



Coachmen
RECREATIONAL VEHICLES

1977

TRAVEL TRAILER & FIFTH WHEEL OWNER'S MANUAL

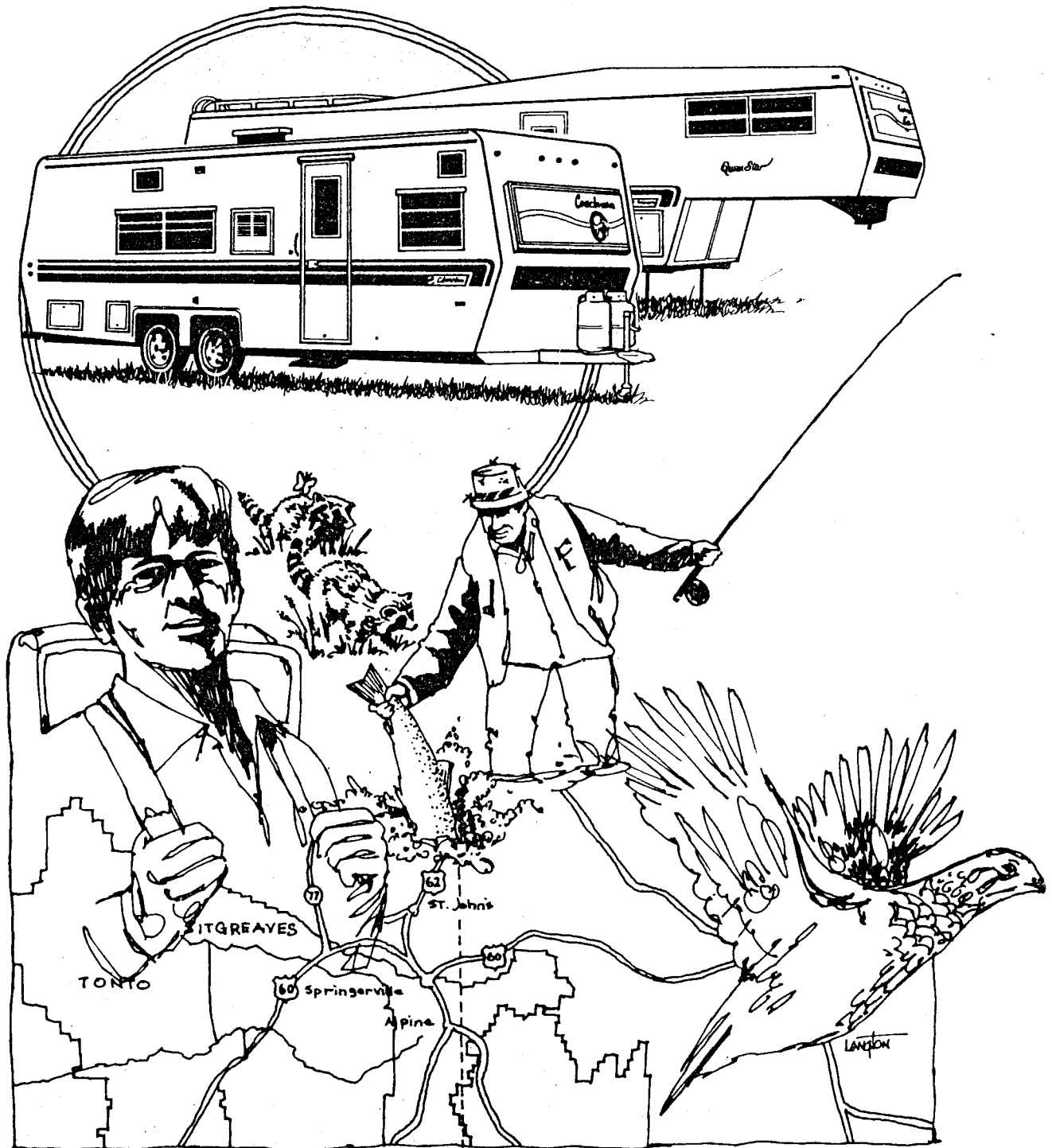


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FOREWORD

Welcome to Coachmen's ever growing family of happy RV owner's. Hours of adventure, fun, relaxation and enjoyment are possible for you in your new Coachmen unit. Simply read and follow all publications contained in the "Coachmen Owner's Information" packet.

This information is intended to provide you with basic instructions which will enable you to operate and maintain the appliances, accessories, and RV systems of your unit, whether it is a travel trailer or fifth wheel trailer. Further information is contained in the appliance and accessory instruction booklets provided by various manufacturers.

Operating and maintenance instructions pertaining to appliances contained in our manual were obtained from and are being used with permission of various manufacturers. We reserve the right to present edited portions of their material.

Coachmen Industries, Inc. works year 'round to improve its products. Accordingly, all specifications, equipment, and prices set forth in Coachmen literature are subject to change without notice and/or obligation.

NOTE: THE SYSTEMS AND EQUIPMENT DESCRIBED IN THIS MANUAL ARE NOT IDENTIFIED AS STANDARD OR OPTIONAL DUE TO THE VARIETY OF APPLIANCES AND ACCESSORIES WHICH MAY BE STANDARD, OPTIONAL OR NOT OFFERED WITH A PARTICULAR UNIT.

INSURANCE

Personal liability, property damage, collision and theft of contents may be features of your automobile insurance policy which apply to your Coachmen unit. Talk to your auto insurance agent for further information. Always carry your policy card.

INTERNATIONAL TRAVEL

Consider the following recommendations when planning a trip to either Canada or Mexico. Because this information is general in nature, contact the nearest Canadian or Mexican consulate for up-to-date regulations, points of interest and campsite listings.

CANADA

DRIVER'S LICENSE — No special driver's permit or license is required. Check and renew your U.S. driver's license if it has expired or will expire during your trip.

PROOF OF IDENTITY — U.S. citizens are not required to possess a passport or visa when crossing the U.S./Canadian border. However, each person should carry a birth certificate, voters registration card or other proof of U.S. citizenship.

If you are a naturalized U.S. citizen, carry your naturalization certificate. If you are an alien resident, carry your registration card.

Carry notarized permission from parents or legal guardian for any guest under 18 years old.

VEHICLE PERMIT — Make sure your vehicle registration papers are stored within easy reach. If you are borrowing this vehicle from a friend, be sure to have a signed notarized letter from him.

INSURANCE — Most U.S. auto insurance policies are acceptable in Canada; however, an additional rider may be necessary. Contact your auto insurance agent for further information.

FISHING & HUNTING — Each province has its own fishing and hunting laws and licenses. Revolvers, pistols and fully automatic rifles are prohibited in most provinces. You will have to present a written description of each shotgun or rifle, along with each serial number, to the customs official at the border. Write the Department of Lands and Forests — Wildlife Branch of the particular province you intend to hunt or fish in for further information.

CITIZENS BAND (CB) RADIO — If you intend to operate CB radio equipment in Canada, you must carry a Canadian temporary tourist radio service license. Request license application information from: Communications Canada, Quebec Regional Office, 2085 Union Ave., Montreal, Quebec.

PETS — If you intend to take your dog into Canada, you must carry a certificate, signed by a licensed veterinarian. It must describe your dog and attest that the animal has had a rabies shot within the past 12 months.

There are no restrictions or certificate requirements for cats.

BIRDS & OTHER PETS — Request further information from: Veterinary Director General Canada, Department of Agriculture, Ottawa, Ontario.

ENTERING CANADA — The Canadian government reserves the right to limit the amount of various items, such as tobacco, alcoholic beverages, ammunition and meats, that may be taken into their country. Contact the Canadian consulate for further information.

RETURNING TO U.S. — U.S. citizens, who have been in Canada 48 hours or longer, may carry merchandise worth a retail value of up to \$100 duty and tax free back into the United States. This merchandise must be intended for personal or household use. Family members may combine this duty and tax free privilege. Because these regulations are subject to change, write to the Bureau of Customs, Department of the Treasury, Washington, D.C. 20226 for the latest information.

MEXICO

DRIVER'S LICENSE — No special driver's permit or license is required. Check and renew your U.S. driver's license if it has expired or will expire during your trip.

PROOF OF IDENTITY — U.S. citizens are not required to possess a passport or visa when crossing the U.S./Mexican border. However, each person should carry a birth certificate, voters registration card or other proof of U.S. citizenship.

If you are a naturalized U.S. citizen, carry your naturalization certificate. If you are an alien resident, carry your registration card.

Carry notarized permission from parents or legal guardian for any guest under 18 years old.

VEHICLE PERMIT — Make sure your vehicle registration papers are stored within easy reach. If you are borrowing this vehicle from a friend, be sure to have a signed notarized letter from him.

Every self-propelled vehicle entering Mexico must have a vehicle permit. This may be obtained, at no charge, from any Mexican customs (Aduana) office upon presentation of tourist card, vehicle registration, title or notarized statement from owner.

TOURIST PERMIT — All persons over 14 years old must carry a tourist card. One may be obtained either at the port of entry or from a Mexican consulate. You may visit towns just across the border for 72 hours or less without this tourist card.

INSURANCE — Your auto insurance policy will not be valid in Mexico. Purchase short term insurance from a Mexican insurance agency prior to entering Mexico.

If you are involved in an accident in Mexico, contact your Mexican insurance agent before the police. You may avoid spending your vacation in jail.

FISHING & HUNTING — Fishing and hunting laws in Mexico are extremely complicated. Request further information from: Secretaria de Comunicaciones, Estados Unidos Mexicanos, Mexico, DF.

CITIZENS BAND (CB) RADIO — If you intend to operate CB radio equipment in Mexico, you must carry a permit. Request an application form and regulations from: Secretaria de Comunicaciones, Estados Unidos Mexicanos, Mexico, DF.

PETS — You must carry a certificate, signed by a licensed veterinarian, which describes the pet and attests that the animal has had a rabies shot within the past 6 months. You will have to pay a nominal fee at the border for a pet permit.

An inoculation certificate is necessary for your pet to re-enter the United States if the animal has been in Mexico more than 30 days.

ENTERING MEXICO — The Mexican government reserves the right to limit the amount of various items, such as tobacco, alcoholic beverages, ammunition and meats, that may be taken into their country. Contact the Mexican consulate for further information.

RETURNING TO U.S. — Return your tourist card and vehicle permit(s) to a Mexican customs official. Cross the border and present your proof of U.S. citizenship to the U.S. customs official. Your vehicle and baggage will probably be searched.

TOWING VEHICLE SELECTION GUIDE

Consider the following items before you purchase a towing vehicle. If you own a vehicle, study the following items to determine if it will handle your new Coachmen unit.

TRAVEL TRAILER/FIFTH WHEEL

ENGINE SIZE — The engine should have enough horsepower to handle the towing vehicle, unit, passengers, driver, clothing, food, water and other camping gear. This total is known as the Gross Combination Weight (GCW).

TOWING VEHICLE EQUIPMENT PACKAGE — Most automobile manufacturers offer a trailer towing equipment package which may include: larger alternator or generator, larger battery, heavier ply tires, heavy duty springs and shocks, side view mirrors, larger engine and transmission cooling systems.

NOTE: *The use of heavier suspension components (springs & shocks) or heavier ply tires does not increase the weight ratings printed on the towing vehicle's identification or certification plate.*

ADDITIONAL TOWING VEHICLE OPTIONS — The following items will be helpful to you and your passengers during long trips: automotive air conditioning, automatic transmission, power brakes and steering.

BRAKE CONTROL — A brake control system must be installed in your towing vehicle to operate the electric brakes of your unit.

TRAVEL TRAILER

HITCH — Installation of a weight distribution (load equalization) hitch is recommended. A portion of the unit's tongue weight is transferred to the front and rear wheels of the towing vehicle. The remaining tongue weight is transferred to the unit's wheels. Because both vehicles will be nearly level, the steering response of the towing vehicle should be improved.

