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Manufacturing subsidiaries of Fleetwood Enterprises, Inc. build the following motor homes:
- Pace Arrow
- Pace Arrow Vision
- Southwind
- Southwind Storm
- Bounder
- Bounder Diesel
- Discovery
- Flair
- Tioga
- Jamboree
- American Eagle
- American Dream
- American Heritage
- American Tradition
AMERICAN COACH ASSOCIATION  
The association of AMERICAN EAGLE, AMERICAN DREAM,  
AMERICAN TRADITION and LIMITED  
Motorcoach Owners

WELCOME TO THE WORLD OF AMERICAN COACH ASSOCIATION! We can appreciate how much you are enjoying your new coach because we, too, own EAGLES, DREAMS, TRADITIONS AND LIMITEDS — and we invite you to join us.

Why should you join? Because it's fun, that's why. There is camaraderie in meeting other owners and, with all due modesty, we’re a darn nice bunch! There are also rallies, a newsletter, and regional chapters covering most of the USA.

AMERICAN COACH ASSOCIATION was formed to encourage camaraderie and the exchange of information not only among members but with the manufacturer as well. It is not sponsored by Fleetwood Motor Homes.

AMERICAN COACH ASSOCIATION holds rallies twice a year in areas that are interesting and / or scenic. Fun and informative, they feature brief seminars to entertain you or keep you informed about your coach; opportunities to see ideas that owners have incorporated in their coaches; optional tours and activities; the “latest info” from Fleetwood’s American Coach Division; and new coaches displayed by dealers.

AMERICAN COACH ASSOCIATION members also receive a newsletter which gives information on upcoming rallies and news from the regional chapters, including information on their rallies. And of course, new members are always recognized and welcomed in the newsletter.

Regional chapters foster fun and friendship among owners in a specific area. Members of AMERICAN COACH ASSOCIATION from outside the area are invited to participate in a chapter’s rally if they happen to be in that area, or you may even join more than one chapter.

So what does it cost to join this elite group? A mere pittance! Initiation fee is $14 and annual membership is $36, prorated from JULY (see enclosed application). Now you too, can be a member of AMERICAN COACH ASSOCIATION — just fill out the application and send it with your check to the address shown on the form.

All kidding aside, we really would like to have you join our group. We know you’re enjoying your elegant new coach and we’ll look forward to getting acquainted.

Sincerely, AMERICAN COACH ASSOCIATION MEMBERS
APPLICATION FOR MEMBERSHIP
AMERICAN COACH ASSOCIATION

“The Association for AMERICAN EAGLE, AMERICAN DREAM, AMERICAN TRADITION & LIMITED Motorcoach owners”

Date: ____________________
(Please fill in your name as you want it to appear on a badge)

OWNER’S LAST NAME________________________ FIRST NAME _______________________

CO-OWNER’S LAST NAME______________________ FIRST NAME _______________________

MAILING ADDRESS____________________________ CITY ____________________________

STATE____________________ ZIP____________ PHONE__________________________

(CHECK ONE)

_____ AMERICAN EAGLE

_____ AMERICAN DREAM

_____ AMERICAN TRADITION

_____ LIMITED

(FILL IN)

MODEL_________ YEAR_________ LIC#__________ STATE ________________

DUES: Use this chart to determine your dues according to month joined.

JULY $36.00 ________ NOV $24.00 ________ MARCH $12.00 ________

AUG $33.00 ________ DEC $21.00 ________ APRIL $9.00 ________

SEPT $30.00 ________ JAN $18.00 ________ MAY $6.00 ________

OCT $27.00 ________ FEB $15.00 ________ JUNE $3.00 ________

INITIATION FEE $14.00

TOTAL PAID __________

Membership in AMERICAN COACH ASSOCIATION is confined to owners of FLEETWOOD AMERICAN EAGLE, AMERICAN DREAM, AMERICAN TRADITION and LIMITED MOTORCOACHES. Please complete this form and mail with your check payable to:

AMERICAN COACH ASSOCIATION
Membership Chairman
P.O. Box 1418
Sarasota, FL 34230
Dear Owner(s) of an American Eagle, American Dream, American Tradition or Limited Motor Home:

Congratulations on choosing an American Coach Product, we are sure that you will enjoy your coach and we would like to invite you to join our organization. The American Coach Chapter (ACC) of the Family Motor Coach Association (FMCA) was formed to allow owners of motor homes produced by the American Coach Division of Fleetwood Enterprises an opportunity to gather at a Pre-Convention Rally, then travel to and be parked as a group at the National FMCA Conventions. FMCA holds two National Conventions each year, one in the Spring and the other in late Summer or early Fall. The American Coach service team attends our rallies to provide service and repair and one or more dealers attend to display, demonstrate and sell new coaches.

To be eligible to join, you must own at least a one-third share in an American Eagle, American Dream, American Tradition or Limited motor home and be a member in good standing of FMCA.

Please consider joining our group. An application is provided below, fill it out and mail it as indicated, or give it and your check to a Chapter member.

APPLICATION FOR MEMBERSHIP IN THE AMERICAN COACH CHAPTER OF FMCA

<table>
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MAILING ADDRESS ____________________________________________

CITY __________________________ STATE ______ ZIP ______

TELEPHONE ( ) __________________________

TELEPHONE ( ) __________________________

Membership Fee $5.00

Annual Dues $12.00

Total Amount $17.00

COACH TYPE ___________ YEAR ___________

FMCA # ___________ E-MAIL ADDRESS ____________________________________________

MAIL WITH YOUR CHECK TO: ACC/FMCA

% Dick & Betty Eno

7408 Chaco Rd. NE

Albuquerque, NM 87109
LIMITED ONE-YEAR/THREE-YEAR WARRANTY

For Motor Homes Manufactured by subsidiaries of Fleetwood Enterprises, Inc.,
sold in the United States and Canada

Your new motor home, 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 or workmanship. Defects or
damage to paint, graphics, exterior materials, upholstery or other
appearance items that may occur prior to delivery are usually
corrected during the inspection process at the manufacturing plant or
the dealership.

The warranty extends to the first retail purchaser and his transferee(s)
and begins on the date of original retail delivery or the date the motor
home is first placed into service as a rental, commercial or
demonstrator unit (whichever occurs first). The warranty extends for
the following periods:

1. For all defects (other than structural) the warranty extends for
a period of one year from such date or until the unit has
received 15,000 total miles of use as determined by the
mileage shown on the odometer (whichever occurs first).

2. For structural defects, 3 years; structural defects are limited
to the following: roof structure, sub-floor structure, exterior
walls, interior walls and ceilings.

Written notice of defects must be given to the selling dealer or
manufacturer not later than ten (10) days after the expiration of the
warranty period.

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 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.

If a problem occurs which the owner believes is covered by this
warranty, the owner shall contact the selling dealer, or the Fleetwood
Service Center, giving sufficient information to resolve the matter.
The owner shall deliver the motor home to the dealer or Fleetwood
Service Center location for warranty service.

AMERICAN TRADITION
WARRANTY

By agreement with the manufacturer, the dealer is obligated to maintain the motor home prior to retail sale, to perform a detailed predelivery inspection and to repair or replace any parts necessary to correct defects in material or workmanship.

DEALER’S OBLIGATIONS

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

WHEN THE DEALER DOES NOT RESOLVE THE PROBLEM

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

MANUFACTURER’S OBLIGATIONS

This warranty does not cover:

1. The automotive system (including the chassis and drive train), tires and batteries, which are covered by the separate warranties of the respective manufacturers of these components.

2. Defects caused by or related to:
   a. Abuse, misuse, negligence or accident;
   b. Failure to comply with instructions contained in the Owner’s Manual;
   c. Alteration or modification of the motor home;
   d. Environmental conditions (salt, hail, 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, wiper blades, lubricants, etc.

5. Motor homes on which the odometer reading has been altered.

6. Transportation to and from dealer or Fleetwood Service Center location, loss of time, inconvenience, commercial loss, loss of use, towing charges, bus fares, vehicle rental, incidental charges such as telephone calls or hotel bills, or other incidental or consequential damages.

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 may also have other rights which vary from state to state.

The manufacturer is not responsible for any undertaking, representation or warranty made by any dealer or other person beyond those expressly set forth in this warranty.

Brand Name: ___________________

Model: _______________________

Serial No.: ____________________

HEADQUARTERS:
Fleetwood’s American Coach Division Parts & Service
1420 West Patterson Street
Decatur, IN 46773

Service (800) 435-7345
Parts (800) 344-3245
Fax (219) 728-2951

CORPORATE
Motor Home Division
Fleetwood Enterprises, Inc.
P.O. Box 7638
Riverside, CA 92513-7638
(909) 351-3500
The particle board, hardwood plywood, or paneling used in your motor home are made with urea-formaldehyde. The companies that supply us with these materials have asked that we tell you about urea-formaldehyde with the statements on this page.

