OWNER'S MANUAL

Dutchmen Towables
Four Winds Towables
Thor Indiana Towables

Safety Chain Installation

This is the preferred method of attaching the safety chain between towing and towed vehicles. When attached, there will be slack in each length of chain between the trailer and towing vehicle in the curve and is not more than necessary to permit the vehicles to turn at their maximum radius, and that when passing between the towing vehicle the chains are oriented in a manner sufficient to prevent the tongue from dropping to the ground and to maintain connection in the event of failure of the primary connection system.

INTRODUCTION

This manual has been provided by the manufacturer for the purpose of providing instructions about the operation and maintenance of its recreational vehicles. Nothing in this manual creates any warranty, either express or implied. The only warranty offered by the manufacturer is set forth in the limited warranty applicable to your vehicle.

The limited warranty and the limited warranties issued by component manufacturers require periodic service and maintenance, and the owner's failure to provide this service and/or maintenance may result in the loss of warranty coverage for that item. The owner should review the manufacturer's limited warranty and the limited warranty of all other manufacturers.

Included in this manual are instructions for operating some components which may be optional on your vehicle.

This manual is devoted to instructions on travel trailers and fifth wheels. We hope you will have many years of vacationing pleasure.

THOR INDIANA,
DUTCHMEN MFG., INC.
305 Steury Ave.
Goshen, IN 46526
(219) 534-2520

TABLE OF CONTENTS

THOR INDIANA, DUTCHMEN MFG., INC. LIMITED ONE YEAR/TWO YEAR LIMITED STRUCTURAL WARRANTY

For travel trailers and fifth wheels manufactured by Dutchmen Mfg., Inc. and Thor Indiana sold in the United States and Canada

Coverage Provided:

Your new travel trailer or fifth wheel, including the structure, plumbing, heating and electrical systems, and all appliances and equipment installed by the manufacturer, is warranted under normal use to be free from manufacturing defects in material and workmanship.

For purposes of this warranty, the "structure" of your travel trailer or fifth wheel includes: the floor, roof, exterior walls, lamination of these components (if applicable) and attachment of the floor, roof, and exterior walls to each other and to the chassis. It does not include the chassis, holding tanks, or any other items attached to the "structure." It does not cover any interior "appointments" (i.e., carpet, cabinets, doors, etc.) or other items attached to the interior of the travel trailer or fifth wheel.

This warranty extends to the first retail purchaser and begins on the date of original retail delivery or the date the travel trailer or fifth wheel is first placed into service (whichever occurs first). This warranty extends for a period of one year/two years limited structural from such date. Written notice of defects must be given to the selling dealer or the manufacturer not later than ten (10) days after the expiration of the applicable warranty. Warranty repairs, if required, will be made without charge after your travel trailer or fifth wheel is taken to the dealer or manufacturing plant location.

Owner's Responsibilities:

The owner is responsible for normal maintenance as described in the owner's manual; however, minor adjustments (such as adjustments to the interior or exterior doors, LP regulator pressure, cabinet latches, TV antenna control, etc.) will be performed by the dealer during the first ninety (90) days of warranty coverage. Thereafter, such adjustments are the responsibility of the owner as normal maintenance unless required as a direct result of repair or replacement of a defective part under this warranty.

The owner is also responsible for inspecting and maintaining sealants or seals around all attachments and seams related to the structure.

WARNING

The owner's failure to perform such inspection and maintenance, which results in water damage to the structure, shall void the warranty.

It is also the owner's responsibility to notify the selling dealer and manufacturer of a warranty defect in a timely manner. Failure to notify in a timely manner will void all or portions of this one year/two year limited structural warranty. Once timely notification is made, the defect should be corrected in a time frame to limit consequential damages, which are not covered under the terms of this warranty.

DELIVERY

To assist you in avoiding problems with your coach, we recommend you do the following:

1. Read the warranty. Go over it thoroughly with your dealer.
2. Inspect the vehicle. Do not accept delivery until you have gone through the coach with the dealer. The manufacturer has provided a checklist to be used during retail delivery. Check each item on the list and make sure the dealer does the same. Do not sign this checklist until you are satisfied with each inspection.
3. Ask questions about anything concerning your coach you do not understand.
4. When taking delivery, set an appointment for adjustments. This should be done approximately two (2) weeks after you accept delivery.
5. Be sure your tow vehicle has the capacity to pull the coach you have selected.

Throughout the manufacturing process, your travel trailer or fifth wheel has been inspected by our qualified technicians. However, our final inspection at the factory is not the last one. The pre-delivery inspections (including systems check) your dealer performs are the final inspections done to the unit prior to your receiving your new coach. Your dealer should assist you in understanding the limited warranties and completing necessary forms to activate them.

If a problem occurs which the owner believes is covered by this warranty, the owner shall contact the selling dealer, or other authorized dealer, giving him sufficient information to resolve the matter. **It is your responsibility to return the vehicle to an authorized service center for any repairs and service that may be required.**

Dealer's Responsibilities:

By agreement with the manufacturer, the dealer is responsible to:

1. Maintain the travel trailer or fifth wheel prior to retail sale.
2. Perform a detailed pre-delivery inspection (including all systems check) and to repair any parts necessary to correct defects in material or workmanship.
3. Provide a customer walk through. This is done to familiarize the customer with the coach, its systems, components and its operation. The manufacturer has provided a checklist to be used during retail delivery. Check each item on the list and make sure the customer does the same. Do not sign this checklist until you are satisfied with each inspection.
4. Deliver the owner's information package. This contains applicable warranty cards and registrations for the coach and for factory installed components that carry a separate warranty.
5. Assist the customer in completing the component registration forms, at their request, to avoid loss of warranty coverage. The dealer should review the limited warranty provisions with you, stressing the importance of filing warranty cards and registrations to the manufacturer and component manufacturers within the prescribed time limits.
6. Provide you with information regarding warranty and non-warranty work on the coach and its separately warranted components, whether you are in or out of the area.
7. Service all Dutchmen/Thor Indiana recreational vehicles.

When The Dealer Does Not Resolve The Problem:

If the dealer is unable or unwilling to resolve a problem which the owner is convinced is covered by this warranty, the dealer should contact the manufacturing plant at the address listed below and provide the manufacturer with a description in writing of the problem and attempts made to resolve it.

THOR INDIANA,
DUTCHMEN MFG., INC.
305 Steury Ave.
Goshen, IN 46526
(219) 534-2520

Manufacturing Plant Obligations:

Upon receipt of notice of a claim, where the dealer was unable or unwilling to resolve the problem, the manufacturing plant will repair or replace any parts necessary to correct defects in material or workmanship, or will take other appropriate action as may be required.

What Is Not Covered By This Warranty:

1. Tires and batteries, appliances and other equipment, which are covered by the separate warranties of the respective manufacturers of these components.
2. Damage caused by or related to:
   A. Accidents, misuse or negligence.
   B. Failure to comply with instructions contained in the owner's manual.
   C. Alteration or modification of the travel trailer or fifth wheel.
   D. Environmental conditions (salt, hail, extreme temperature, chemicals in the atmosphere, etc.).

3. Normal deterioration due to wear or exposure, such as fading of fabrics or drapes, carpet wear, etc.
4. Normal maintenance and service items, such as light bulbs, fuses, lubricants, etc.
5. Extra expenses, such as transportation to and from dealer or manufacturing plant location, loss of time, loss of pay, loss of use of the travel trailer or fifth wheel, inconvenience, commercial loss, towing charges, bus fares, vehicle rental, incidental charges (such as telephone calls or lodging bills) or other incidental or consequential damages (other than injury to the person).
6. Any unit used as a commercial unit, used as a rental unit or used as a permanent dwelling.
7. Condensation on any window or other parts or any results of condensation.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

This warranty gives you specific legal rights, and you have other rights which may vary from state to state.

Dealers or any other persons are not authorized to make modifications to this warranty. Any additional statements concerning this warranty, whether oral or written, are not the responsibility of the manufacturer and should not be relied upon.

NOTE

For a listing of component manufacturers that provide a two (2) year warranty coverage (separate from this one year/two year limited structural warranty), refer to the chapter on Appliances and Equipment.

THOR INDIANA,
DUTCHMEN MFG., INC.
305 Steury Ave.
Goshen, IN 46526
(219) 534-2520

OWNER REGISTRATION

You or the dealer should fill out and mail the warranty registration within thirty (30) days from the date of delivery, along with the manufacturer's copy of the pre-delivery inspection checklist.

