unit to fishtail. If the front of the unit is too low, additional weight will be transferred to the truck.

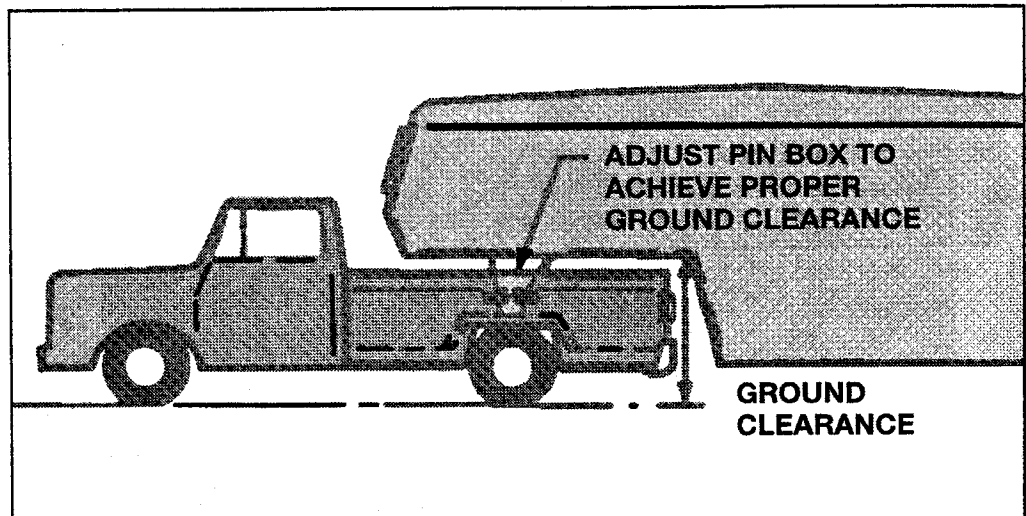
COMMENTS **WARNING**

DO NOT ALLOW THE SAFETY CHAINS OR THE PIGTAIL WIRING TO DRAG ON THE GROUND. THIS COULD CAUSE EXCESSIVE WEAR AND POSSIBLY PREVENT THE TAIL LIGHTS FROM WORKING AND WEAKEN THE SAFETY CHAIN.

NOTE: BE SURE THE HITCH PIN IS SECURELY IN PLACE BEFORE USING YOUR RV.

NOTES:

For proper height, adjust the pinbox by removing the bolts on each side. Raise or lower the box until the holes are aligned, and then reinsert and tighten the bolts.



FIFTH WHEEL GROUND CLEARANCE

Loading

Distribute your cargo evenly from side-to-side and from front-to-back. Load-leveling hitches are available; however, rely on some experienced recommendations to determine if your vehicle and tow vehicle are suitable for such a load-leveling hitch.

Heavier items should be stored in a central location, on or near the floor. They should be secured so they cannot slide during a sudden stop. Loose cargo can cause damage and alter your load balance. Lighter items can be stored in overhead cabinets or other areas.

Remember to leave space and weight allowance for items you may purchase during your travels.

A properly loaded unit can help conserve fuel and prevent excessive wear on your tow vehicle.

Weight Determinations

It is extremely important that you weigh your unit **before** you leave on a trip. Check the Gross Axle Weight Rating (GAWR) and the Gross Vehicle Weight Rating (GVWR) found on the Federal Sticker affixed to each vehicle.

The Federal Sticker or certificate lists the unit Serial Number and the front and rear GAWR and GVWR. It is located on the left outside front corner of your vehicle. Your tow vehicle has a similar sticker. The ratings listed on each sticker is for the specific wheel and tire sizes listed.



COMMENTS

NOTES:

Vertical column of horizontal lines for handwritten notes.

You can weigh your vehicle at a grain elevator, sand and gravel dealer or government weighing station. Weigh your unit fully loaded. There may be a small fee for weighing your vehicle; however, it is an investment in safe traveling and peace of mind. Check your Yellow Pages for the address and telephone number of the weighing facility nearest you.

MFD. BY:					DATE
INC. VEH.					DATE
MFD. BY					DATE
	GAWR LB	TIRES	PSI COLD SINGLE	PSI COLD DUAL	RIMS
FRONT					
INTER-MEDIATE					
REAR					
GVWR LB	MODEL NUMBER				
TYPE	VEHICLE I.D. NUMBER				
THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT IN					

FEDERAL STICKER (EXAMPLE)

We suggest that you record this sticker information in the space provided to ensure that you always have the information close at hand.

GVWR _____ GAWR Front _____

GAWR Rear _____ with _____ tires

RIMS _____ at _____ PSI cold

Note: Exceeding the GVW and GAW ratings for your unit could result in serious damage to the suspension, frame or other components of your vehicle and void the warranty on those parts. Use of heavier suspension components (springs, shocks, axles) or heavier-ply tires does not increase the weight ratings printed on the tow vehicle's certification plate.

The GAWR of each axle is determined by the axle system components with the lowest weight-carrying capacity. To avoid overloading your vehicle, check the GVWR and GAWR.

WEIGHT DEFINITIONS

- **GVWR**--(Gross Vehicle Weight Rating) is the maximum permissible weight of this vehicle. The GVWR is equal to or greater than the sum of the Unloaded Vehicle Weight plus the Net Carrying Capacity.
- **GAWR**--(Gross Axle Weight Rating) is the allowable weight, including cargo, which can be safely supported by each axle.



COMMENTS



CAUTION !!!

EXCEEDING THE GVW AND GAW RATINGS FOR YOUR UNIT COULD RESULT IN SERIOUS DAMAGE TO THE SUSPENSION, FRAME OR OTHER COMPONENTS OF YOUR VEHICLE AND VOID THE WARRANTY ON THOSE PARTS.

IT IS NOT RECOMMENDED THAT YOU TOW ANYTHING BEHIND YOUR TRAVEL TRAILER OR FIFTH WHEEL. IF WEIGHT IS ADDED TO THE BACK OF THE VEHICLE (WHICH TAKES WEIGHT OFF THE HITCH PIN), DAMAGE COULD OCCUR TO THE FRAME, AND TOWABILITY COULD BE AFFECTED. YOU COULD ALSO BE VIOLATING STATE LAWS PERTAINING TO VEHICLE LENGTH, AS WELL AS VOIDING WARRANTY COVERAGE.

TIP: A PROPERLY LOADED UNIT CAN HELP CONSERVE FUEL AND PREVENT EXCESSIVE WEAR ON YOUR TOW VEHICLE.

NOTES: _____

- **UVW--(Unloaded Vehicle Weight)** The weight of the unit with no fluids, cargo, optional equipment or accessories.
- **HITCH WEIGHT--**The weight at the hitch of this model with the unit sitting level. This weight includes typical options, but does not include the weights of full fresh water tanks, full holding tanks, and full LP gas tanks.
- **CCC--(Cargo Carrying Capacity)** - This is equal to the GVWR minus each of the following: UVW, full fresh (potable) water weight (including water heater) and full LP gas weight. A sample Computation of the Cargo Carrying Capacity is included on the Weight Information Sheet.
Note: See sample of Weight Information Sheet on next page.

Four Corner Weights

When possible, it is desirable to obtain the individual weights at each tire, (dual tires on the rear). This requires using scales which are capable of measuring each corner weight individually.

The corner weights should not exceed 1/2 of the respective Gross Axle Weight Rating (GAWR) or the maximum load rating for the tire (or set of dual tires at the rear), whichever is less. The maximum load rating for the tire can be found embossed on the tire's sidewall.

NOTE: IF ANY OF THE CORNER WEIGHTS EXCEED 1/2 OF THE LISTED GAWR OR TIRE RATINGS, RELOCATE THE PASSENGERS AND REDISTRIBUTE OR REMOVE A PORTION OF THE CARGO UNTIL THE WEIGHT IS WITHIN THE PROPER LIMITS FOR ALL FOUR CORNERS OF THE VEHICLE.



COMMENTS

NOTES:

S • A • M • P • L • E
WEIGHT SHEET

(00/00/00) TOWABLE - UNIT WEIGHT INFORMATION SHEET
MM/DD/YY

PRODUCT NAME _____ YEAR _____ MODEL # _____ SERIAL# _____
(EXAMPLE) SPIRIT OF AMERICA 2003 249 QB 1TC2B249_3

10,800 LBS. GVWR (GROSS VEHICLE WEIGHT RATING) is the maximum permissible weight of this trailer when fully loaded. It includes all weight at the trailer axle(s) and tongue or pin.

7,381 LBS. UVW (UNLOADED VEHICLE WEIGHT) is the weight of this trailer as manufactured at the factory. It includes all weight at the trailer axle(s) and tongue or pin. If applicable, it includes full generator fuel, engine oil, and coolants. The UVW does not include cargo, fresh water, LP gas, or dealer installed accessories.

1,157 LBS. CCC (CARGO CARRYING CAPACITY) is equal to the GVWR minus each of the following: UVW, full fresh (potable) water weight (including water heater), and full LP-Gas weight.

0,000 LBS. HITCH WEIGHT is the weight at the hitch of this model with the unit level. This weight includes typical options, but does not include the weights of full fresh water tanks, full holding tanks, and full LP-Gas tanks.

TOTAL WEIGHT ON AXLES SHOULD NOT EXCEED COMBINED AXLE RATING: 10,000 LBS.
DO NOT EXCEED 5,000 LBS. PER AXLE

CARGO CARRYING CAPACITY (CCC) COMPUTATION:.....LBS.....(KG.)	
GVWR	10,800.....(4,903.2)
• Minus UVW.....	7,381.....(3,350.9)
• Minus fresh water(3.8kg/gal)..... (weight of 100 gallons @ 8.3 lb/gal.)	830.....(376.8)
• Minus LP-Gas weight of 8.9gallons..... @ 4.5 lb/gal (2kg/gal)	40.....(18.6)
CCC for this trailer*(approx.).....	2,549(1,157.2)

*Dealer installed equipment will reduce CCC

OPTION WEIGHTS IN LBS. (Net Weight Added For Manufacturer Installed Options)

ALL WEIGHTS ARE APPROXIMATE and provided to assist the operator in the proper loading of this vehicle.

CONSULT HITCH MANUFACTURER'S OWNER'S/USER MANUAL for specific weighing instructions and towing guidelines.



COMMENTS

NOTES:

DRIVING

Get to know how your tow vehicle handles with the added weight of your RV. The brakes and steering operation will be different. Before leaving on a trip, practice making right and left turns, braking, backing and accelerating. Your RV is designed to travel at maximum legal highway speeds under ideal conditions. Under less than ideal conditions, your vehicle should be operated at reduced speed and it should never exceed the posted legal speed limits. Before you travel be sure to read APPENDIX A: PRE-TRAVEL CHECK in this manual. Below are tips to help you.

Clearance

Be sure to read "Clearance Height" signs on overpasses, drive-through windows, etc. Watch out for overhanging tree branches, awnings or similar obstructions that can damage your vehicle's roof or roof-mounted equipment and accessories. Check with your dealer for clearance measurements of the unit.

Pulling into Traffic

Check for oncoming traffic in all directions. Signal before entering the flow of traffic. Always accelerate slowly and smoothly; the added weight of your RV makes quick acceleration not only difficult but potentially unsafe.

Passing

Avoid sudden maneuvers when passing a slower moving vehicle. Remember that additional time and distance are required to pass safely. Wait until the road is clear of oncoming traffic for at least 1/2 mile. Check the outside rearview mirrors and signal lane changes before passing other vehicles. When you have safe clearance, signal lane change and return to your original lane.

Braking

Allow a safe distance to stop; follow no closer than one combined tow vehicle/RV length for each 10 mph. A sudden stop may cause your unit to jackknife.

Backing Your RV

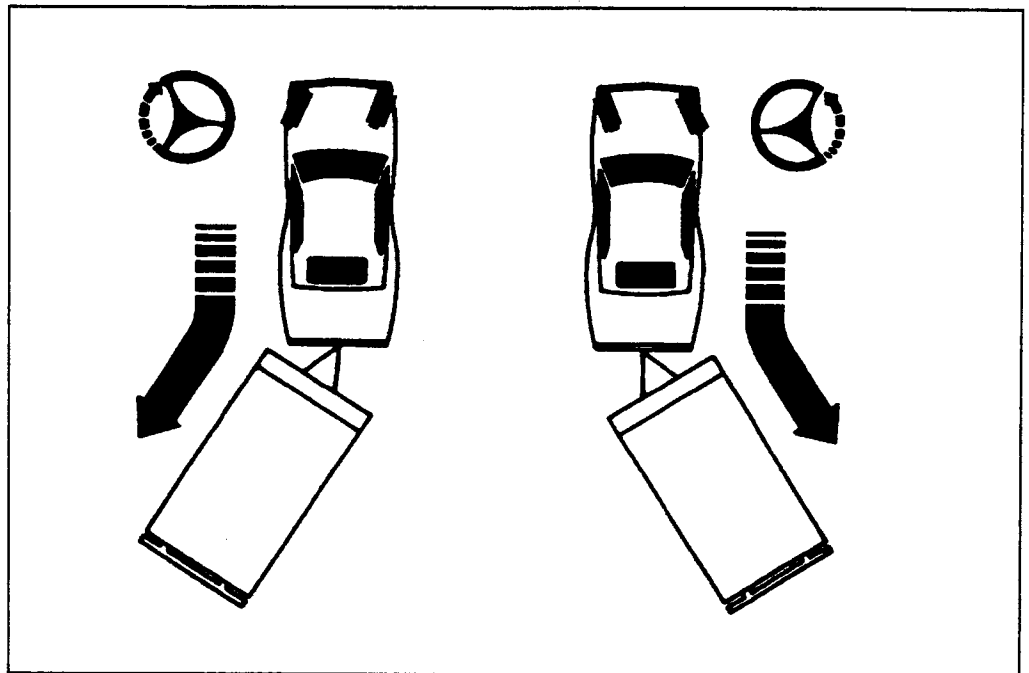
It is very important that you back the RV slowly. Trying to maneuver the RV as you would in normal driving could cause the unit to jack-knife, hit your tow vehicle or cause other damage. The same hazards could result from turning the wheels too sharply when backing the vehicle or when driving normally.

COMMENTS

NOTES:

Backing the unit may require stationing someone beside the unit to guide the driver. When backing your RV, place your right or left hand at the bottom of the steering wheel. To move the trailer to the left, move your hand to the left; to move the trailer to the right, move your hand to the right. If the trailer starts to jackknife, stop, pull forward and start the procedure again.

If you have never backed a tow vehicle and trailer before, practice backing up, or check with your dealer for technique tips.



BACKING YOUR TRAVEL TRAILER OR FIFTH WHEEL

Swaying or Fish-tailing

If this happens while you are towing a vehicle, accelerate slightly and then gradually slow down. If your unit still sways, pull off the road and check the following:

1. Height of equalizer hitch
2. Distribution of cargo
3. Tire pressure
4. Tow vehicle front-end alignment and suspension

Turning

The wheels of your RV are set wider than those of your tow vehicle. Pull several feet farther ahead before turning. This will compensate for the extra width and length of your RV and will help you avoid hitting curbs or parked vehicles.

COMMENTS

NOTES:

Downgrades/Upgrades

When going downhill, reduce your speed and shift the transmission to a lower gear to assist in braking on long or steep downgrades.

To avoid engine overheating when climbing a steep grade, reduce speed and shift the transmission to a lower gear.

Parking on a Grade

Parking vehicles on an upgrade or downgrade is not recommended. If it is necessary in an emergency, apply the brakes and have a passenger place wheel chocks on the downhill side of the tires of your RV.

When in place, slowly release brakes until the unit is stopped by the chocks. Apply parking brake and shift transmission into PARK position (place manual transmission vehicles in gear).

Freeing a Stuck Vehicle

To pull your unit out of the snow, sand or mud, apply slight pressure to the accelerator pedal and move the gear selector rhythmically between first gear and reverse gear. If possible, keep the front wheels pointed straight ahead. Avoid sharp turns. Once the unit starts to move, do not stop until it is on firm ground.

LEVELING/CHOOSING A CAMPSITE**Campsite Selection**

There are many campground guides that will assist you in making your selection. Most campgrounds accept reservations, and during peak seasons, it is wise to do so. If possible, arrive early so you can inspect and choose your campsite during the daylight hours.

During the winter months it is desirable to take advantage of natural windbreaks like trees, bushes or any similar type of windbreak. This will cut down the possibility of cold drafts that can affect the comfort level of your unit.