**WARNING**

This product is manufactured with urea-formaldehyde resin. Formaldehyde vapor may in some people cause headaches, eye, nose and throat irritation, and aggravation of allergies and respiratory problems, such as asthma. Proper ventilation should reduce the risk of such problems.

*Champion International Corporation*

**WARNING**

This product is manufactured with a urea-formaldehyde resin and will release small quantities of formaldehyde. Formaldehyde levels in the indoor air can cause temporary eye and respiratory irritation, and may aggravate respiratory conditions or allergies. Ventilation will reduce indoor formaldehyde levels.

*Weyerhauser Corporation*

**WARNING**

This product contains components containing or manufactured with 1,1,1 Trichloroethane, a substance that may be harmful to the public health and environment by destroying ozone in the upper atmosphere.

**WARNING**

Irritant: This product contains a urea-formaldehyde resin and may release formaldehyde vapors in low concentrations. Formaldehyde can be irritating to the eyes and upper respiratory system of especially susceptible persons such as those with allergies or respiratory ailments. Use with adequate ventilation. If symptoms develop, consult your physician.

*Georgia-Pacific Corporation*

Ventilation is important for making the interior of your motor home comfortable. Please read the section about ventilation and prolonged occupancy in the *Living With Your Motor Home* chapter in this *Owner's Manual.*
We are required to tell you consumer information provided by the National Fire Prevention Association (NFPA) and the American National Standards Institute (ANSI). The information and warnings found on these pages may also be found in other chapters of this Owner's Manual. Please see the LP Gas System and Appliances chapters for other safety and operating information.

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<td>Do not bring or store LP gas containers, gasoline or other flammable liquids inside the vehicle because a fire or explosion may result.</td>
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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.

The following label has been placed in the vehicle near the range:

**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 ventilation openings.
5. Leave the area until the odor clears.
6. Have the gas system checked and leakage source corrected before using again.

LP gas regulators must always be installed with the diaphragm vent facing downward. Regulators that are not in compartments have been equipped with a protective cover. Make sure that regulator vent faces downward and the cover is kept in place to minimize vent blockage which could result in excessive gas pressure causing fire explosion.
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 supply is limited due to the size of the recreational vehicle, and proper ventilation when using the cooking appliance(s) will avoid dangers of asphyxiation. It is especially important that cooking appliances not be used for comfort heating as the danger of asphyxiation is greater when the appliance is used for long periods of time.

WARNING

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

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.
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**Glossary**
This page intentionally blank.
Welcome to the recreational vehicle life-style and the growing family of motor home owners. We sincerely thank you for choosing a Fleetwood motor home!

Your motor home has been designed to provide you with years of carefree, pleasant traveling and vacationing. It conforms with, or exceeds, applicable American National Standards Institute (ANSI), National Fire Protection Association (NFPA), Canadian Standards Association (CSA) (units built for Canada only), Federal Motor Vehicle Safety Standards (FMVSS) and Environmental Protection Agency (EPA) and California Air Resources Board (CARB) regulations. These standards and regulations establish the plumbing, heating, electrical and other requirements for safety. The seal attached just outside the entry door indicates compliance with ANSI or CSA standards.

Like all finely crafted equipment, your motor home will require care and regular maintenance in order to deliver maximum value and performance. The dealer will give you basic operating and maintenance instructions. However, supplement this by reading all instructional material furnished with the motor home in the Owner’s Information Package and motor home Chassis Operator’s/Owner’s Guide/Manual. This information outlines important areas of operation and maintenance for you to follow for safe, trouble-free service from your motor home. Study these instructions carefully. A good working knowledge of your motor home and how to care for it will help you enjoy many miles and years of recreational living.

NOTE

This manual describes many features of your motor home and includes instructions for its safe use. This manual, including photographs and illustrations, is of a general nature only. Some equipment and features described or shown in this manual may be optional. Because of the continuous program of product improvement conducted by Fleetwood, it is possible that recent product changes may not be included. The instructions included in this manual are intended as a guide, and in no way extend the responsibilities of the manufacturing subsidiary, parent company or affiliates beyond the standard written warranty as presented in this manual.
**Introduction**

In this manual, statements preceded by the following words are of special significance:

**WARNING**
means that there is the possibility of personal injury to yourself and others.

**CAUTION**
means that there is the possibility of damage to the vehicle.

**NOTE**
indicates points of particular interest for more efficient and convenient operation.

Please pay close attention to these statements while you read this manual.

If you have any questions regarding operation, maintenance, or service, please contact your dealer immediately so he can assist you. Your dealer’s Service or Sales Department will handle any normal problems which might occur.

Your motor home is covered by one of the most comprehensive warranty programs in the RV industry. Please refer to the warranty in the front of this manual. It explains your rights and obligations, as well as the rights and obligations of the dealer and manufacturer. Please read this section carefully. You will be better informed in case you have a warranty-related problem, and your dealer will be better able to get you on the road again. If you have any questions about the warranty or what it does or does not cover, please contact your dealer.

**Warranties**
The materials in your *Owner's Information Package* contain warranty information and operating instructions on the various appliances and components in your motor home. Warranty registration cards for these items should be filled out and mailed as soon as possible after you take delivery of your motor home. If you do not have operating instructions for a particular appliance, contact your dealer.

You will automatically receive an *Ownercare Card* approximately 3-4 weeks after delivery of your new motor home. This card is imprinted with your name, the motor home serial number, and manufacturing subsidiary location. If your motor home ever needs warranty service, present this card to the dealer, or have it available when contacting a Fleetwood Service Center.

The motor home has been thoroughly inspected before shipment. Your dealer is responsible for performing a complete predelivery inspection of the chassis and all motor home components as specified in the predelivery checklists supplied by the motor home and chassis manufacturers. You should receive a copy of these completed checklists from your dealer when your motor home is delivered to you.

As a part of the predelivery inspection procedure, the dealer is responsible for road testing the motor home, noting and correcting any steering problems before delivery.

*Fleetwood and its subsidiaries will not be responsible for front end alignment after this predelivery inspection is done.*

You should return your motor home to the selling dealer for warranty service. If this is not possible, you may contact any other authorized Fleetwood motor home dealer. The service department at any of the locations listed at the back of this manual can help you find a dealer in your area.

If you have a warranty or service concern about the chassis portion of your vehicle please be aware that you may go directly to an authorized chassis dealer for service. This may
save you time and effort as the chassis warranty is administered by the chassis manufacturer. Consult your area phone directory for an authorized dealer and make arrangements with their service department. If you are unsure if the concern is chassis related, feel free to contact your Fleetwood dealer to assist you.

If, for some reason, a problem is not handled to your satisfaction:

1. Discuss any warranty-related problems directly with the manager and/or owner of the dealership, giving them an opportunity to help the service department resolve the matter for you.

2. If a problem arises that has not been resolved to your satisfaction by your local dealer, please contact:

   Fleetwood’s American Coach Division
   Parts and Service
   1420 West Patterson Street
   Decatur, IN 46733
   Phone (800) 435-7345

3. We sincerely believe that your dealer and the factory representative will be able to solve any problem which might arise. If their combined efforts are not satisfactory, please send a letter describing the circumstances to:

   Fleetwood Enterprises, Inc.
   Motor Home Division
   PO Box 7638 Riverside, CA 92513-7638

   Please include the brand name and serial number of your motor home. The serial number is located on the identification tag next to the entry door, and on your warranty card.

There may be times when your motor home will need repairs or parts while you are on the road. If your motor home is repaired by a non-authorized repair facility (non-Fleetwood dealer), be sure to save receipts and especially any parts that are replaced. These parts will usually have to be returned to your dealer before you can be reimbursed for their cost.
If you need service or warranty information, please see the booklets and other documents included in your *Owner’s Information Package*. When contacting any of the equipment manufacturers, always have the model and serial numbers available. Appliance identification numbers will be found on tags or plates attached to the appliance.

Chassis component (engine, transmission, axles, etc.) identification numbers will be located in the manuals included with your motor home.

If you need service or warranty information, the following phone numbers may be helpful:

*Fleetwood American Coach Service*

<table>
<thead>
<tr>
<th>Service</th>
<th>Phone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parts</td>
<td>(800) 344-3245</td>
</tr>
<tr>
<td>Warranty &amp; Technical Service</td>
<td>(800) 435-7345</td>
</tr>
<tr>
<td>Chassis (Spartan)</td>
<td>(800) 543-4334</td>
</tr>
<tr>
<td>Engine (Cummins)</td>
<td>(800) 343-7357</td>
</tr>
<tr>
<td>Transmission (Allison)</td>
<td>(800) 252-5283</td>
</tr>
</tbody>
</table>
If you need service or warranty information, please see the booklets and other documents included in your Owner’s Information Package. When contacting any of the equipment manufacturers, always have the model and serial numbers available. Appliance identification numbers will be found on tags or plates attached to the appliance.