WEIGHT RATING

Located on the unit's front roadside lower corner is a Federal Certification Label. This label gives the maximum weight carrying capacities of your unit and each axle designated by the letters "GVWR" and "GAWR" respectively. The serial number of your unit is located on this label also.

The Gross Vehicle Weight Rating (GVWR) is the maximum your unit should weigh fully loaded, with water and LP tanks full, with food, clothing and all other supplies aboard.

Each axle also has a maximum load-bearing capacity, referred to as the Gross Axle Weight Rating (GAWR).

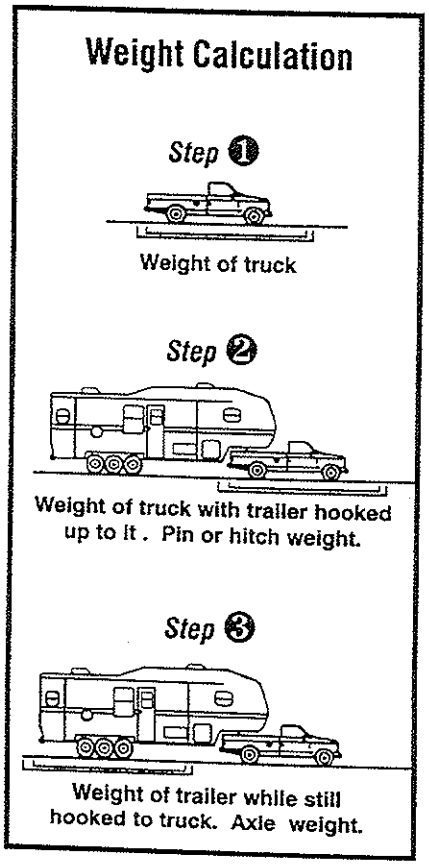
Located on the wall inside (typically) the kitchen overhead cabinet is the RVIA weight label. It contains the following information:

UVW (Unloaded Vehicle Weight) means the weight of the coach as built with the most common options of this unit. The UVW does not include cargo, fresh water, LP gas or dealer installed accessories.

NCC (Net Carrying Capacity) means the maximum weight of all personal belongings, food, fresh water, waste water, LP gas, tools, dealer installed accessories, etc. that can be carried by the coach. NCC is equal to or less than the GVWR minus the UVW.

GVW ((Gross Vehicle Weight) is the weight of the coach with all items and supplies that are loaded into the unit at any point in time.

Under no circumstance should the respective loads ever exceed these ratings.



APPLIANCES AND EQUIPMENT

Components manufacturers' list of two (2) year limited coverage:

LP Tanks • Refrigerator • Air Conditioner • Awning • Microwave • Tires • Furnace • TV Antenna • Slide Mechanism • Water Pump • Generator • Water Heater • Toilet • Range • Stereo • Power Converter

Refer to the individual manufacturer's owner's manual for operating instructions on the following equipment.

Before operating any gas appliance, make sure the valve on the gas tank is open.

WARNING

All pilot lights, appliances and their igniters (see operating instructions) shall be turned off during refueling of motor fuel tanks and/or LP gas containers.

Additional instructions regarding operation of the various appliances installed in your vehicle have been developed by the manufacturer of the appliance and are supplied with your vehicle. These instructions should be studied carefully before attempting use of the appliance and should be retained for future reference.

WATER HEATER

CAUTION: Before lighting water heater, be sure fresh water system is filled. Purge air from water heater by opening all faucets until water flows steadily from each faucet.

ELECTRONIC IGNITION (optional)

IMPORTANT: Read Water Heater Operating Instructions before using.

MANUAL IGNITION

1. Remove exterior vent cover.
2. Turn main gas valve to OFF. Wait five (5) minutes.
3. Turn main gas valve to PILOT. Push and hold reset button or dial while lighting pilot. Allow to burn for 30 seconds before releasing reset button or dial.
4. Turn main gas valve to ON and set water temperature dial.
5. After pilot has been burning replace exterior vent cover.

RANGE AND OVEN

Your range and oven will give you fast, dependable, and economical service using LP gas. The oven provides a complete range of heats and maintains temperature automatically for baking. The burner flame will vary during these settings.

You range cleans easily with a warm detergent solution. Naturally, food spillage allowed to remain becomes hard to clean and may clog functional parts. Burned head ports can usually be cleaned with a toothpick.

Carefully consult the instruction manual provided with the range for detailed information.

WARNING

Never use the range or oven for extra comfort heating. All the other gas appliances are vented to the outside and safe for continuous use, but the cooking appliances should be used only while cooking and then with one or more vents or windows open.

IF YOU SMELL GAS

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

GAS/ELECTRIC REFRIGERATOR

The refrigerator must be level for the cooling system to work efficiently. Use the small device supplied with the refrigerator to check if the refrigerator is level.

Do not alter or restrict the outside ventilation system. Always check before traveling to make sure the refrigerator door is secured so the contents do not spill on the floor during transit.

Carefully consult the instruction manual provided with the refrigerator for detailed operational instructions.

TV ANTENNA

The TV antenna is designed for all-channel color and black-and-white reception. If reception is poor, make sure the power supply switch is on and connectors are tight. Should reception remain poor, check with your authorized dealer. Check the instruction brochure for detailed instructions.

POWER CENTER

The power center transforms 110-volt A.C. to 12-volt D.C. It also holds the circuit breakers for the 110-volt system.

The 12-volt system is protected by fuses. Should a fuse blow because of an overload, reduce the load and replace the fuse.

NOTE

The converter does not change 12-volt D.C. to 110-volt AC.

BREAKAWAY SWITCH

It's located on the A-frame for trailers and on the pin box for fifth wheels. The looped cable for this switch must be attached to be a fixed part of the tow vehicle — not over the hitch ball. When a cord is pulled, breakaway switch automatically sets trailer brakes if trailer battery is charged. Do not use breakaway switch as a parking brake. Continued operation will drain trailer battery and or damage brake magnets.

POWER SUPPLY CORD

The power cord is accessible from the outside. Open the cord hatch cover and pull it from the storage compartment. It will reach an outside power receptacle approximately 20 feet away.

Many campgrounds provide less than 30-amp service. It is possible to blow their fuse or circuit breaker. If this happens, reduce the load and replace the fuse or reset the breaker.

FIRE SAFETY

The possibility of fire exists in all areas of life, and the recreational life-style is no exception. Recreational vehicles are complex machines. They are made up of many materials, some of which are flammable. Like most hazards, the possibility of fire can be minimized, if not totally eliminated. This is done by recognizing the danger and practicing common sense safety and maintenance habits. For safety reasons, your unit is furnished with both a fire extinguisher and a smoke alarm.

Fire Extinguisher

The fire extinguisher is rated for Class B (grease, gasoline, diesel fuel, flammable liquids) and Class C (electrical) fires. These are the most common types of fires in vehicles. Read the operator's manual and the instructions on the fire extinguisher. Be sure to know how and when to use the extinguisher and where it is located.

Fire extingu[illegible]s are mechanical, pressurized devices. Care must be exercised when they are handled. They must be maintained as the operator's manual instructs for proper and safe operation. The extinguisher should be inspected at least once a month. More frequent inspections may be required if the extinguisher is exposed to the weather or to possible tampering. Do not test the extinguisher by partially discharging; doing this will cause a loss of pressure.

If a fire occurs in the vehicle, evacuate the vehicle as quickly and as safely as possible. Consider the cause and the severity of the fire and the risk involved before trying to extinguish it. If the fire is major or fuel fed, move away from and stand clear of the vehicle and wait for emergency assistance to arrive.

Smoke Detector

The battery powered smoke detector is mounted on the ceiling in the living area of the unit. Read the operating instructions for details on the testing and care for this important safety device. Test the smoke detector after the unit has been in storage, before each trip, and at least once a week during use. The detector should never be disabled because of nuisance or false alarm from cooking smoke or a dusty furnace. Ventilate the unit with fresh air and the alarm will shut off. Never disconnect or remove the battery from the smoke alarm. The battery should be replaced once a year or when the low battery signal sounds.

Emergency Exit Window

In the bedroom or slide out of the unit, there may be an emergency exit (egress) window. This window is designed to be used as an additional exit in emergency situations. It can be identified easily by the red handle and red "EXIT" label. To open the egress window, familiarize yourself and occupants with proper procedure.

There should be two paths of escape from each sleeping area. Familiarize yourself and occupants with these paths and the location of the exits.

FURNACE

The furnace utilizes a sealed combustion system, which means the combustion chamber is completely sealed from the inner atmosphere of your vehicle. Combustion air is drawn from the outside and combustion products are expelled outside through a vent.