SWAY CONTROL DEVICE — The installation of a sway control device is recommended. This device should minimize swaying caused by: crosswinds; wind encountered by passing or being passed by another vehicle; or dropping the tires off the edge of the road onto a soft shoulder.

FIFTH WHEEL

PIN — Be sure your pick-up truck will accommodate the pin weight of your new fifth wheel. See the BROCHURE for the pin weight of your unit.

TRAVEL PREPARATION

INFORMATION — Write to the chamber of commerce of each state through which you intend to travel for road maps, campground listing points of interest and other tourist information. Purchase RV'ing "How-To" books and traveling guide books.

HOME SECURITY — Give a trusted neighbor, friend or relative a house key and your travel itinerary. Make arrangements for someone to check your house at least once a week. If you intend to be away for more than 2 weeks, request police surveillance. Stop mail and newspaper delivery. Carry an extra set of vehicle and house keys on a separate key ring.

IMPORTANT DOCUMENTS — Carry your vehicle registration papers and other important documents within easy reach. If you are borrowing a vehicle from a friend, it is recommended that you carry a signed notarized letter from him.

SUPPLIES AND EQUIPMENT — The following list contains basic supplies and equipment which will aid you in deciding what to take along. Write the description of additional material under the appropriate category.

CAMP HYGIENE — Compile a list of items which will help keep unit and camp site neat, clean and comfortable.

- Clothes line & cloths pins
 - Dish soap, dish cloth & dish towel
 - Garbage & trash bags
 - Mop, broom & dust pan
-
-
-

CLOTHING — Compile a clothing list for each person. Consider number of days, season and geographical location.

- Blouse & shirt
 - Coat or jacket
 - Dress and/or skirt
 - Shoes & socks
 - Trousers & slacks
 - Underwear
-
-
-

ENTERTAINMENT — List items which will provide entertainment for you and your family while traveling and rainy days.

- Books
- Games
- Magazines
- Toys

FOOD & BEVERAGES — Plan at least 3 meals for each person. Consider length of travel time.

- Bottled food & condiments (Not advisable due to possible breakage)
- Boxed food & condiments
- Canned food & condiments
- Fresh fruit & vegetables
- Water (weighs approximately 8 lbs. per gallon)

HOBBY & SPORT — List hobby and sport equipment per person.

- Camera equipment
- Fishing & hunting gear
- Golf equipment

MEAL PREPARATION — List those items which will be necessary for preparing meals.

- Bottle & can opener
- Electric appliances
- Matches, lighter or igniter device
- Pots & pans
- Plates, glasses and cups
- Knives, forks & spoons

PERSONAL COMFORT & HYGIENE — List items which are essential to you and your family's personal comfort and hygiene.

- Insect & fly repellents
- Soap, deodorant & talcum powder
- Shaving kit
- Sun tan lotion
- Toilet paper & facial tissue
- Tooth paste & tooth brush
- Wash cloths & towels

SAFETY EQUIPMENT — Some states require the following equipment to be carried by RV'ers.

- Flash light
- First aid kit
- Flares & reflector
- Tow rope or chain

SET UP — List items which will be required for camp set up.

- 20' long 3 wire power cord (*Check maximum load capacity of your unit and use a power cord of sufficient gauge.*)
- 3 prong adaptor with grounding wire
- Two buckets
- Two water hoses & "Y" type water hose fitting (*You may have to share a water hook up with a neighbor.*)
- Wheel chocks
- Two step leveling ramp (FIG. 1)

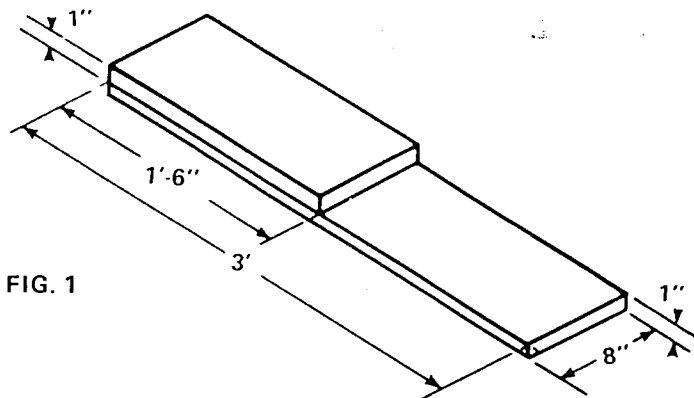


FIG. 1

SLEEPING GEAR — Prepare a list of sleeping gear for each person.

- Pajamas
- Pillows, sheets & blankets
- Sleeping bag

Tools — You may encounter a situation which requires specific tools. Consider storage areas within vehicle.

- Hatchet, saw & shovel
- Tool box (Include an assortment of wrenches, pliers, hammer, screw drivers, tire pressure gauge and tape.)
- 12 Volt Direct Current portable tire pump.

LOADING

GENERAL— Proper loading and weight distribution are essential for the safe handling of your unit. Store light weight items in the overhead cabinets and heavier items on or near the floor. This will help lower the center of gravity of your unit, thus improving handling in curves. Lash down items that are too large to store in cabinets or closets. This will help prevent damage caused by sliding cargo. Distribute "supplies and equipment" as listed in TRAVEL PREPARATION as equally as possible from side to side and front to rear.

CAUTION — *Overloading or improper weight distribution can cause a serious safety hazard. We strongly recommend that you use the following procedure to determine if your unit is properly loaded.*

LOADING DEFINITIONS

APPROXIMATE CAPACITY — (Found in BROCHURE) is the difference between the dry weight and the GVWR.

DRY WEIGHT, standard no options — (Found in BROCHURE) is obtained by adding the axle and pin weights as listed in the BROCHURE. This will give you the weight of your unit without options or cargo.

GROSS AXLE WEIGHT (GAW) — is the amount of weight transferred to a particular axle when your unit is loaded with cargo, options, and passengers (when permitted).

GROSS AXLE WEIGHT RATING (GAWR) — (Found in BROCHURE) is the amount of your units total weight that can be safely supported, while traveling, by each axle.

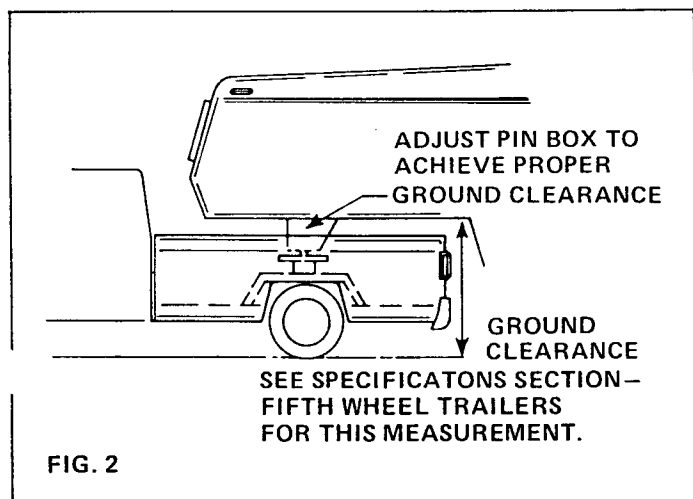
NOTE: Under NO circumstances are you to exceed your GAWR with the GAW, see COMPUTATIONS.

GROSS VEHICLE WEIGHT (GVW) — is the actual weight of your unit with cargo, options, and passengers (as permitted).

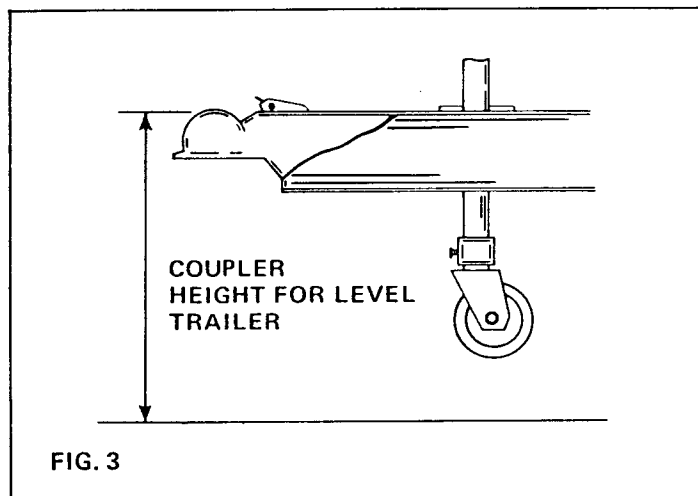
GROSS VEHICLE WEIGHT RATING (GVWR) — (Found in BROCHURE and the federal sticker of your unit) is the maximum permissible weight of your unit.

NOTE: The GVW is never to exceed the GVWR when the vehicle is in tow.

GROUND CLEARANCE (5TH WHEEL) — (Found in BROCHURE) is the distance from the ground to the bottom of the upper frame needed to provide the best handling of your fifth wheel when traveling.



HITCH BALL HEIGHT (TRAVEL TRAILER) — (Found in BROCHURE) is the distance needed from the ground to the top of the hitch ball to provide easy handling for your travel trailer.



HITCH/PIN WEIGHT — is the portion of the unit's GVW that is transferred to the towing vehicle. This should be between 12 to 19% of the trailer's GVW and between 25 to 28% for fifth wheels.

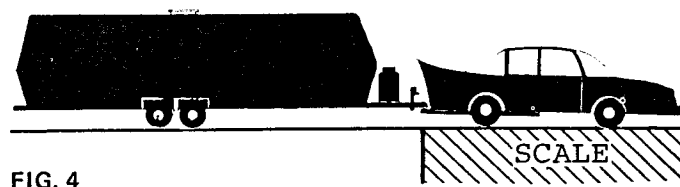
WEIGHT DETERMINATIONS — It is extremely important that you weigh your unit prior to leaving on any trip to determine whether or not your unit is properly loaded.

To find the location of a weighing station in your area, look in the yellow pages of the telephone book under grain elevator, sand and gravel dealers, or a government weighing station.

Load your unit and towing vehicle with all of the cargo and people that you plan to take on your trip. Drive to the weighing station exercising extreme caution (your unit may already be improperly loaded).

Position the towing vehicle on the scale so that the unit can be unhitched without placing the front jack on the scale.

STEP 1 — Weigh the towing vehicle with the trailer attached. Be sure you have the proper hitch ball height (BROCHURE) and enter this weight in FIG. 7A, under GROSS TOWING VEHICLE WEIGHT (GTVW).



STEP 2 — Unhitch the unit from the towing vehicle (make sure the jack is not on the scale) and enter the weight in FIG. 7A, in the space for TOWING VEHICLE WEIGHT (TVW).

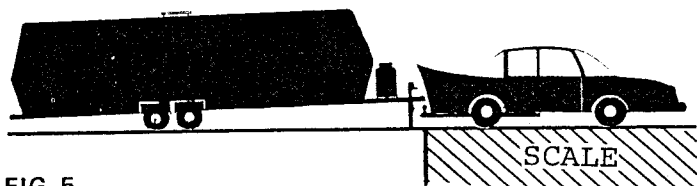


FIG. 5

STEP 3 — Hitch the unit to towing vehicle and pull forward so that the towing vehicle is off the scale. Check the hitch ball height (BROCHURE). Enter this weight as the trailer's GROSS AXLE WEIGHT (GAW) in FIGURE 7B.

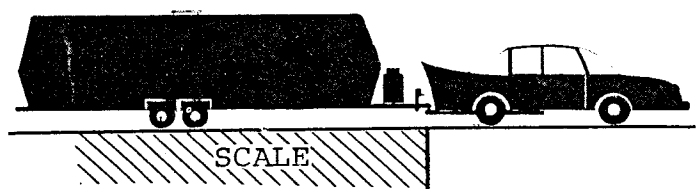


FIG. 6

STEP 4 — (TANDEM AXLES ONLY) — Pull forward so that only the rear axle is on the scale. Enter this weight in FIG. 7B, REAR AXLE WEIGHT (RAW).