If you ever need warranty work done, be sure to have the right papers with you. Take your warranty folder. If required work is not covered under the warranty, your dealer’s service department can help you with getting the correct service. Always keep a maintenance log of your motor home’s service history.

Always make a written list of the motor home’s problems or the specific work you want done. If you’ve had work done that is not on your maintenance log, especially while out of town, let the service advisor know. Don’t keep secrets.

And finally, be reasonable with requests. If you have a long list of service items that need attention and you need your motor home very soon, discuss the situation with the service advisor, listing the items in order of priority. This will help the service department manage their time and will help get you going as quickly as possible.
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 Fleetwood Service Center at 1-800-322-8216.

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 Fleetwood’s manufacturing subsidiary.

To contact NHTSA, you may either call the Auto Safety Hotline toll-free at 1-800-424-9393 (or 366-0123 in Washington, D.C.) or write to:

NHTSA
U.S. Department of Transportation
400 Seventh St. SW
Washington, DC 20590

You can also obtain other information about motor vehicle safety from the Hotline.

This package contains valuable documents about your motor home and its equipment and systems. This Owner's Manual is in the package. Since this manual does not cover every possible detail of equipment and options installed on or in your motor home, there are booklets and instructional material in the package that will help you safely operate, maintain and troubleshoot those items. Be sure you read all this information and understand the safety and operating instructions included in the package. Additionally, you must follow all maintenance instructions to insure full warranty coverage. If you ever decide to sell or trade your motor home, be sure the new owner receives all the material in this package.
Several numbers are used to identify the vehicle and components used on the vehicle.

The V.I.N. or Vehicle Identification Number is the identification of the completed vehicle and is the number of the vehicle registration. The V.I.N. is found on the Federal certification tag attached to the interior left sidewall of the motor home driver compartment. Refer to this information when ordering parts from the chassis manufacturer or chassis dealer service center.

The F.I.N. or Fleetwood Identification Number is located on the tag just outside the main entry door or on the outside left front side of the motor home. Use this number when ordering parts through your Fleetwood dealer or Service Center.

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**FEDERAL CERTIFICATION TAG**

<table>
<thead>
<tr>
<th>MFG BY</th>
<th>DATE OF MFR:</th>
</tr>
</thead>
<tbody>
<tr>
<td>INCOMPLETE VEHICLE MFG. BY:</td>
<td></td>
</tr>
<tr>
<td>DATE OF INC. VEH. MFR:</td>
<td></td>
</tr>
</tbody>
</table>

**GVR**

<table>
<thead>
<tr>
<th>KGS</th>
<th>LBS</th>
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**GAWR FRONT**

<table>
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<tr>
<th>KGS</th>
<th>LBS</th>
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**GAWR INTERMEDIATE**

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<th>KGS</th>
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**GAWR REAR**

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<th>KGS</th>
<th>LBS</th>
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**GAWR COMBINED**

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<tr>
<th>KGS</th>
<th>LBS</th>
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</table>

**VEHICLE IDENTIFICATION NUMBER BAR CODE**

This tag is located on the left top of the instrument panel.

**FLEETWOOD, MOTOR HOMES**

Located on the left of the main entry door or on exterior left front side of the motor home.

F.I.N. (Fleetwood Identification No.)
The front suspension and steering system of this vehicle was accurately aligned at the factory before delivery to the dealership. However, after you have fully loaded the vehicle according to your personal needs, have the alignment checked and adjusted, if necessary. To help prevent uneven tire wear, check the front-end alignment periodically.

*Please note that front-end alignment after retail delivery is the owner’s responsibility and is not covered under the warranty.*

Excessive or abnormal tire wear may indicate worn or misaligned suspension or steering components, unbalanced tire(s) or some other tire/suspension problem.

Alignment can be affected by worn steering/suspension parts or road hazards such as hitting a curb, pothole, railroad track, etc. Improper alignment can cause tires to roll at an angle and wear unevenly. It may also cause the vehicle to “pull” to the right or left.

Out-of-balance tires will not roll smoothly and will cause annoying vibrations and uneven tread wear such as cupping or flat spots. If you see uneven tire tread wear or if the vehicle ride comfort decreases, the tires may need to be balanced.

See the *Chassis Operator's/Owner's Guide/Manual* for more information.

Fleetwood does not sanction or condone the installation of any steering aid device that is not approved by our chassis manufacturer's. Any add-on device of this type will likely void the chassis manufacturer's warranty on the item or items affected.

Any after-market steering aid device proposed for installation must be approved by *Fleetwood Motor Home Product Engineering* before considering it for any after-market installation on your motor home.
Vehicle Crash
Like any other vehicle you may drive, your motor home can be involved in a vehicle crash, including a rollover. The motor home will be damaged and you and others can be injured or killed. Drive defensively at all times. **DO NOT** drive if you are tired, have been drinking alcoholic beverages, are under the influence of any controlled substance, or are taking any medication or drugs that may impair your sight, hearing, judgment or coordination. Pull off the road and park in a safe area until you can drive safely.

Vehicle Handling
Your motor home is longer, wider and higher than a typical car or truck you may be accustomed to driving. Keep this in mind as you become familiar with driving your motor home. New motor home owners should take special care to learn the driving and handling characteristics of your vehicle in safe and familiar surroundings. The distribution of the weight of your motor home is designed so it will handle safely while being driven.

>> **When loading the motor home, balance the load front-to-rear and side-to-side.**

>> **Load and secure heavier items lower in the storage areas than lighter items.**

If you fail to properly load your belongings and supplies, you will defeat the load distribution design of the motor home, possibly leading to handling problems and a vehicle crash.
Vehicle Response
When you, the driver, accelerate, brake or steer the motor home, it responds to these inputs. If you are faced with an emergency while driving, the way you respond to the emergency and the way the motor home responds becomes more critical. If you load, alter or maintain your motor home improperly, it will not respond as it did when you first received it in an unloaded condition. Improper loading, alteration, maintenance and improper driver responses to emergency conditions can lead to handling problems and vehicle crashes.

Vehicle Towing
Your motor home can be equipped with a hitch designed to allow you to tow vehicles or other loads behind your motor home. The maximum amount of weight your motor home can pull or stop is determined by the manufacturer of the chassis on which your motor home is built. Check the Chassis Operator's/Owner's Guide/Manual provided by the motor home chassis manufacturer for the limits on the weight you can tow.

If the Chassis Operator's/Owner's Guide/Manual does not provide information on towing weight limits, do not tow a load of more than 1000 pounds unless the towed unit has a properly installed and operating supplemental brake control system that operates with the brakes on your motor home.

» You may be able to increase the weight of any towed load by properly installing on the towed load a supplemental brake control system that operates with your motor home's braking system. Even with additional brakes, you cannot tow more than the GTW or GCWR for the chassis under your motor home. Again, check the Chassis Operator's/Owner's Guide/Manual.

» You CANNOT increase the towed weight limit by changing the size of your hitch.

» Properly load what you tow to avoid a vehicle crash.
**INTRODUCTION**

- Do not attempt to tow something that is too heavy for your chassis.

- When driving in mountainous areas, look for and obey highway signs concerning grades and curves. Your driving experience when pulling and stopping a towed unit on mountain roads will be very different from what you experience on level ground.

- State laws in the United States and provincial laws in Canada are different concerning towing requirements and limits. Check the laws in the areas where you anticipate traveling.

**Alterations to Your Motor Home**

Many motor home owners like to add a personal touch to their motor home. But there is a difference between changing how your motor home looks versus how it handles or responds to driver inputs. If you expect to make any type of alteration to your motor home, consult a professional who understands the correct way to do the alteration and how the alteration will change or affect the stability, handling, vehicle response, and overall performance and safety of your motor home. An improper alteration that affects vehicle handling or response can cause a vehicle crash, and any improper alteration to the electrical or LP gas systems can cause a fire and can endanger your motor home and its occupants. Fleetwood and your chassis manufacturer stand behind the motor home as delivered - NOT as altered by someone else.
Maintenance
It is your responsibility to properly maintain your motor home. Consult your Fleetwood and Chassis Operator's/Owner's Guide/Manual for service information. See an authorized Fleetwood dealer to have your motor home serviced or repaired. You, or an experienced professional, should check all fluid levels and change fluids and filters when needed. Tire condition and proper inflation pressure is critical to safe operation. Keep your vehicle properly maintained to help avoid a vehicle crash.