Set-Up

It is very important that your unit is level. This allows your refrigerator and drainage systems to operate properly (both function by gravity). To level your RV, place a level on the bottom of the refrigerator's freezer compartment or on a normally level location inside the vehicle.

You may wish to permanently attach levels (available at your dealer) on the front and/or back and sides of the RV. This will allow you to tell at a glance if you've stopped on a level site and will help speed the leveling process.

COMMENTS **WARNING!!!**

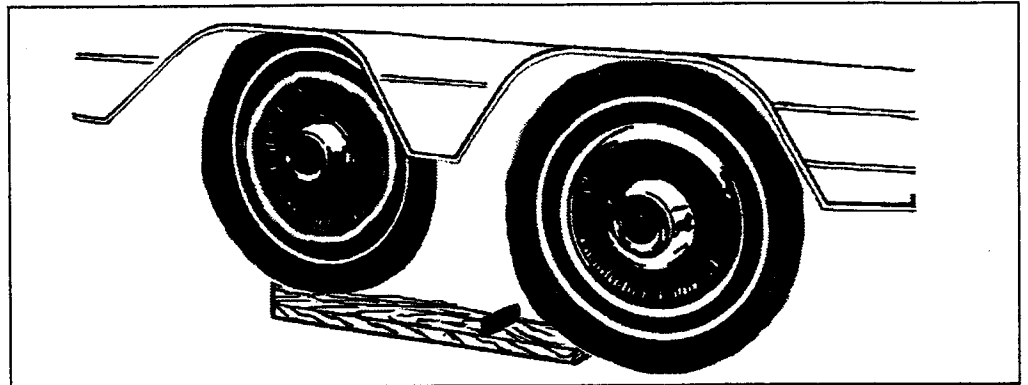
STABILIZER JACKS ARE DESIGNED FOR STABILIZING ONLY. **DO NOT** ATTEMPT TO USE THEM TO SUPPORT THE FULL WEIGHT OF THE RV.

TIP:

USING BLOCKS UNDER THE JACKS WILL HELP KEEP THE UNIT LEVEL AND WON'T ALLOW THE JACKS TO SINK INTO THE GROUND.

NOTES:**Side To Side Leveling**

If the unit needs side-to-side leveling, make a step leveling ramp on the low side out of 1"x6" or 2"x6" boards of varying lengths. Pull the unit forward or back onto the leveling ramp until the low side is level. Many experienced RV'ers carry leveling boards or blocks in their unit for this purpose.



STEP LEVELING RAMP

**Front-To-Back Leveling
Travel Trailer**

To level a travel trailer from front-to-back, prepare to unhitch the unit from the tow vehicle by installing the dolly wheel/jack foot and crank or run the front jack down. Never rest the unit on the front jack without the dolly wheel/jack foot being attached, or without a board under it. (A dolly wheel/jack foot is not recommended with a power jack.)

If the ground or surface is soft, place a board under the dolly wheel/jack foot or jack. Disconnect the safety chains, the pigtail and the breakaway cable from the tow vehicle. Move the front jack up or down until the unit is level.

Jack stands, available from your dealer, may be placed under the frame to eliminate sway when persons move about inside the unit. If you use a jack stand, lower the front jack about two inches below level. Place a jack stand under both main frame members—**NEVER AGAINST THE FLOOR**—at the rear of the trailer.

Raise each jack until it touches the frame. Raise the front jack about two inches above level, and place jack stands under the main frame members near the front of the unit. Raise the jacks until they touch the frame, then lower the front jack to level.

Level unit by moving jacks up or down. Install jack stands at the rear of the fifth wheel by lowering the front jacks two inches below level and placing jacks under the rear main frame members—**NEVER AGAINST THE FLOOR**. Raise the jacks until they touch the frame. Level by raising the front jacks.



COMMENTS

NOTES:

Some RVs will have installed, for your convenience, permanently mounted stabilizing jacks. If your RV has this type of jack, unhitch the RV and, using the RV's front jack, get a front to rear level.

Check level for low side of trailer (some camping sites are not level and it will be necessary to use a leveling ramp on the low side of the trailer). Lower the stabilizing jacks on the LOW side of the trailer to a level position. Lower the stabilizers on the opposite side of the trailer to the ground and firm up.

An angle of 55 to 60 degrees on the jack legs provides the best stabilization. Before moving your trailer, crank the stabilizers to the fully closed position, and give it a quarter turn to tightly secure.

If your unit has a power front jack, you may have to remove the switch cover to run the jack up or down. The switch is spring-loaded and will return to the OFF position when released. If your power jack has a switch cover, be certain to replace it when the switch is not in use. Familiarize yourself with the direction and travel of the jack post and the corresponding switch direction.

Fifth Wheel

To level the fifth wheel, lower the front jacks. Place a board under each jack foot. Disconnect pin hitch, pigtail and breakaway cable. Remove or lower tailgate and drive truck away.

Level unit by moving jacks up or down. Install jack stands at the rear of the Fifth Wheel by lowering the front jacks two inches below level and placing jacks under the rear main frame members----NEVER AGAINST THE FLOOR. Raise the jacks until they touch the frame. Level by raising the front jacks.



COMMENTS

CAUTION !!!

THE TRAILER/FIFTH WHEEL MUST BE LEVEL AND PROPERLY SUPPORTED BY THE STABILIZING JACKS BEFORE THE SLIDE ROOM IS EXTENDED.

NOTES:

Multiple horizontal lines for handwritten notes.

SLIDE ROOM OPERATION

Select models of travel trailers and fifth wheels are equipped with slide-out rooms. There are different methods of operating the slide room. See instructions below, or contact your authorized dealer for additional operating instructions. **NOTE: THE TRAVEL TRAILER/FIFTH WHEEL MUST BE LEVEL AND PROPERLY SUPPORTED BY THE STABILIZING JACK BEFORE EXTENDING THE ROOM.**

MANUAL OPERATION

The room can be manually operated by slightly rotating the long driveshaft to release room seal pressure and by releasing the 15/16" disengagement nut on the motor/gearbox assembly.

The room can be retracted or extended by rotating the manual drive nut located on the opposite end of the driveshaft from the motor assembly.

Be sure to engage the nut to lock the room in the full **IN** or **OUT** position. The override nut is located under the bed in bedroom slide rooms. Rotate the nut to retract the room. The trailer/fifth wheel must be level and properly supported by the stabilizing jacks before the slide room is extended. The use of supports under the slide room itself is not necessary or recommended.

The room is designed to properly seal without the use of room supports. To **extend** the room:

- Remove travel locks if so equipped.
- Insert the supplied crank handle into the manual crank mechanism and crank the room to the fully extended position.

To **retract** the room:

- Crank room in.
- Install travel locks if so equipped.

Note: It is not necessary to use excessive force to seal the room in the **IN** or **OUT** position.

Note: Before extending or retracting the room, check for interior or exterior obstructions which may hinder room travel. Check for items which may have fallen into the area between the interior flange and the outside wall.

ELECTRICAL OPERATION

The trailer must be level and properly supported by the stabilizing jacks before the slide room is extended. The use of supports under the slide out room itself is not necessary or recommended. The room is designed to properly seal without the use of room supports.



COMMENTS

⚠ WARNING !!!

BE SURE YOU REMOVE OR UNLOCK ANY DEVICES THAT MAY BE USED TO LOCK THE ROOM IN THE CLOSED POSITION.

NOTE: BEFORE EXTENDING OR RETRACTING THE ROOM, CHECK FOR INTERIOR OR EXTERIOR OBSTRUCTIONS WHICH MAY HINDER ROOM TRAVEL. CHECK FOR ITEMS WHICH MAY HAVE FALLEN INTO THE AREA BETWEEN THE INTERIOR FLANGE AND THE OUTSIDE WALL.

NOTE: IT IS NOT NECESSARY TO USE EXCESSIVE FORCE TO SEAL THE ROOM IN THE **IN** OR **OUT** POSITION.

NOTES:

Note: Before extending or retracting the room, check for exterior or interior obstructions which may hinder room travel. Check for items which may have fallen into the area between the interior flange and the outside wall.

To **extend** the room:

- Remove travel locks if so equipped.
- Push the in/out switch located inside the unit to the **OUT** position and hold the switch until the room is fully extended.
- Release the switch when the room is fully extended.

To **retract** the room:

- Push and hold the in/out switch to the **IN** position until the room is fully retracted.
- Release the switch when the room is fully retracted.

IMPORTANT: HOLDING THE SWITCH IN THE IN OR OUT POSITION AFTER THE ROOM HAS REACHED THE FULL EXTENT OF TRAVEL COULD RESULT IN DAMAGE TO THE STRUCTURE OR MECHANISM.

It is necessary to have a fully charged 12 volt battery installed to electrically operate the room. The room will not operate properly without the battery even if the 110 volt shore line is plugged in.

**SEE FOLLOWING TWO PAGES FOR
POWER GEAR / DEWALD
SLIDE OUT SYSTEM ILLUSTRATIONS**



COMMENTS

▲ WARNING !!!

DO NOT COVER EMERGENCY WINDOW(S). THESE EXIT WINDOWS MUST REMAIN ACCESSIBLE AT ALL TIMES.

▲ CAUTION !!!

DAMAGE OR DETERIORATION DUE TO LONG TERM OCCUPANCY MAY CONSTITUTE AN "UNINTENDED USE" OF YOUR RV AND WILL NOT BE COVERED UNDER YOUR WARRANTY.

NOTES:

Multiple horizontal lines provided for handwritten notes.

AIR QUALITY/LIVING AREA

CONDENSATION

Condensation is "the process by which a gas or vapor is changed to liquid". This process occurs when there is too much moisture in the air and not enough air movement. It can be a problem in modern, tightly-constructed, well insulated RVs. Certain amounts of condensation should be expected, especially on cool surfaces such as windows, roof vents, and metal door frames. However, excessive condensation can cause water damage and infiltrate the RVs' insulation causing it to become damp, thus reducing its' insulation properties.

Condensation can appear as fog, frost or ice on the inside of windows indicating moisture is trying to escape to mix with drier air. It may also occur inside the walls and ceilings where it is hidden from view. Evidence of trapped water vapor or hidden condensation could be water stains on the ceiling, warped moldings or trims, water running down the walls, dripping from fixtures or softened wall or ceiling materials. Other indicators of excessive moisture could be damp carpet, paint failure, mold or mildew and damage to furniture. If any of these situations should occur, be sure to check all the normal functions of your RV, such as plumbing, seals, windows and roof, before assuming it is condensation. Just like your home, inspections and maintenance should be performed on a regular basis.

Keep in mind that your RV is a confined space and unlike a permanent dwelling, has limited venting capacity. Activities such as cooking, dish washing, cleaning, laundry and bathing add moisture to the air, so when performing these functions remember to keep your RV well ventilated to allow moisture to escape. By being aware of the causes, you may also be able to decrease the risks.

Your recreational vehicle was designed primarily for recreational use and short term occupancy, not a permanent dwelling. If you use your RV as a permanent dwelling or for prolonged periods of time, it is more susceptible to this condition. The number of inhabitants and pets residing in your RV are also a factor, as breathing and perspiration are impossible to avoid but do add to the moisture content in your unit.

If you intend to use your RV for an extended period, be prepared to take steps to prevent condensation, mold or mildew. Prevention can be a scheduled event, on your time frame. An unexpected repair is not only inconvenient, but can be more costly than a scheduled repair.

COMMENTS **WARNING !!!**

DO NOT USE THE OVEN OR RANGE FOR HEATING PURPOSES OR TO ELIMINATE THE EFFECTS OF CONDENSATION. IN ADDITION TO HAZARDOUS TOXIC FUMES, OPEN FLAMES WILL ADD MOISTURE TO THE INTERIOR AIR, THUS INCREASING THE CONDENSATION CONTENT.

NOTES**CONTROLLING CONDENSATION**

- **QUICK ACTION** - If leaks or spills occur indoors, clean it up quickly. In most cases mold and mildew do not grow if the area is dried within 24-48 hours.
- **REPAIR** - Regularly clean and repair any items installed on the roof. Check for debris or blockages in the vents. (If roof vents are properly maintained and sealed, yet you still have water dripping from the vents, it could be condensation.) Be sure all seals are tight, and check for loose screws or moldings
- **LOWER THE HUMIDITY INSIDE YOUR RV** - Keep indoor humidity below 60 percent relative humidity, (ideally between 30-50 percent). Relative humidity can be measured with a humidity meter, which is available at most hardware stores. The meter is an inexpensive way to avoid the far more costly repairs of water damage.

Note: Even if it is raining or snowing, opening a vent for more air circulation will decrease moisture. Ventilated air from outside is drier than interior air.

REDUCING HUMIDITY LEVEL

- When bathing, open the bathroom vent to allow steam and moisture to escape.
- Avoid hanging wet clothing inside to dry .
- If using a clothes dryer, be sure it is properly vented according to manufacturer's instructions.
- Remove and dry wet shoes and rain gear. Avoid allowing them to air dry inside causing rain or snow to soak into the carpet or rug.
- When cooking, avoid boiling. As an alternative, use the microwave when possible. Many items can be cooked in the microwave with minimal water.

Note:

If you follow these guidelines and continue to have an excessive amount of moisture, you may want to consider using a dehumidifier.

REMINDER:

Left unchecked, these repairs could become very costly and this type of preventable damage is not warrantable.

COMMENTS

NOTES:

TABLES/BEDS

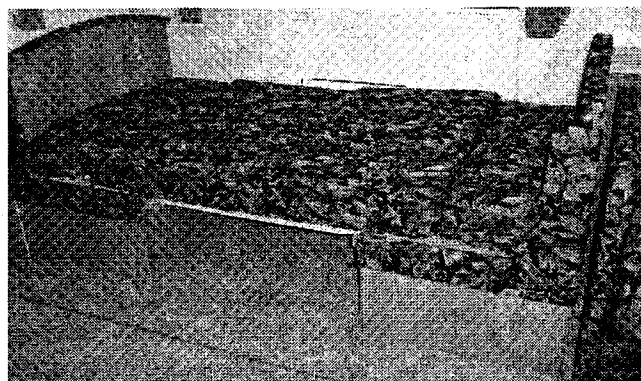
Listed below are general instructions for setting up the variety of tables and beds that may be found in your RV. Your dealer will be happy to demonstrate the function of these items.

Dinette Booth Assembly

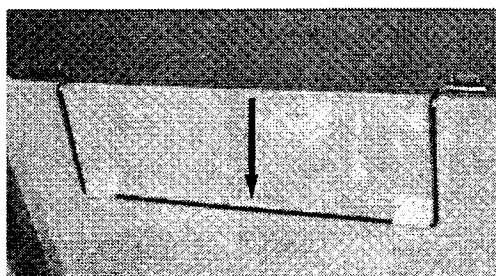
To raise the table, pull the table toward you and up, then push it toward the wall. Insert tabs at back of table into the wall brackets. Pull the leg down and adjust to the proper height. To lower the table into the bed position, reverse the above operation.



DINETTE BOOTH



DINETTE BOOTH/BED



DINETTE TABLE HINGE



DINETTE TABLE TABS

COMMENTS

NOTES:

Horizontal lines for taking notes.

Sofas/Beds

Several types of sofas are available, depending upon your floor plan. Most of the sofas also convert into a bed. Consult your dealer for proper instructions for the sofa in your unit.



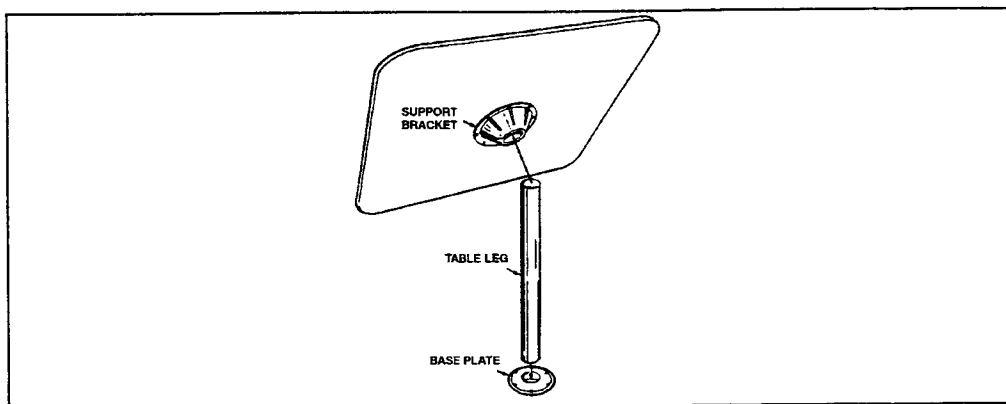
JACKKNIFE SOFA

HIDEABED SOFA BASIC



SOFA BED

PEDESTAL TABLE



(To assemble, insert table leg into base plate. Lower table support bracket onto the leg.)