STEP 5 — Subtract the TVW from the GTVW (Fig. 7A), to obtain the HITCH/PIN WEIGHT (H/P W).

STEP 6 — Add the H/P W to the GAW (FIG. 7A), to obtain the trailer GVW.

STEP 7 — Divide the H/P W by the GVW. This figure should be within the limits as specified in HITCH/PIN WEIGHT (LOADING DEFINITIONS).

STEP 8 — (TANDEM AXLES ONLY) — Subtract the RAW from the GAW to obtain the FRONT AXLE WEIGHT (FAW).

If any of the weights (GAW, FAW, RAW) exceed those specified in BROCHURE, or if the H/P W ratio is not as specified in LOADING DEFINITIONS, your unit is improperly loaded. You should redistribute your cargo and reweigh your unit as outlined.

FIG. 7A

GROSS TOWING VEHICLE WEIGHT (GTVW) from STEP 1	
TOWING VEHICLE WEIGHT (TVW) from STEP 2	
HITCH/PIN WEIGHT (H/P W) subtract TVW from GTVW (see STEP 5)	
GROSS VEHICLE WEIGHT (GVW) add GAW to H/P W (see STEP 6)	

FIG. 7B

GROSS AXLE WEIGHT (GAW) from STEP 3	
REAR AXLE WEIGHT (RAW) from STEP 4	
FRONT AXLE WEIGHT (FAW) subtract RAW from GAW (see STEP 8)	

TOWING HOOK UP TRAVEL TRAILER

COUPLER — Crank the front jack clockwise to lift the coupler above the top of the hitch ball. Back the towing vehicle to the unit in such a way as to position the hitch ball directly under the coupler.

Lift the coupling lever handle (FIG. 8), and crank the front jack counter-clockwise to allow the coupler to rest on the hitch ball. Return the coupling lever handle to it's original position and lock into place.

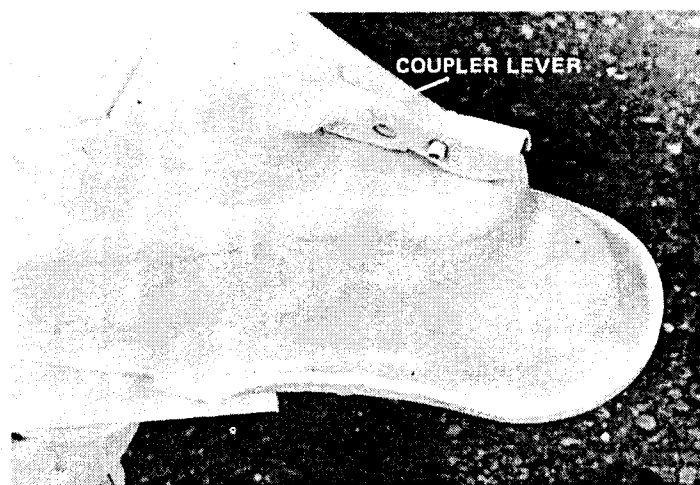


FIG. 8

FRONT JACK — Crank the front jack counter-clockwise until you have enough room to remove the dolly wheel. After removing the dolly wheel crank the front jack counter-clockwise until it can go no higher.

LOAD EQUALIZING & STABILIZING EQUIPMENT — Attach load equalizing and stabilizing equipment as recommended by the manufacturer.

SAFETY CHAINS & ELECTRICAL CONNECTION — Cross safety chains under the "A" frame and attach them to the towing vehicle hitch platform. Plug the pigtail into the electrical connection that your Coachmen dealer installed in your towing vehicle. Make sure that you leave enough slack in these connections to allow your unit to turn freely. Safety chains should be hooked-up in such a manner as to allow the trailer to fall from the hitch ball without touching the ground or pull the pigtail from the towing vehicle.

BREAK-AWAY SWITCH — Attach the activating cable to the towing vehicle so that it will activate the trailer brakes before the unit falls to the safety chains. Allow enough slack in the activating cable to allow the unit to turn freely without activating the brakes. The break control system installed by your Coachmen

dealer will activate the trailer brakes unless the pigtail is separated from the towing vehicle. However, if the pigtail is pulled out of the harness during this accidental separation, electricity must come from a battery located on your unit.

Cadet Units — If your unit is not equipped with a battery you must purchase a 12-Volt dry cell battery from your Coachmen Dealer.

FIFTH WHEEL

HITCHING — Lower or remove the truck tailgate. Release the plate jaws by pulling the handle until a snap is heard (FIG. 9). Back up the truck until the pin is caught by the jaw plates, another snap will be heard. Check the release handle and the spring loaded lock rod. The rod must be holding the handle against the hitch plate base.

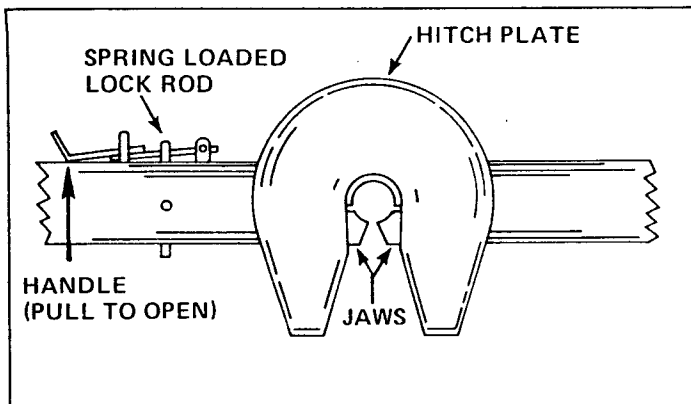


FIG. 9

Turn the crank handle counter-clockwise to raise the jack stands. Be sure they are raised as far as possible. If this procedure is not followed, one or both stands may be damaged if they should happen to dig into the ground or pavement.

ELECTRICAL PIGTAIL CONNECTION — Plug the electrical pigtail into the truck's electrical harness.

BREAK-AWAY SWITCH — Attach the activating cable to the truck body. DO NOT attach cable to the plate handle, hitch plate base, or plate mounting brackets. Adjust cable so both vehicles may turn freely without pulling the pin from the switch.

The towing vehicle battery will apply your unit's brakes if the kingpin accidentally separates from the hitch plate. However, if the pigtail is pulled out of the harness during this accidental separation, electricity must come from a battery located on your unit.

Quinstar Units — The break-away system is connected to the interior electrical system battery.

PRE-TRAVELING CHECK

TRAVEL TRAILER/FIFTH WHEEL

Whether you intend to pull away from your home, rest area or campsite, we suggest that you perform the following pre-traveling checks.

TIRES — Check each tire for uneven or excessive treadwear, cuts, peeling, or bulging. Change damaged

tire as directed in the CARE & MAINTENANCE section.

Check each tire's air pressure at least once each trip. This must be done before leaving; air pressure will be 6 to 9 lbs. greater due to heat generated by road friction.

NOTE: See the appropriate BROCHURE section for tire air pressure.

WHEELS — During your initial trip and after changing each tire, tighten the wheel lugs every 50 miles of the first 200.

PIGTAIL CONNECTION — The electrical pigtail must be plugged into the towing vehicle's electrical harness. Check to make sure there is a solid connection.

LIGHTS — Test all running lights (*tail, turn, stop, clearance & backup*). Clean the lens covers.

MIRRORS — Adjust outside rearview mirrors. We suggest they be adjusted so that you can see both right and left sides of your unit.

BREAK-AWAY SWITCH ACTIVATOR CABLE — The break-away switch activator cable must be attached to the towing vehicle as directed in the TOWING HOOK-UP section.

POWER CORD — Unplug power cord from shore-line source. The cord must be stored inside the unit and the hatch secured. (FIG. 19)

CITY WATER — Disconnect water hose from city water fixture and pressurized water source. The fixture cap must be closed and secured. (FIG. 17)

SEWAGE DUMP VALVES — Close and lock dump valves. Secure dump valves to valve outlets. (FIG. 18)

EXTERIOR STORAGE & EQUIPMENT ACCESS DOORS — Close and lock all exterior storage & equipment access doors.

LPG — Turn off LPG at POL valve (FIG. 15).

STEP — Return the step to the traveling position.

TV ANTENNA — Crank antenna down to its traveling position (FIG. 28).

WINDOWS & VENTS — Close and secure all windows and vents.

DOORS & DRAWERS — Close and secure all doors and drawers.

AWNING — Lower and secure the awning with latches.

HITCH — Coupler must be fastened to the hitch ball.

SAFETY CHAINS — Both safety chains must be crossed under the coupler and hooked to the hitch platform. They must not drag the ground when traveling in a straight line, nor prevent either vehicle from turning freely.

FRONT JACK — Check the front jack stand. It must be raised as far as possible.

FIFTH WHEEL

HITCH — Check the release handle and the spring loaded lock rod. *The rod must hold the handle against the hitch plate base.* (FIG. 9)

FRONT JACKS — Check the front jack stands. They must be raised as far as possible.

DRIVING

Your driving habits will have to be somewhat modified in order to compensate for the length of the unit and the additional weight placed on the towing vehicle.

TURNING — Because the turning radius of the trailer is tighter than the towing vehicle's, pull at least 2' further into the intersection before turning. On right turns, this procedure will prevent the unit's wheels from bouncing over the curb, hitting parked cars or pedestrians. On left turns, the unit will swing wide of the cars waiting at the cross street of an intersection.

BACKING — Place hand at the bottom of the steering wheel. Move wheel in the direction you want the trailer to go (FIG. 10).

Have an observer stand behind the trailer where you can see him. Work out a set of signals for turning, distance to go, stopping and forward.

If the trailer starts to jackknife, stop, pull forward and start over.

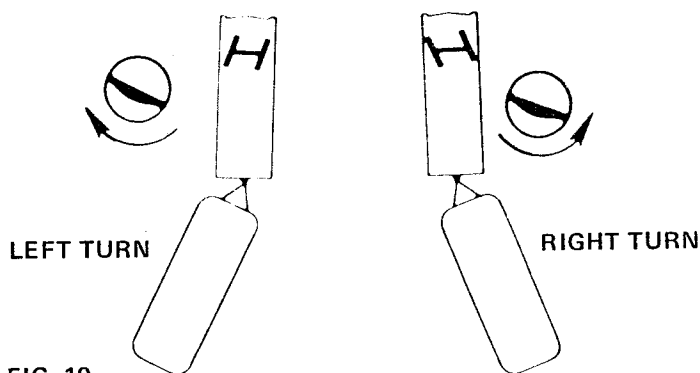


FIG. 10

BRAKING — Allow sufficient distance to stop safely. Apply towing vehicle and trailer brakes lightly to stop on wet or icy roads. If your vehicle starts to slide, turn the steering wheel in the direction of the slide. DO NOT tromp down on the brake pedal — a panic stop will increase the slide. DO drive slowly enough so that you may stop without a panic slide.

DO NOT rest your foot on the brake pedal while driving. Riding the brakes in this manner may cause abnormally high brake temperatures, excessive lining wear, possible brake failure or fire.

TRAVELING — Check for oncoming traffic in all directions. Signal before entering the traffic flow. Accelerate slowly and smoothly. DO NOT tromp the accelerator to the floor; jack rabbit starts waste gas.

Stay in the right lane as much as possible. Allow faster vehicles to pass. Some states require slow moving vehicles to pull off the road as soon as possible when four or more vehicles are waiting to pass.