Warning Devices
Your motor home is equipped with warning devices. Check them before a trip for proper operation. A disabled warning device cannot warn you or your occupants of a life-threatening danger. Keep them working and respond to them quickly.
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Driver's Control

Instrument Panel

Shifter Selector (Side-Pod)
### Driver's Control

**Instrument Panel**

<table>
<thead>
<tr>
<th>1.</th>
<th>Air Vents</th>
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<tbody>
<tr>
<td>2.</td>
<td>Generator Hour Meter Gauge</td>
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<tr>
<td>3.</td>
<td>Head Light Switch</td>
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<tr>
<td>4.</td>
<td>Windshield Wiper/Washer Switch</td>
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<tr>
<td>5.</td>
<td>Blank</td>
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<tr>
<td>6.</td>
<td>Auxiliary Start (Chassis &amp; Generator Engine)</td>
</tr>
<tr>
<td>7.</td>
<td>Dome Light Switch</td>
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<tr>
<td>8.</td>
<td>Generator Start Switch</td>
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<tr>
<td>9.</td>
<td>Air Horn Switch</td>
</tr>
<tr>
<td>10.</td>
<td>Radio Select Switch (Switches power to the radio between the chassis batteries and house batteries.)</td>
</tr>
<tr>
<td>11.</td>
<td>Driver's Fan Switch</td>
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<tr>
<td>12.</td>
<td>Passenger's Fan Switch</td>
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<tr>
<td>13.</td>
<td>Luggage Lights Switch</td>
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<tr>
<td>14.</td>
<td>Hood Lights Switch (Chassis &amp; Generator Engine Areas)</td>
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<tr>
<td>15.</td>
<td>Docking Lights Switch</td>
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<td>16.</td>
<td>Fog Lights Switch</td>
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<td>17.</td>
<td>Chassis Engine High Coolant Temperature Warning Light</td>
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<tr>
<td>18.</td>
<td>Chassis Engine Low Coolant Warning Light</td>
</tr>
<tr>
<td>19.</td>
<td>Transmission High Temperature Warning Light</td>
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<tr>
<td>20.</td>
<td>Chassis Engine Low Oil Pressure Warning Light</td>
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<td>21.</td>
<td>Left Turn Signal Indicator Light</td>
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<tr>
<td>22.</td>
<td>Speedometer Gauge</td>
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<td>23.</td>
<td>Transmission Temperature Gauge</td>
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<tr>
<td>24.</td>
<td>Chassis Engine Coolant Temperature Gauge</td>
</tr>
<tr>
<td>25.</td>
<td>Chassis Engine Oil Pressure Gauge</td>
</tr>
<tr>
<td>26.</td>
<td>Fuel Gauge</td>
</tr>
<tr>
<td>27.</td>
<td>Chassis Engine Voltmeter Gauge</td>
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<tr>
<td>28.</td>
<td>Chassis Engine Tachometer Gauge</td>
</tr>
<tr>
<td>29.</td>
<td>Right Turn Signal Indicator Light</td>
</tr>
<tr>
<td>30.</td>
<td>High Beam Indicator Light</td>
</tr>
<tr>
<td>31.</td>
<td>ABS Systems Warning Indicator Light</td>
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<tr>
<td>32.</td>
<td>Exhaust Brake Indicator Light</td>
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<tr>
<td>33.</td>
<td>Parking Brake Indicator Light</td>
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<tr>
<td>34.</td>
<td>AM/FM Radio/Cassette</td>
</tr>
<tr>
<td>35.</td>
<td>Cockpit Heater/Air Conditioner Controls</td>
</tr>
<tr>
<td>36.</td>
<td>Chassis Engine Preheat Wait To Start Indicator Light</td>
</tr>
<tr>
<td>37.</td>
<td>Leveling Jacks Down Warning Indicator Light</td>
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<tr>
<td>38.</td>
<td>Transmission Check Trans Warning Indicator Light</td>
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<tr>
<td>39.</td>
<td>Low Air Pressure Warning Indicator Light</td>
</tr>
<tr>
<td>40.</td>
<td>Dual System Air Pressure Gauge</td>
</tr>
<tr>
<td>41.</td>
<td>Chassis Engine Ignition Switch</td>
</tr>
<tr>
<td>42.</td>
<td>Parking Brake Control Knob</td>
</tr>
<tr>
<td>43.</td>
<td>Leveling Jacks Control Pad</td>
</tr>
<tr>
<td>44.</td>
<td>Stop Engine Indicator Light</td>
</tr>
<tr>
<td>45.</td>
<td>Engine Protect Indicator Light</td>
</tr>
<tr>
<td>46.</td>
<td>Check Engine Indicator Light</td>
</tr>
</tbody>
</table>

**Shift Selector (Side-Pod)**

| 47. | Cruise Control ON/OFF Switch |
| 48. | Cruise Control SET-ACCEL/COAST-RESUME Switch |
| 49. | ICC Switch (Intermittent Courtesy Switch) |
| 50. | Exhaust Brake Switch |
| 51. | Transmission Shifter |
| 52. | Mirror Controls |
1. C.B. antenna
2. Radio antenna
3. Waterfill (city & gravity)
4. Solar panel
5. Refrigerator vent
6. R/S radiator access
7. External power cord
8. Utility compartment
9. Storage & LPG tank
10. Fuel fill
11. Air conditioner
12. Water heater
13. TV antenna
14. Storage
15. Heater outlets
16. Batteries (house & engine)
17. D/S engine access
18. Generator access
19. Fog lights
20. Rear view camera
21. Engine air intake
22. Engine access
23. Dryer vent
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As the operator of this motor home, you are responsible for its proper and safe loading. This section is intended to provide you with helpful information concerning the loading of your motor home.

Your motor home chassis is designed to carry a specific maximum weight. This weight includes everything: the weight of the empty motor home itself, all occupants and their belongings, fuel, fresh water, waste water and anything else that may be in or attached to the motor home. This weight must never be exceeded. If you do exceed this weight, you will change how your motor home handles and responds, possibly leading to a vehicle crash.

Before discussing loading and weighing, we need to explain some common weight terms. We will use abbreviations and you should refer back to these terms if you do not understand what the abbreviation means.

GVWR (Gross Vehicle Weight Rating)*
means the maximum permissible weight of this motor home. The GVWR is equal to or greater than the sum of the Unloaded Vehicle Weight plus the Net Carrying Capacity.

GCWR (Gross Combined Weight Rating)*
means the value specified by the motor home manufacturer as the maximum allowable loaded weight of this motor home with its towed trailer or towed vehicle. Towing and braking capacities may be different. Refer to Fleetwood and the chassis manufacturer’s manuals for complete information.

*These ratings are shown on the Carrying Capacity label.
GTW (Gross Towed Weight)*
means the maximum permissible loaded weight of a trailer or car that this motor home has been designed to tow. This cannot be increased by changing the trailer hitch.

GAWR (Gross Axle Weight Rating)*
means the maximum permissible loaded weight a specific axle is designed to carry.

Hitch Rating:
This is the maximum load that the hitch receiver supplied with your motor home was designed to tow. This rating may be affected by the type of hitch head assembly you select. Read Towing a Vehicle or Trailer before selecting a hitch head assembly or trailer. This rating is listed on a tag affixed to the hitch receiver and is also noted on the carrying capacity label.

TW (Tongue Weight)*
the maximum permissible downward force exerted on the hitch ball by the towed vehicle coupler.

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

NCC (Net Carrying Capacity)*
means the maximum weight of all occupants including the driver, personal belongings, food, fresh water, LP gas, tools, tongue weight of towed vehicle, dealer installed accessories, etc., that can be carried by this motor home. Normal variation of materials may cause the Net Carrying Capacity to be 200 lbs. higher or lower than stated. (NCC is equal to or less than GVWR minus UVW.)

Designated Seating Capacity (Canadian units only)
the number of sleeping positions designated equals the seating capacity.
When you use your motor home to tow, remember that you must stop the towed load with your motor home’s brakes. This is critical on hills and in the mountains where you may encounter sharp curves and possibly irregular road surfaces. Check your motor home Chassis Operator’s/Owner’s Guide/Manual for the maximum weight your motor home can pull and stop on both level and steep roads. If the Chassis Operator’s/Owner’s Guide/Manual does not provide information on towing weight limits, do not tow a load of more than 1000 pounds unless the towed unit has a properly installed and operating supplemental brake control system that operates with the brakes on your motor home. The supplemental brakes will NOT allow you to tow more than the listed GCWR for your motor home. If you cannot stop, you will crash.