Carefully read and follow the lighting and operating instructions from the furnace manual supplied with the unit

New furnaces sometimes emit smoke and an odor when first used due to paint burning off the heating chamber. Do not mistake this for a malfunctioning furnace. You may want to open the windows during the initial breaking in of the furnace.

Thermostat readings may not always be a true indication of temperature throughout the living space. Use these readings as a guide to obtain the most comfortable level for you.

TOILET STOOL

The toilet requires little or no maintenance. An occasional spraying of the bowl sealing blade with silicone spray will retain the original smooth operating condition. Use an approved non-abrasive cleaner when cleaning the bowl.

Check for complete instructions in the owner's manual provided with the unit.

WASTE WATER SYSTEM

The main parts of the waste water system are the toilet, dual holding tanks and tank dump valves. The system is designed to provide complete self-contained toilet facilities, while on the road or parked, without being connected to a sewage line. It may also be used in the stationary position while connected to a sewage hose.

With either method, keep the dump valves closed and empty the tanks when they are nearly full. The idea is to send a large volume of water through the tanks and hose at the same time to float solids away.

After the sewage tank has been emptied, close the gate valves and put approximately five gallons of water in the sewage holding tank. This will help prevent solids from building up in the sewage holding tank. The addition of a deodorizing agent like *Aqua Kern* will help prevent odors.

Should you ever have a buildup of solids, close the valves, fill the tanks about ¾ full with fresh water, drive a distance to agitate the solids and drain the tanks.

THINGS NOT TO PUT INTO TOILET OR DRAINS

1. Facial tissues (they do not dissolve like toilet paper).
2. Detergents or bleach. Use a sewage tank deodorizer, available from your dealer.
3. Automotive antifreeze, ammonia, alcohols or acetone.
4. Table scraps or other solids that may clog the drains.
5. Cooking grease, which may coat tank probes and create misreading of tank gauges.

MONITOR PANEL

The monitor panel allows you to check the approximate liquid levels in the fresh water and holding tanks and to monitor battery charge condition.

With the rocker switch depressed, the empty indicator ("E") light will always be lit. If the tank is full, all lights will be on.

Erroneous indications can be caused by:

1. Water with low mineral content. Level is measured by a very low level electrical signal traveling through the liquid. Water which is very low in mineral content may not conduct the signal properly. This condition may be infrequent, but can exist. Check the panel reading when the fresh water tank is filled.
2. Material trapped on the sides of the holding tanks may give a full reading when the tank is actually empty. Use of a spray to wash out the tank following dumping should help prevent this condition.

NOTE

If the sensor probes mounted in the tanks get coated with grease, the monitor panel may indicate falsely or not at all. Avoid pouring grease, oils or similar substances down drains or the toilet. If this is unavoidable, the holding tank(s) should be washed out with a soapy water solution.

CITY WATER HOOK-UP

Simply connect hose to source, open the valve and you have pressurized faucets, toilet and water heater. Open faucets to purge trapped air from water system before lighting water heater.

CAUTION

Some water supplies develop excessive pressure, particularly in mountain regions. Water pressure regulators are available to protect your system against high pressure. See your dealer.

WATER TANK FILL

Connection to the water storage tank is a 1¼" flexible plastic tube. Simply remove cap, insert garden hose and fill. Water is supplied to each outlet by the pump.

SANITIZING SYSTEM

To assure complete sanitation of your potable water system, the following procedures are recommended for a new system. For one that has not been used for a period of time and for one which may have become contaminated:

1. Prepare a chlorine solution using one (1) gallon of water and one-quarter (¼) cup of household beach (5% sodium hypochlorite solution). With tank empty, pour one (1) gallon of solution into the tank for each fifteen (15) gallons of tank capacity.

NOTE: As an option, several commercial solutions are available and should be used as directed on the package.

2. Complete filling of tank with fresh water. Operate all faucets to release trapped air. Pressurize entire system with pump, if available, and turn off pump.
3. Allow to stand for three (3) hours.
4. Drain and flush with fresh potable water.
5. To remove excessive chlorine taste or odor which may remain, prepare a solution of one (1) quart vinegar to five (5) gallons water and pour into tank. Allow solution to agitate in tank by vehicle motion (several days, if possible).
6. Drain tank and flush with fresh potable water.

FRESH WATER SUPPLY SYSTEM

The fresh water system is a demand system. The 12-volt pump will run whenever there is need for water from any faucet. Just turn on the faucet for a smooth continuous flow of water.

A "city" water hook-up with a standard hose connection is also on your unit to permit connection of your unit directly to a city water supply with a potable water hose. The city water hook-up will bypass the water tank and demand pump. When the city water hook-up is used the switch for the demand pump should be in the "off" position.

WATER PUMP

The water pump is self-priming and totally automatic, operating upon demand when water is required.

1. Fill or partially fill freshwater supply tank.
2. Open kitchen and bathroom faucets.
3. Turn on switch for water pump and allow it to fill the water lines and hot water heater.
4. Close each faucet after it delivers a steady stream of water.
5. Water pump should stop running after all faucets are closed.
6. Pump should now run when faucet is opened and stop when faucet is closed.
7. Never allow pump to run for long periods of time without water in supply tank. Damage to pump may result or fuse in circuit line may blow.

When using the demand system and no water comes when a faucet is turned, use the following chart to correct the problem.

Situation	Solution
Pump running — No water	1. Fill tank 2. Clear water line to pump
Pump doesn't run	1. Check if pump switch is on 2. Check 12 volt fuses 3. Check electric connection

All water should be drained from the fresh water system when not in use for more than 1 week.

AIR CONDITIONER (optional)

If your unit is equipped with a roof mounted air conditioner, it is operated by a 110V A.C. power source through a separate circuit breaker. Keep in mind that our entire electrical system is designed to handle 30 amps and that the air conditioner takes a sizable portion of that when the compressor starts. Reduce other loads as much as possible when using air conditioning to reduce the chance of overload and possibly tripping main breaker.

Be sure the air conditioner is turned off before plugging your vehicle into an external receptacle.

Replacing or cleaning the filter with hot soapy water is recommended if air conditioner is used daily for a two-week period.

A complete instruction manual is provided with the unit.

MICROWAVE (optional)

Roast, bake, defrost, stew, simmer and keep warm. Just select the speed you want for fast, flexible microwave cooking. Consult manufacturer's instruction manual before operating.

TIRES AND WHEELS

The tires should be checked before starting on every trip. Check them regularly and keep inflated to recommended pressures. The recommended tire pressure is on the side of the tire. A tire gauge is a very inexpensive tool and is valuable for checking tire inflation. Rotate tires at least once every 5,000 miles. You may want to have a spare tire with you in case of an emergency,

All travel trailers and fifth wheels are equipped with tubeless tires. They are designed for today's turnpike speeds and are rated to carry the weight of the trailer plus your

family's personal needs for an extended vacation. If you should require an adjustment on a faulty or defective tire, secure the name of your nearest tire dealer or distributor and request an adjustment according to the conditions and terms of the tire warranty.

WHEEL NUT TORQUE

Proper wheel nut torque is very important to safe and dependable trailering. The wheel and axle systems used in travel trailers are similar in many ways to those used in cars and trucks, but they differ in several important ways. These differences require special attention to wheel nut torque both while the trailer is new and throughout the trailer's life.

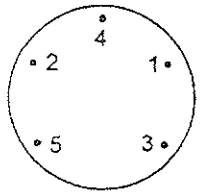
Trailer wheels must carry much higher loads per wheel than passenger car or truck wheels. Each wheel may carry from 1,000 to 2,500 pounds. Furthermore, wheels on tandem axle trailers do not steer, and are subjected to very high side load stress whenever the trailer makes a tight turn. When you go around corners — especially slow, tight ones — the wheels on your trailer are subjected to these strong side loads. This tends to flex the wheel and gradually loosen the wheel nuts. Although the materials and manufacturing methods are maximized for this kind of service, these extra load stresses and flexing can cause loosening.

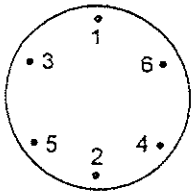
It is critical that the wheels be properly torqued during the first 25 to 50 miles of road operation. Although the wheels have been properly torqued before leaving the manufacturing plant, settling and wearing in of components during the first few miles of operation may cause some loosening of the wheel nuts.