When passing a slower vehicle, remember that additional time and distance will be required to safely accomplish the maneuver. Wait until the road is clear of oncoming traffic for at least one-half mile. Always check the rear view mirrors and signal lane changes before passing another vehicle.

Always maintain at least one combination towing vehicle/trailer length spacing for each 10 MPH from the vehicle in front of yours. DO NOT pull up to a slower moving vehicle while you wait for a chance to pass him. He may unexpectedly slow down or stop.

SWAYING OR FISHTAILING — This condition must be eliminated as soon as possible. Either accelerate, then gradually slow down, or briefly apply only the trailer brakes. If these maneuvers do not eliminate the sway, pull off the road and check: tire pressure, proper loading of trailer (*Too much weight behind the axles*), towing vehicle front end alignment and suspension.

OVERHEATING — The engine may overheat while climbing and descending steep grades. If your towing vehicle's engine should overheat, pull well off the road. Shift to neutral gear and run the engine with your foot resting lightly on the accelerator pedal. Another method for reducing engine temperature is to operate the automotive heater. If the engine does not cool within 5 minutes, turn it off and locate the problem before continuing with your trip.

Engine temperature problems may be avoided: climb long grades and descend steep grades in second gear; climb steep grades in first; turn off the automotive air conditioner (*If towing vehicle is so equipped*).

HOLDING ON AN UPGRADE — Use foot brake or parking brake and parking gear to hold both units on an upgrade. Using driving gear may cause the engine or transmission to overheat.

PARKING ON A GRADE — Apply foot brake first; shift transmission to park; apply parking brake; release foot brake.

OVERHEAD OBSTRUCTIONS — Tree branches, awnings and other overhead obstructions may damage your trailer's roof, equipment and accessories which are mounted on the roof. Know the height clearance measurement of your trailer.

FREEING A STUCK TOWING VEHICLE — To pull a stuck vehicle out of snow, sand or mud, apply slight pressure on the accelerator pedal and, if vehicle is equipped with automatic transmission, move the gear selector rhythmically between 1st and reverse. If possible, keep the front wheels pointed straight ahead. Avoid sharp turns. Once the towing vehicle starts to move, do not stop until it is on firm ground.

WARNING: DO NOT race the engine or spin the wheels. The transmission will overheat which may cause it to fail.

EMERGENCY STOPPING (Travel Trailer) — If the trailer coupler is jolted off the hitch, steer towards the nearest shoulder of the road and gradually reduce speed. The safety chains, which must be crossed under the coupler and hooked to the hitch platform, will prevent the tongue from dropping to the road. If the break-away pin is pulled from the break-away switch, the trailer brakes will be automatically applied. DO NOT slam on the brakes if the coupler bounces off the hitch — the trailer will strike the towing vehicle.

CAMP SITE SELECTION

Arrive at the campground early enough so that you may inspect and choose a parking site during daylight hours. Check ground firmness — avoid mud, sand and gravel. DO NOT camp next to a swamp, stream or other bodies of water — mosquitoes and other insects may be quite bothersome. Check for dead trees and loose limbs — a strong wind may blow them over and damage your unit. Avoid areas which display signs of flash flooding, such as exposed tree roots or other erosion.

WINTER USAGE — Park behind a grove of trees, bushes or other type of windbreak. Cover the gap between your unit and the ground with plastic, canvas or other suitable insulating material. These procedures will help maintain a comfortable interior temperature.

SET UP

SIDE-TO-SIDE LEVELNESS — Your unit must be level from side-to-side for your refrigerator to operate properly. Check this by placing a carpenter's level on the floor. If your unit is not level, either place a leveling ramp (FIG. 1) under the tire on the low side, or dig a shallow hole under the tire of the high side.

UNHITCH UNIT

TRAVEL TRAILER — Install the dolly wheel to the front jack (FIG. 11). Place a board directly under the dolly wheel and crank down the front jack.

Detach and store the safety chains, load equalizing and stabilizing equipment, pigtail, and break-away actuator cable. Lift the coupling lever (FIG. 8) and crank the front jack to raise the bottom of the coupler above the top of the hitch ball.

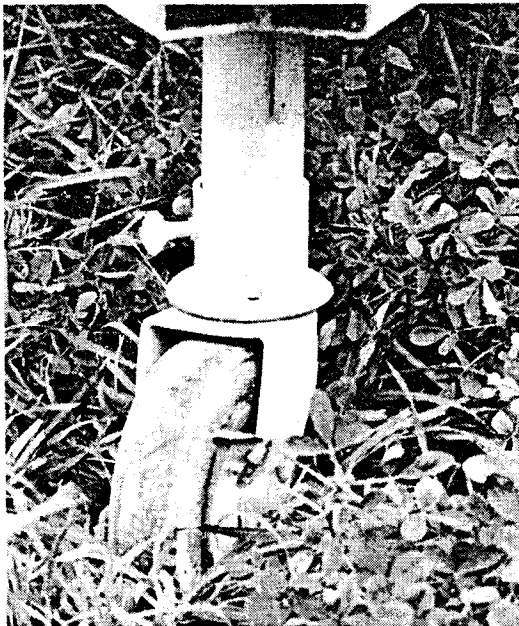


FIG. 11

FIFTH WHEEL — Place a board under the front jacks. Crank the jacks down until the weight of your fifth wheel is solidly supported.

Disconnect the pigtail, and break-away switch activating cable, from the towing vehicle. Pull the release handle and remove the towing vehicle from beneath the unit.

FRONT-TO-REAR LEVELNESS — Your unit should be level front-to-rear, not only for your comfort, but also for the drain system to function properly.

JACK STANDS — Crank the front jack(s) so that the unit is level. Again use the carpenter's level to determine levelness. Place jack stands beside both rear, and (travel trailers only) both front corners. Adjust the jack stands so that they extend approximately 2" above the main frame members.

Lower the front of the unit so that the jack stands can be placed directly under the main frame members.

Fifth Wheel — Level the unit with the front jacks and proceed in setting up your other components.

Travel Trailer — Using the front jack, raise the front of your unit so you can place the jack stands under the front main frame members. Lower the front of the unit so that most of the weight rests on the jack stands.

DOOR STEP — Lift the front edge and pull the step out to its fullest extent. Some units have a double step (FIG. 12). Remember to push the step back into its traveling position before moving your unit.

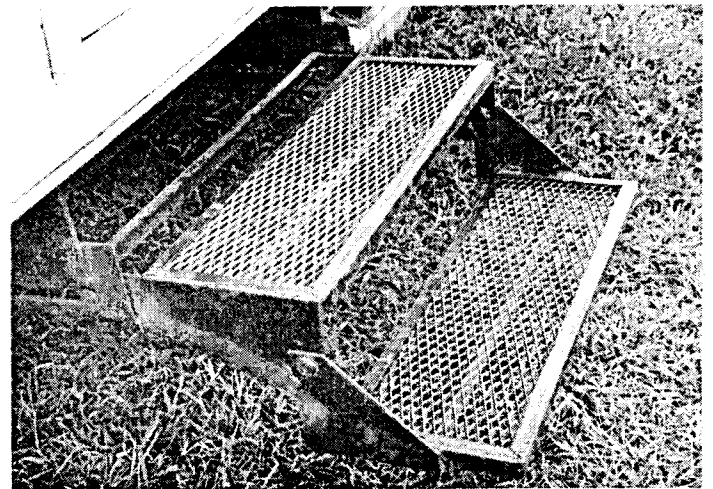


FIG. 12

FRONT AWNING — Pull both release latches (*one is located on each side of the awning*). Swing awning up to desired opening and tighten bolt wing nuts.

DINETTE TABLE

PEDESTAL TYPE — Insert top of support leg into the bracket located under the bottom surface of the table. Insert the leg into the floor base. Remove the table and the leg before setting up the dinette bed.

EXTENSION TYPE — Unfasten travel latch (*if table is so equipped*). Swing up table. Release table leg by appropriate method: Depress lever and swing leg

down to the locked position; or pull the leg toward the table hinge, after the leg releases swing it down to the locked position. Unfasten the latch located under the table. Pull out the sliding portion of the table. Insert leaf and push table together.

HINGE TYPE — Rotate back edge of table up to the wall brackets. Insert tabs, which are located on the back edge of the table, into the wall brackets. Pull the leg towards the table hinge, after the leg releases swing it down to the locked position.

DINETTE BED

HINGE TYPE — Pivot the hinge table down to the dinette seat supports. Arrange cushions on top of platform.

GAUCHO TYPE — Remove table. Lift front edge of gauchio platform and slide it out. Arrange cushions on top of platform.

FACING GAUCHO PLATFORMS — Remove table. Slide each platform out as described above.

"U" TYPE — Remove table. Place table on seat supports. Arrange cushions on top of platform.

OVERHEAD BUNK — Release latch and push platform towards the end wall. After it clears both brackets, swing it out and place on supports.

OVERHEAD BED — Release latch and swing platform down to its supports.

CABINET/BUNK — Open both end cabinet doors. Release latches — one is located on each inside end of the cabinet. Close and latch the cabinet doors. Swing cabinet face down so that it rests on its supports. Position reinforcing boards on top of the cabinet face. Arrange cushions on top of platform.

FIRE SAFETY

Fire safety is a major subject in the RV industry. We at Coachmen feel that fire prevention is the key to fire safety.

FIRE PREVENTION — To prevent fires your unit has been engineered to comply with federal and state regulations, and approved by the Recreational Vehicle Institute (as well as your own state agencies). This, unfortunately, is not enough if you, as the owner, fail to maintain your unit as described in the CARE AND MAINTENANCE section. It is extremely important that you take special notice of your LP gas system, and maintain it properly.

Fires can also be prevented by adjusting personal habits, such as not smoking in bed; overloading electrical circuits; leaving meals cooking on the range; tampering with the electrical circuitry or fuses; etc.

FIRE EMERGENCY — The prevention of personal injury is the primary concern in case of fire. We recommend that you, and all members of your party

familiarize yourselves with the emergency features of your unit.

FIRE EXTINGUISHER — A chemical fire extinguisher has been provided with your unit. Be sure that everyone knows its use and location.

Use — The fire extinguisher has been provided for small fires only. Contact your local fire department for instructions on its use.

EXITS — In case the fire cannot be extinguished by one extinguisher, GET OUT. This is accomplished through the main door, exit dome, or pop out window.

Exit Dome — To open the exit dome release the latch (FIG. 13) and push upward on the dome.

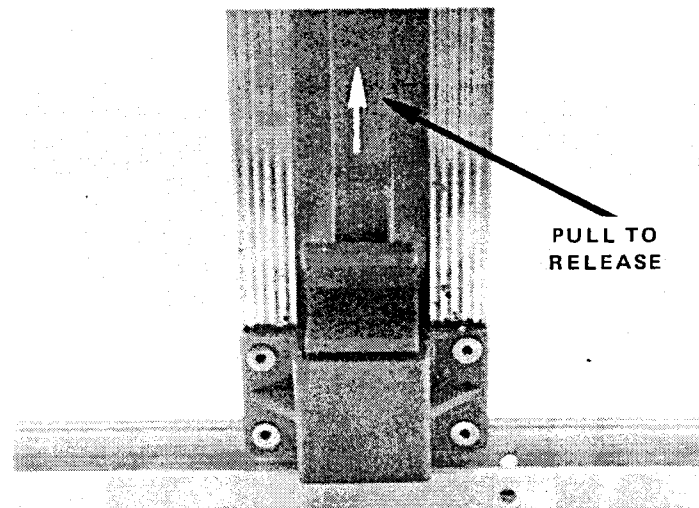


FIG. 13

Pop Out Windows — Release both latches (FIG. 14) and push outward on the window.