COMMENTS**WARNING !!!**

DISCONNECT THE 120 VOLT (SHORELINE CORD) AND DISCONNECT THE NEGATIVE TERMINAL FROM THE BATTERY BEFORE WORKING ON THE ELECTRICAL SYSTEM. FAILURE TO DO SO COULD RESULT IN SEVERE BURNS, SHOCK OR ELECTROCUTION.

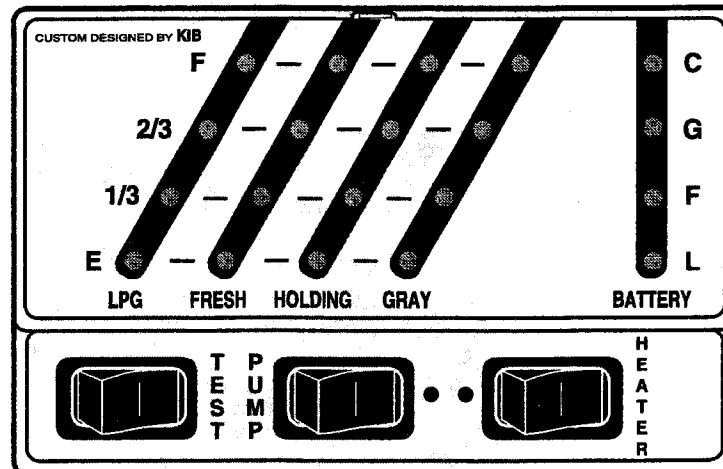
NOTES: _____

ELECTRICAL

This section will describe the four basic utility systems found in your RV. They are: Electrical, Fresh Water, Drainage/Sewer and LP Gas. The following will familiarize you with their function, operation and simple maintenance. If a problem should develop with any of the systems, contact your authorized dealer for service.

Monitor Panel

This panel allows you to check the condition of your RV battery and the volume of fresh, waste and gray water in your unit's holding tanks, the water pump and water heater switch.



MONITOR PANEL (EXAMPLE)

NOTE: THE MONITOR PANEL ILLUSTRATED IS TYPICAL. THE ONE IN YOUR UNIT MAY LOOK AND FUNCTION DIFFERENTLY. YOUR DEALER WILL BE HAPPY TO EXPLAIN THE OPERATION OF YOUR MONITOR PANEL.

Battery Connection Levels

The battery condition will fall into one of the following levels:

- C CHARGED--more than 14.5 volts (unfiltered circuit or dead cells in battery).
- G GOOD--12.6 to 14.49 volts.
- F FAIR--12.0 to 12.5 volts.
- L LOW--5 to 11.9 volts.

COMMENTS

NOTES:

Battery

The liquid level in the battery must be above the plates. It should be checked frequently (daily during heavy usage). The battery manufacturer recommends using a good grade of drinking water (not mineral water). The battery terminals should be kept free of dirt and corrosion. The charge level of the battery should be checked frequently. You may use a battery hydrometer to do this. When specific gravity is below 1.225, recharge the battery until the 1.265 level is indicated.

Power Distribution Chart

POWER CENTER and/or 12-VOLT BATTERY	120-VOLT ELECTRICAL
All interior lights	Power center
Porch light	All receptacles
Trunk lights	Refrigerator
Radio	Air conditioner(s)
Water pump	Microwave
Monitor panel	Washer/dryer
Range vent	Television
Power roof vent	VCR
Slide-Out Room	Stereo
Television (front & rear)	Water Heater
Television antenna	
Water heater (electronic ignition)	
Furnace (electronic ignition)	
Grab handle (lighted)	
LP leak detector	
Refrigerator	

Range Hood

The light and fan of your power range hood are controlled by switches on the front. Use the fan to draw smoke and cooking fumes out of the unit.

Cleaning the Range Hood

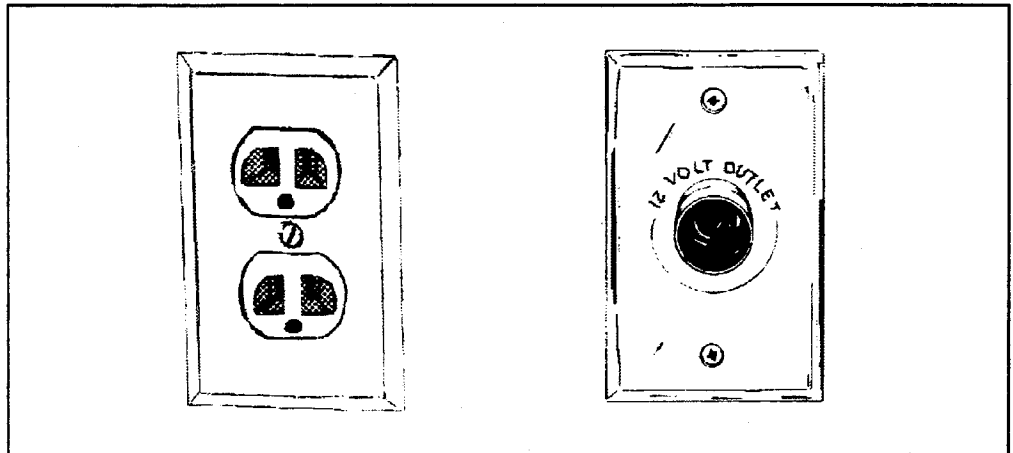
- To clean the power hood filter, push slot located in center front of screen and pull down. If not greasy, simply tap the filter to loosen and dislodge any debris. If the filter is greasy, wash in hot soapy water until grease dissolves. Allow the filter to drain and dry, then replace by positioning the flanges and push into place.
- Clean the power hood plastic light cover by removing and washing in warm soapy water. Rinse well, dry and replace.
- Clean metal surfaces using the same procedure as the range top. Dry with clean dry cloth to prevent streaking.

COMMENTS

NOTES:

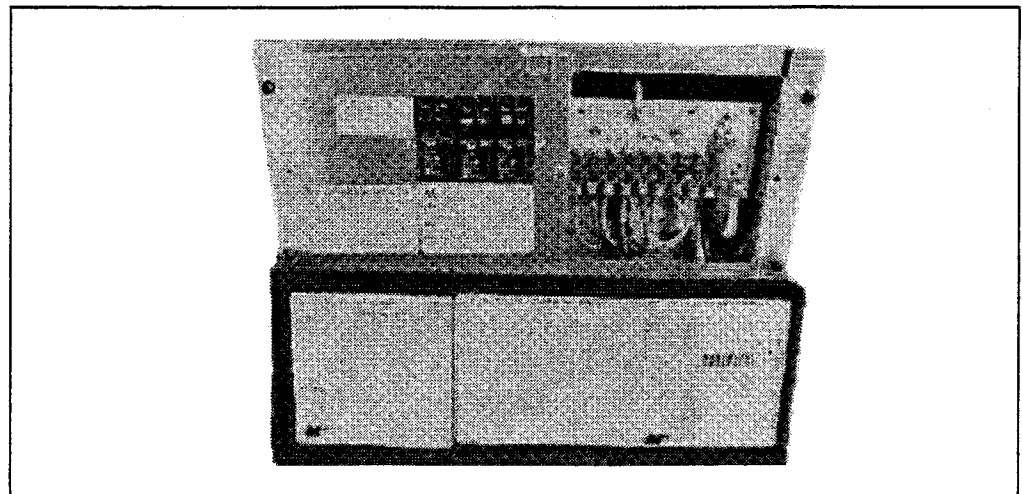
12 VOLT AND 120 VOLT SYSTEMS

Your recreational vehicle contains two (2) separate electrical systems: one 12-volt direct current (DC) and one 120-volt alternating current (AC), similar to the one in homes. These systems provide you with power while you are camped or are traveling. The 120-volt system requires an external source of 120-volt electricity, usually a campsite or household receptacle or an auxiliary generator. The 12-volt electrical system is supplied by batteries, the power converter or the 12-volt source from the tow vehicle.



120 VOLT AND 12 VOLT RECEPTACLES

To reduce the 12-volt load on your RV batteries, the 120-volt system should be used whenever a 120-volt hook-up is available. Although most components in your unit (water pump, range hood light and fan, interior lights) operate only from a 12-volt source, the power converter changes 120-volt AC to 12-volt DC power.



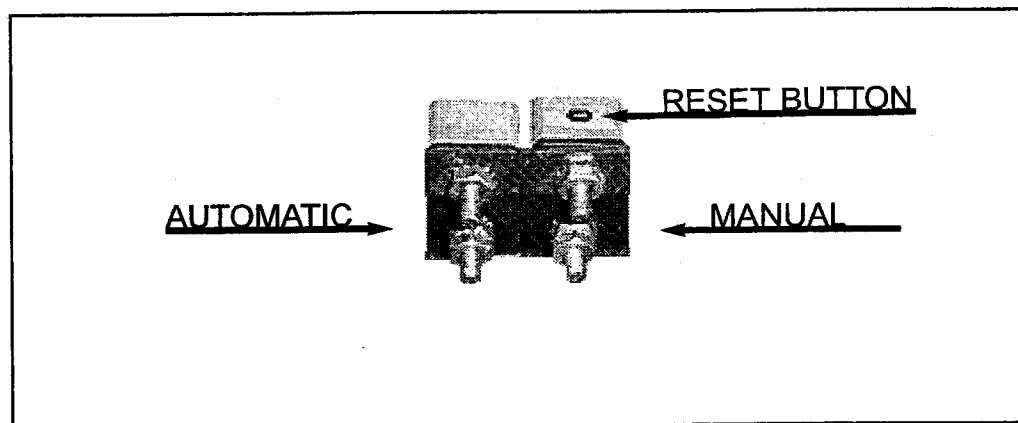
COMBINED POWER CENTER-CONVERTER

COMMENTS

NOTES:

If your unit is equipped with two air conditioners, wiring for a second air conditioner, or a combination washer/dryer, you will have a 50 amp service with a heavy-duty cable and a 4-prong plug. If it is necessary to adapt from the 50 amp plug to a 30 amp receptacle, you will not be able to operate these options.

The 120-volt system is protected by the circuit breakers. If a circuit breaker opens, unplug the appliance(s) on that circuit, allow a short period for the breaker to cool, and reset the breaker. If the breaker continues to open, it may be caused by an appliance you have added, or a fault in the electrical system. If you determine it may be a fault in the electrical system contact your dealer.



AUTOMATIC AND MANUAL CIRCUIT BREAKER

12-VOLT SYSTEM

The 12-volt system, includes the automotive battery and the RV battery, plus the 12-volt converter. To use the automotive battery the electrical pigtail must be attached to your tow vehicle. This provides power to the exterior lights and brakes in addition to all inside 12-volt appliances. The RV battery and/or 12-volt converter provide power to all inside appliances (lights, range hood, furnace blower, water pump, 12-volt receptacles, porch light, monitor panel and refrigerator). The shoreline must be attached to run the converter.

The automotive alternator will charge the RV battery when the pigtail is attached. When the shoreline is attached, the RV battery will be charged by the 12-volt converter.

The pigtail should be disconnected from the tow vehicle when the RV battery is in use. To check the battery using the monitor panel, disconnect the shoreline and turn on at least three interior lights. (A discharged battery will show full charge unless electricity is being drawn.)

COMMENTS



WARNING!!!

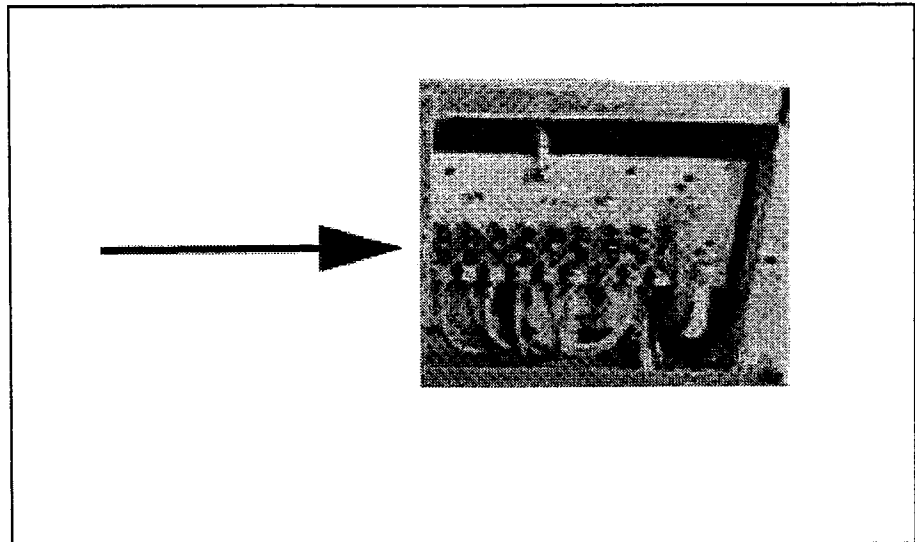
DO NOT REPLACE A FUSE WITH ONE OF A HIGHER AMP RATING.

NOTES:

CONVERTER

The power converter section of the power center transforms 120-volt AC into 12-volt DC to supply power to all of the 12-volt systems. Each 12-volt circuit is protected by a fuse in the power center.

Turn the twist lock to open the door and check the fuses. A listing of the circuits is on the inside of the door. Some fuses protect circuits with more than one function; others may be for specific appliances.



12 VOLT FUSE BLOCK

If a fuse is blown, turn off or unplug all appliances on the circuit controlled by the blown fuse. Replace the blown fuse with a fuse of the **same** ampere rating. If the fuse continues to blow, notify your dealer. See the power center manufacturer’s owner/user manual for specifications, operation and testing procedures.

WATER SYSTEMS

FRESH WATER SYSTEM

Fresh water for your unit is supplied either by the vehicle’s fresh water tank or by an external pressurized source (city water).

Troubleshooting the Fresh Water System

The water heater is an LP gas appliance that heats water to a preset temperature. To fill the water heater, simply turn on a hot water faucet. When water flows steadily, turn the faucet off.

COMMENTS

NOTE:

IF YOUR UNIT IS NOT EQUIPPED WITH AN INLINE PRESSURE REGULATOR, WE RECOMMEND YOU INSTALL ONE. SINCE WATER PRESSURES VARY DEPENDING ON THE SOURCE, THIS WILL HELP PROTECT YOUR WATER SYSTEM AND YOUR SUPPLY HOSE FROM EXCESSIVELY HIGH WATER PRESSURE.

NOTES: _____

There are two common reasons the Fresh Water System may fail. The first is a problem within the system itself; a hose, valve, coupling, road vibration effects, etc. The second most common cause of system failure is neglect. Improper winterization, dirty filters, insufficient battery power and failure to perform proper maintenance will affect how your system operates. Most water system problems can be avoided by conscientious attention to these important details.

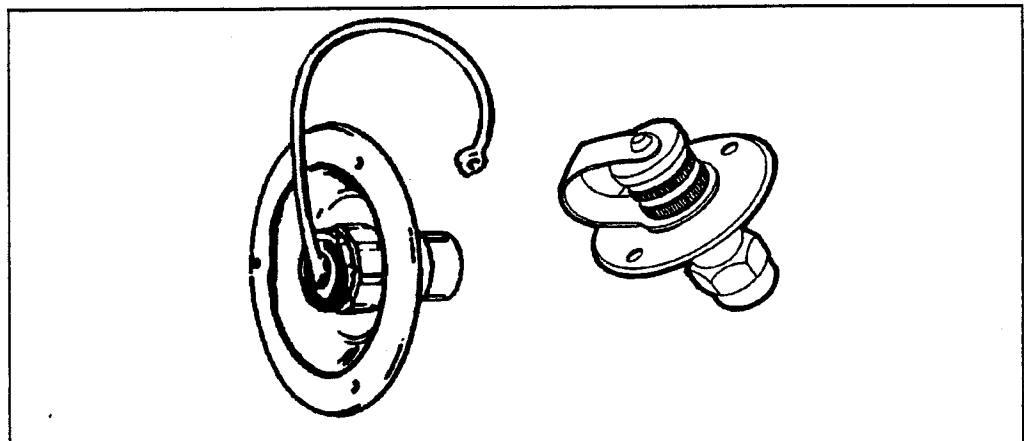
Leaks

Leaks most often occur at a fitting. Vibration while traveling can cause fittings to loosen and impure water can cause hoses or valves to become clogged. Tighten fittings, taking care not to over tighten. If a leak continues to be a problem, check for clogs in hoses or lines and be sure the tank drains are securely closed

Proper winterization is a very important part of leak prevention. See section on WINTERIZATION for additional information.