The wheel nut torque specification is 90-95 ft.-lbs. ALWAYS USE AN ACCURATE TORQUE WRENCH TO TIGHTEN WHEEL NUTS. A torque wrench with adequate accuracy is available for $20-$30 at most automotive tool stores. Considering the overall investment in the trailer, this is a very reasonable cost. Use of a torque wrench can also reduce the effort required to tighten the wheel nuts.

Before each trip and any time a wheel is replaced, be sure to tighten the wheel nuts, following the sequence shown in the diagram, to the specified torque. If the wheel was replaced, check the torque again after 25 and 50 miles. If you notice wheel wobbling or hear a rattling sound coming from a wheel, especially at low speeds, a wheel lug nut may have come loose. This problem is usually caused by improper tightening or by faulty or damaged lug bolt threads. If you have reason to believe a lug nut has come loose, **SAFELY STOP THE VEHICLE AT THE SIDE OF THE ROAD AS SOON AS POSSIBLE.** Put up warning devices. Remove the lug caps and check the tightness of all the lug nuts. Tighten all lug nuts to the specified torque of 90-95 ft.-lbs If lug bolt threads are damaged or faulty, get

professional service help. Do not tow the trailer with missing lug nuts or faulty lug bolts.





NOTE

Use a torque wrench to tighten lug nuts. Tightening by hand or with an impact wrench is not recommended.

TORQUE TO: 90-95 FT. LBS.

TIRE CHANGING

1. Use emergency flares when near a road or highway.
2. Block the wheels on the opposite side from the tire you wish to change to prevent accidental movement.
3. Position a hydraulic jack on the frame close to the spring hanger.
4. Raise the trailer until the tire clears the ground.

WHEEL BEARING LUBRICATION

Your wheel bearings should be repacked every 6,000 miles or every 8 months, whether the coach is used or not. Every time the wheel hub is removed, the wheel bearings must be adjusted. Turn the hub slowly to seat the bearings while tightening the spindle nut until the hub will no longer turn. Loosen spindle nut so it may be turned by hand. Tighten nut finger tight, then loosen to first hub slot allowing alignment. Install cotter pin.

NOTE

Do not move hub during this step.

The spindle nut and hub should be free to move, with the cotter pin being the only restraint.

Prepare bearings by cleaning with solvent to remove old grease. Repack by pressing fresh bearing grease into bearing roller area. Repack bearings more often if subject to extremely wet conditions. If trailer has not been used for more than 2 months, bearings should be inspected and repacked if necessary.

Repack bearings using a high temperature, automotive type, wheel bearing grease produced by a reputable manufacturer. The soap type should be polyurea, lithium complex or equivalent. Use an NLGI Grade 2 product with a minimum dropping point of 440° F.

BRAKE ADJUSTMENT

The electric brakes are of the drum and two shoe type and adjust the same as most automotive brakes. The adjusting screw is accessible through a hole at the bottom of the backing plate. Remove the hole plug and use a standard brake adjusting tool. Turn the screw until the shoes contact the drum and with enough force to make the wheel hard to turn by hand. Then back off the screw six to eight clicks, or until the wheel turns freely.

WARNING!

If brake failure occurs, have them repaired immediately. CONTINUED DRIVING IS DANGEROUS.

BRAKES, WHEEL BEARINGS AND WHEELS SERVICE SCHEDULE

Check	Function Required	Daily	Weekly	Every 3000 Miles or 3 mos.	Every 6000 Miles or 6 mos.
Brakes	Test for proper function	●			
Air Pressure	Inflate tires to specifications	●			
* Lug Bolts or Nuts	Tighten to proper torque specs			●	
Breakaway Switch	Test switch operations, inspect connections			●	
Breakaway Battery	Maintain charge, inspect connections		●		
Wheel Rims	Inspect for dents, damage or out of round			●	
**Brake Shoes	Test brake drag and adjust if required			●	
Brake Magnets	Inspect for uneven wear				●
Wheel Bearings and Cups	Inspect for wear or damage and repack				●
Hub Drum	Inspect for heavy scoring or wear				●
Seals	Inspect for damage or wear				●

* Tighten wheel bolts or nuts every 50 miles for the first 200 miles and after every change in wheel mounting. (Torque to 90-95 ft.-lbs.)

** Adjust brakes after first 200 miles then at above intervals.

UTILITY SYSTEMS

HYDRAULIC/ELECTRIC SLIDE-OUT OPERATION

NOTE

Before extending the slide out make certain that there is a minimum of five (5) feet of clear space on the slide-out side of the unit.

You must check slide tracks and gears periodically, grease as necessary.

To extend the slide-out room, press and hold the control switch until the room is fully extended.

To retract the slide-out, move or rearrange furniture and interior fixtures as necessary to provide clearance for the room to retract into the trailer interior. Disconnect

the electrical cords (if equipped) for the slide-out lights. Press and hold the control switch until the room is fully retracted.

The slide-out room is equipped with a manual override to retract the room in cases where electrical power is interrupted or unavailable.

To operate the manual override see instructions on the Hydraulic Pump. If the system is electric, have the dealer explain the simple procedure.

SLIDE-OUT ROOM TROUBLESHOOTING

The most common cause of slide-out room malfunction is low battery voltage. Be sure the batteries are adequately charged. Reduce the electrical load by turning off all 12-volt lights and appliances when operating slides.

IMPORTANT

If the trailer is not level, the slide-out room may bind in opening. This puts additional strain on the slide-out mechanism and may damage the trailer. We recommend that stabilizer jacks by used in all coaches with slide rooms.

* *Your unit may or may not have them installed from the factory. If not, ask your dealer to option them on your unit.*

Slide-out room seals may stick if the room has been in the extended or retracted position for an extended amount of time. This sticking can be reduced or eliminated by using a seal dressing such as *Armor All.*

After installation, readjustment and re-leveling may be necessary due to settling. We recommend your selling dealer perform these adjustments for you.

Quality components are used throughout your trailer; however, local weather and atmospheric conditions will in time cause rubber and vinyl weather seals to need replacement, which are not covered beyond the term of your warranty.

Slide-out setup, adjustments and re-leveling are owner responsibilities which are not included in the warranty of your trailer. Therefore, your dealer will charge to perform these services.

Professional setup, adjustment, regular maintenance and replacement of weather seals as soon as required will extend the life and usefulness of your slide-out room. Weather seals which are allowed to remain in service after deterioration will allow rain, snow, or ice to penetrate inside the walls or roof and may cause extensive damage.

Do a close visual inspection of these seals at least twice each year — once before the winter season and again each spring.

ELECTRICAL SYSTEM

Your electrical system is a combination 12-volt and 110-volt system, every facet carefully engineered and installed to comply with the "National Electric Code."

The combination system consists of:

1. 12-volt automotive system.
2. 110-volt outside power source.

110-VOLT SYSTEM

This is supplied by plugging the power cord into an outside 110-volt receptacle. It furnishes current to 110-volt roof air conditioners refrigerator and all internal 110-volt receptacles. It also supplies power for the 12-volt trailer system through the converter.

The 110-volt circuits are protected by circuit breakers and will handle up to 1020 amps. The most common cause of a circuit breaker to open is an overloaded circuit. If this happens, reduce the load and reset the breaker.

Your bathroom, kitchen and exterior receptacles are protected by a highly sensitive device known as a "Ground Fault Interrupter," which is designed to sense the slightest electrical "short" at those receptacles and instantly disconnect the current before a person can be injured.

CAUTION

NEVER REPLACE CIRCUIT BREAKERS OR FUSES OF HIGHER CURRENT RATING THAN THOSE ORIGINALLY INSTALLED. THIS COULD OVERHEAT THE WIRING AND START A FIRE.

12-VOLT AUTOMOTIVE SYSTEM

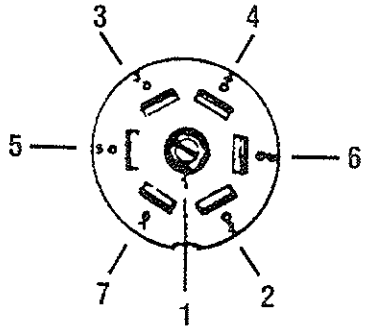
The 12-volt battery in the tow vehicle supplies the current to the trailer's electric brakes, clearance lights, turn signals, tail, stop and backup lights through the electrical connector.