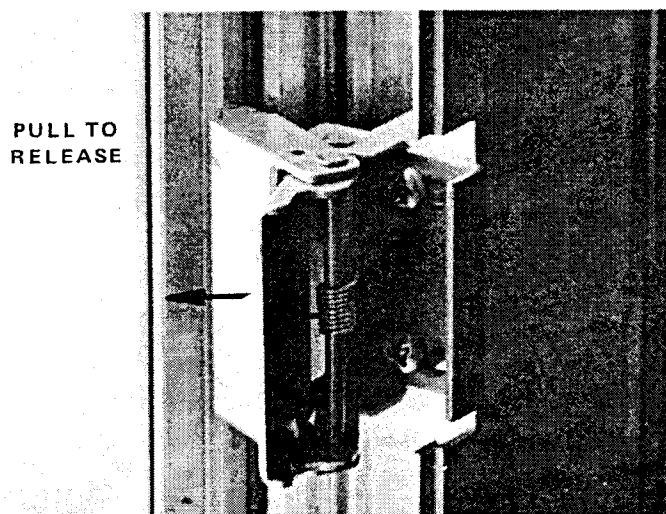


FIG. 14

CAUTION: Do not attempt to extinguish any fire with water. To do so could cause adverse effects of your efforts.

DESCRIPTION & OPERATION OF SYSTEMS

(STANDARD & OPTIONAL)

LP GAS SYSTEM

The Liquefied Petroleum Gas (LPG) System provides fuel for the operation of the range, oven, furnace, water heater and the refrigerator.

Fuel may be purchased from an LPG dealer as listed in the yellow pages section of most telephone books under the heading "Gas — Liquefied Petroleum — Bottled & Bulk." LPG dealers will provide a mixture of propane and butane fuels that will be suitable for use in their geographical area. The proportion of this mixture is determined by the climatic conditions and elevation above or below sea level.

Partially fill the tank before traveling to or through an area that experiences different weather conditions or is located at a different elevation above sea level. Purchase more fuel for each area.

TURN OFF ALL LPG APPLIANCES — Turn off the range burners. Extinguish the oven, furnace, refrigerator, and water heater pilot lights. See the APPLIANCES & ACCESSORIES section for complete instructions.

REMOVE TANKS — Close POL valve (FIG. 15). Turn the POL gas line connector(s) clockwise to unfasten them from the tanks.

Turn the spinner nut counter clockwise enough to raise the "T" bar from the tank handles (FIG. 15). Remove the tanks.

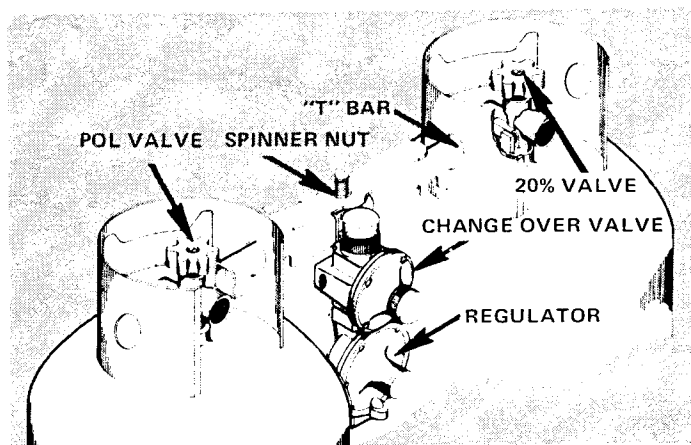


FIG. 15

TRANSPORT TANKS TO & FROM DEALER — Transport the tanks to and from the dealer in an upright position. If the tanks are laid on their sides, the safety valves may accidentally open and the gas could leak out.

HAVE LPG DEALER FILL THE TANKS — Connect the nozzle to the gas line connector. Open the 20% and POL valves. Fill the tank. Turn off the gas supply when liquid appears at the 20% valve. Close the 20% and POL valves and remove the nozzle.

CAUTION: DO NOT smoke, strike a match or ignite a lighter when filling the LPG tanks. LPG fumes will leak from the nozzle and tank connection. A spark or flame could ignite the fumes.

REINSTALL TANKS — Lift the "T" bar and set the tank on the bottom support plate. Tighten the spinner nut so that the "T" bar holds the tanks in place.

CHANGEOVER VALVE — Open both POL valves. Turn the indicator knob fully in either direction so that the arrow points to one of the tanks. When that tank is nearly empty the indicator on top of the changeover valve will turn red. At the same time the valve will switch to the other tank. Turn the indicator knob so that it points to the other tank.

NOTE: Some states prohibit vehicles that are equipped with LPG tanks from using tunnels. A few other states prohibit traveling with the POL valve open and the pilot lights lit. These regulations are based on the premise that a gas line could be ruptured in a highway accident, which could cause a further hazard through fire and/or explosion. Check the regulations of each state through which you intend to travel.

WATER SYSTEM

Water may be obtained from your unit's potable water supply or city water source.

POTABLE WATER SUPPLY — Your unit is equipped with a potable water tank and a "DEMAND" pump. To fill the water tank open the water fill spout (FIG. 16). With either a hose or bucket, pour in the desired amount of potable water.

To Use Your Potable Water System — Turn the pump switch to the "ON" position and open the faucet.

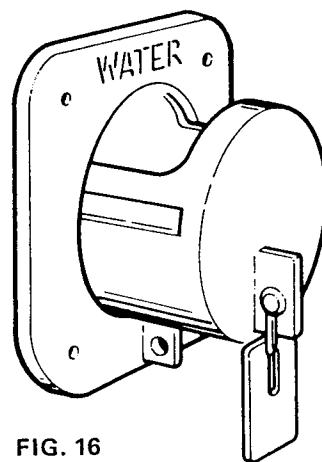


FIG. 16

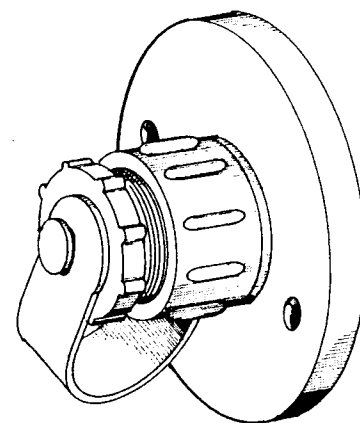


FIG. 17

CITY WATER SOURCE — Your unit also contains provisions for you to hook-up to a pressurized water system (**NOTE:** In areas where the water pressure exceeds 60 LBS. PSI, you should use a pressure regulator). Simply fix a hose to the city water hook-up (FIG. 17) and turn on the faucets. You will not be able to fill your potable water tank from this hook-up.

GRAY WATER & TOILET SEWAGE SYSTEMS

GRAY WATER — Sink and shower waste water (*Gray Water*) flows through the drainage system and is drained through the termination valve.

Set Up — If gray water is drained from the same termination valve as the holding tank, be sure the tank's dump valve is closed and locked.

Remove valve cap from drain outlet (FIG. 18A or B). Connect sewer hose to outlet and the campground's septic sewage system. If a septic system is not available, place a bucket under the outlet. **DO NOT** drain gray water on the ground. Besides spoiling the natural beauty of the countryside, you may be violating a local or state law.

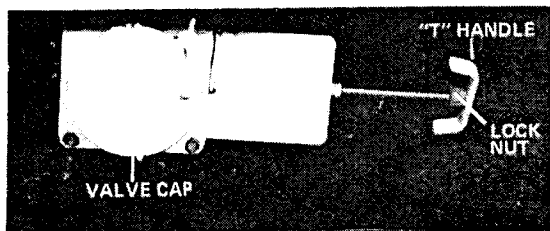


FIG. 18A

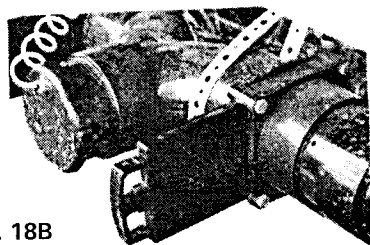


FIG. 18B

TOILET SEWAGE — The toilet drains directly into the holding tank. Prepare the toilet for use by following the instructions contained in the **APPLIANCES & ACCESSORIES** section. It is recommended that the holding tank contents be drained at a holding tank dumping station as soon as possible after breaking camp.

HOLDING TANK DRAINAGE — Place drainage bucket under the dump valve outlet and remove drain cap (FIG. 18A or B). Connect sewer hose to the outlet and insert the other end into the station's sewage receptacle.

Depending on the type of dump valve used on the unit: either unfasten the dump valve lock nut and pull out the "T" handle (FIG. 18A), or pull out the dump valve handle (FIG. 18B).

Close the valve after the tank has drained. Flush about 2 gallons of water through the toilet into the holding tank. Drain the tank again.

Close and lock the dump valve handle: either tighten the lock nut (FIG. 18A), or make sure the handle is completely pushed into the valve locks (FIG. 18B).

Remove hose; wash and store. Prepare the toilet for use as described in the **APPLIANCES & ACCESSORIES** section.

ELECTRICAL SYSTEMS

Your unit is equipped with three electrical systems; 120 VAC, interior 12 VDC, and exterior 12 VDC.

120 VAC SYSTEM — Your unit is equipped with a 120 VAC electrical system to supply power to your 120 VAC appliances (see **APPLIANCES & ACCESSORIES**).

To Use Your 120 VAC System — Plug the "shore line" power cord (FIG. 19) into a 120 VAC, three pronged, grounded, electrical supply box. Reset all breakers (FIG. 20). If you have a circuit breaker that "trips" and will not reset, contact your Coachmen Dealer immediately.

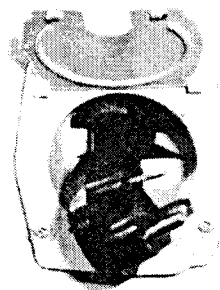


FIG. 19

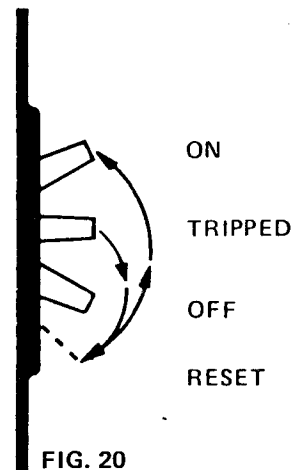


FIG. 20

GENERATOR — A 120 VAC generator may also be provided to produce electricity when no electrical hook-up is available. The generator interconnecting circuit breakers must be switched to: Generator "ON" and shoreline "OFF" (FIG. 21). (See **APPLIANCES & ACCESSORIES** for further information.)

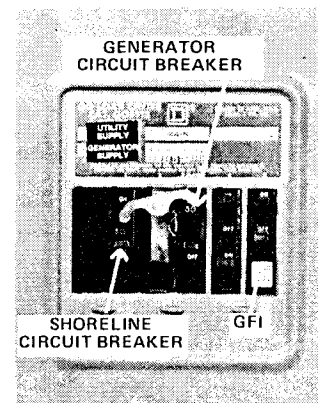


FIG. 21

EXTERIOR 12 VDC SYSTEM — All Coachmen products are equipped with a 12 VDC system used to operate the taillights, running lights, and brakes. The power for this system is provided by the pigtail connection installed by your dealer into the towing vehicle.

INTERIOR 12 VDC SYSTEM — Your unit has an interior 12 VDC electrical system that obtains power in two ways.

CONVERTER — Your unit's interior 12 VDC system has a converter hooked into the 120 VAC

system. This converter changes 120 VAC electricity to 12 VDC power. (For operating instructions see APPLIANCES & ACCESSORIES).

BATTERY — Your 12 VDC system will also operate off a 12 VDC battery when a 120 VAC supply is not available.

APPLIANCES & ACCESSORIES

RANGE — Open the POL valve (FIG. 15). Open the range valve and light the burner. A blowing noise, which will occur when the burner is first lit, will subside once all the air has escaped from the LPG line.