City Water

When using the city water hookup, the water tank and pump are bypassed. You cannot fill the water tank through the city water inlet. Connect a hose to a 'city pressurized' water faucet and to the RV's fresh water inlet. Although a common garden hose can be used to fill the water tank and connect to city water, long-time RV'ers recommend a hose specifically manufactured for this, available at your dealer.



CITY WATER FILL

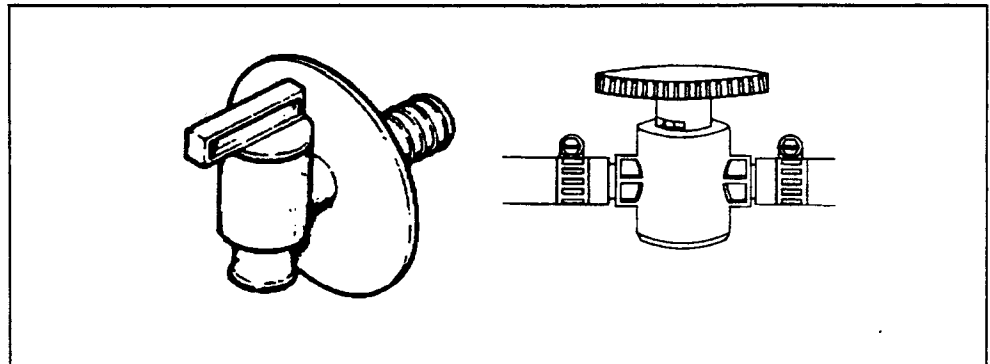
Note: In areas where city water pressure exceeds 60 psi, a pressure regulator should be used. Excessive water pressure may damage lines and connections. See your authorized dealer for more details.

COMMENTS

NOTES:

The water tank should be sanitized before you use it for the first time, after a period of non-use, and whenever you suspect the tank has been contaminated. To sanitize your water tank, first empty the tank and then use the following procedures:

1. Pour 2-1/2 cups of liquid household bleach along with approximately 10 gallons of water into the fresh water tank.
2. Turn the vehicle's water pump on. Open the hot water faucet until water begins to flow. Turn off hot water and repeat with the cold. Wait three hours.
3. Open faucet's, line drains, water tank and water heater drains. Some solution will remain in the water heater.
4. Fill the water tank to the 1/2 level. Turn on the water pump and open all faucet's. Let the water run until the system is empty. Connect a hose to the city water fill. Turn on all faucet's and let the water flow for about five minutes.
5. If a chlorine taste lingers, flush the system with a vinegar and water solution (one quart of vinegar to five gallons water). Wait two to three hours and flush with fresh water.



WATER TANK DRAINS

WATER PUMP

The water pump is a 12-volt DC appliance that is activated by a switch on the monitor panel mounted in the kitchen area. (On some models a second switch may be located in the bathroom). The switch can be left on while camping. When you want water, simply open a faucet. The pump which supplies water from the fresh water tank will run only as long as is needed.

Troubleshooting the Water Pump

- If the pump fails to start when the switch is on, check the fuse located in the converter.

COMMENTS

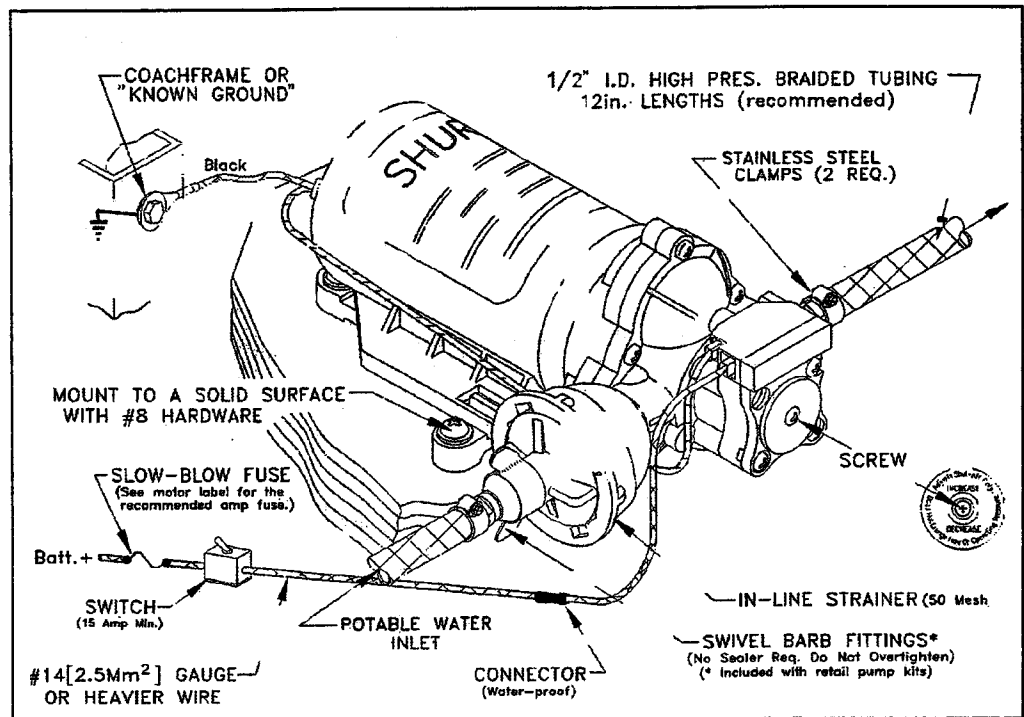
TIP: IF THE CITY WATER IS CONNECTED, THE PUMP IS NOT REQUIRED AND SHOULD BE TURNED OFF

NOTES:

- If the pump continues to operate whether the faucet's are opened or closed, check the water tank.

- If the pump runs sporadically; the tank may be empty or there might be a leak in the system.

- If water pressure is low, check the filter.
 - a. Loosen the clamp at the inlet end of the filter
 - b. Remove water line from filter
 - c. Unscrew filter from pump
 - d. Turn and pull apart each end of the filter
 - e. Clean screen
 - F. Reinstall filter and check operation



WATER PUMP (TYPICAL)

NOTE: IF THE CITY WATER IS CONNECTED, THE PUMP IS NOT REQUIRED AND SHOULD BE TURNED OFF.

Shower

If your shower faucet has a diverter, as a safety measure it will be equipped with an anti-siphon device. This device is built into the faucet and if a vacuum should occur, will prevent backflow of grey water into fresh water. This feature will reduce the possibility of contamination of the fresh water supply.

COMMENTS

NOTES:

Care of Sinks/Shower

Do not use any type of abrasive cleaner or one that contains acid or lye on your sinks, shower or fixtures. Any type of mild cleaner is sufficient and remember to rinse well.

If you have a stainless steel sink, you may clean it with stainless steel cleaner available at most grocery stores or any nonabrasive cleaner. You may also use any type of ABS cleaner which is available from your authorized dealer.

Drainage /Sewer System

Your RV is equipped with a drainage sewer system that functions much the same as the one in your home. In most units, this system includes drain lines from the kitchen sinks, lavatory, tub/shower and marine type toilet to a gray-water holding tank and/or a sewage holding tank.

The drainage system also includes vents that carry odors (caused by drain water and waste) out through the roof. The drainage system vents also equalize the air pressure, which is necessary to maintain a water barrier against odors in the P-traps and to ensure smooth flow and escape for your drainage system.

Toilet

Flush the toilet before initial use and after emptying the holding tank. This will help to prevent collection of solids.

To help control odors, there are a number of toilet and holding tank treatment concentrates on the market. These chemical concentrates are available at your dealer.

The following illustrations show four different toilet models used in RVs. To operate Toilet A, step on the small pedal to add water to the bowl.

When cleaning your toilet, do not use highly concentrated or highly acidic household cleaners (no scouring powder).

If you have a toilet with a slide valve and the valve does not move freely, apply silicone spray for ease of operation.

COMMENTS

NOTES:

Aqua-Magic IV
Hand FlushAqua-Magic IV
Foot-Pedal Flush

TYPICAL TYPES OF RV TOILETS

To ensure proper operation and maintenance, refer to your toilet manufacturer's operating manual.

HOLDING TANKS

Most unit drainage/sewer systems have two holding tanks: Gray Water and Waste (black) Water. The gray water holding tank collects water from the kitchen sink, lavatory and tub/shower. The waste (black) water holding tank is used to collect waste from the toilet.

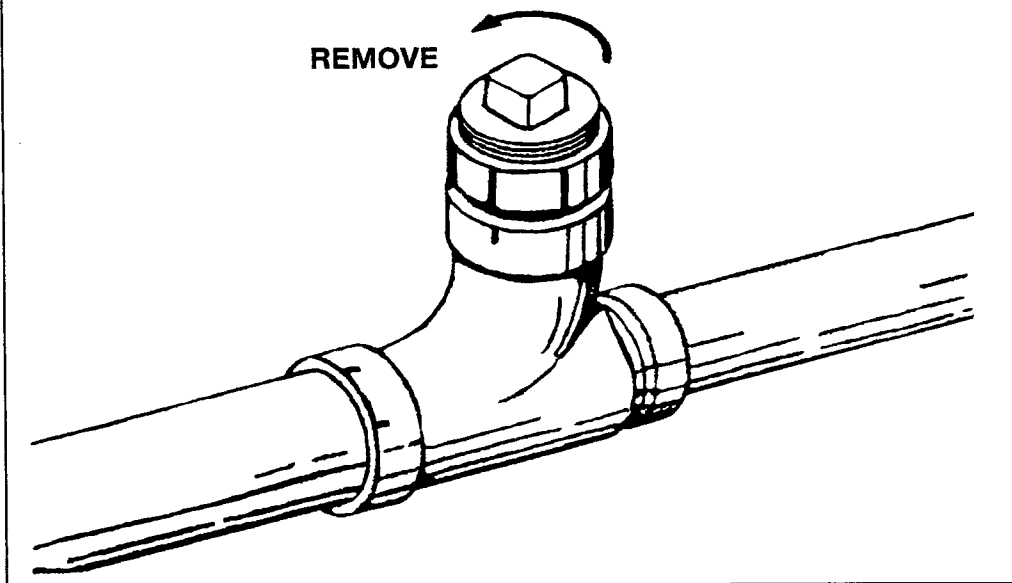
To prevent unnecessary accumulation of solids in the waste holding tank, do not put facial tissues or similar products into the toilet. It is highly recommended that you use only bio-degradable toilet tissue available from your RV dealer.

Holding tanks should be emptied frequently into a specified dumping station. Most campgrounds have dumping stations, often at each campsite, and many service stations and highway rest areas have waste dumping stations also. Before emptying the holding tanks, make sure your vehicle is level; emptying the holding tanks depends on gravity.

To empty the holding tank, remove the sewage drain hose from its storage area. Remove the cap from the termination outlet and connect the sewage drain hose.

COMMENTS

NOTES:



DRAIN CLEAN-OUT

Do not use harsh drain cleaner chemicals or solvents in the drains. Drain cleanouts are installed on certain units at intervals to facilitate drain line cleaning or unclogging. Use a wrench to remove and replace drain cleanout plug.

While you are camped you may leave the gray water dump valve open only if the hose is connected and your campsite has a sewage hookup. Do not open the waste water dump valve until you want to empty the holding tank. If the waste water dump valve is left open, the rinse and flush water will run off and solids will be left to collect and harden in the bottom of the tank.

To drain a holding tank, pull out the dump valve slide handle. On some units it is necessary to unfasten a locking device before the slide valve handle can be pulled out. After the tank is drained, close the valve (if applicable, lock in place).

After emptying the waste holding tank, flush or pour about two gallons of water through the toilet and drain again. This flushes the tank and helps clean the drain hose. Repeat as necessary.

To empty the gray water holding tank, follow the same procedure used to empty the waste holding tank. A flushing may not be necessary. When the tank is empty push the dump valve handle in until it seats (if applicable, lock in place). Remove the hose, wash it and return it to its storage holder. Replace the termination cap securely.

COMMENTS

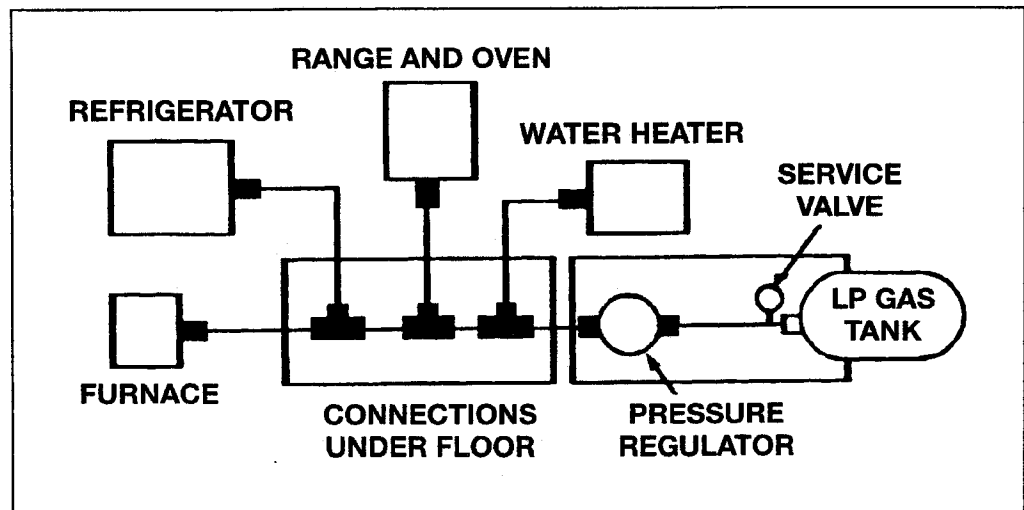
NOTES:

If your model is equipped with an outside shower this may be used to rinse the inside of your sewer hose before leaving the dump facility.

It is recommended that you always drain the sewage waste holding tank first, and then the gray water tank. This aids in flushing and cleaning the termination valve and drain hose.

LP GAS SYSTEM

The liquefied petroleum (LP) gas system in your unit furnishes fuel for hot water, heat, cooking and refrigeration (see illustration).



LP GAS SYSTEM (TYPICAL)

LP gas provides a portable, efficient and inexpensive source of energy. It is stored in a LP gas bottle(s) on the "A" frame of travel trailers or inside a compartment on fifth wheel trailers.

Under pressure in the tank, the LP gas turns to vapor; it is the latter that burns. Each tank has a manual 80 percent stop-fill valve that allows space in the tank for vapor expansion.

The high pressure of the vapor in the tank is reduced in two stages through a regulator. The tank pressure will vary with temperature and altitude, but may be reduced to about 12 psi in the first stage, then to about 6-1/4 ounces in the second stage (the 6-1/4 ounces per square inch also is expressed as 11 inches of water column).

Call your Coachmen dealer or an authorized repair center with any questions regarding your LP system.



COMMENTS



WARNING !!!

LP GAS CONTAINERS ARE EQUIPPED WITH SAFETY DEVICES WHICH RELIEVE EXCESSIVE PRESSURE BY DISCHARGING GAS INTO THE ATMOSPHERE. **DO NOT** PLACE OR STORE LP CONTAINERS INSIDE THE LIVING AREA OF A VEHICLE.

NOTES:

WARNING !!! WARNING !!! WARNING !!!
When refilling your tanks, be sure to use propane **ONLY**.
DO NOT use butane or butane mixtures.
WARNING !!! WARNING !!! WARNING !!!

The LP gas system is designed and built to meet rigid standards, and it is tested before it leaves the factory. Your dealer also tests the system before it is delivered to you. Always take your vehicle to an authorized dealer for LP gas problems. Always have an authorized LP gas supplier fill your LP gas tanks. Be sure you use only liquid petroleum fuel in your LP tank. Do not use butane or a butane mixture. Check with your LP gas supplier to be sure you are getting a pure quality LP gas.

LP gas burns readily and with intense heat. With proper care and maintenance, it is safe and efficient. There are, however, certain characteristics about LP gas you should know.

- LP gas settles into any closed area, it displaces air and could cause suffocation if not detected.
- It also could create a fire or explosion hazard.
- In its' natural state, LP gas is odorless. An additive gives it a distinctive mustard odor so that leaks can be readily detected. Under certain circumstances you may not be able to detect LP gas by smell.