The electrical connector wiring color code is as follows:

No.	*Color*	*Item*	*Wire Size*
1	Yellow	Backup Lights (not used)	No. 14
2	Black	Brakes	No. 14
3	Green	Clearance and Tail Lights	No. 16
4	Red	Battery Charge	No. 8
5	Red	Left Turn and Stop Lights	No. 16
6	Brown	Right Turn and Stop Lights	No. 16
7	White	Ground	No. 16

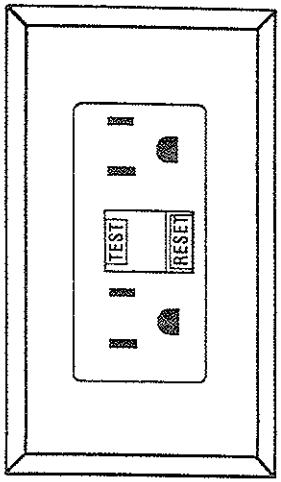
The color code is accurate at time of printing. If any questions, consult with your dealer. Changes may o[cc]ur without notice.

Car Connector Plug



No.	*Color*	*Item*	*Wire Size*
1	Yellow	Backup Lights (not used)	No. 14
2	Blue	Brakes	No. 12
3	Green	Clearance and Tail Lights	No. 14
4	Red	Battery Charge	No. 10
5	Red	Left Turn and Stop Lights	No. 14
6	Brown	Right Turn and Stop Lights	No. 14
7	White	Ground	No. 10

GROUND FAULT CIRCUIT INTERRUPTER



UL Listed

DUPLEX RECEPTACLE

ALL MODELS 125V AC 60 Hz ONLY
20A Feed-Through Rating.

THIS DEVICE PROTECTS AGAINST FAULT CURRENTS ONLY.
It does NOT protect against over current.

The GFI receptacle is located in the bathroom; it should be tested at least once a month for maximum protection. To test the GFI receptacle push the TEST button. The RESET button will pop out. Power is now off at all outlets protected by the GFI receptacle. The popping out of the RESET button during the test indicates the device is functioning properly. If the RESET button does not pop out when testing, do not use any outlets on this circuit. Protection is lost. Call your dealer if this device malfunctions. After a successful test, restore power by pushing RESET. Your test is complete when the RESET button stays pushed in.

LIQUID PROPANE (LP) GAS SYSTEM

Liquid Propane (LP) gas, when properly handled, is a clean burning, dependable fuel for all your LP gas appliances. The LP tank or tanks mounted on your unit contain liquid under high pressure. The liquid vaporizes into a gas and passes through the regulator which automatically reduces the gas pressure. The low pressure gas is then distributed to the appliances. The arrow on the automatic gas regulator will always point to the gas bottle in service. When the red flag appears in the inspection glass, this indicates that the bottle is empty. The arrow should be turned toward other bottle and the empty bottle should be filled as soon as possible. Never adjust the regulator yourself. Have your dealer or an authorized service man make any required adjustment.

LP GAS DETECTOR

WARNING

Never check gas lines for leaks with an open flame. Do not check for leaks using ammoniated or chlorinated household type detergents. These detergents can cause cracks to form on the metal tubing and brass fittings. Take the unit to a qualified LP gas service technician to find and repair the leak. Keep the tank valve closed and all of the appliances turned off when the unit is stored. If any of the LP gas valves do not close leak-tight by hand, consult a service technician.

Liquid Propane (LP) gas is heavier than air and will settle to the lowest point of the room, which is generally on the floor of your coach. Because of this, the LP detector installed in your coach is located near the floor. The detector is also sensitive to other fumes, such as hair spray, which contain butane as the propellant. Butane, like propane, is heavier than air and will settle to the floor level where it may be detected.

The detector is equipped with a "sensor activation strip." This strip must be removed for the detector to operate properly. This should have been done during the dealer's pre-delivery inspection. Please cheek the detector to verify that the activation strip has been remove.

Please consult your LP detector User's Guide for more detailed information.

FILLING LP GAS BOTTLES

When your LP gas tank is empty, have it refilled as soon as possible. There are many LP refueling stations available. Many RV parks also have LP gas available. Caution your supplier not to over fill your tank. Room is required to let the liquid vaporize.

There are approximately 11,000 BTUs of heat produced from each gallon of LP gas. Your furnace and oven will require the most LP gas. During extreme cold temperatures, check fuel tanks frequently to avoid running out of fuel.

1. Make sure the arrow on the cylinder selector is pointed to the full cylinder.
2. Close the valve on the empty cylinder and remove the hose from the valve. (Note: left hand thread)
3. Loosen the clamp that holds cylinder in place.
4. Remove the cylinder and have it refilled.
5. Slide the cylinder back in place and tighten clamp.
6. Connect the left-hand hose and tighten securely.

LP GAS LINES

The primary manifold is a black pipe located under your unit. Copper tubing with flare fittings are used as secondary lines running to the gas appliances. Should any lines ever rupture, NEVER attempt to splice them. A new line should always be installed. We recommend any LP gas line services be performed by your dealer or an authorized service man. Always close main valve at LP tank when servicing any gas appliance. This prevents any gas leakage which could result in an explosion or cause serious bodily injury.

Although your LP gas system was thoroughly inspected for leaks before delivery, gas fittings can loosen from vibration during travel. Your LP gas system should be inspected at least once a year. If leak is suspected, check immediately!

PRECAUTIONS AND RECOMMENDATIONS

- Inspect LP fill valve for foreign material before refueling.
- Shut off tow vehicle and pilot lights when refueling gas tanks.
- Never check for gas leaks with open flame match, etc.
- Visually inspect gas lines for any problem periodically.
- Have dealer inspect gas system yearly and before and after long trips. Always have qualified technician check and make any repairs in your gas system.

NOTICE

This gas piping system is designed for use of liquefied petroleum gas only. Do not connect natural gas to this system. Do not fill container(s) to more than 80 percent of capacity. Securely cap inlet(s) when not connected for use. After turning on gas, except after normal container replacement, test gas piping and connections to appliances for leakage with soapy water or bubble solution. Do not use products that contain ammonia or chlorine.

WARNING

All pilot lights, appliances and their igniters (see operating instructions) shall be turned off during refueling of motor fuel tanks and/or LP gas containers.

CARE AND MAINTENANCE

EXTERIOR CARE

Washing

The exterior of your new camping vehicle is made of pre-finished aluminum and/or fiberglass. Frequent washings and thorough cleanings are recommended to prevent damage to the vehicle finish after exposure to damaging salts, calcium chloride, road tar, tree sap, insects and other foreign material. Never wash the vehicle in direct sunlight, while the vehicle is hot or with hot water. Build up of mud and dirt under the body can cause damaging rust on steel parts and can add needless weight to the vehicle. Corrosive materials, such as those used for ice and snow removal and dust control, also accumulate on the underside of the vehicle. These materials should be removed by flushing the underbelly regularly with water, especially areas where mud and other foreign materials collect. The chance of corrosion can be minimized by frequent washings of the vehicle.

When washing the vehicle, make certain that the undercarriage and the wheel wells are cleaned, as well as the exterior of the coach. Do not use strong soaps or detergents for washing the vehicle. Always use a mild soap in warm water, a commercially prepared product for automotive finishes or your local car wash. Be careful when using a pressure-type washer to avoid loosening any exterior decals or sealants, etc. After washing, carefully inspect the caulking around the window frames and vents and any other joints that may have separated. Recaulking, if necessary, is relativity simple.

IMPORTANT

Never use a strong solvent, such as lacquer thinner or harsh abrasives, on any of the exterior painted surfaces.

Waxing

The exterior finish will require a routine waxing. When water will not bead and roll off a freshly washed vehicle, a new coat of wax is needed. Wax not only improves the appearance of the vehicle, but it also protects the finish against oxidation and corrosive materials. The recommended type of wax is one that is compatible with painted and gel-coated fiberglass finishes. Cleaning with a polishing compound will improve a dull or discolored finish.

IMPORTANT

When using a polishing compound that does not contain a wax preservative, reapplying a coat of hard wax after polishing is recommended.

Seals

The seals around doors, windows, vents and external seams should also be checked at least twice a year. Check the roof seams once a year for cracking or peeling. If deterioration is noted, reseal the seams or seals with an approved sealant to prevent leaks. Your dealer can perform the resealing inspections and work for you. Your dealer is also able to inform you of the appropriate sealants to be used, if you prefer to do the job yourself. Sealants can be purchased from your dealer.

RUBBER ROOF

Cleaning

For normal cleaning, standard household detergents can be used to wash the rubber roof material. Rinse thoroughly after cleaning. Be sure to keep the sidewalls wet to reduce streaking.

Care

The roof material itself does not require annual coatings or additional sealants. Periodic washing with soap and water is all that is required.

The rubber roof material can be cut by sharp objects. Use caution when loading sharp articles on the roof. If you add accessories or new equipment on the roof be sure the installer is qualified to work On the rubber roof material.