RANGE BURNER PILOT (OPTIONAL EYE LEVEL RANGE) — The eye level range is equipped with a range burner pilot. Unfasten and remove the range top panel. Open the POL valve (FIG. 15). Strike a match and light the burner pilot (FIG. 22). Adjust the gas flow so the top of the pilot flame is about 1/8" from the burner flash tubes.

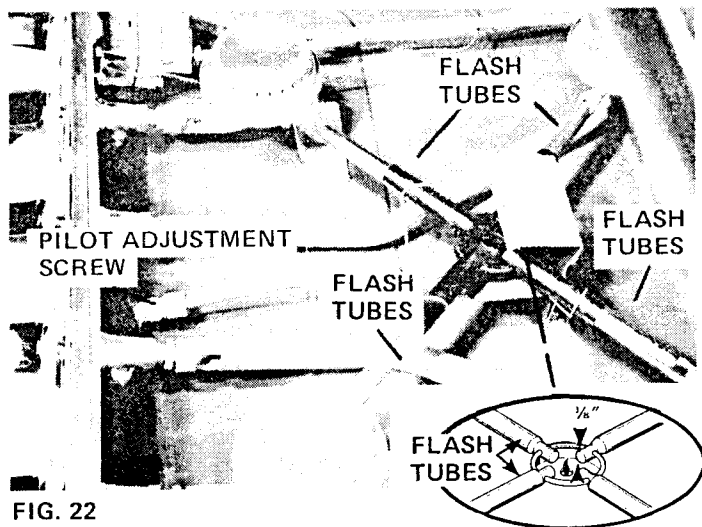


FIG. 22

CAUTION: DO NOT use the range burners to heat your unit. A window or roof vent must be open when using the range burners. Failure to heed these cautions may result in asphyxiation.

OVEN — Open the POL valve (FIG. 15). Turn the oven temperature control knob from "Pilot Off" to "Off". Strike a match and light the pilot. You will find the pilot inside the oven compartment, just below the main burner (FIG. 23). Relight the pilot if air in the line blows it out. To use the oven, turn the knob to the desired temperature. To extinguish the pilot, turn the knob to "Pilot Off".

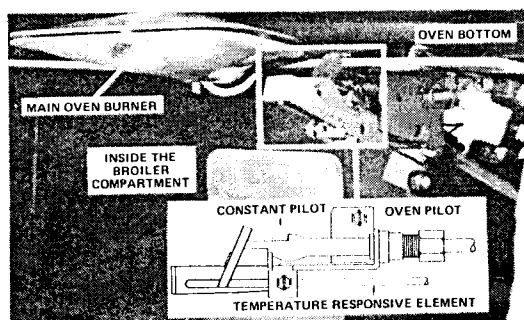


FIG. 23

GRAVITY FURNACE

LIGHTING — Set Thermostat (or manual temperature control) to its lowest setting (FIG. 24A or B). Open the POL valve (FIG. 15). Push inward on the furnace gas control knob (FIG. 25) and turn to the "Off" position. Wait 5 minutes. Turn the furnace POL valve to the pilot position. Hold a lighted match to the burner tip as you push in on the furnace POL valve. Hold the furnace POL valve in for about 45 seconds or until the pilot remains lit. Turn the furnace POL valve to the "On" position. Set the thermostat to the desired setting. Replace the lighter cap.

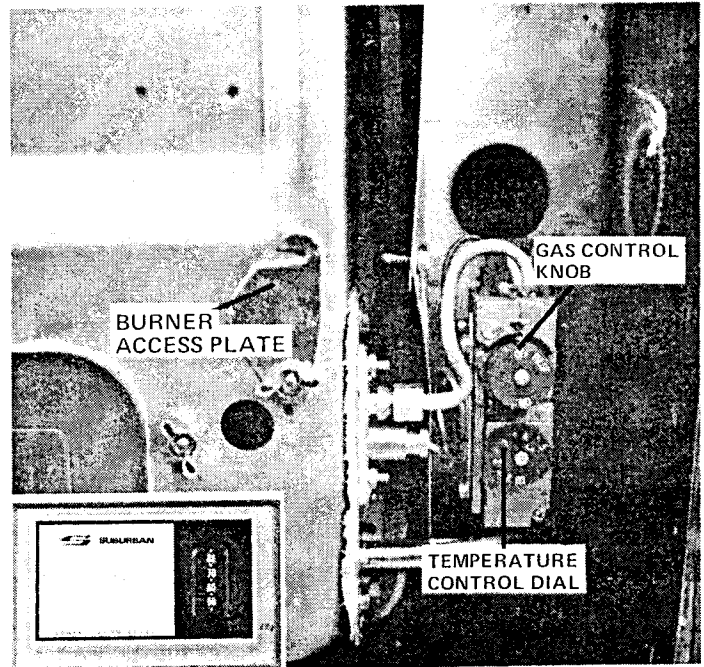


FIG. 24A

FIG. 24B

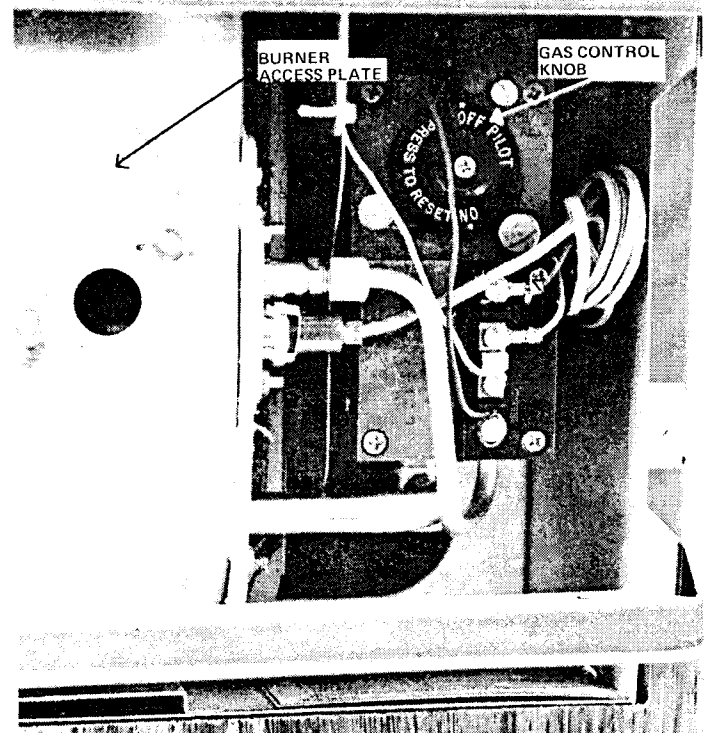


FIG. 25

FORCED AIR FURNACE

LIGHTING — Open POL Valve (FIG. 15). Turn the furnace POL valve (FIG. 26) to the "Off" position, and wait 5 minutes. Open the furnace POL valve completely. Adjust the thermostat to the desired setting (FIG. 24A). Wait 15 seconds, if the furnace does not light repeat the procedure.

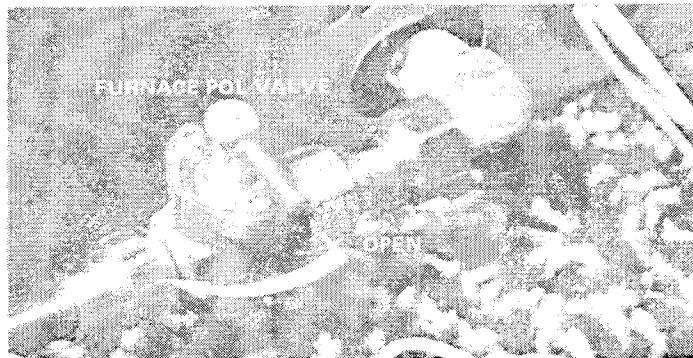


FIG. 26

WATER HEATER

LIGHTING — Turn on POL valve (FIG. 15). Turn gas control knob to the "Off" position (FIG. 27A or B). Wait at least 5 minutes to allow the LP gas, accumulated in burner compartment, to dissipate. Turn control knob to "Pilot" position. Perform the following procedure that applies to your unit's water heater thermostat.

Unitrol Thermostat — Press and hold reset button (FIG. 27A). Light the pilot burner (FIG. 27C). Release the reset button after 1 minute. Repeat this procedure if the pilot goes out. After the pilot is lit, turn the control knob to the "On" position, and adjust the temperature dial to the desired water temperature.

ITT Thermostat — Turn the gas control knob past the "Pilot" position and hold it against its internal stop (FIG. 27B). Light the burner (FIG. 27C). Release the control knob after 1 minute. If pilot goes out, repeat this procedure. Turn gas control to "On" and adjust temperature lever to desired water temperature.

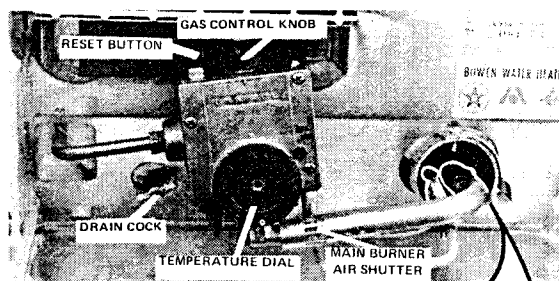


FIG. 27A

PILOT BURNER



FIG. 27C

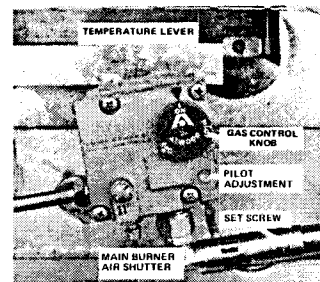


FIG. 27B

PILOT ADJUSTMENT — Remove the pilot adjustment screw protective cap (FIG. 27A or B). Turn the screw to adjust the flame so it is 1/2" high or has a yellow tip.

BURNER ADJUSTMENT — Loosen the set screw that holds the air shutter in place (FIG. 27B). Slide the main burner air shutter to the right until the flame has a yellow tip. Slowly slide the shutter to the left until the yellow tip disappears. Tighten the set screw.

EXTINGUISHING — Turn the gas control knob to the "Off" position.

DRAINING — Open the drain cock (FIG. 27A).

REFRIGERATOR

LP GAS OPERATION — Open the POL valve (FIG. 15). Pull the "OFF/12V/ELEC/GAS" selector outward and turn it to the "GAS" position. Turn the gas thermostat to the highest number on the dial.

Pull out on the LPG valve (FIG. 28) and wait 10 seconds. Push in on the lighter (FIG. 28). You may have to depress the lighter several times until you see a light in the reflector (FIG. 28). After the gas has ignited hold the LPG valve (FIG. 28) another 5 seconds, then release.

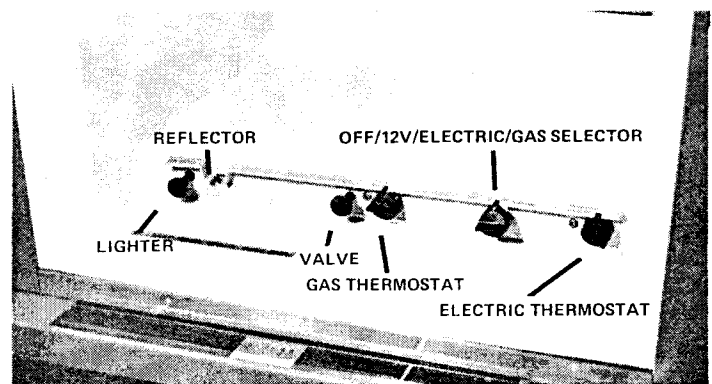


FIG. 28

ELECTRIC OPERATION — Turn the "OFF/12V/ELEC/GAS" selector to either "12V" or "ELEC" and turn the electric thermostat to the highest number. After the refrigerator has cooled then adjust the thermostat to the desired setting.