For that reason, your vehicle is equipped with an LP leak detector which will provide an audible warning if a propane leak is detected.

NEVER DISABLE OR BYPASS THIS CRITICAL SAFETY DEVICE.

WARNING !!! WARNING !!! WARNING !!!
(IF YOU SMELL, OR THINK YOU SMELL LP GAS)

1. Extinguish any open flames, pilot lights, and all smoking material.
2. Do not touch electrical switches.
3. Shut off the gas supply at the tank. Close valve(s) or gas supply connections.
4. Open doors and other non-electrical ventilating openings.
5. Leave the area until the odor clears.
6. Immediately call your gas supplier and have the gas system checked and leakage source corrected before using again.

WARNING !!! WARNING !!! WARNING !!!

NOTE: BEFORE USING ANY LP GAS APPLIANCE, READ THE LP GAS MANUFACTURER'S OPERATING INSTRUCTION MANUAL.

COMMENTS



WARNING !!!

USE ONLY PURE LP GAS IN THE LP TANK. **DO NOT** USE BUTANE OR BUTANE MIXTURE.

NOTES: _____

It is recommended that you use only propane gas. The names of LP suppliers can be found in the Yellow Pages of your telephone directory under "Gas-Liquefied Petroleum-Bottled and Bulk." Many campgrounds now have LP fill facilities, as do some service stations.

OPERATING YOUR LP GAS APPLIANCES

To operate any LP gas appliance, the LP gas SERVICE valve must be open. When first used, or after a refill, there may be some air in the gas lines that will escape when you first open a range burner or similar LP gas valve. The air may extinguish your match or igniter the first time or two before you get ignition.

Remember too, that when you close the tank's SERVICE valve some of the gas will remain in the lines. To completely bleed the lines of gas, close the tank's SERVICE valve and light a range burner to use up the excess. When the flame burns out, turn the range burner off.

CLIMATE DIFFERENCES

An appliance will not function if the LP gas does not vaporize. Propane continues to vaporize down to -44 degrees F. Liquid gas does not vaporize as rapidly in cold weather, so you may place too great a demand on your tanks' capacities in certain conditions. This can cause a refrigeration effect resulting in frosting of the tank and regulator.

Check with your dealer or LP gas supplier regarding how your appliance demands may be met by your tank at various temperatures.

LP APPLIANCE OPERATION

To operate any LP gas appliance, the LP SERVICE valve, (located on the LP tank) must be open. After first use or a refill, there may be some air in the gas lines that will escape when you first open a range burner or similar LP gas valve. The air may extinguish your match or igniter. Continue lighting process until all air is out of tank and you have ignition.

Remember too, that after closing the tank's SERVICE valve, some gas will remain in the lines. To completely bleed the lines of gas, close the tank's SERVICE valve and light a range burner to use any excess gas left in the times. When the flame burns out, turn the range burner off.

REGULATOR PRESSURE

Check the LP gas regulator at the beginning of each season or whenever a problem is indicated. Correct line pressure is 11 inches of water column. Your dealer or LP gas supplier can perform this check. LP gas regulators must always be installed with the diaphragm vent facing down. Regulators that are not in compartments have been equipped with a protective cover. Make sure that the regulator vent faces down and that

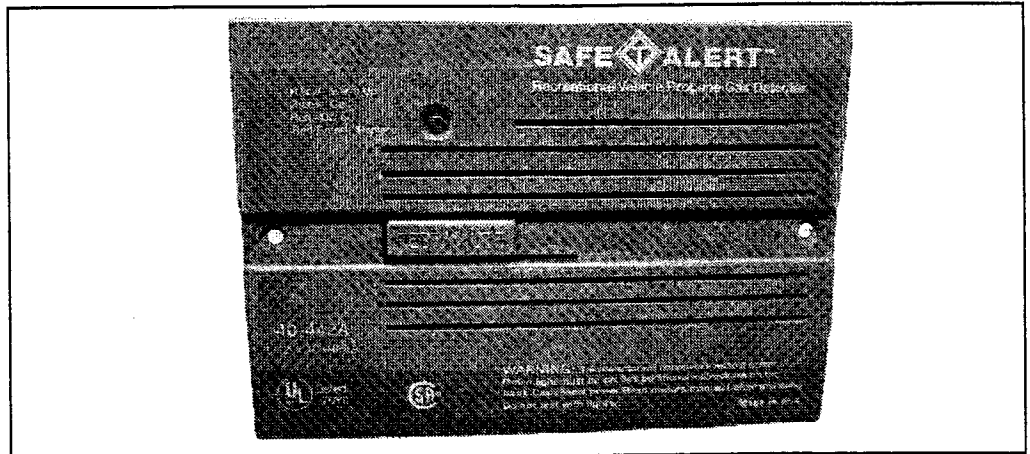
COMMENTS

NOTES:

the cover is kept in place. This will minimize vent blockage that could result in excessive gas pressure and could cause a fire or explosion.

LP LEAK DETECTOR

The LP leak detector in your RV should be in the **ON** position any time you are using your RV. The most important feature is an early warning alarm and a malfunction indicator.



LP PROPANE DETECTOR (TYPICAL)

If gas concentrations reach a level of only 1/4 the danger level, audio alarms and visual flashings are activated. There are periodic tests to perform to insure safety.

Please be sure to read the manufacturer's instructions for maintenance and troubleshooting information

Note: The system should be turned off when the RV is in storage or will not be used for several days.

Note: Do not spray any cleaning fluids near the detector.

Note: If the indicator light is not on, check the in-line fuse behind the detector.

REGULATOR/CHANGE OVER

Each pair of LP gas bottles will have a regulator. Double 20 lb. bottles may have a manual changeover valve; double 30 lb. bottles may have an automatic changeover valve. With the manual valve, open only one bottle's service valve. When the bottle is empty, close that service valve and open the service valve of the other bottle.



COMMENTS

NOTES:

For units with the automatic changeover valve, open the Service valves on both bottles. The bottle to which the arrow in the changeover knob points is the one in service.

As long as there is fuel in the bottle, the FULL-EMPTY indicator on top of the regulator will show white. When the bottle is empty, the automatic regulator will begin using fuel from the "reserve" bottle. When this happens, the FULL-EMPTY indicator will change from white to red.

At this point, the empty bottle should be shut off and the indicator knob turned so that the arrow points to the bottle in service. The FULL-EMPTY indicator again will show white. The empty bottle may now be disconnected for refilling.

Check the indicator flag regularly to avoid running completely out of fuel. You can also check the volume of LP gas by weighing the bottle, comparing the known weight of an empty and a filled bottle. The TARE (empty) weight is stamped on the LP gas bottle handle.

LP GAS LINE CHECK

Regular maintenance of the LP gas system is extremely important to insure the systems safety.

All checks and/or repairs should be performed by an authorized service agency who is trained in dealing with RV LP gas systems.

DO NOT attempt repairs yourself. The system should be checked at least once every 30 days of use or 5,000 miles of travel. If you are using your vehicle in rough terrain or traveling over rough roads these inspections should be done more frequently.

If you check connections for leaks yourself:

DO NOT USE OPEN FLAME OR MATCHES TO CHECK LP GAS LINE CONNECTIONS. Use only an approved leak detector solution.

DO NOT USE PRODUCTS THAT CONTAIN AMMONIA OR CHLORINE, (most common household soaps). If you detect a leak, shut off the gas and contact either your dealer or the nearest authorized LP gas dealer to have repairs made.

NOTE: If you have questions about your LP system, refer to an authorized Coachmen dealer or a licensed/certified LP repair facility.

COMMENTS **WARNING !!!**

DO NOT MODIFY YOUR LP GAS SYSTEM.

 **WARNING !!!**

DO NOT REMOVE COMPONENTS OR REPLACE WITH COMPONENTS WHICH ARE NOT OF EQUAL VALUE.

 **WARNING !!!**

DO NOT FILL CONTAINER(S) TO MORE THAN 80% OF CAPACITY. OVER-FILLING THE CONTAINER CAN RESULT IN UNCONTROLLED GAS FLOW WHICH CAN CAUSE FIRE OR EXPLOSION

NOTES: _____

1. **DO NOT** FILL YOUR BOTTLE BEYOND THE LEGAL LIQUID LEVEL CAPACITY.
2. NEVER USE A WRENCH OR PLIERS TO CLOSE THE SERVICE VALVE. THESE VALVES ARE DESIGNED TO BE CLOSED LEAK-TIGHT BY HAND. IF WRENCHES ARE NECESSARY TO STOP A LEAK, THE VALVE SHOULD BE REPLACED.
3. MAKE PERIODIC CHECKS FOR LEAKS IN THE BOTTLE AND LINE CONNECTIONS. VIBRATIONS DURING TRAVEL MAY CAUSE LEAKS. USE A PROPANE GAS LEAK DETECTOR SOLUTION TO MAKE THESE CHECKS.
4. BE SURE TO FASTEN YOUR BOTTLE(S) SECURELY IN PLACE.
5. TURN THE BOTTLE(S) SO THE OPEN PART OF THE GUARD IS FACING THE TRAILER. THIS WILL PROTECT THE VALVE AND REGULATOR FROM FLYING ROCKS OR MUD.
6. TRANSPORT YOUR BOTTLE(S) IN THE SAME POSITION AS IT IS USED NORMALLY. BE SURE THE VALVE IS CLOSED. DO THIS WHETHER YOU REMOVE YOUR BOTTLE(S) FOR TRANSPORT OR FOR A REFILL. ALWAYS SECURE THE BOTTLE(S) TO AVOID FALLING OR ROLLING.
7. PRACTICE SAFETY ALL ALL TIMES. LP GAS CAN BE DANGEROUS. IF YOU HAVE ANY QUESTIONS ABOUT THE OPERATION OF YOUR GAS APPLIANCES OR THE LP GAS SYSTEM, CONTACT YOUR LOCAL LP GAS DEALER.

Note: If your unit is equipped with a horizontal LP gas tank, the tank must be filled in that position

WARNING !!! WARNING!!! WARNING !!!

DO NOT FILL CONTAINER(S) TO MORE THAN 80% OF CAPACITY. Over-filling the LP gas container can result in an uncontrolled gas flow which can cause fire or explosion. A properly filled container will contain approximately 80% of its volume as liquid LP gas. If the tank is over-filled, have the LP gas dealer bleed out the excess. **DO NOT** smoke, strike a match, or ignite a lighter when the LP gas container is being filled. A spark or flame could ignite fumes. Be certain all burner and pilot flames are out and Service Valve is closed when filling your vehicle's LP gas or fuel tanks.



COMMENTS

NOTES:

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SECTION THREE

BECOMING FAMILIAR WITH OPERATIONAL PROCEDURES

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COMMENTS

⚠ WARNING!!!
DO NOT USE COOKING
APPLIANCES FOR COM-
FORT HEATING

NOTES: _____

APPLIANCES AND ACCESSORIES

RANGE/OVEN

Your recreational vehicle has a three burner range; it may have an oven beneath the range, and it may have a gravity range hood with a light, a power range hood with fan and light, or a range hood with fan only. The range burners and oven are LP gas appliances.

Read the range manufacturer's manual carefully for complete details on the operation and care of the range, range hood and oven.

WARNING !!! WARNING !!! WARNING !!!

Before operating your oven or range, do the following:

- Open overhead vent or turn on exhaust fan. It is not safe to use cooking appliances for comfort heating.
- Open a window or vent. Cooking appliances need fresh air for safe operation.

WARNING !!! WARNING !!! WARNING !!!

This warning is to remind you to provide an adequate supply of fresh air for combustion. Unlike homes, the amount of oxygen supply is limited due to the size of the recreational vehicle. Proper ventilation when using the cooking appliance(s) will avoid dangers of asphyxiation. It is especially important that cooking appliances not be used for comfort heating as the danger of asphyxiation is greater when the appliance is used for long periods of time.

FAILURE TO FOLLOW THIS WARNING CAN RESULT IN FIRE OR EXPLOSING WHICH COULD CAUSE INJURY OR DEATH

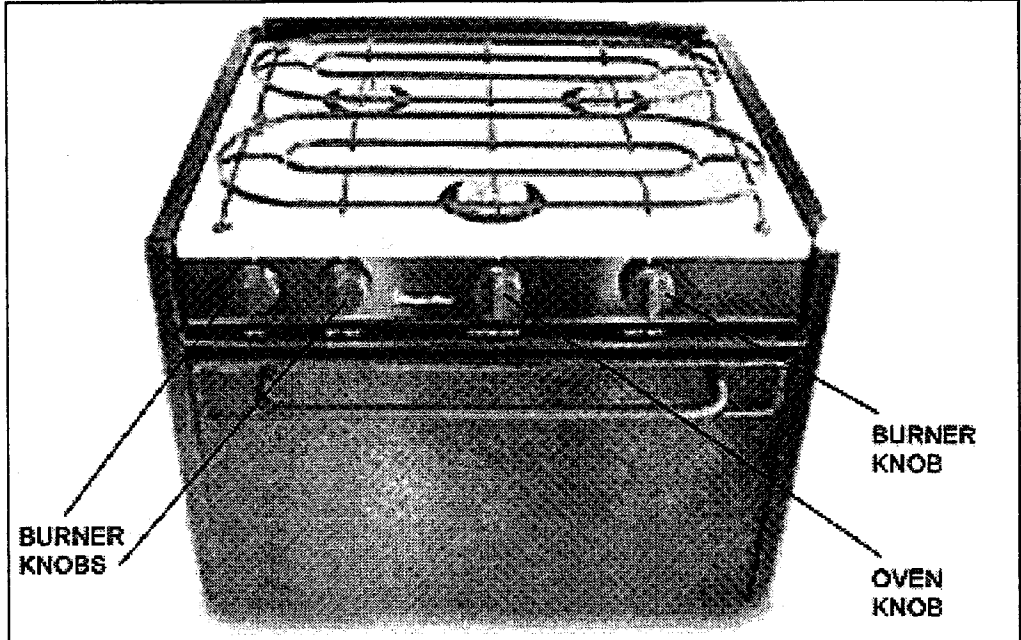
FAULURE TO FOLLOW THIS WARNING WILL VOID ANY VEHICLE WARRANTY

Lighting the Oven Pilot

To light the oven pilot, be certain the LP gas container Service valve is OPEN, then depress and turn the oven control knob to PILOTS ON. Open the oven door and hold a lighted match next to the constant pilot area (it is near the rear of the oven compartment, just below the main oven burner). Relight the pilot if air in the line extinguishes the flame. When the pilot remains lit, adjust the oven control knob to the desired temperature

COMMENTS

NOTES:

**THREE BURNER RANGE WITH OVEN**

Note: The oven control knob must be in the PILOTS ON position for the pilot to be lit. Once lit, the pilot will continue to burn.

Lighting the Range

Be certain that the LP gas Service valve is OPEN. Light a match and hold it close to the range burner making sure you are lighting the valve you turned on. Turn the burner's control knob to full ON. Air in the line may cause a blowing noise and may extinguish the match. When the line is free of air, the burner will light readily. Adjust the burner flame with the control knob.

Care of Range and Oven

Allow the range top to cool, then clean it with hot, soapy water. Use a damp cloth to clean chrome surfaces. Grease splatters, which may bake onto the surfaces, should be wiped off before they have time to harden. Use chrome polish to remove stubborn stains. Clean the oven with commercial cleaner after each trip, or as necessary. DO NOT apply cleaner to aluminum gas tubing, thermostat sensing bulb or electrical components.

Broiler

For broiler use, if so equipped, light the oven and set the control knob to BROIL. Place the broiler pan (optional equipment) in the area below the oven burner. Do not place meat too close to the flame; grease or fat may ignite. Use foil only as recommended. Never cover the holes in the broiler pan or the air openings in the oven bottom with foil.

COMMENTS

NOTES: _____

Always remove the broiler pan as soon as you have finished broiling. If the pan is not removed and the oven is used, the grease may bake onto the surfaces or the grease may ignite.