You must not exceed the weight factors listed below if you expect to tow something behind your motor home, either with or without a dolly. The factors are:

- **GCWR - Gross Combined Weight Rating**
- **GTW - Gross Towed Weight**
- **TW - Tongue Weight**
- **GAWR - Gross Axle Weight Rating**

The ratings for these factors are all listed on the carrying capacity label posted inside the motor home.
If you expect to tow with your motor home, there are additional guidelines that you must follow:

» Limit the tongue weight to the Towed Weight as listed on the carrying capacity label. Heavier tongue weights can change your vehicle's handling and response, can cause a vehicle to crash, and will restrict your coverage under the Ownercare Warranty.

» Do not tow anything weighing more than the GTW listed on the carrying capacity label. Heavier towed loads can exceed your chassis' ability to pull and stop the load and cause a vehicle crash, damage the motor home structure or drive train, and restrict your coverage under the Fleetwood or chassis manufacturer's warranty. Changing the trailer hitch will not increase the tow capacity of the motor home.


The way your motor home handles and responds will be affected by the way the towed unit is loaded. If the tongue weight is too light in relation to the GTW, handling and response will change and your motor home will operate less safely. Careful load planning and safe experimentation with different loading patterns in what you are towing can avoid this risk and make your driving and towing experience safer and more enjoyable.
Your motor home is equipped with one-half of the equipment required to tow a trailer, automobile dolly, or other towed load.

Typical Hitch System Components

The equipment supplied with your motor home is called the “hitch receiver.” This component is attached to the motor home frame. The square tube opening “receives” any of a wide variety of hitch head assemblies. The “hitch head” is the component that includes the hitch ball.

Hitch head assemblies are available in both “Weight-Distributing” (load-equalizing) and “Weight-Carrying” types. A weight-distributing hitch uses spring bars attached to the trailer tongue A-frame assembly to transfer some of the trailer tongue weight to both motor home axles.
A weight-carrying hitch head assembly does not use spring bars. All of the tongue weight of the trailer bears down on the hitch assembly which loads the motor home rear axle. For this reason, the maximum load you can tow with a weight-carrying hitch head assembly is limited.

<table>
<thead>
<tr>
<th>HITCH RECEIVER</th>
<th>HITCH HEAD ASSEMBLY</th>
<th>MAXIMUM TOWED LOAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>10,000 Lbs. (standard)</td>
<td>Weight-Carrying</td>
<td>5,000 Lbs.*</td>
</tr>
<tr>
<td></td>
<td>Weight-Distributing</td>
<td>10,000 Lbs.**</td>
</tr>
</tbody>
</table>

* To tow the maximum 10,000 lb. load, you MUST use a weight-distributing hitch head assembly.

** If you use a weight-carrying hitch head assembly, the maximum towed load is limited to 5,000 lbs.

The table above outlines the hitch head assembly combinations and the resulting maximum towed loads that are available to you. The ratings associated with the particular hitch receiver supplied with your motor home are noted on the weight tag and on a label affixed to the hitch receiver.

Consult with your dealer or towing equipment/trailer supplier to determine the correct type of hitch head assembly you should use for the towed load you intend to pull.

---

**WARNING**

Failure to understand and follow these guidelines as presented in this section could result in damage to the motor home frame or body, could cause unstable driving and handling characteristics, and will restrict your warranty coverage.
Your motor home is equipped with an electrical connector, from here on referred to as a hitch plug, which provides an electrical connection for your towed vehicle. The hitch plug is located at the rear of the motor home near the hitch receiver. It is a 7 position connector wired as follows:

Please note this connector provides separate positions for the two turn signals and brake lights. This is necessary for the towed vehicles that have separate amber turn signals in addition to the red brake lights.
Some towed vehicles will not have amber turn signals separate from the brake lights. They will instead use the same lamp to indicate braking as well as turn signal. Towed vehicles with this type of lighting will not be able to utilize the standard hitch plug on your motor home.

For towed vehicles with this type of lighting you will need to replace your hitch plug. A replacement hitch plug wiring harness is available through Fleetwood’s American Coach Service. This harness replaces your current hitch plug and is easily installed in minutes. Following is the wiring diagram for this connector:
The amount of cargo weight you can place in your motor home is the motor home's GVWR minus its UVW, or maximum capacity minus the weight of your motor home as assembled by Fleetwood, i.e., without dealer installed accessories, water, LP gas, cargo or occupants. When the motor home is being designed, the number and size of storage compartments, the liquid tank capacities and number of belted seating positions are determined for value and convenience. If you fill all liquid tanks to capacity, fill all storage compartments and cupboards to maximum volume and fill all available seating positions with passengers, the motor home could be overloaded. (See Loading Tips). Be aware of the weight of the items you store and where you store the items in your motor home, and weigh your motor home after it is fully loaded.

In addition to knowing the overall weight that can be safely loaded in or attached to the motor home, you must know how to distribute the weight so that correct amounts of weight are distributed between the axles or front-to-rear and also between the wheels or side-to-side. It is also important to place heavier items in under-the-floor storage or low in the motor home. If you make the motor home top heavy or much too heavy on one side, the motor home can be overturned and crash in a curve, turn or in an emergency steering maneuver. When the load is properly distributed, your motor home will handle and respond safely, and you as the driver can be more confident and will be more comfortable.

If your motor home is improperly loaded, it may be unsafe to drive, uncomfortable to drive, or both. Axle load is important and it is recommended that you should load your motor home so that the front axle is loaded to at least 80% of the front GAWR.
CARRYING CAPACITY

<table>
<thead>
<tr>
<th>PRODUCT</th>
<th>YEAR</th>
<th>MODEL</th>
<th>SERIAL NO.</th>
<th>GVWR</th>
<th>LBS.</th>
</tr>
</thead>
<tbody>
<tr>
<td>GCWR</td>
<td></td>
<td></td>
<td></td>
<td>LBS.</td>
<td></td>
</tr>
<tr>
<td>FRONT GAWR</td>
<td></td>
<td></td>
<td></td>
<td>LBS.</td>
<td></td>
</tr>
<tr>
<td>REAR GAWR</td>
<td></td>
<td></td>
<td></td>
<td>LBS.</td>
<td></td>
</tr>
</tbody>
</table>

(Includes capacity if tag axle is so equipped)

<table>
<thead>
<tr>
<th>HITCH RATING</th>
<th>LBS.</th>
<th>TONGUE WEIGHT</th>
<th>LBS.</th>
<th>GTW</th>
<th>LBS.</th>
</tr>
</thead>
<tbody>
<tr>
<td>UVW (DRY WEIGHT) OF FINISHED VEHICLE</td>
<td>LBS.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NET CARRYING CAPACITY</th>
<th>LBS.</th>
</tr>
</thead>
</table>

GVWR (Gross Vehicle Weight Rating): means the maximum permissible weight of this motor home. The GVWR is equal to or greater than the sum of the Unloaded Vehicle Weight plus the Net Carrying Capacity.

GCWR (Gross Combination Weight Rating): means the maximum allowable loaded weight of this motor home with a towed or towed vehicle. Towing and braking capacities may be different. Refer to Fleetwood and the chassis manufacturer's manual for complete information.

GAWR (Gross Axle Weight Rating): means the maximum permissible loaded weight a specific axle is designed to carry.

GTW (Gross Towed Weight): means the maximum permissible loaded weight of a trailer or car that this motor home has been designed to tow. This cannot be increased by changing the trailer hitch.

Tongue Weight: The maximum permissible downward force exerted on the hitch ball by the towed vehicle coupler.

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

NCC (Net Carrying Capacity): means the maximum weight of all occupants including the driver, personal belongings, food, fresh water, LP gas, tools, tongue weight of towed vehicle, dealer installed accessories, etc., that can be carried by this motor home. Normal variation of materials may cause the Net Carrying Capacity to be 200 lbs. higher or lower than stated. (NCC is equal to or less than GVWR minus UVW.)

This motor home is capable of carrying up to _________ gallons of fresh water (including water heater) for a total of _________ pounds.

Reference: Weight of fresh water is 8.33 lbs/gal.; Weight of LP gas is 4.5 lbs/gal. (average).

WARNING: The Heaviest Loaded Motor Home With All Passengers, Goods, Water, Driver And Towed Vehicle Must Not Exceed Any Of The Following:

1. The gross vehicle weight rating (GVWR).
2. The gross combination weight rating (GCWR).
3. The front/rear gross axle weight ratings (GAWR'S).

CONSULT OWNER'S MANUAL FOR WEIGHING INSTRUCTIONS AND TOWING GUIDELINES.

Carrying Capacity Label
Refer to your local telephone directory to find a public weigh station. The following procedures will help you determine whether your loaded motor home (complete with cargo, fluids, passengers, and driver) is within GAWR, GVWR, and GCWR limits. When you arrive at a weigh station, the attendant will guide you through the correct positioning of the motor home on the scales.