THERMOSTATS — Both the gas and electric thermostats register the lowest temperature with the highest number on the dial, and the highest temperatures with the lowest number.

NOTE: Your unit must be level for proper operation of the refrigerator.

ICE BOX — Place ice in the top tray. Make sure the hose is not kinked or clogged. Water will drain through this tube, as the ice melts, and drip onto the ground.

HELPFUL HINTS FOR REFRIGERATOR OR ICE BOX

— Store food in sealable containers or wrap in suitable material such as wax paper, aluminum foil, etc. Chill or freeze food in your home refrigerator before traveling.

TV ANTENNA

SET UP — Turn the crank handle in the "Up" direction until some resistance is felt (FIG. 29). Plug the TV set's power cord into either 110 VAC or 12 VDC outlet. Turn on the power supply. The antenna power supply switch and light are part of the main antenna wall outlet.

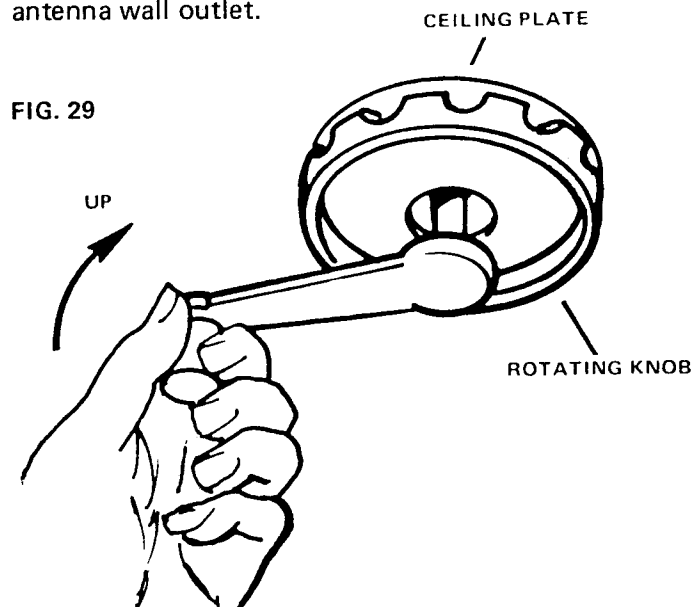


FIG. 29

TUNING — Pull the rotating knob down to disengage it from the ceiling plate. Turn the knob to achieve the best picture and sound.

GENERATOR

PRE-OPERATION — Prior to starting the generator check the oil level (FIG. 30), fuel filter, air intake, and exhaust.

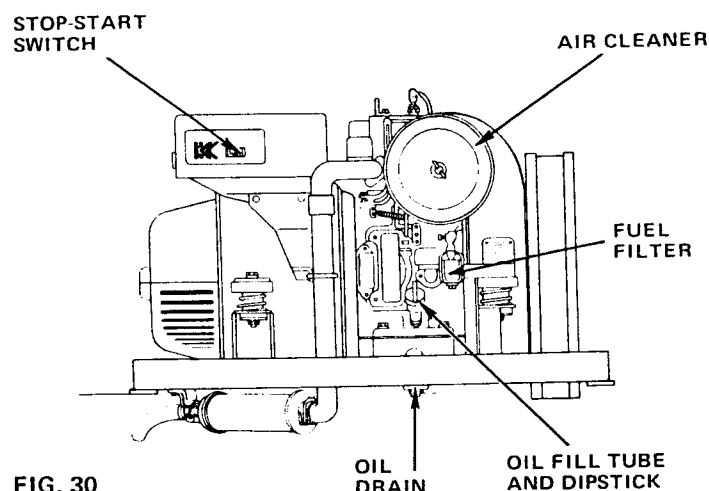


FIG. 30

Oil Level — Check to be sure that there is enough oil in the engine to lubricate all interior moving parts. To do this remove the dipstick (FIG. 30). Look on the end of the dipstick for the presence of oil. If the oil is not up to the full mark you must add oil until it registers full on the dipstick.

Fuel Filter — Check the fuel filter (FIG. 30) for the presence of sediment or water.

Air Intake — The generator is air cooled so it is extremely important to have proper ventilation to the motor.

Exhaust — The generator produces deadly carbon-monoxide due to the internal combustion in the engine. Be sure that there is nothing near the exhaust that could deflect this gas into your unit.

NOTE: Prior to starting your generator be sure that the generator interconnecting circuit breakers are switched to: Generator "OFF" and Shoreline "ON" (FIG. 21).

TO START — To start your generator depress and hold the START/STOP switch into the start position (there is a START/STOP switch on the generator (FIG. 30), and on some models a START/STOP switch inside the unit). Once the generator has started release the START/STOP switch.

TO USE — To use the electricity produced by your generator; switch the generator interconnecting circuit breakers (FIG. 21) to shoreline "OFF" and generator "ON".

NOTE: The interlocking device (FIG. 21) has been installed to prevent the electrical system from receiving an overload of electricity.

GENERATOR HOUR METER — This meter indicates the amount of time that generator has run, and is useful in planning the care and maintenance of the generator.

SHUT DOWN — Before stopping the generator switch the generator interlocking circuit breaker to the generator "OFF" and shoreline "ON" positions. Wait 5 minutes to allow the generator to cool. Then move and hold the START/STOP switch to the "STOP" position.

ROOF AIR CONDITIONER

COOLING — Turn the selector control to desired fan speed within the "Cooling" function. Turn the temperature control to achieve desired coolness.

AIR RECIRCULATION — Turn the selector control to desired fan speed within the "Fan Only" function. Turn the temperature control fully counter clockwise.

DE-HUMIDIFIER — Turn the selector control to the minimum setting within the "Cooling" function. Turn the temperature control fully counter clockwise. When operating in this mode you may see water running off your unit's roof. Do not be alarmed for this is normal.

HEATING (OPTIONAL CHILL CHASER) — Turn the selector control to the "Heating" function. Turn the temperature control to achieve desired warmth.

TOILET

ELECTRA MAGIC

Initial Charge — Pour about 3 gallons of fresh water into the bowl (until the water reaches the charge level on the indicator lens). Add 1 eight ounce bottle of AQUA KEM CONCENTRATE.

NOTE: AQUA KEM CONCENTRATE can be purchased from your Coachmen Dealer.

To Flush — Depress the flush button.

AQUA MAGIC III

To Flush — Turn the flush knob clockwise 90° until water swirls in the bowl then release.

AM/FM/MPX STEREO RADIO & 8 TRACK CARTRIDGE STEREO TAPE PLAYER

RADIO — The On/Off & Volume, Tone, Tuning and Push Button Station Selector are controls which are located in the same relative position and function in the same manner as those used in most car radios.

TAPE PLAYER — Insert an 8-track tape cartridge into the slot. Select desired track by pressing the selection button. Never attempt to turn the tuning knob when the tape player is in use.

CARE & MAINTENANCE

LP GAS SYSTEM

GAS LINE CHECK — Check the LPG lines and connections regularly before, during, and after each camping season, or after every third refill, whichever is more frequent.

Gas Line Checking Procedure — Turn off all LP gas appliances (range, oven, furnace, and refrigerator). Open all windows, doors, and roof vents to allow the gas to dissipate. Turn on POL Valve (FIG. 15). Apply a soapy water solution to all gas line connections (FIG. 31). Bubbles indicate a leak. Tighten leaking connections until bubbling stops. Repeat the testing procedure. If the garlic odor persists after all connections have been tested, contact your Coachmen dealer.

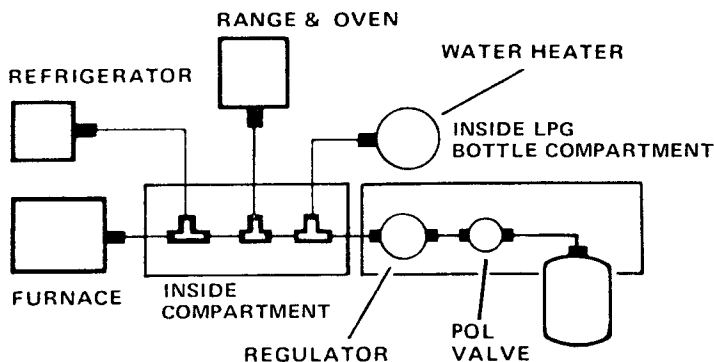


FIG. 31

NOTE: Coachmen technicians checked your LP gas system prior to shipment. However, leaks may develop while your unit is in transit. We recommend that you recheck it before your first trip.

REGULATOR PRESSURE — Check the LP gas pressure at the beginning of each camping season and after every third refill. Correct line pressure is 11" water column. Your Coachmen dealer has the necessary equipment to perform these checks.

LP TANK UPKEEP — Periodically inspect the LP tank for rust and general appearance. Sand off rust and paint with rust preventative paint.

LPG APPLIANCES

FURNACE — The furnace does not require routine maintenance or cleaning. Soot, which may form on the inside of the combustion chamber, may be removed with a vacuum sweeper.

RANGE

Burners — Use a toothpick to clean clogged burner orifices. DO NOT use a metal object, such as an ice pick, screwdriver, wire, etc., to unplug burners. These objects will distort the openings, which in turn will affect burner operation.

Porcelain Surfaces — Allow the range top to cool off, then clean with dishsoap and hot water. Porcelain may craze with hairline cracks if you attempt to clean with water while hot. Use a non-abrasive cleaner to remove stubborn stains.

Chrome Surfaces — Use a damp cloth to clean chrome surfaces. Grease spatters, which may bake into the surfaces, may be removed with chrome polish.

OVEN — Clean the oven with commercial cleaner after each trip. DO NOT apply cleaner to aluminum gas tubing, thermostat sensing bulb and electrical components.

WATER & DRAIN SYSTEMS

SANITIZING WATER TANK — Sanitize your unit's water tank: before initial use; after a period of nonuse; when tank is suspected of being contaminated.

Open the water tank drain cock (FIG. 32). This device is attached directly to the water tank. After the tank is empty, close the cock. Mix 3 gallons (11 L) of water with 3/4 cup of Clorox or Purex household bleach. Pour solution into the tank through the water fill spout (FIG. 16). Wait 3 hours. Drain and flush tank with fresh, potable water. If chlorine taste lingers, pour 1 quart (.9 L) of vinegar and 5 gallons (19 L) of water into the tank. Wait several days before draining tank. Flush tank with fresh, potable water.

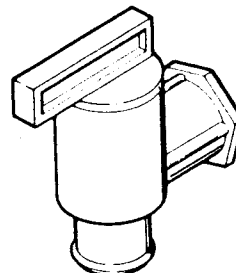


FIG. 32

WATER PUMP — The water pump does not require routine maintenance or cleaning.

If water pump fails to start when you flip on the switch, check the fuse. Depending on your model, the fuse will either be located inside the converter or in an in-line fuse holder next to the pump.

If the pump continues to operate whether the faucets are opened or closed, check the water tank — it is probably empty.

DRAIN PIPING — Use clear water to clean exterior pipe surfaces. DO NOT use harsh detergents or lacquer thinner. DO NOT pour harsh cleaner chemicals or solvents into the drains.

AQUA MAGIC — Use AQUA BOWL CLEANER as directed on bottle. If the slide valve does not move freely, apply silicone spray.

ELECTRICAL SYSTEMS

BATTERY — Check the liquid level at least once a month. It must be above the plate. Add either distilled or other mineral free water. Keep terminals free of dirt and corrosion. Use a hydrometer to check battery charge. When specific gravity is below 1.225 recharge the battery until 1.260 is indicated.