MICROWAVE OVEN

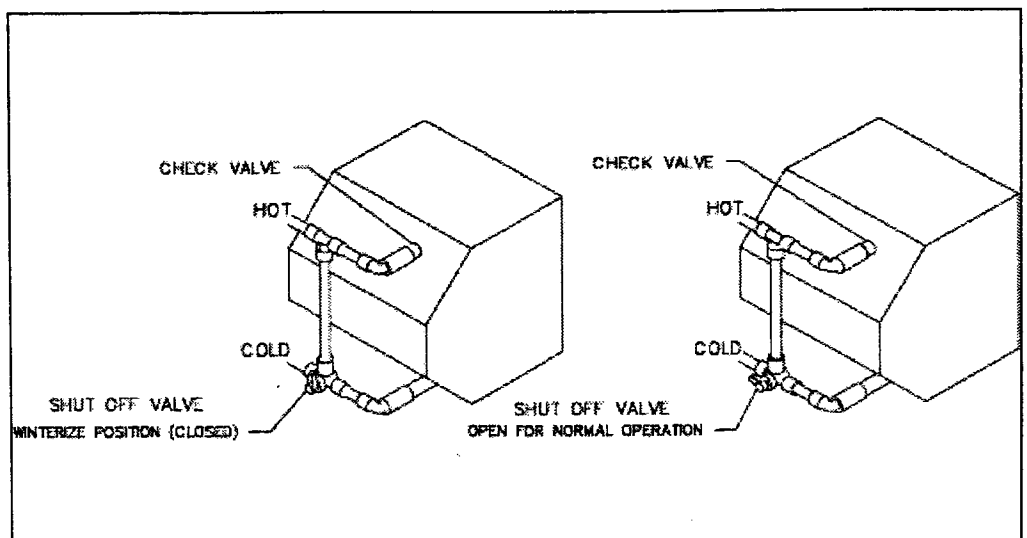
The microwave oven is a 120-volt appliance used to cook, defrost or simmer foods in less time than other cooking methods. Several types of microwave ovens are installed by the manufacturer. Be certain to read carefully the oven manufacturer's owner's manual for specific instructions for the model which may be installed in your unit.

WATER HEATER

Your water heater is an LP gas appliance capable of heating gallons of water to a preset temperature. When the system is connected to city water, fill the water heater by opening a hot water faucet. When filling the fresh water tank, turn the water pump ON and open a hot water faucet. In either case, when water flows steadily, turn the faucet OFF.

Water Heater Bypass

There is a water heater by-pass system installed in the water lines at the back of the water heater. It allows you to use the water system without the water heater, as well as winterize the water system without having to fill the water heater with anti-freeze. For normal operation, close the center valve and open the outside valves. To by-pass the water heater, open the center valve and close the outside valves.

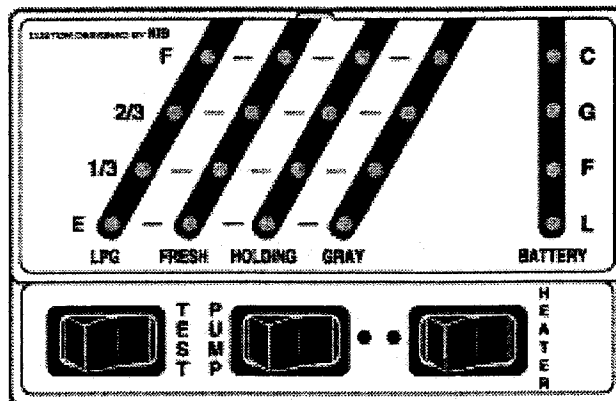


WATER HEATER VALVE POSITIONS

COMMENTSNOTES: _____

_____**Water Heater Electronic Ignition**

Place the remote water heater switch in the ON position. This switch is located in the lower right corner of the display panel. If the red fault light comes on, place the switch in OFF position and wait 5 minutes. The red fault light will only come on in the event of water heater malfunction or if the flame fails to light. After the required delay, again place switch in ON position. If the water heater turns on a green light will show on the display panel. It may take more than one start attempt when the water heater is being used for the first time or after the LP gas bottle has been refilled. To turn the water heater completely off place the switch in OFF position.



REMOTE WATER HEATER SWITCH

WARNING !!! WARNING !!! WARNING !!!

HYDROGEN GAS CAN BE PRODUCED IN A HOT WATER SYSTEM SERVED BY A HEATER THAT HAS NOT BEEN USED FOR A LONG PERIOD OF TIME (GENERALLY TWO WEEKS OR MORE).

HYDROGEN GAS IS EXTREMELY FLAMMABLE.

TO REDUCE THE RISK OF INJURY UNDER THESE CONDITIONS, IT IS RECOMMENDED THAT THE HOT WATER FAUCET BE OPENED FOR SEVERAL MINUTES AT THE KITCHEN SINK BEFORE USING ANY ELECTRICAL APPLIANCE. IF HYDROGEN IS PRESENT, THERE SHOULD BE AN UNUSUAL SOUND SUCH AS AIR ESCAPING THROUGH THE PIPE AS THE WATER BEGINS TO FLOW. THERE SHOULD BE **NO** SMOKING OR OPEN FLAME NEAR THE FAUCET AT THE TIME IT IS OPEN. CONTACT YOUR DEALER OR THE SERVICE DEPARTMENT AT THE ADDRESS ON THE MANUFACTURER'S WARRANTY IF YOU ARE NOT CERTAIN OF WHAT ACTION YOU SHOULD TAKE.

WARNING !!! WARNING !!! WARNING !!!



COMMENTS



_WARNING !!!

DO NOT USE PORTABLE FUEL-BURNING HEATING APPLIANCES, INCLUDING KEROSENE HEATERS, WOOD AND CHARCOAL GRILLS AND STOVES, IN YOUR RV. SUCH APPLIANCES PRODUCE EXCESSIVE MOISTURE, CONSUME OXYGEN AND MAY EMIT DANGEROUS PRODUCTS OF COMBUSTION.

NOTES: _____

Draining

The water heater has a drain plug or drain cock in the water heater which must be opened or removed to drain the water heater tank. To facilitate drainage, open all hot water faucet's. When water ceases to drain, replace plug. Because of the location of the drain plug, about two quarts of water will remain in the bottom of the tank.

To flush the tank, connect a hose to the city water fill. Remove the drain plug from the water heater tank. Run water for several minutes to flush tank. Turn water off and reinstall drain plug.

Care of Water Heater

Be certain the exterior compartment is clean and does not contain combustible materials. Never obstruct the relief valve or exhaust vent. Periodically drain and flush the water heater tank.

Burner Adjustment

Refer to Water Heater manufacturer's operation manual.

FURNACE

The furnace is an automatic ignition type, controlled by a wall thermostat. Heat is delivered through a duct system.

NOTE: ALTHOUGH THE FURNACE'S FUEL SOURCE IS LP GAS, THE POWER OPERATES ON 12-VOLT ELECTRICITY. THE FURNACE REQUIRES A MINIMUM OF 9 VOLTS TO OPERATE.

Ignition

Before lighting a furnace, be sure the LP gas bottle Service valve is **OPEN** and the thermostat ON/OFF switch is **ON**.

Automatic Models

Set thermostat to desired temperature and turn ON/OFF switch to **ON**. An automatic relay in your furnace provides a time delay. Therefore, when you turn up the thermostat there will be a pause prior to startup of the blower. At blower startup, your furnace air will enter your living quarters at room temperature.

Your furnace will start warming quickly and continue getting warmer for the next several minutes. If your motorhome is cold throughout, it may take from one to several hours to heat all interior walls, ceilings, floors and fixtures to a comfortable temperature. Once reached, your furnace will automatically maintain steady warmth.

COMMENTS



WARNING!!!

DO NOT ATTEMPT TO REPAIR OR ADJUST THE FURNACE YOURSELF. CONTACT AN AUTHORIZED DEALER OR SERVICE CENTER

NOTES: _____

On initial lighting, the burner may not ignite due to air in the gas lines. If this occurs, set the thermostat back to the lowest setting and wait 30 seconds; then reset thermostat to the desired temperature.

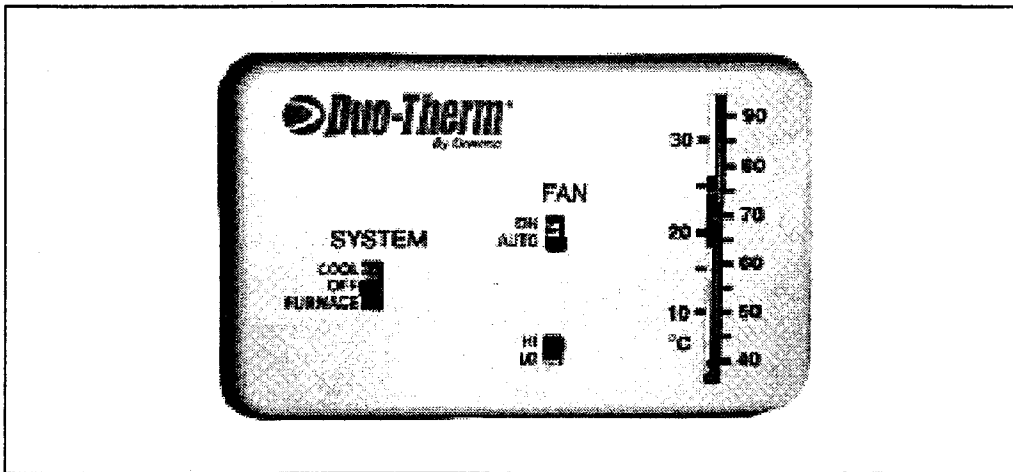
Note: If the furnace does not light after several attempts, while allowing each time for any delay pause, turn the thermostat OFF and contact your authorized dealer or service center.

DO NOT attempt to repair or adjust the furnace yourself.

When changing your unit's electrical source, as from 12-volt to shore-line or generator, turn the thermostat off. This will preserve the life of your furnace's electronic system.

Carefully read the furnace manufacturers manual for other important Do's and Dont's of service and operation.

Preventive Maintenance
Preventative maintenance should be performed annually by an authorized dealer and should include cleaning of heat exchanger, furnace ducts and blower wheels to remove dust, lint and other foreign materials. The furnace's LP gas system should also be checked. Check the manufacturer's manual for further information.



HEAT AND COOL WALL THERMOSTAT



COMMENTS

NOTES:

Vertical column of horizontal lines for notes and comments.

REFRIGERATOR

Your refrigerator is two-way (LP gas and 120-volt electricity). It is equipped with a control system, which can automatically select the most suitable energy source which is available, either 120-volt AC, or LP gas operation. The refrigerator can be run either in a factory preset temperature setting AUTO mode, or in MANUAL mode. The refrigerator controls will work down to 9.6-volt DC.

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

WARNING !!! WARNING !!! WARNING
MOST LP GAS APPLIANCES USED IN RECREATIONAL VEHICLES ARE VENTED TO THE OUTSIDE OF THE VEHICLE. WHEN PARKED CLOSE TO A GASOLINE PUMP, IT IS POSSIBLE THAT THE GASOLINE FUMES COULD ENTER THIS TYPE OF APPLIANCE AND IGNITE FROM THE BURNER FLAME, CAUSING A FIRE OR EXPLOSION.
FOR YOUR SAFETY, IT IS RECOMMENDED THAT ALL LP GAS APPLIANCES WHICH ARE VENTED TO THE OUTSIDE SHOULD BE SHUT OFF WHEN REFUELING.
WARNING !!! WARNING !!! WARNING !!!

Your refrigerator comes with operational instructions and most have instructions posted near the controls. Ask your dealer to demonstrate the operation of the refrigerator in your RV. The instructions given here are for your convenience; in case of a difference, use the instructions furnished with your refrigerator.

The refrigerator operates on the gravity flow of chemicals, so it must be level. If you must stop on an uneven site for more than 30 minutes, turn the refrigerator OFF. Use a level in the freezer compartment to check levelness.

Before beginning a trip, use the shoreline connection to cool the refrigerator the night before departing. Keep items to be stored in the RV refrigerator in your home refrigerator or freezer until you are ready to leave. This will reduce the cooling load on your refrigerator and help keep perishable foods fresh.

Always store food in sealable containers or suitable wrapping. When traveling, switch to LP gas operation. Use door lock during travel.

Note: Some states and municipalities do not allow operation of LP gas systems while the vehicle is in motion. If you have a question in this regard, check with the appropriate state law enforcement agencies.

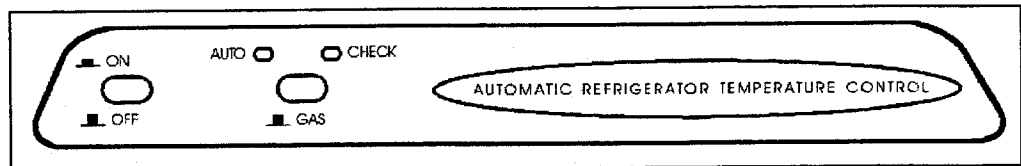
COMMENTS

NOTES:

Start Up Instructions

- A. A Continuous 12-volt DC supply must be available for the electronic control to function.
- B. Press the main power ON/OFF button to the DOWN position.
- C. In AUTO mode operation, the temperature is automatically controlled by a factory preset temperature setting, on the energy source selected by the control system.
- D. In MANUAL mode operation, the refrigerator will run continuously on the energy source selected by the control system.

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



REFRIGERATOR CONTROL PANEL

Auto Mode

1. Press the AUTO/MANUAL mode selector button to the DOWN position. The AUTO mode indicator lamp will illuminate. If 120-volts AC is available, the control system will select AC operation. If 120-volts AC is not available, the control system will automatically switch to GAS operation. Within 45 seconds the burner should be ignited and operating normally.
2. If the CHECK indicator lamp illuminates, the control has failed to ignite the burner on GAS. To reset when the CHECK indicator lamp is illuminated, press the main power ON/OFF button to the OFF then ON position.
3. On the initial refrigerator start-up on gas (120-volts AC is not available), it may take longer than 45 seconds to allow air to be purged from the gas line. If the refrigerator has not been used for a long time or the LP tanks have just been refilled, air may be trapped in the supply lines. To purge the air from the lines may require resetting the main power ON/OFF button three or four times. If repeated attempts fail to start the LP gas operation, check to make sure that the LP gas supply tanks are not empty and all manual shutoff valves in the lines are open. If the problem is still not corrected, contact a service center for assistance.

Note: Do not continue to reset GAS operation if the 'CHECK' indicator lamp continues to be illuminated after several tries.

4. In AUTO mode operation, the temperature is automatically controlled by the factory preset temperature setting.



COMMENTS

NOTES:

Manual Mode

Move the AUTO/MANUAL mode selector button to the UP position. The AUTO mode indicator lamp will go off.

The difference between AUTO mode and MANUAL mode is that in MANUAL mode operation, the refrigerator will run continuously on the energy source selected by the control system.

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

To Shut Off Refrigerator

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

Note: To avoid running out of battery power, the climate control should be turned OFF.

The interior light should be turned off during defrosting and storage periods, use a tape to close the light switch or remove the lamp bulb.

Care of Refrigerator

Remove food and ice after each trip. Clean the interior of the refrigerator with a lukewarm, mild baking soda solution. The evaporator, ice trays and shelves must, however, be cleaned with warm water only. Wipe dry with a soft, dry cloth. Never use strong chemicals or abrasives to clean the refrigerator; they can do harm to the plastic and aluminum surfaces.

If the refrigerator is not in use for a period of time, turn all power OFF, empty and clean the interior and leave the door slightly ajar.

To defrost refrigerator, remove food and ice. Turn the thermostat OFF. To speed up the defrosting process, fill the ice trays with hot water. When all frost is melted, empty the drip tray and dry the interior of the refrigerator with a clean cloth.

Replace the drip tray and ice trays, replace all food stuffs and set the thermostat at MAX for a few hours. When the interior is cold, reset the thermostat knob to its normal position.

Optional Refrigerator with Ice Maker

Your RV may have an optional refrigerator with a built-in automatic ice maker. Please refer to manufacturer's owner's manual for care and operating instructions.

COMMENTS

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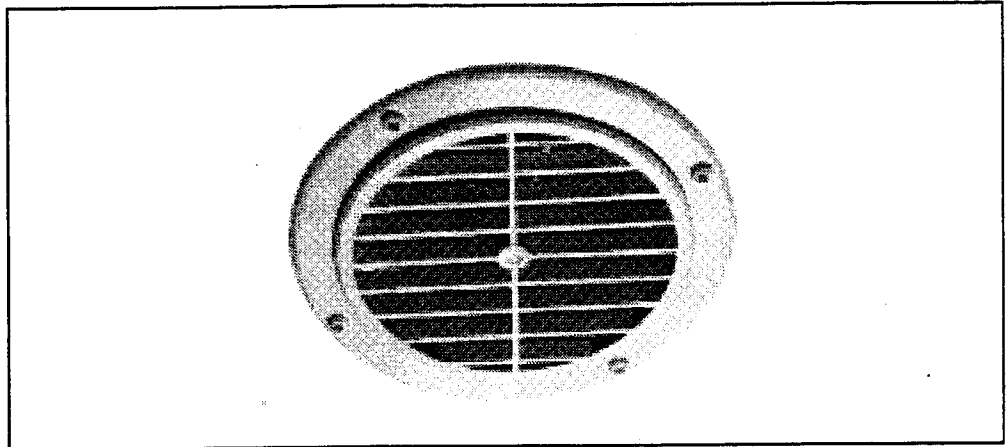
WASHER/DRYER

Some Coachmen models have an optional Washer/Dryer combination. This appliance has been carefully engineered for recreational vehicle use. To obtain the best possible results from this product, please read and follow the appliance manufacturer's instructions found in the booklet that came with your unit. After insuring that the instructions have been carefully followed; if you still have questions, please seek the advice or assistance of your authorized Coachmen dealer or Service Center.