1. Center the front wheels on the scale platform and take a reading. This is the front Gross Axle Weight (Reading 1).

2. Center the entire motor home (all axles) on the scale and take a reading. This is the Gross Vehicle Weight (Reading 2).

On The Road

How to Weigh Your Loaded Motor Home Without a Trailer or Other Towed Load
3. Center the rear axle on the platform and take a reading. This reading is the rear Gross Axle Weight (Reading 3).

Compare the readings taken on the scales to the weight ratings on the Federal certification tag and carrying capacity label. Fill in the chart to aid in comparing weights.

If any readings are higher than the rating, you will have to adjust or remove the load.

<table>
<thead>
<tr>
<th>MOTOR HOME READINGS (from labels)</th>
<th>SCALE READINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>GVWR</td>
<td>Reading 2</td>
</tr>
<tr>
<td>Front GAWR</td>
<td>Reading 1</td>
</tr>
<tr>
<td>Rear GAWR</td>
<td>Reading 3</td>
</tr>
<tr>
<td>Hitch Rating</td>
<td>Reading 4</td>
</tr>
<tr>
<td>GCWR</td>
<td>Add 2 and 4</td>
</tr>
</tbody>
</table>
1. Center the front wheels on the scale platform and take a reading. This is the front Gross Axle Weight (Reading 1).

2. Center the entire motor home so that only the motor home is being weighed. Leave the towed load hitched to the motor home, but resting off of the scale. This is the Gross Vehicle Weight (Reading 2).
3. Center the towed load on the scale and take a reading. This is the Towed Vehicle Weight (Reading 4).

4. Subtract Reading 1 from Reading 2. This is the rear Gross Axle Weight (Reading 3).

Compare the readings taken on the scales to the weight ratings on the Federal certification tag and carrying capacity label. Fill in the chart to aid in comparing weights.

If any readings are higher than the rating, you will have to adjust or remove the load.

If you exceed weight ratings, you will:

» **Cause unsafe braking.**

» **Cause unstable driving and handling characteristics.**

» **Cause damage to the motor home, drive train, or chassis.**

» **Reduce your warranty protection.**

Since you may load your motor home differently for different trips, loading and weight patterns will change. Periodically reweigh your motor home and log the weights in this chapter. Refer to your log as you prepare to load for future trips.
Load heavier items lower.

Do not load heavy items on the bumpers.

Make a loading diagram of your properly loaded motor home, and then weigh the properly loaded motor home. The loading diagram, your loading log and the loaded motor home weight will help you locate where specific items are stored, and will help speed the loading process.

Secure and brace items so they won’t move during travel.

Fresh water and waste water weigh over eight pounds per gallon. Carry only as much water as needed for travel use or to balance the load, and whenever practical, empty the holding tanks before traveling.

Store emergency items in a readily accessible location. As a minimum include a fire extinguisher, tools, first aid kit, rain gear, flashlight, highway warning devices, an electric cord with light, and sturdy gloves.

Your motor home is equipped with wheels and tires selected to match the capacity specifications of the chassis as designed by the chassis manufacturer. Under normal circumstances and with proper tire and chassis maintenance, you should receive thousands of miles of trouble-free service.
For safety and maximum tire life, vehicle speeds must be proper, proper inflation pressure must be maintained, and tread depth and wear must be monitored. Properly inflated tires also contribute to overall motor home stability and safety. Refer to the tire section in your Chassis Operator's/Owner's Guide/Manual or any tire manufacturer's information that may be provided in your Owner's Information Package for information on maintenance and tire care. A quality truck tire gauge is supplied with your new coach to emphasize the importance that tire pressure has on your safety, convenience, and tire life.

The maximum inflation pressures are stated on the Federal Certification Tag located on the sidewall near the driver's seat. To maximize tire performance, consult with the tire manufacturer's guidelines or Chassis Operator's/Owner's Guide/Manual for recommended tire inflation pressure.

**NOTE**

The tire pressures on your motor home were adjusted for the weight of the motor home at the time it was built. These pressures may be lower than the pressures required for the weight of a loaded motor home. Check and adjust the tire pressures on your motor home before your first trip using the information provided in the Chassis Operator's/Owner's Guide/Manual.

**NOTE**

Check the wheel lug nut tightness periodically. They could work loose during driving. Check the Chassis Operator's/Owner's Guide/Manual for correct lug nut torque and torquing procedure.

Replacement tires must be the same size, type and tread depth per axle, and have at least the same weight carrying capacity as the original equipment. All tires of the same size and rating may not have the same weight carrying capacity. Consult your tire dealer. The original equipment wheels and tires supplied on your motor home have weight carrying capacities to support Gross Axle Weight Ratings (GAWR) as stated on the Federal Certification Tag located on the sidewall near the driver's seat.
In case of sudden tire failure:

» Remove your foot from the accelerator.

» Use moderately heavy brake pedal pressure. Do not pump the brake. The vehicle is equipped with Anti-lock Brakes (ABS) which will properly control braking.

» Firmly hold the steering wheel while avoiding abrupt steering inputs and move slowly to a safe, off-road place.

» Park on a firm level surface.

» Turn off the ignition.

» Set the parking brake.

» Turn on the hazard flasher system.

» Ensure your passengers are safely located and children monitored.

» Get professional help.

Even with good tire maintenance and normal driving, you may experience a flat tire. Summon professional help through your auto club, travel service, or a local truck service facility. Your motor home is not equipped with a jack or other lifting device. Do not attempt to lift the motor home with a jack. Consult the Chassis Operator's/Owner's Guide/Manual for additional information on tire inflation and proper torque.

Your motor home is not equipped with a spare tire or wheel.

⚠️ WARNING

Truck wheels and tires are extremely heavy and may weigh 100 pounds or more. Do not attempt to remove the spare tire unless you are capable of handling the weight.

⚠️ WARNING

To avoid personal injury and/or property damage if a blowout or other tire damage occurs, obtain expert tire service help. Do not attempt to change the tire yourself.

✅ NOTE

Your motor home is not equipped with a spare tire or wheel.

✅ NOTE

If you need on-the-road tire service and call for assistance, be ready to give the tire size information to the service facility. Some service facilities may be able to repair or replace the tire on the spot.
Seat belts help to restrain you and your passengers in case of a collision. In most states, the law requires their use.

Seat belts provide the best restraint when:

- the seat back is upright
- the occupant is sitting upright (not slouching)
- the lap belt is snug and low on the hips
- the shoulder belt is snug against the chest
- the knees are straight forward

For your safety, your vehicle has combination lap and shoulder belts for the driver and front seat passenger and lap belts without retractors in all other designated seating positions.

Always drive and ride with your seatback upright and the lap belt snug and low across the hips to reduce the risk of serious injury to the abdomen or neck that could be caused by sliding under the safety belts in a collision.

Never let a passenger hold a child on his or her lap while the vehicle is moving. The passenger cannot protect the child from injury in a collision.

Children should always ride with the seatback in the fully upright position. When the seatback is not fully upright, there is a greater risk that the child will slide under the safety belt and be seriously injured in a collision.

Never use a single belt for more than one person or across more than one seating position. This greatly increases the risk that one or both of the people will be injured in a collision. Each designated seating position in your vehicle has a specific seat belt assembly which is made up of one buckle and one tongue that are designed to be used as a pair.

**WARNING**

Make sure that you and your passengers, including pregnant women, wear safety belts. Be sure that lap belts fit snugly and as low as possible around the hips. If safety belts are not used properly, the risk of you or your passengers being injured in a collision greatly increases.

**WARNING**

Use the shoulder belt on the outside shoulder only. Never wear the shoulder belt under the arm. Never swing it around the neck over the inside shoulder. Failure to follow these precautions could increase the risk and/or severity of injury in an accident.
While your vehicle is in motion, the combination lap and shoulder belt adjusts to your movement. However, if you brake hard, corner hard or if your vehicle receives an impact, the lap and shoulder belt locks and prevents you from moving.

To fasten the belt, pull the lap/shoulder belt from the extractor so that the shoulder portion of the belt crosses your shoulder and chest. Insert the belt tongue into the proper buckle until you hear a snap and feel it latch.

To tighten the lap portion of the belt, pull up on the shoulder belt until it fits you snugly. The belt should rest as low on your hips as possible.

A longer lap and shoulder belt assembly is available and is a direct replacement for the driver and front passenger positions. The longer lap and shoulder belt is made and tested to the same standards as the original belt. This belt assembly can be purchased and installed at any authorized Fleetwood motor home dealer.