Inspect the roof at least every six months, paying particular attention to the seams where the areas of sheetmetal, rubber and/or fiberglass are joined.

Carefully inspect the flange connections between air conditioners, vents, skylights, etc, If signs of cracking, weather, or drying are evident, reseal the affected area. The roof requires special adhesives and material that can be purchased from your dealer.

NOTE

- *Frames and Bumpers:* Inspect for rust periodically and repaint with rustproof enamel when necessary.
- *Wash and wax more frequently in salt water areas.* Touch up or repair scratches, scuffs and punctures as they develop. If repair is required on the exterior contact your dealer.
- *Door and Window Seals:* Inspect the sealants around windows and doors at least every six months. If any of the following defects are evident during inspection, the affected areas must be resealed:
  - Sealant cracked or peeling
  - Voids in sealant
  - Shrunken or separated sealant

INTERIOR CARE

Upholstery

Do not launder upholstery fabrics. Blot up stains promptly, before they set. Use an upholstery cleaner or mild solvent, depending on the stain. Never soak the fabric. Use as little water as possible. Blot rather than rub. Towel dry or have professionally cleaned.

Draperies

Draperies and upholstery fabrics should always be dry cleaned like any other fine fabric by a competent dry cleaning establishment. Spots and stains should be removed with a commercial spot remover made for this purpose.

Countertops

Your countertops are made of high pressure plastic laminates and are highly resistant to normal spills and scuffs. Avoid regular use of abrasive pads and scouring powders which will dull the surface and make it more stain-prone.

Confine knife blades and slicing to a chopping block.

Although the laminate resists heat up to 275° F, pots and pans straight from the oven or burner and irons should be placed on lined hot pads.

Appliances

Refer to the individual manufacturer's owner's manuals for care and cleaning for your appliances.

Ceilings

Use a damp cloth to clean ceiling. Clean with a mild detergent in warm water. Never use a strong chemical. Excessive moisture may damage the ceiling.

Interior finish

The interior surfaces are easy to clean with mild soap and a damp cloth. Waxing is unnecessary. Stubborn stains may be removed with a spray cleaner.

Scratches can usually be touched up satisfactorily with a good quality commercial furniture scratch remover.

Floor coverings

The carpeting in your vehicle is tough and easily maintained. Vacuum regularly to remove abrasive grit. Water based spills and spots should be removed immediately with a damp cloth. Grease or oil based stains and spots should be spot cleaned with a good commercial spot cleaner made for this purpose. If complete shampooing is desired, it is best to have it done by a competent professional carpet cleaner. Never soak or water log your carpeting.

The cleaning procedure for your vehicle's linoleum is the same as for any other linoleum. Use a soft cloth or mop and mild soap with warm water.

Tub and lavatory

Do not use steel wool, harsh abrasives or liquid cleaners with solvents. These plastic surfaces are best cleaned with soap and water or dishwashing detergent and water.

Windows

The all-season windows in your travel trailer or fifth wheel normally open and close easily. If they become clogged with dirt, clean the mechanism with a small, stiff brush and spray with a silicone lubricant.

Doors and drawer fronts

The doors and the drawer fronts in your unit are made of high quality wood. They should be wiped off with a dust cloth and a good household cleaner.

Bedspreads

The manufacturer of the bedspreads recommends that the bedspreads not be washed, but professionally dry cleaned.

*NOTE: Dutchmen Mfg. / Thor Indiana does not recommend this RV for use in the winter unless it is with an all season package.

WINTER STORAGE

1. Level the unit — front to rear and side to side.
2. Remove bottled and canned goods and other items that could be damaged by freezing.
3. Open all faucets, valves and drains (including toilet stool valve), water heater drain and line drain.
4. Run demand pump till water stops flowing from faucets. Shut pump off immediately. Allow drains, faucets and valves to remain open for several hours or blow all extra water out with air. Be sure lines are empty.
5. Close all faucets, valves and drains,
6. It is a good idea to use an antifreeze solution for potable water for more positive protection. Do not use automotive type antifreeze.
7. Before using vehicle again, you may want to sanitize the system.
8. Completely drain holding tanks.
9. Flush sink, shower-tub, lavatory and stool with a solution of hot water and dishwater soap. Allow to drain and flush with clean hot water.
10. If possible, agitate the water in the holding tanks by driving a few miles, then drain tanks again.
11. An alternate to step #9 is to use a chemical deodorant. Let mixture stand for a few days, then drain.
12. Flush with fresh water, drain, and after tanks are dry, close dump valves and drain cap.
13. Fill traps with an antifreeze approved for use in ABS plastic pipes. Normally, a cupful per trap is adequate. Do not use an antifreeze solution with an alcohol base.
14. Turn the thermostat off.
15. Put graphite in all the locks and lubricate all door hinges.
16. Close all windows and roof vents.

EFFECTS OF PROLONGED OCCUPANCY

Your trailer was designed primarily for recreational use and short-term occupancy. If you expect to occupy the trailer for an extended period, be prepared to deal with condensation and the humid conditions that may be encountered. The relatively small volume and tight compact construction of a modern recreational vehicle mean that the normal living activities of even a few occupants will lead to rapid moisture saturation of the air contained in the trailer and the appearance of visible moisture, especially in cold weather.

Just as moisture collects on the outside of a glass of cold water during humid weather, moisture can condense on the inside surfaces of your trailer during use in cold weather when the relative humidity of the interior air is high. This condition is increased because the insulated walls of the trailer are much thinner than house walls. Estimates indicate that a family of four can vaporize up to three gallons of water daily through breathing, cooking, bathing and washing. Unless the water vapor is carried outside by ventilation, or condensed by a dehumidifier, it will condense on the inside of the windows and walls as moisture, or in cold weather as frost or ice. It may also condense out of sight within the walls or the ceiling where it will manifest itself as warped or stained panels. Appearance of these conditions may indicate a serious condensation problem. When you recognize the signs of excessive moisture and condensation in your trailer, you should take action to minimize their effects.

NOTE

Your trailer is not designed to be used as permanent housing. Use of this product for long term or permanent occupancy will lead to premature deterioration of structure, interior finishes, fabrics, carpeting and drapes. Damage or deterioration due to long-term occupancy will not be considered normal, and will under the terms of the warranty constitute misuse, abuse or neglect, and will therefore reduce your warranty protection.

Ventilation and Moisture Control

You can reduce interior moisture condensation by taking the following steps:

1. **Ventilate with outside air.** Partially open one or more roof vents and one or more windows to provide circulation of outside air into the interior. While this ventilation may increase furnace heating load during cold weather, it will greatly reduce water condensation. Even when it is raining or snowing, ventilation air from outside will be far drier than interior air and will effectively reduce condensation inside the trailer.
2. **Minimize moisture released inside the trailer.** Run the range vent fan when cooking and the bath vent fan (or open the bath vent) when bathing to carry water vapor out of the trailer. Avoid making steam from excessive boiling or use of hot water. Remove water or snow from shoes before entering to avoid soaking the carpet. Avoid drying overcoats or other clothes inside the trailer.

WARNING

DO NOT HEAT THE TRAILER INTERIOR WITH THE RANGE OR OVEN.

In addition to the hazards of toxic fumes and oxygen depletion, open flames add moisture to the interior air, increasing condensation. Do not use an air humidifier inside the trailer. Water put into the air by the humidifier will greatly increase condensation.

3. **Ventilate closets and cabinet.** During prolonged use in very cold weather, leave cabinet and closet doors partially open to warm and ventilate the interiors of storage compartments built against exterior walls. The air flow will warm the exterior wall surface, reducing or eliminating condensation and minimizing possible ice formation.
4. **Install a dehumidifier.** During prolonged, continuous use, a dehumidifying appliance may be more comfortable and effective in removing excess moisture from the interior air. While use of a dehumidifier is not a "cure-all," and ventilation, storm windows and moisture reduction continue to be important, operation of the dehumidifier will reduce the amount of outside air needed for ventilation. Heating load on the furnace will be reduced and the interior will be less drafty.
5. **Install tight fitting storm windows** to reduce or eliminate condensation on window glass. The interior surface of the storm window will be warmer, reducing moisture condensation.

WARNING

DO NOT COVER EMERGENCY EXIT WINDOW(S). THIS WINDOW MUST BE LEFT ACCESSIBLE AT ALL TIMES FOR EMERGENCY EXIT.