ROOF AIR CONDITIONERS

If you did not order the optional roof air conditioner at the time of purchase, your RV is wired so that one (or two) can be installed at a later date. The roof air conditioner will operate only on 120 volt electricity.

The ducted roof air conditioning system is optional on most travel trailers and fifth wheels. It utilizes ducts in the ceiling to distribute the air flow throughout your recreational vehicle. The air flow can be regulated by opening and or closing the outlets of your choice. The thermostat for the ducted A/C system also controls the furnace.



AIR CONDITIONER CEILING VENT

The optional heat unit on some A/C models is not a substitute for the primary heating system. It is designed to warm the air during moderately cool days or nights. If your air conditioner is equipped with the optional heat package, turn the selector switch to HEAT and rotate or slide the selector switch to the position most comfortable and adjust the directional louvers to the desired direction of air flow. The heater will cycle on and off automatically to maintain the temperature.



COMMENTS

NOTES:

MISCELLANEOUS ELECTRONIC EQUIPMENT

There are many different models, styles, and manufacturers of electronic equipment in your RV; both as standard and optional equipment. The User's manual for each item is supplied with your unit. Please refer to the manufacturer's manual for information regarding the specific brand and model you have.

STORAGE and WINTERIZATION

STORAGE

Consider using the following procedures if you will not be using your unit for sixty days or more and when storing your RV for a prolonged period of time.

LP Gas

Close the LP gas container's Service valve. Extinguish all pilots and close all LP appliance gas valves (i.e. oven/range, water heater, refrigerator, furnace). Light a range burner to consume any gas remaining in the lines. When the flame burns out, turn the range burner off. This process will bleed the gas out of the lines that remains after turning the appliance gas valve off.

Water Tank

To drain the water tank, turn the water pump on and open all faucet's. Open the tank's drain valve and all hot and cold water line drain valves. When the tank is empty, close all faucet's and drain valves.

Water Heater

The water heater has a drain plug or drain cock which must be opened or removed in order to release the water. To facilitate drainage, open all hot water faucet's. When water stops flowing from the drain valve and the hot water faucet's, replace the plug.

Water Pump

When the water tank and water lines have been drained, remove the outlet hose from the pump. Turn the pump on, allowing it to pump out any remaining water, usually about a cupful. Use a small container or cloth to catch this water. Reattach the outlet hose.

Electrical System

Turn off all circuit breakers at the Power Center. Disconnect all loads from the battery. Be sure the battery is fully charged.

General

Close and secure all doors and windows. Open a roof vent or window slightly to allow circulation, but not so far that snow or rain can enter.

COMMENTS**WARNING !!!**

HYDROGEN GAS CAN BE PRODUCED IN A HOT WATER SYSTEM SERVED BY A HEATER THAT HAS NOT BEEN USED FOR A LONG PERIOD OF TIME (GENERALLY TWO WEEKS OR MORE). HYDROGEN GAS IS EXTREMELY FLAMMABLE. TO REDUCE THE RISK OF INJURY UNDER THESE CONDITIONS, IT IS RECOMMENDED THAT THE HOT WATER FAUCET BE OPENED AND ALLOWED TO RUN FOR SEVERAL MINUTES AT THE KITCHEN SINK BEFORE USING ANY ELECTRICAL APPLIANCE. THIS WILL ALLOW ANY BUILD-UP OF HYDROGEN GAS TO DISSIPATE TO A SAFER LEVEL.

DO NOT USE AUTOMOTIVE ANTIFREEZE IN THE WATER OR SEWAGE SYSTEM. IT IS POISONOUS AND CORROSIVE TO SEWAGE SYSTEM COMPONENTS.

NOTES:

WINTERIZATION

Make special preparations for storing your unit in cold winter climates. All systems and components should be inspected and, if necessary, repaired prior to storage. Be sure to winterize the RV before removing the RV battery.

Note: If you will be using your RV during cold weather, be certain to keep the fresh water system drained or use an approved, non-toxic RV antifreeze to prevent freeze-ups. Consult your authorized dealer for more information.

Refrigerator

Remove all food from the refrigerator, defrost, wash and dry the inside. Prop the door open so air can circulate.

Cabinets

Check the staple foods in your cupboards and remove any that could freeze or be damaged. Leave cabinet and closet doors open a little to prevent a musty odor or mildew.

Holding Tanks

The dump valve shafts should be inspected and lubricated. Be certain the dump valves are closed.

Fresh Water System.

Drain as described in the STORAGE section of this manual, then pour two gallons of non-toxic RV anti-freeze into the gravity water fill. Turn shut off valves at the water heater to the winterize position. (If you wish to put anti-freeze in the water heater, use six gallons of RV anti-freeze and leave the shut off valves in the normal position). Winterize the fresh water system by briefly opening all water faucet's and switching the water pump on. Close faucet's when anti-freeze flows out. Switch pump off. Pour anti-freeze (non-toxic) into sinks and shower/tub. Use enough to fill P-traps.

Water Heater

Drain the water heater (see water heater draining in APPLIANCE SECTION). Although about two quarts of water will remain after the heater has been drained, there is ample room for expansion if it freezes.

Water Tank

Drain by switching the water pump on and opening all faucet's. Open the tank's drain valve. Open all hot and cold water line drain valves. When the tank is empty, close all faucet's and drain valves.

Water Pump

The water pump should be drained when the water tank and water lines have been drained. Remove the outlet hose from the pump. Turn pump on, allowing it to pump out any remaining water, usually about a cupful. Use a towel or other cloth to catch this water. You can reattach the outlet hose now or later.

COMMENTS

⚠ CAUTION !!!

PLEASE NOTE ALL EMERGENCY EXITS AND SEE THAT EACH MEMBER OF YOUR PARTY KNOWS THE EMERGENCY LOCATIONS AND THEIR OPERATION.

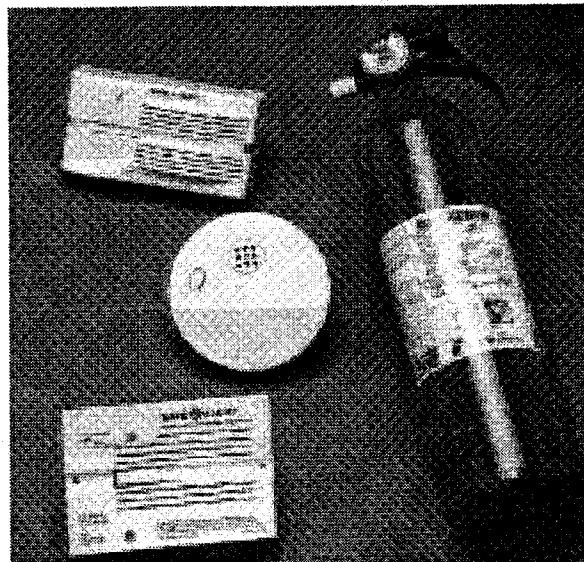
NOTES:

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SAFETY FEATURES

Prevention is the best form of safety. Observe the same precautions in your RV as you do in your home. Use care with any open flame inside of your unit. Follow the instructions for the care and maintenance, and operation of the various appliances in your RV.

Be sure everyone in your party is familiar with the emergency features of the unit, the location of exits and the location and operation of fire extinguishers. (It is recommended that a fire drill be conducted on a regular basis to ensure this knowledge.)



SMOKE, LP, CARBON MONOXIDE DETECTORS & FIRE EXTINGUISHER

Fire Extinguisher

A chemical fire extinguisher may be furnished with your unit. Check it regularly to be sure it is ready for emergency use. Immediately replace a fire extinguisher that is discharged or partially discharged. Fire extinguishers are located directly inside the front entrance door on either a cabinet or on the sidewall.

Detectors

Test your detectors after the vehicle has been in storage, before each trip and weekly during use.

NOTE: Refer to the product manufacturer's owner's manual for complete operation, maintenance and testing procedures.

Emergency Exits

Windows that double as an 'Emergency' exit will be marked by a label with one-inch, red letters. Handles that must be operated to open Emergency exits will be colored red. Be sure your dealer explains the location and operation of the emergency exits and that all members of your party are well informed.



COMMENTS

RV MAINTENANCE

NOTES:

RV owners are noted for the pride they take in the appearance of their units. Proper maintenance will do more than keep your RV looking nice. It can help ensure trouble-free operation and maximum efficiency of the appliances and accessories. Failure to maintain the vehicle or its components may also constitute a breach of your warranty obligations. Just as an open window or an unrepaired leak in your home may lead to costly damage, the failure to repair leaks in your vehicle or to reseal your seams may result in serious damage. Read the various appliance and component manufacturer's manuals for specific maintenance information.

Unless otherwise noted, maintenance functions should be performed at least annually. All maintenance schedules listed are the minimum requirement; heavy use, unusual temperatures or humidity, or other environmental conditions may require more frequent maintenance.

At the start of each season, or after a period of storage, thoroughly inspect and test all systems and components to be certain they are functioning properly. Airing of the unit is essential before you occupy it. See details under the AIR QUALITY and CONDENSATION sections of this manual.

Automotive System—Be sure to check your tow vehicle as outlined in the tow vehicle manufacturer's owner's manual.

Awning Supports and bright metal parts should be cleaned and coated with silicone annually.

Axle and Suspension should be inspected frequently; paint and adjust as necessary.

Batteries should be inspected frequently and refilled or recharged as necessary; battery cables and terminals should be checked and cleaned every 90 days.

Body should be washed to remove dirt, dust, road tar, bird and tree droppings, insects, and other foreign material from exterior surfaces. Use a mild soap in lukewarm water. Apply an automotive-type wax at least once a year.

Brakes should be inspected every six months and replaced as necessary.

COMMENTS

NOTES:

Bumper and Frames that are painted, or any exposed painted surface, should be inspected for damage and rust. Rust should be removed and bumper and frame painted with rust preventive paint annually.

Counter and Table Tops should be cleaned periodically with a mild detergent and polished with a product such as Pride or Pledge.

Cushions, Chairs, Sofas may be labeled with the voluntary industry cleanability code. Because dyes or backings on some upholstery fabrics will be affected by water or solvents, the cleanability code will indicate the cleaning method that is safe for your fabric. If the furniture is not coded, test the fabric for discoloration on an inconspicuous part of the furniture before spot-cleaning. The code is symbolized by the following letter:

W

Use only water-based cleaning agents or foam. Mix two tablespoons ammonia or detergent, such as Ajax liquid, with a quart of water. Wipe the stain gently with a clean cloth dampened with the solution. Continue wiping, turning the cloth so that you are always using a clean portion, until the stain is removed. Be careful not to wet the fabric too much. Always wipe from the outer edge of the stain toward the center.

S

Use only mild, pure, water-free dry-cleaning solvents, such as Energine or Carbona. Dampen a clean cloth with the solvent and follow the same procedure described under W.

WS

Either of the above methods may be used.

X

Clean fabric only by vacuuming or light brushing to remove soil. Do not use liquid cleaning agents of any kind.

TYPES OF STAINS

Water-Based—ketchup, soft drinks, milk, etc. Remove using method W.

Oil-Based—salad dressing, butter, greasy food, etc. Use method S or, for flat-woven fabrics, not velvet, apply Texize K2R Spot Remover according to directions.

COMMENTS

NOTES:

Combination—ice cream, gravy, etc. are both watery and oily. Remove these types of stains using the S method and follow with the W method.

Mud—lift away what you can easily remove without forcing the mud into the fabric. Allow the remaining mud to dry completely, then vacuum. If the stain remains, clean with method W.

When overall cleaning is necessary, professional cleaners are recommended. However, if you wish to do it yourself, follow these suggestions:

1. Vacuum thoroughly.
2. Test fabric for discoloration on an inconspicuous place using a foam cleaner such as Fibre Fresh Concentrate or Glamorene.
3. If no discoloration appears, use cleaner on entire item.
Note: Many velvet fabrics cannot be cleaned with water-based cleaning agents.
4. After cleaning, you may wish to apply Scotchgard fabric protector to such areas as furniture arms, backs and cushions.

Door Step—The door step must be returned to its travel position before the unit is safe for traveling. To do this, lift the front edge of the step and push it under the unit.

Draperies, Curtains, Bedspreads should be dry-cleaned only.

Electrical System should be inspected and tested prior to each trip. Check the shoreline for damage. Test the 120 volt system for proper polarity and voltage. You may want to purchase a ground monitor and a line voltage tester to perform these checks.

Exterior Access Doors—Exterior access doors for storage and equipment should be closed and locked.

Fabrics need regular and continuing care. To keep them at their best, vacuum and brush away loose dirt before it becomes embedded and more difficult to remove. Clean spills and stains while fresh. VELVET fabrics should be cleaned with extreme care. Spills on velvet generally will bead-up. Blot them up quickly and gently so as not to force the stain deep into the fabric. If a stain remains, spot-clean using one of the methods described below. Wipe the stain in the direction of the pile to prevent distortion. When the fabric is dry, gently brush with a soft brush. Many velvet fabrics cannot be cleaned with water-based cleaned agents.



COMMENTS

NOTES:

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LP Gas Bottles—LP gas bottles and connections should be secured. Note: Some states prohibit vehicles equipped with LP gas bottles from using tunnels; others prohibit traveling with the Service Valve open and the pilots lit. Check the regulations of the state through which you intend to travel.

Lug Nuts should be checked after 10, 25 and 50 miles or whenever a wheel has been reinstalled. If lug nuts continue to loosen, they should be replaced. . For more information check Chassis owner’s manual.

Pigtail Contacts should be inspected and coated with WD-40 every 90 days.

Refrigerator Door—Secure the refrigerator door with the travel latch.

Rock Guard Awning—The unit awning should be lowered and secured. To lower the awning, loosen the wing nuts and slide the awning down. Pull the retaining pins and seat in the latch hole. To raise the awning, pull the retaining pins out and slide the awning up. Tighten the wing nuts to secure the awning at the desired height.

Roof, Body, Underbelly should be inspected for damage, rust or corrosion every 90 days and repaired as necessary.

Rubber Roof

- 1) Keep your roof clean. Clean your roof four (4) times annually.
For normal Cleaning:
 - Use a mild laundry detergent. DO NOT use general purpose cleaners containing petroleum solvents, harsh abrasives, or citric based cleaners
 - Rinse the roof thoroughly to remove any loose dirt or debris.
 - Using a medium bristle brush along with your selected cleaner mixed with water, scrub the entire roof. Rinse thoroughly with clean water to avoid residue build up on the roof or side wall of the vehicle.
 - For more difficult stains, you may use cleaning materials mentioned above in a more concentrated mixture. For stubborn stains, use of a rag dampened with mineral spirits is recommended. DO NOT use mineral spirits in a large area or allow it to soak into the membrane. Household bleach or windshield washer fluid can also be used (fully concentrated) and allowed to soak in stubborn stain areas, then scrubbed with a medium bristle brush or rag. Rinse thoroughly.
- 2) Beware of areas where fruit or tree sap or harsh environmental fall out may stay on the roof for an extended period of time.



COMMENTS

NOTES:

should be balanced as necessary but, if required, these tires should be rotated front-to-rear or rear-to-front only.

TV Antenna exterior moving parts should be lubricated periodically. The TV antenna must be cranked down to its' traveling position.

Vents should be inspected and cleaned annually; lightly oil all moving parts. Inspect vents periodically for bird nests.

Vinyl-Coated ceiling and wall panels should be cleaned with a mild soap and damp sponge as needed.

Water Heater control compartment should be kept clean and free of combustible material and flammable liquids. The vent and combustible air grille should be clear of any obstructions. Manually operate the pressure temperature relief valve at least once a year. Operate only when storage water in tank is cool. Periodically compare main and pilot burner flame with illustrations in the manufacturer's operation instruction manual. **DO NOT** tamper with the pilot orifice to increase the pilot flame size; this can cause high water temperature and failure of gas control.