Check your safety belt system periodically to make sure that it works properly and isn't damaged. If the webbing shows any wear, nicks or cuts, have it examined by a qualified technician to determine if replacement is necessary. Always have your safety belt system checked after a collision.

In most states, you are required by law to use safety restraints for children. If small children (less than four years old, and under 40 pounds) ride in your vehicle, you must put them in safety seats that are made specially for children. Safety belts alone do not provide maximum protection for these children. Check your local and state laws for specific requirements.

WARNING

Never leave a child unattended in your vehicle. Always remove the key from the ignition and take it with you.
Safety belts and seats can become hot in a vehicle that has been closed up in sunny weather, and could burn a small child. Check seat covers and buckles before you place a child anywhere near them.

Children who are too large for child safety seats should always wear safety belts.

If the shoulder belt cannot be properly positioned so that it does not cross or rest in front of the child’s face or neck, move the child to one of the seats with a lap belt only and use the lap belt.

Lap belts and the lap portion of lap and shoulder belts should always be worn snugly and below the hips, touching the child’s thighs.

Children should always ride with the seatback in the fully upright position. When the seatback is not fully upright, there is a greater risk that the child will slide under the safety belt and be seriously injured in a collision.

Use a safety seat that is recommended for the size and weight of the child. Seat backs should be upright for use with child safety seats.
Driving your motor home will be different from driving your family car or truck. Your motor home is large and heavy. You may have to adjust or learn new driving techniques to safely operate your motor home.

Downhill driving puts extra strain on many drivetrain components of your motor home. The brakes are easily overloaded and overheated when used for downhill slowing. Brake fade will occur if the brakes overheat.

When driving down long grades, shift the transmission to a lower gear at the top of the grade. Rule of thumb: *Use the same lowest gear going down as it took to go up the hill.* Crest the hill in the lower gear. Monitor your speed.

Your motor home is equipped with a diesel engine. Diesel-equipped vehicles are less responsive than gas-powered vehicles. Acceleration will be slower. Attempts at "jack-rabbit" starts from stops may damage the engine and drive-train components. If you anticipate overtaking and passing other vehicles, remember that your motor home may not achieve the required speed as quickly as you expect. The engine speed RPM for the engine in your motor home is:

- Programmable Idle Speed .......... 600-875 RPM
- Governed Speed .................. 2200 RPM
- Maximum Downhill Speed
  with Exhaust Brake ON ............. 2700 RPM

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**ON THE ROAD**

**DRIVING AND VEHICLE CONTROL**

**ENGINE AND TRANSMISSION**

**CAUTION**

Engine overspeed (engine speed in excess of high idle, no load RPM) can damage the engine.

**NOTE**

Driving a diesel-powered vehicle is different from driving a gasoline-powered vehicle. Engine over-revving can cause serious internal engine damage.
**ON THE ROAD**

**Normal Starting Procedure:**

1. Shift transmission to NEUTRAL.

2. Turn ignition switch to the right (clockwise) to the first position. The WAIT TO START light on the instrument panel will light up. When the WAIT TO START light goes out, turn the switch clockwise to the START position. When the engine starts, release the switch. See Driver's Controls for location of WAIT TO START light.

The engine is equipped with a block heater to aid in cold-weather starting. Plug-in connections for the engine block heater are located in the electrical shore cord compartment.

Engine oil pressure must be indicated on the gauge within 15 seconds after starting.

When starting a cold engine, increase the engine speed (RPM) slowly to be sure adequate lubrication is available to the bearings and to allow the oil pressure to stabilize.

Idle the engine 3 to 5 minutes at 1000 RPM before operating with a load. Check the oil pressure indicator(s), temperature indicator(s), and other gauges often to make sure they are operating correctly.

The motor home will not move until the air brakes and suspension systems are sufficiently full of air. Normal brake system air pressure is 90-120 psi.

**Normal Shut Down Procedure:**

1. Shift transmission into NEUTRAL.

2. Pull out on the Parking Brake knob to engage the parking brake.

3. Let engine idle for a minimum of 3 minutes for proper cool down. Increase this time if there has been extended hot weather running.

See the Chassis Operator's/Owner's Guide/Manual for details on engine operation and maintenance.

**ENGINE OPERATION**

**NOTE**

The WAIT TO START feature is necessary for engine intake air pre-heating. The operating timing interval depends on engine and outside air temperature. The light will go off sooner if the engine is hotter and the outside air temperature is warm.

**NOTE**

See the cold weather starting instructions included in the Chassis Owner's Manual.

**CAUTION**

To prevent damage to the starter, do not engage the starting motor for more than 30 seconds. Wait two minutes between each attempt to start.

**WARNING**

The transmission does not have a "PARK" position. Place transmission in neutral (N) and set the parking brake when parking the motor home.
Your motor home is equipped with an automatic transmission. Please note that this transmission does not provide a PARK position. **You MUST set the parking brake whenever you park the motor home.**

Up- and downshifting is automatic under most driving conditions. You may manually shift the transmission under marginal or poor traction conditions, up and/or downhill or mountain driving, or under any driving condition to maintain complete vehicle control.

This transmission has an electronic control and monitor system.

No special procedure is required, although the transmission must be in the NEUTRAL position. The digital display will indicate NEUTRAL.

**SELECT**
Displays the range of gears selected by the operator

**MONITOR**
Displays the current gear of transmission operation.

**Shift Selector**
The push button shift selector has R, N, D, , , a MODE button, and a digital display. When a range button has been pressed, a tone will sound, the SELECT indicator displays the chosen operation (if the electronic control unit determines the shift is acceptable), and the transmission will shift to the starting range as indicated on the MONITOR display. The transmission starts in the lowest gear of the range and as conditions permit automatically upshifts until the highest gear in the selected range is in use.
MODE Button
The MODE button is used to activate special Electronic Control Unit (ECU) functions. Your transmission has two modes: ECONOMY and POWER. When the MODE light is ON, the ECONOMY mode is activated.

CHECK TRANS Light
This indicator is located on the instrument panel. Illumination of this light, accompanied by eight seconds of short beeps from the shift selector, indicates that shifts are being restricted.

The SELECT digit on the display will be blank. Operation may continue in order to reach service assistance. On the push button shift selector the ECU will not respond to operator requests since operating limitations are being placed on the transmission; i.e., upshifts and downshifts may be restricted. Direction changes will not occur. The ECU will cause the transmission to shift to a safe gear and hold-in-range and disengage the lockup clutch.
Reset procedure to clear CHECK TRANS light and restore operation.

When the CHECK TRANS light comes on, a reset procedure can be performed to clear the system. If necessary, continue to operate the vehicle and have the transmission checked at the earliest opportunity.

» Bring vehicle to a stop at a safe location and apply parking brakes.

» Simultaneously press the UP and DOWN arrow buttons one time.

» Press and hold the DISPLAY MODE button until a tone is heard. Then release the button and the transmission will return to the direction attained prior to clearing the active indicator.

SERVICE Indicator
The SERVICE INDICATOR indicates that the transmission is operating with reduced capabilities. Although the transmission can continue to operate, promptly seek service to minimize the potential for damage. A diagnostic code will be registered in the ECU when SERVICE has been indicated.

If this light illuminates, check for a transmission overheat condition on the instrument panel gauge or overtemp light. If the transmission fluid temperature is outside the normal limits, stop the vehicle at a safe location and summon service. If the temperature is within limits, the vehicle may be carefully driven to a service facility if conditions can be negotiated safely.
Illumination of the CHECK TRANS or SERVICE light during vehicle operation indicates that the ECU has registered a diagnostic code. Diagnostic codes can be displayed on the display portion of the shift selector.

To display the codes:

1. Stop the vehicle, shift into NEUTRAL and set the parking brake.
2. Simultaneously press the UP and DOWN arrow buttons one time. The four digits of the current code and any pertinent parameters are continuously flashed on the display.
3. Press the MODE button to cycle the display to the next code with its pertinent information. Dashes indicate all stored codes have been displayed.

See the *Chassis Operator's/Owner's Guide/Manual* for additional information.

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**How ABS Works**

Your motor home is equipped with ABS anti-lock air brakes. ABS is an electronic system that monitors and controls wheel speed during braking. The system works with standard air brake systems.

ABS monitors wheel speeds at all times and controls braking during wheel lock situations. The system improves vehicle stability and control by reducing wheel lock during braking.

The ECU (electronic control unit) receives and processes signals from the wheel speed sensors. When the ECU detects a wheel lockup, the unit activates the appropriate modular valve, and air pressure is controlled.
In the event of a malfunction in the system, the ABS in the affected wheel(s) is disabled; that wheel still has normal brakes. The other wheels keep the ABS function.