Dripping Ceiling Vents

During cold weather and even in short term occupancy, condensation frequently forms on ceiling vents and may even accumulate to the point of dripping onto the surfaces below. This is frequently misinterpreted as a "leaking" roof vent but is most often condensation drippage. Follow the preceding steps to control moisture condensation; protect surfaces with plastic sheeting until the moisture has dissipated.

APPROXIMATE HEIGHT OF UNITS

Travel Trailer without Air Conditioner	116" maximum
Fifth Wheel without Air Conditioner (Lo Profile 22'-28')	123" maximum
Fifth Wheel without Air Conditioner (Hi Profile 30'-35')	132" maximum
Travel Trailer with Air Conditioner	130" maximum
Fifth Wheel Slide Outs w/Air Conditioner (Lo Profile 24'-27')	130" maximum
Fifth Wheel Slide Outs w/Air Conditioner (Hi Profile 27'-35')	149" maximum
Hitch Ball Height	19½" approximate

The heights listed are accurate maximums at time of printing. Your individual unit may vary. If any questions, consult your dealer. Maximum heights are subject to change without notice.

HITCHING

HITCHING - TRAILER

Hooking up your trailer will become quite simple to you after a little practice and following these step-by-step instructions.

1. Crank jack up the tongue of the trailer until the hitch coupler is high enough to clear the hitch ball on your tow vehicle.
2. Back the tow vehicle to the trailer until the hitch ball is directly under the coupler on the trailer. This is the part that will take a little practice; if possible, ask another person to help guide you. Another good aid is a mirror that is sold by trailer supply dealers. It attaches to the trailer tongue magnetically and allows you to see the hitch coupler and ball from the driver's seat. When the ball is under the coupler, set the parking brakes, raise the locking latch on the coupler and crank it down onto the ball. Then move the locking latch down to lock it on the ball.
3. Engage the lock and retainer clip.
4. Raise the tongue by cranking the jack down. (The tow vehicle will come up with it if the high coupler is properly latched.) It also makes it easier to install the equalizing hitch bars. Make sure the unit is loaded before attaching equalizing bars. Adjust the equalizer bars to the trailer and tow vehicles are level. (See equalizer hitch manufacturer's instructions.)
5. Connect the power cord between the tow vehicle and your trailer.
6. Hook-up the breakaway switch. Be sure that the breakaway switch cable is not attached to any part of the tow vehicle assembly.
7. Crank the jack all the way up.
8. Install and adjust your mirrors.
9. Check all lights on your trailer and tow vehicle — running lights, stop and tail lights, turn signals.
10. Pull the trailer forward and apply the hand control for trailer brakes to be sure they are operating property.
11. Check inside of trailer and see that everything is stored away, vents closed, all doors and drawers closed, entrance door locked and steps retracted.

LOADING INSTRUCTIONS

Whether you start out for a weekend jaunt or a longer trip, the first thing you are going to do is load such items as food, clothing, bedding and recreational equipment. As you become experienced in travel trailer living, you will learn what is necessary and what merely takes up storage space.

CAUTION

IT IS ESSENTIAL THAT YOU STORE THE HEAVIER ITEMS CENTRALLY AND AS LOW TO THE FLOOR AS POSSIBLE. SECURE LOOSE ITEMS TO PREVENT SHIFTING.

HITCHING - FIFTH WHEEL

1. Adjust trailer jacks until trailer is at height level for hooking to the fifth wheel.
2. Place wheel chocks behind trailer wheels.
3. Lower tailgate on truck.
4. Release 5th wheel lock handle.
5. Line up truck so 5th wheel will accept trailer kingpin.
6. Close and latch tailgate.
7. Back truck slowly until kingpin engages the 5th wheel and automatically locks.
8. Make sure lock is closed.
9. Connect power cord between the tow vehicle and the trailer.
10. Connect breakaway switch cable.
11. Check 5th wheel lock, brakes and lights.
12. Completely raise trailer jacks.
13. Pick up and store wheel chocks.

TRAVELING

TOWING

A good way to practice towing is to choose a large parking lot (where it permissible).

Easing to a stop and starting smoothly saves wear and tear on your tow vehicle saves gas and prevents damage to the hitch and items stowed in the trailer. Your trailer is designed to be towable at any speed that is safe and smooth for your tow vehicle alone. Remember, when towing the trailer, always maintain at least a car and a trailer length space between you and the car in front of you for every 10 miles of speed. This will give you ample time to stop in an emergency.

As you drive, try to anticipate problems that may occur way ahead and prepare for them, even though they may never happen. Anticipate dips, gutters and depressions in the street, slowing down well in advance, as these are the hardest jolts of any kind on your car, your hitch, your trailer and items stowed in your trailer. Take dips and bumps slowly and be certain that the trailer wheels have passed the point before accelerating. Cross railroad tracks slowly. Always release your brakes before crossing.

On long grades, shift into a lower gear (or lower range, if you have automatic transmission) before your engine labors.

CAUTION

UNDER NO CIRCUMSTANCES SHOULD THE ENGINE BE ALLOWED TO "LUG" OR PULL HARD FOR EXTENDED PERIODS OF TIME.

When going downhill, use the same procedure as going uphill well in advance; the compression of your car's engine will help to slow your whole rig safely. Avoid conditions that require excessive and prolonged use of your brakes. Apply and release brakes at short intervals to give them a chance to cool.

WARNING

WHEN BEING OVERTAKEN, PASSING OR MEETING AN ONCOMING BUS, TRUCK OR OTHER LARGE VEHICLE, AIR TURBULENCE MAY BE ENCOUNTERED AND MAY CAUSE YOU TO FEEL THE TRAILER SWAY. WHEN THIS OCCURS A SLIGHT ACCELERATION AND/OR APPLYING THE TRAILER BRAKES ONLY WILL HELP OVERCOME THE SWAY SENSATION: HOWEVER, APPLICATION OF THE TOW VEHICLE BRAKES AT THE BEGINNING OF THE SWAY SITUATION WILL ACCENTUATE THE SWAY AND MAY CAUSE YOU TO LOSE CONTROL OF YOUR VEHICLE.

STARTING OUT

Starting the car slowly, check the traffic after signalling and be sure the road is clear. You are ready to pull into traffic. Accelerate slowly and evenly. Check the mirror frequently to observe the traffic behind you and the action of your trailer. Then move carefully into the proper traffic lane, as you accelerate.

TURNING CORNERS

Here's where you find the first basic difference with a trailer. The trailer wheels do not follow the path of your car's wheels. The trailer will make a closer turn than the car. Compensating for this action when making turns, you will pull the car out further into the intersection than you would normally, so that the trailer will clear the curb or clear any parked vehicles along the curb.

Making a left turn requires technique similar to a right turn, with a wider than normal swing into the new lane of traffic to keep the trailer from edging into the opposing lane.

On sharply winding and narrow roads keep well to the center of your lane, equally away from both the center line and pavement edge. This allows the trailer to clear the edge of the pavement without likelihood of the wheels dropping off onto the shoulder, which could cause dangerous trailer sway. Do not overcrowd or cross the center line. All sharp turns should be taken at low speeds. Professional drivers, when rounding turns, slow down well in advance of the turn, enter it at reduced speed, and then accelerate smoothly as they come out again onto the straightaway.

OVERTAKING AND PASSING

When you pass another vehicle, remember that it takes longer to accelerate and you must allow for the length of the trailer to pass as well, before returning to your lane. Use your signals freely. On freeways and expressways, try to pick the lane in which you want to move and stay in it, preferably the slow lane to the right.

You will usually notice that due to your slower speed, cars will be "trapped" behind you on a two-lane road. It is both courteous and practical to signal, pull onto the shoulder (when possible) and let them pass. It reduces passing hazards and saves tempers.

SLIPPERY PAVEMENT

On slippery and icy pavement, drive slowly, and if you feel you are skidding, gently apply the trailer brakes only.

MUD AND SAND

Let the momentum of your car and trailer carry you through. Apply power gently and stay in the tracks of the previous vehicle. If you do get stuck, tow the car and trailer out together without unhitching.

BACKING AND PARKING

After arriving at your destination, your next task is to choose a good level parking space and back into it. A recommended procedure for backing into a space is this:

1. Stop near the site, get out and look it over. (Check the site for low hanging tree limbs, posts, large rocks, etc.)
2. Always try to place the site to your left. This way you can see what the trailer is doing while you are backing. If the site is on your right, you will be backing into your blind side, which is more difficult.
3. With everything clear, maneuver the travel trailer into position for backing into the site.
4. Now grasp the steering wheel at the bottom (never at the top) and back up. Turn the steering wheel in the direction you wish the trailer to go. If the site is on your left, move your hand to the left and back slowly, watching the trailer. When the trailer starts into the turn, follow it by easing up on the steering wheel. The trailer will move into position.