WARNING: *If the battery must be "Quick Charged", turn off the electrical portion of the refrigerator.*

AM/FM/MPX STEREO RADIO & 8 TRACK CARTRIDGE STEREO TAPE PLAYER — The tape player is equipped with an automatic head cleaner. Occasionally you will have to clean oxide off the tape playback head, capstan shaft and the automatic track selector. To activate the capstan, depress the switch (*Located next to the capstan*) with the eraser end of a pencil. Use a cotton swab, moistened with isopropyl alcohol to clean the playback head, capstan shaft and the automatic track selector.

WARNING: *DO NOT use Carbon Tetrachloride to clean components of tape player.*

ROOF AIR CONDITIONER — Remove and clean the filter at least once every two weeks if air conditioner, or Chill Chaser, are used extensively. Wash in soap and water. DO NOT operate air conditioner for extended periods of time without a filter.

GENERATOR — The following procedures, along with those procedures specified in the generator manufacturer's manual, should be completed in order to maintain your generator in top operating condition.

Daily or before each start up — Check oil level. Clean cooling air inlets and outlets. Remove loose dirt from generator compartment.

Change oil every 50 hours or 6 months, whichever ever occurs first. If operating in dirty, dusty conditions, change oil more frequently. Drain oil from crankcase. Use oil specified in the generator manufacturer's manual. Remove the air cleaning element. Clean by tapping it against a flat surface.

After each 100 to 200 hours (depending operating conditions) — Drive your unit to an authorized service center for the manufacturer's recommended maintenance.

INTERIOR

SINKS — Clean the kitchen and bathroom sinks with non-abrasive material. Stainless steel cleaner may be purchased at any grocery store. ABS cleaner, such as AQUA K-7, may be purchased from your Coachmen Dealer.

TABLE & COUNTER TOPS — Clean the table and counter tops with warm water and liquid dishsoap.

WOODWORK — Clean woodwork with commercial household furniture polish. DO NOT use water to clean wooden surfaces. Scuffs may be covered with commercial furniture wax and stain mixture. Scratches may be covered with PUTTY STIC.

VINYL FLOOR COVERING — Sweep and damp mop the vinyl floor covering regularly. Use a mild detergent and wax occasionally.

CARPETING — Vacuum the carpeting (if so equipped) as required. Use commercial carpeting shampoo as required.

CLOSET, DRAWERS & STORAGE COMPARTMENT(S) — Remove clothes, linen, can goods and other food items. Clean wooden surfaces with commercial household furniture polish. Wash plastic drawers in warm water and liquid dishsoap.

REFRIGERATOR — Remove food, water and ice after each trip. Clean the interior of the refrigerator with warm water and liquid dishsoap. Wipe dry. DO NOT use abrasive cleaning material because it will scratch the surfaces.

If you do not intend to use your unit for an extended period, prop open the door. This will help prevent musty odor within the refrigerator.

Another method you may use to control odor is to place a small jar of coffee grounds, without the lid, on the bottom shelf of the refrigerator. Close the refrigerator door.

To defrost the frozen food compartment: remove frozen food and ice; turn off the thermostat; place a pan of hot water inside the compartment; dry the interior with a clean, soft cloth.

ICE BOX — A plastic hose is connected to the ice storage tray. As the ice melts, the water will drain from the tray through the hose and drip onto the ground. A clogged or kinked hose will cause water to back up into the tray. To clear, carefully run a soft wire up through the hose from under the floor.

EXTERIOR

BODY — Wash the dust and dirt, road tar, bird and tree droppings, insects and other foreign material from the exterior surfaces. Use a mild soap in either cold or lukewarm water.

WARNING: *To avoid marring the body surfaces: DO NOT use abrasive cleaning compound or cloth; DO NOT wipe surfaces with a dry cloth; DO NOT wash or wax unit in the hot sun. Wait until the body surfaces has cooled before washing or waxing.*

ROOF — Coat all roof seams, roof edges and around vents with top quality roofing cement, at least

once each season. Coat awning rails and window seams with silicone.

Periodically inspect seams for damage and/or cracking. Repair leaky seams with either roofing cement (*roof seams*) or silicone (*awning rail and window seams*).

FRAME — Inspect the frame for damage or rust. Sand off all traces of rust. Remove dust and dirt and apply rust preventative paint.

SAFETY CHAINS & HOOKS — Inspect safety chains and hooks before each season. Inspect them again before each trip. Replace damaged chains. Federal and SAE regulations prohibit a chain from being repaired by welding damaged links together, or cutting off damaged links and splicing in new ones.

TIRE INSPECTION — Inspect tires before each trip. Replace tire when its tread is worn to 1/16" depth in 2 or more adjacent grooves, or to the level of tread indicators which are molded into the bottom of tread grooves. Each morning, check the tire pressure and condition. Note that heat, which is generated by surface friction, will increase a tire's air pressure by approximately 6 to 9 lbs. psi; therefore, do not bleed air out of a hot tire. See the SPECIFICATIONS section which applies to your unit for correct tire air pressure.

When purchasing a new tire, be certain it is the same size and has the same ply rating or load range as the old tire. DO NOT mix radial ply with bias or bias-belted tires.

CAUTION: *Before your initial trip and after each time you change a tire, tighten the lug bolts to the specified torque every 50 miles for the first 200.*

You will have to replace the lug bolts after changing tires approximately 5 times. These bolts will lose their selflocking feature after about 5 changes.

ELECTRIC BRAKE — Inspect the brake drums, lining and shoes at the beginning of each season and before an extended trip. See your Coachmen Dealer for further information.

WHEEL BEARINGS — Check wheel bearings at the beginning of each season and before an extended trip. See your Coachmen Dealer for further information.

STORAGE

GENERAL

Perform the following procedures and those contained in the CARE & MAINTENANCE section before storing unit for any period of time. Follow the WINTERIZING section before storing unit during cold months.

WATER TANKS & LINES

Turn on the water pump. Open all water faucets. Open the tank drain cock (FIG. 32). Open the hot and cold water line drains. Both drains are located together under the same side of the unit. Depending on the type of drains used, either remove caps or open the valves.

When the tank is empty, close the faucets and drains.

WATER PUMP

After the water tank is empty, disconnect the intake and discharge hoses from the water pump. Operate the pump for about 2 minutes after all the water has been expelled. Reconnect the hoses.

TOILET

AQUA MAGIC III — Turn the flush knob and insert a wad of rolled up newspaper into the bowl outlet. Release the knob slowly until the blade holds the wad in place. This will prevent any water residue from being trapped inside the bowl where it could freeze.

BATTERY

Remove battery from case or compartment. Store it in a warm dry place. Set it on a block of wood.

CAUTION: *Hydrogen gas is produced through a chemical action — this is a normal trait of any storage battery. Hydrogen gas is toxic and extremely combustible when mixed with air. DO NOT store battery where it will be exposed to sparks or open flame, nor where it may be touched by children.*

ELECTRICAL

Unplug all electrical appliances and turn off all electrical circuit breakers.

GENERATOR

While the engine is hot, drain oil from the crankcase (FIG. 30). Flush the crankcase with clean, light weight oil as specified in the generator manufacturer's manual. Refill the crankcase with specified type of oil — again see the generator manufacturer's manual.

Drain fuel from the filter sediment bowl and carburetor bowl (FIG. 30).

Remove the spark plug and pour about a tablespoon of oil into the hole. Crank the engine over several times and reinstall the spark plug.

Clean the exterior surfaces of the generator set. Spread a light film of oil over the unpainted metallic surfaces which could corrode.

Place a dust cover over the generator set.

RUNNING GEAR

Block up the unit to take some of the weight off the tires. This will prevent flat spots from developing on the tires and wheel bearings. To block the unit: lower front of unit about 3" (7 CM), place jack stand *directly under the frame*; extend each jack until it touches the frame; raise the front of the unit enough to remove some of the weight from the tires.

PERIODIC INSPECTION

Check unit occasionally during prolonged periods of storage.

WINTERIZING

Protect the toilet, fresh water system and the drains from freeze damage before storing or using your unit during cold months.

TOILET

AQUA MAGIC III — Follow the WATER TANK ANTI-FREEZE instructions outlined below.

WATER TANK ANTI-FREEZE

Open the water tank fill spout (FIG. 16). Pour in a combination of potable water and potable water anti-freeze. Turn on the water pump and briefly open the kitchen and lavatory faucets. This will circulate

the anti-freeze and water solution throughout the water lines. Potable water anti-freeze may be purchased from any Coachmen Dealer.

DRAINS

Pour about 1/2 cup of approved anti-freeze solution into all sink, sub and/or shower drains.

CAUTION: *DO NOT use automotive anti-freeze in the toilet, fresh water system or drains — it is poisonous.*

WATER HEATER

Drain the water heater as described in APPLIANCES AND ACCESSORIES.

APPLICABLE TO ALL UNITS

LIGHT BULBS

Interior 12 VDC	#1141
Range Hood	25 Watt, 12 VDC
Turn, Tail & Stop	#1157
Backup	#1156
License Plate	#67
Clearance	#1895
Patio	#93

COLOR CODE FOR PIGTAIL

White	— Common to Ground
Red	— Stop & Left Turn
Brown	— Stop & Right Turn
Green	— Tail, Running & License Plate
Blue	— Electric Brake
Yellow	— Backup
Black	— Converter/Interior

WATER PUMP FUSE

6 1/4 Amp. Slo Blo

RV'ING COURTESY

While on the road, parked at a rest area, or set up at a campsite, you will be representing all RV'ers. The general public will relate your actions to all other RV'ers. Help promote recreation vehicles by observing the following suggestions.

DRIVING

Comply with all driving regulations of each state through which you drive.

Pull well off the road, as soon as possible, when four or more vehicles line up behind you waiting to pass.

DO NOT litter the highways — use trash bags.

Contact local or state police for regulations which pertain to overnight roadside or rest area parking before you park in a questionable location.

CAMPING

Before parking on private property, obtain permission of owner or caretaker.

Be considerate of your neighbor. Radio, tape deck or TV volume and parties to the wee hours of the morning should be regulated so you do not disturb your neighbors.

Comply with rules and regulations which are posted at commercial or government operated campgrounds.

Depending on the state and the season, a campfire permit may be required.

When building a campfire, exercise caution: remove grass and brush from immediate area; never leave fire unattended; and make sure the fire embers are completely extinguished before departing campsite.

DO NOT ruin nature's beauty by chopping down or damaging trees and shrubbery. When building a campfire pick up branches and brush from ground.

Pick up broken glass, paper and other refuse, whether it is yours or someone else's, before departing your campsite.

Empty gray water and waste water holding tanks at designated dumping stations. DO NOT dump them on the ground or in rivers or other water resources.

EMERGENCY CONTACTS

DOCTOR	NAME	_____	NAME	_____
	ADDRESS	_____	ADDRESS	_____
	PHONE	(AC) _____	PHONE	(AC) _____
RELATIVE	NAME	_____	NAME	_____
	ADDRESS	_____	ADDRESS	_____
	PHONE	(AC) _____	PHONE	(AC) _____
NEIGHBOR	NAME	_____	NAME	_____
	ADDRESS	_____	ADDRESS	_____
	PHONE	(AC) _____	PHONE	(AC) _____
FRIEND	NAME	_____	NAME	_____
	ADDRESS	_____	ADDRESS	_____
	PHONE	(AC) _____	PHONE	(AC) _____
POLICE	PHONE	(AC) _____	PHONE	(AC) _____
	PHONE	(AC) _____		
FIRE	PHONE	_____		
INSURANCE AGENT	NAME	_____	NAME	_____
	ADDRESS	_____	ADDRESS	_____
	PHONE	(AC) _____	PHONE	(AC) _____

TRAVEL TRAILER & FIFTH WHEEL OWNERS MANUAL

Serial No. _____



COACHMEN DRIVE
MIDDLEBURY, INDIANA 46540