Wheel Bearings should be cleaned and repacked at least once a year.

Windows, Doors, Compartment Doors should be inspected for damage or leaks prior to each trip. Replace any damaged or worn parts. Fix or replace any leaking parts. Lubricate moving parts and rubber seals with silicone lubricant. Clean dirt and debris from window tracks.

Windows and Vents—All windows and vents should be closed completely or adjusted as desired before you travel.

Wood Cabinetry should be protected and cleaned several times a year using any good non-silicone wood polish. Careful control of temperature and humidity will help reduce expansion and shrinkage of doors and door panels.

NOTE: THIS INFORMATION IS PROVIDED ONLY AS A SERVICE AND SHOULD NOT BE INTERPRETED AS A WARRANTY. THE NAMING OF A CLEANING AGENT DOES NOT CONSTITUTE AN ENDORSEMENT OF PRODUCTS; OTHER SIMILAR PRODUCTS MAY BE EQUALLY EFFECTIVE.



COMMENTS

NOTES:

Horizontal lines for writing notes and comments.

APPENDIX

PRE-TRAVEL CHECK LIST

GENERAL DRIVING CHECKS

For your safety, make certain that the following items have been checked and rechecked before you take your RV on the road. Make certain that all items inside of your RV are secured (e.g., lawn chairs, pots and pans, TV, etc.). As you travel, these items, if not secured, may become damaged or may damage the interior of your RV.

Front Jacks—The front jacks must be raised as far as possible.

Lights—The following lights should be tested on both the RV and the tow vehicle: brake lights, warning lights, flashers, clearance lights, tail-lights and headlights. Clean all lens covers.

Pigtail—The pigtail should be connected properly to the tow vehicle's electrical harness.

Hitch Coupler/Pinbox—Inspect the hitch coupler or pinbox to be sure they have not loosened.

Rearview Mirrors—Adjust the rearview mirrors so that the driver can see the right and left sides of the unit.

OTHER DRIVING CHECKS

Whether you are departing from your home, rest area or campsite, you should check the following parts of your RV before you take off.

Tires—Before each trip, check your tires for uneven wear, road damage, foreign objects or excessive peeling or bulging. Each morning, inspect the condition and pressure. Heat generated by surface friction will increase the tire's air pressure approximately six to nine psi; therefore, do not bleed air out of a hot tire. Inflate the tire to the recommended pressure (indicated either on the tire or in the manufacturer's instruction booklet).

Tire Change (in the event of a FLAT or WORN tire)—Turn on tow vehicle's hazard warning flashers. Set up flares or warning lights. Put a chock under the opposite tire and unhitch the unit from the tow vehicle. Place a scissors-type or hydraulic jack on a block of wood directly UNDER THE FRAME close to the tire you intend to change. DO NOT use a bumper jack; it could damage the sidewalls or floor board. Raise the jack to take weight off the tire. Loosen the lug nuts. Raise the jack until the tire clears the ground, then remove the lug nuts. Pull the tire off and put the spare tire on the hub. Replace and tighten lug nuts. Lower the jack until the tire just touches the ground.

**TROUBLESHOOTING GUIDE**

NOTE: Use the product manufacturer's owner's manual for all appliance troubleshooting.

PROBLEM	CAUSE	SOLUTION
Electrical Power		
No electrical power to unit.	1) Shoreline Connection.	Be sure you have power to the shoreline.
	2) Circuit breaker switches may be tripped or off.	Reset breaker(s) at power center.
	3) Fuse may be blown.	Replace fuse at battery compartment.
<hr/>		
Power Converter		
Converter making clicking noise.	1) Circuit overload.	Reduce load on circuit.
	2) Reversed polarity at battery.	Correct polarity at battery.
	3) Short in recharge line.	Locate and repair short.
<hr/>		
Electrically Charged (Hot) Chassis		
Chassis is electrically charged.	1) Short in 110/120v circuit.	Disconnect unit from electrical supply. Have unit inspected and repaired if necessary, by a qualified service facility. NOTE: Determine if shoreline has proper polarity.
	2) Power cord ground not connected to earth ground.	Make sure shoreline post ground is earth ground and power cord ground is used.
	3) Bad adapter plug.	Replace power cord adapter.
<hr/>		
Lighting		
Lights flickering.	1) Loose fuse holders.	Tighten or replace fuse holder.
	2) Blown fuse.	Replace fuse with one of the same ampere-rating.
	3) Broken connection or wire.	Replace connection and/or wire.
	4) Bad ground.	Make sure ground connection is secure.
	5) Converter overheating.	Reduce load and let converter cool.
Lights dim or half bright.	1) Bad battery.	Check battery condition.
	2) Possible converter malfunction.	Have converter checked by an authorized Service Center.
	3) Possible low voltage from shoreline.	Make sure voltage to shoreline is not too low.

..... Continued on next page

**TROUBLESHOOTING GUIDE ...continued from previous page**

NOTE: Use the product manufacturer's owner's manual for all appliance troubleshooting.

PROBLEM	CAUSE	SOLUTION
Refrigerator Refrigerator will not cool.	1) RV not level. 2) Upper and/or lower refrigerator vents clogged. 3) If refrigerator is running on gas, the tank is empty. 4) Blown fuse (12v)	Make sure RV is level. Clear vents of debris or food items that may block air flow in the vents. Fill LP gas tank Replace fuse with one of the same ampere rating.
TV Antenna TV antenna has poor reception	1) Power TV jack not turned on. 2) Bad connection at TV or wall plate. 3) Cut or nicked cable. 4) Antenna not pointed in direction of 'sending' station.	Turn power TV jack switch on. Make sure the connections are good at both TV and wall plate. Replace bad cable where needed at TV and antenna. Reposition antenna to point in direction of 'sending' station.
Towing Unit will not tow level.	1) Ball hitch improperly positioned on tow vehicle. 2) Unbalanced load—too much weight in front or back. 3) Load leveling stabilizer bars on hitch improperly adjusted.	Have ball hitch position checked by an authorized dealer for a possible solution. Redistribute cargo to achieve the correct hitch weight. Adjust stabilizer bars to the proper setting.



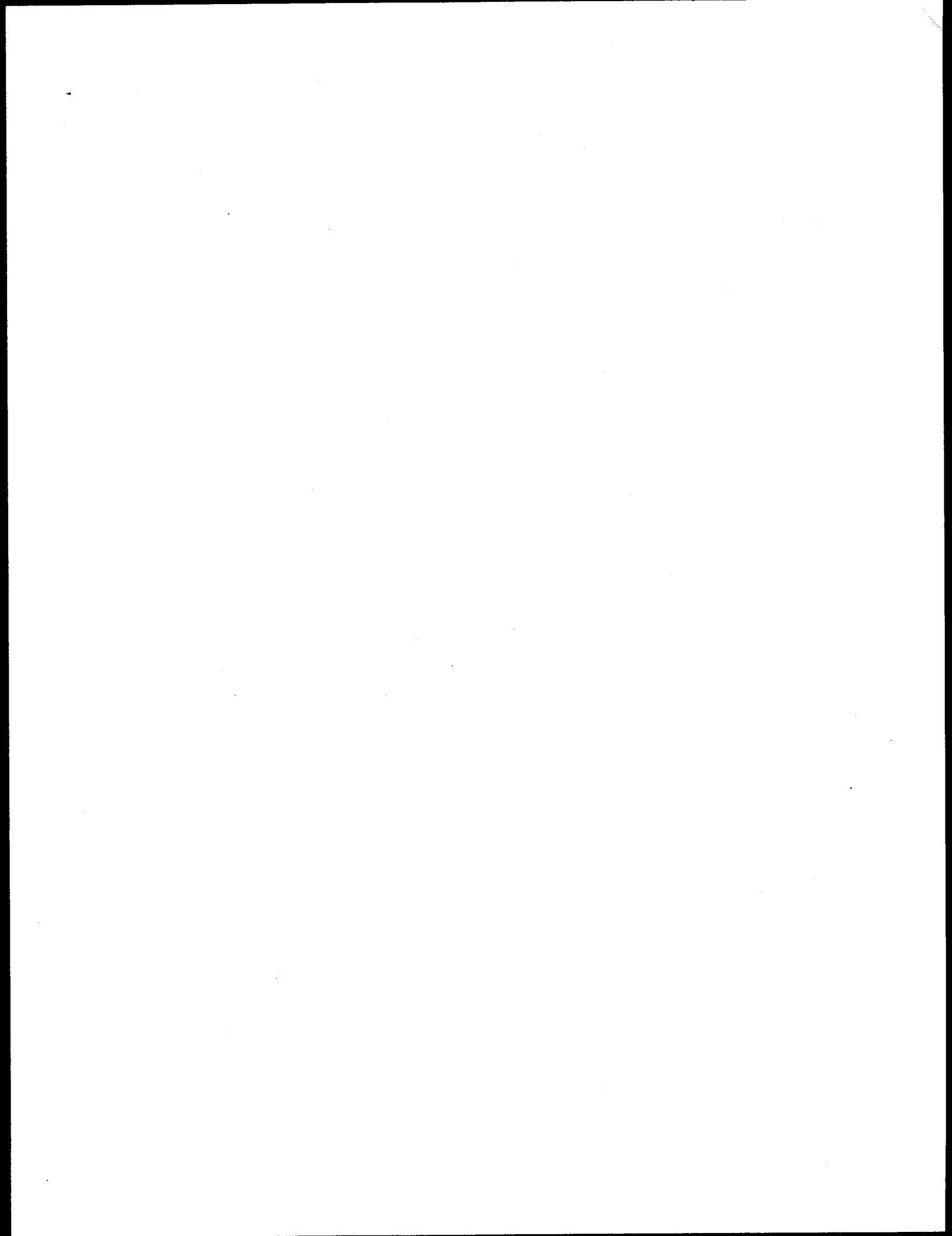
APPLIANCE IDENTIFICATION FORM

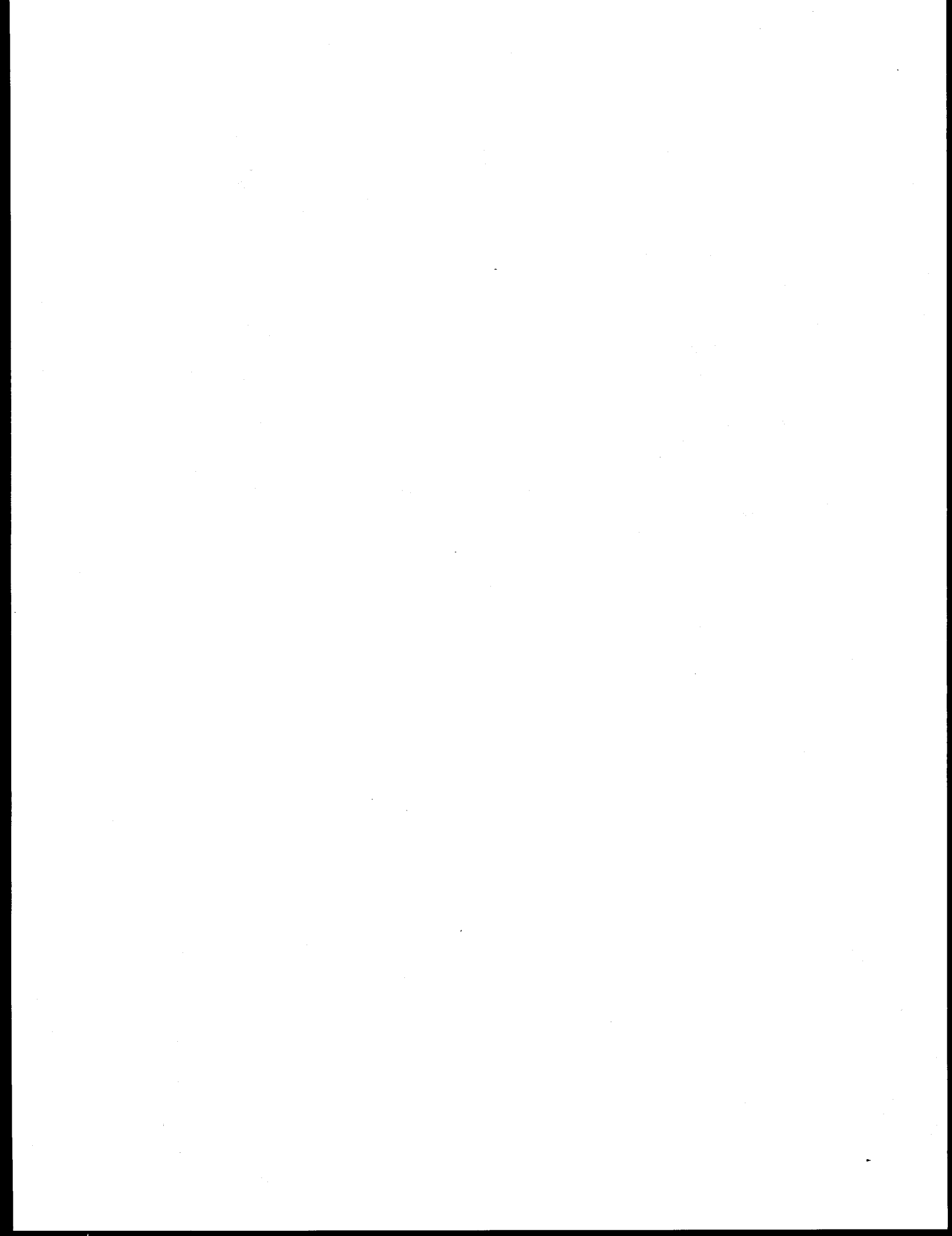
Should your unit or one of the appliances require warranty service, you will have to identify the manufacturer, model designator and serial number. Fill in this form as soon as possible. It will help you meet identification requirement. Depending on your unit, certain items listed below may be offered as either optional and/or standard. Most of this information can be found on the Recreational Vehicle Data and Quality Assurance Information sticker attached to the inside of one of the kitchen cabinets.

EQUIPMENT	MANUFACTURER	MODEL DESIGNATOR	SERIAL NUMBER
Travel Trailer or Fifth Wheel	_____	_____	_____
Converter/Power Center	_____	_____	_____
Water Pump	_____	_____	_____
Furnace	_____	_____	_____
Generator	_____	_____	_____
Keys—Door	_____	_____	_____
Exterior Storage	_____	_____	_____
Other	_____	_____	_____
Microwave Oven	_____	_____	_____
Radio/Cassette Player	_____	_____	_____
Range/Oven	_____	_____	_____
Refrigerator	_____	_____	_____
Washer	_____	_____	_____
Dryer	_____	_____	_____
Roof Air Conditioner(s)	_____	_____	_____
Toilet	_____	_____	_____
TV	_____	_____	_____
TV Antenna	_____	_____	_____
Water Heater	_____	_____	_____

OPTIONAL EQUIPMENT

_____	_____	_____	_____
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COACHMEN RECREATIONAL VEHICLE COMPANY COMPLEX
Middlebury, Indiana

Coachmen Industries, Inc. was founded in Middlebury, Indiana, in 1964 by Claude, Keith and Tom Corson. The three brothers recognized business opportunities in the new and growing recreational vehicle (RV) industry and combined their business experience in finance, marketing and manufacturing.

Their confidence in the RV industry was well founded. From first-year production which included 12 travel trailers, one pick-up truck camper and 80 truck caps, the Company has become a diversified, full-line manufacturer of recreational vehicles under many well-known brand names with over 450,000 units manufactured. The Company's RV product line includes travel trailers, fifth wheel trailers, Class C mini-motorhomes and Class A motorhomes. The Coachmen RV complex consists of 135 acres with over 812,000 square feet of assembly facilities under roof.



The Coachmen recreational vehicles described in this manual incorporate components produced by divisions of Coachmen Industries, Inc., and various suppliers. During the product year, Coachmen may decide to produce units with different components and/or specification other than initially scheduled. All such changes are approved for use by Coachmen in order to maintain the quality standards associated with the Coachmen name. All illustrations and specifications contained within this Owner's manual are based upon the latest product information at the time of publication. Coachmen Recreational Vehicle Company, LLC reserves the right to make changes in operations, materials, equipment and specifications at any time without notice. Coachmen assumes no responsibility for any error in type or print reproduction of specifications in this Owner's manual. Check with your Coachmen dealer for additional information regarding your specific recreational vehicle.