SET UP

This section outlines the procedures necessary to stabilize and set up your trailer.

Before attempting to set up the trailer, carefully read and understand these instructions. Setting up your trailer is not difficult but does require some forethought and care.

Your trailer is designed to be efficient and comfortable. Careful attention to detail and thoroughness during set up will ensure that you will benefit from all the features and comfort built into your trailer.

During storage or after your trailer has been set up, you may notice slight rippling or waviness of the aluminum or fiberglass exterior sidewall panels if your trailer is sitting in the sun. This is caused by the normal expansion of the materials as they warm up. As the temperature goes down these panels will tend to return to their original shape.

LEVELING AND STABILIZATION

Leveling of your trailer at the site is important. A level trailer is not only necessary for comfort but your refrigerator must be reasonably level in order to operate properly. Stabilization is recommended to keep the trailer from jouncing while unhitched when people are moving inside the trailer.

Stabilizer jacks are intended to stabilize the trailer body while the trailer's full weight is supported by the hitch jack (conventional travel trailers) or landing gear (fifth-wheel trailers) and running gear. Stabilizer jacks are not designed to lift or level the trailer or support its entire weight. If coach is equipped with a slide out, be sure to level main unit before extending the room(s).

Leveling Procedures for a Conventional Trailer

1. If the site is not an asphalt pad, concrete slab or other prepared surface, be sure it is as level as possible. Be sure the ground surface is not soft and will support the weight of the trailer on the stabilizing jacks or other support devices.
2. Before uncoupling, level the trailer from side to side with suitable lengths of 2" x 6" wood blocks under the trailer wheels. Place the 2" x 6" wood blocks on the ground surface forward of the trailer wheels, and tow the trailer onto the 2" x 6" blocks. Block the trailer wheels so the trailer cannot roll.
3. Put the foot pad on the hitch jack post, uncouple the trailer from the tow vehicle and level the trailer front to rear. It may be necessary to place a sturdy 2" x 6" wood block under the jack post foot pad to support the jack post on soft ground surfaces.
4. Check the level of the trailer with a carpenter's level both crosswise and lengthwise on the trailer floor. To assure reasonable level at the refrigerator, use the round bubble level inside the refrigerator. Acceptable level is when the bubble is within the marked area of the bubble level.

CAUTION

AFTERMARKET STABILIZER STANDS MUST BE PLACED ONLY UNDER CHASSIS FRAME RAILS.

WARNING

DO NOT ATTEMPT TO LEVEL, RAISE OR OTHERWISE PLACE ALL OF THE WEIGHT OF THE TRAILER ON THE STABILIZER JACKS.

WARNING

STABILIZER JACKS ON TRAILERS WITH SLIDE ROOMS SHOULD NOT BE PLACED AT EXTREME CORNERS OF THE FRAME. LOCATING STABILIZERS IN THESE LOCATIONS CAN CAUSE SLIDE ROOM DAMAGE SHOULD LEVELING BLOCKS SHIFT OR SETTLE.

5. After stabilizing the trailer, be sure the trailer frame is not twisted, buckled, or stressed. Check that all doors and windows operate freely and do not bind.
6. Before resuming travel, be sure all stabilizers are removed or fully retracted.

Leveling Procedures for a Fifth-Wheel Trailer

1. If the site is not an asphalt pad, concrete slab or other prepared surface, be sure it is as level as possible. Be sure the ground surface is not soft and will support the weight of the trailer on the stabilizing jacks or other support devices.
2. Before unhitching, level the trailer from side to side with suitable lengths of 2" x 6" wood blocks under the trailer tires. Place the 2" x 5" wood blocks on the ground surface forward of the trailer tires and tow the trailer onto the 2" x 6" blocks. Block the trailer tires so the trailer cannot roll.
3. Lower the "quick drop" landing gear legs before extending the landing gear. The positioning of the "quick drop" legs will depend upon how level your campsite is from side to side and front to rear. The landing gear is then extended either mechanically (hand crank) or by the optional power motor. It may be necessary to place a sturdy 2" x 6" wood block under the foot pads to support the landing gear on soft ground surfaces.

CAUTION

DO NOT OPERATE THE POWER LANDING GEAR WITH CRANK HANDLE ENGAGED.

4. Check the level of the trailer with a carpenter's level (both crosswise and lengthwise) on the floor. To assure reasonable level for the refrigerator, use the round bubble level inside the refrigerator. Acceptable level is when the bubble is within the marked area of the bubble level.

CAUTION

AFTERMARKET STABILIZER STANDS MUST BE PLACED ONLY UNDER CHASSIS FRAME RAILS.

WARNING

DO NOT ATTEMPT TO LEVEL, RAISE OR OTHERWISE PLACE ALL OF THE WEIGHT OF THE TRAILER ON THE STABILIZER JACKS.

5. After stabilizing the trailer, be sure the frame is not twisted, buckled or stressed. Check that all doors and windows operate freely and do not bind.
6. Before resuming travel, be sure all stabilizers are removed or fully retracted.

CAUTION

THERE ARE SEVERAL WARNING TAGS PLACED ON THE EXTERIOR AND INTERIOR OF YOUR TRAVEL TRAILER. THESE ARE REQUIRED BY LAW. PLEASE FOLLOW THEIR INSTRUCTIONS.

SPECIAL SAFETY WARNING & PRECAUTIONS

WARNING

IT IS NOT SAFE TO USE COOKING APPLIANCES FOR COMFORT HEATING.

Cooking appliances need fresh air for safe operation. Before operation:

1. Open overhead vent or turn on exhaust fan, and
2. Open window.

This warning label has been located in the cooking area to remind you to provide an adequate supply of fresh air for combustion. Unlike homes, the amount of oxygen supplied is limited due to the size of the recreational vehicle; proper ventilation when using the cooking appliance(s) will avoid danger 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.

WARNING

A warning label has been located near the LP gas container. This label reads:

DO NOT FILL CONTAINER(S) TO MORE THAN 80 PERCENT OF CAPACITY

Overfilling the LP Gas container can result in uncontrolled gas flow which can cause fire or explosion. A properly filled container will contain approximately 80 percent of its volume as liquid LP gas. Safety regulation prevents filling over 80%.

WARNING

Portable fuel-burning equipment, including wood and charcoal grills and stoves, shall not be used inside the recreational vehicle. The use of this equipment inside the recreational vehicle may cause fires or asphyxiation.

WARNING

Storage of LP gas containers, gasoline or other flammable liquids inside your vehicle — even for short periods of time — presents a risk of fire and/or explosion. All flammable liquids should be stored safely in a well-ventilated area outside your vehicle and in proper containers.

WARNING

LP gas containers shall not be placed or stored inside the vehicle. LP gas containers are equipped with safety devices which relieve excessive pressure by discharging gas to the atmosphere.

WARNING

LP gas regulators must always be installed with the diaphragm bent facing downward. Regulators that are not in compartments have been equipped with a protective cover. Make sure that regular vent faces downward and that cover is kept in place to minimize vent blockage which could result in excessive gas pressure causing fire or explosion.

REPORTING SAFETY DEFECTS

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying the manufacturer.

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer or the manufacturer.

To contact NHTSA, you may either call the Auto Safety Hotline toll-free at 1-800-424-9393 (or 366-0123 in the Washington, DC area) or write to: NHTSA, U.S. Department of Transportation, Washington, DC 20590. You can also obtain other information about motor vehicle safety from the Hotline.

PERSONAL RECORD

Type _____ Serial No. _____

Chassis Make and Model _____

Chassis No. _____

Date Purchased _____

From Whom Purchased _____

Range Model and Serial No. _____

Refrigerator Model and Serial No. _____

Furnace Model and Serial No. _____

Water Heater Model and Serial No. _____

Converter Model and Serial No. _____

Tire Make _____

Tire Size _____

Door Key _____

When writing to the factory or a component manufacturer, be sure to include the pertinent model and serial numbers.

THE DESCRIPTIONS AND SPECIFICATIONS WERE IN EFFECT AT THE TIME THIS MANUAL WAS APPROVED FOR PRINTING.

MAINTENANCE RECORD

Date/ Mileage	Type of Service Performed	Cost	

MAINTENANCE RECORD

Date/ Mileage	Type of Service Performed	Cost	

MAINTENANCE RECORD

Date/ Mileage	Type of Service Performed	Cost	

MAINTENANCE RECORD

Date/ Mileage	Type of Service Performed	Cost	