The ABS warning lamp lets drivers know the status of the system. This lamp is also used to display blink code diagnostics.

The ABS warning lamp works as follows:

NORMAL OPERATION, with the ignition key ON, ABS lamp comes on at ignition momentarily for a bulb check, then goes out. System is O.K.

AFTER SERVICING ABS SYSTEM, with the ignition key ON, ABS lamp does not go out at ignition. When vehicle is driven at speeds above 4 mph (6km/h), lamp goes out. System is O.K.

EXISTING FAULT, ABS lamp does not go out at ignition. Lamp does not go out at speeds above 4 mph (6km/h) - a fault exists in the ABS system.

Air Compressor
The air compressor pumps air into the air storage tanks. It is gear driven by the motor home chassis engine.

Air Tanks
These tanks hold compressed air for the brake system. They will hold enough air to allow the brakes to be used several times even if the compressor stops working. Entrapped liquid is drained automatically from the air tanks. Consult the Chassis Operator’s/Owner’s Guide/Manual for additional information.
Air Dryer
Compressed air usually has some water and compressor oil in it. This compressed air is cycled through a dryer to remove air system contaminants. Consult the Chassis Operator's/Owner's Guide/Manual for additional information.

The Brake Pedal
The harder you push down on the pedal, the more air pressure is applied to the brakes. When you let up on the pedal, some of the brake pressure is released. You will hear the air escape when you let up on the pedal.

As this air is released, the compressor must build the pressure back up. Pressing and releasing the pedal repeatedly can let air out of the system faster than the compressor can restore it. If the pressure gets too low and the service brakes will not function properly, the spring brakes will be applied automatically.

When you push down on the pedal, you will feel both a spring pressure and the air pressure back against your foot. With practice, you will know how to judge the force necessary to stop your motor home.

Spring Brakes
The spring brakes are applied automatically whenever there is a loss of air pressure in the braking system or when the parking brake is activated.

Air Gauges
The pressure gauges on the instrument panel tells you how much air pressure is in the tanks, and whether the system will operate. An audible buzzer and dash indicator light warns you if air pressure is insufficient for proper brake operation.
The parking brake control is a yellow, diamond-shaped, push-pull control knob. Pull the knob out to set the brake, and push in to release.

Any time you park, use the parking brake, except:

» if the brakes are very hot. Brake system components can be damaged by excessive heat;

» in freezing temperatures, if the brakes are very wet. The brake shoes on your motor home cover a large surface area. If they become very wet and freeze to the brake drums, the motor home will not be able to move until they thaw. If the brakes freeze, DO NOT try to force the motor home to move. Brake system components could be damaged.

If necessary, use wheel chocks to hold the vehicle. Let hot brakes cool before using the parking brake. If the brakes are wet, use the brakes lightly while driving in a low gear to heat and dry them.

On The Road

Parking Brake

Caution

If the low pressure buzzer or light ever comes on while the motor home is in motion, exercise extreme caution. Stop and park the motor home as soon and as safely as possible by down-shifting the transmission. Apply the parking brake as soon as the vehicle is motionless. The spring brake system will apply the brakes as pressure drops.

Warning

Never leave your motor home unattended without setting the parking brake.

Warning

Your motor home transmission does not have a PARK position. Place the transmission in neutral (N) and set the parking brake when parking the motor home.

Warning

If a loss of air pressure in the braking system occurs rapidly, the spring brakes will be applied suddenly. This may cause loss of traction and vehicle control. Refer to your Chassis Operator’s/Owner’s Guide/Manual for further information on the functioning of the brake system.
**ON THE ROAD**

For normal stops, push the brake pedal down until the vehicle comes to a smooth stop.

In emergencies, brake so that you can steer and keep the motor home under control.

Air brakes are more sensitive than hydraulic brakes. Practice stopping in a safe, unobstructed area until you get the feel of the brake pedal. The front air pressure gauge indicates front brake system air pressure. The rear air pressure gauge indicates rear brake system air pressure. Please note that the vehicle will not move until air pressure is sufficient to release the brake safety springs. A dash indicator will light and a buzzer will sound until the proper operating pressure is reached.

With air brakes there is an added delay. After the brake pedal is pressed, the air may take a fraction of a second to activate the brake mechanisms on the wheels. For this reason, the total stopping distance will increase depending on speed. Under good traction and brake conditions, this delay may add up to 35 feet at 55 mph, making the total distance over 300 feet at that speed. Please be aware of this increase in stopping distance, and anticipate your stops with this in mind.

Downhill driving puts extra strain on many drivetrain components of your motor home. The brakes are easily overloaded and overheated when used for downhill slowing. Brake fade will occur if the brakes overheat.

When driving down long grades, shift the transmission to a lower gear at the top of the grade. Rule of thumb: *Use the same lowest gear going down as it took to go up the hill.* Crest the hill in the lower gear. Do not exceed the maximum downhill speed with exhaust brake ON of 2700 RPM.

Please see the *Chassis Operator's/Owner's Guide/Manual* for more information about brake system operation and downhill driving techniques.
Your motor home is equipped with air suspension. When the engine is started the suspension will begin to fill with air, lifting the motor home body 4-6 inches. A buzzer will sound until the air tanks are sufficiently full for proper operation.

Your motor home has four suspension air bags – one for each wheel. The pressure in these bags is controlled by air valves. These valves are preset and determine the distance between the chassis and axle, or “ride height.” Each air bag may contain a different air pressure. This pressure is determined automatically by the system to maintain a level chassis, and is continually adjusted as long as the coach’s chassis engine is running.

The air suspension system is not the same as the Semi-Automatic Leveling System. See Semi-Automatic Leveling System.

Be cautious when maneuvering to allow for the length and width of the vehicle. Always allow room to corner and to change lanes. Your vehicle’s side view mirrors and rear view camera monitor (if equipped) will help you keep aware of your vehicle’s position and the position of other vehicles and/or obstructions near your motor home. You must monitor them constantly while you are driving. Become familiar with the operation of the side mirrors and learn to use them to view objects and the road beside and behind the motor home.

The rear view mirrors are controlled from a panel located on the driver’s left side instrument panel. To adjust the mirrors, select either LEFT or RIGHT mirror and press the appropriate arrow. Activate the mirror heaters (if equipped) by pressing the HEATER position.

Remember that your motor home is heavier than a car, making it less maneuverable and harder to stop. Also, because of its greater side surface area, it is more easily affected by cross winds. Allow extra distances for passing and stopping, and drive at a moderate speed, particularly in traffic and in gusty wind conditions.
ON THE ROAD

Driving on winding or mountain roads is not difficult if done with reasonable care. Observe proper vehicle speeds when ascending or descending hills and always operate in the proper transmission range. Downshift on hills to avoid overheating or undue engine loads. Downshift when descending grades.

Engine compression and friction will help control vehicle speed, and relieve some of the strain on the brakes. DO NOT EXCEED MAXIMUM ENGINE RPM for the gear range you are in. Serious component damage could occur. Shift the transmission to a lower gear before starting down the grade. Match speed and gear using the tachometer. Refer to the Chassis Operator's/Owner's Guide/Manual for downhill driving technique.

Mountain driving or desert temperatures can put extreme demands on drive train components. Under extreme heat conditions you may need to turn off the vehicle air conditioner to improve engine and transmission cooling.

Be aware of the extra height of your motor home. Check for low hanging tree branches or other obstructions whenever you drive or park. Avoid low overhangs when pulling in for service. Always check overhead clearances of overpasses and bridges. This may be particularly important if you drive with the overhead vents open or if the motor home is equipped with a roof air conditioner, roof rack, CB or TV/radio/satellite antenna.

Before leaving on a trip, check your route. Some tunnels prohibit motor homes with LP gas systems.

When parking parallel to a curb, be sure to allow for poles or obstructions as the front and rear portions of the motor home swing wider than an automobile. When parking on an incline, turn the front wheels into the curb in the direction of the roll to aid the parking brake. When parking, always shift the transmission to P and set the parking brake.
If you can’t avoid operating, parking or idling your vehicle off-road:

» Be aware that combustible materials could catch fire from the vehicle’s hot exhaust system.

» Avoid driving your vehicle through or over combustible materials such as leaves, grass, vegetation or stubble high enough to touch, catch or collect on its hot exhaust system.

» Parking or idling should be done only in an area where there are no combustible materials under the vehicle.

To use the engine as a braking force, select the next lower gear. If the motor home is exceeding the maximum RPM for this gear, use the service brakes to slow down. When a lower speed is reached, the transmission Electronic Control Unit (ECU) will automatically downshift the transmission. Engine braking provides good speed control for going down grades. When the motor home is heavily loaded, or the grade is steep, preselection of a lower gear prior to the grade may be desirable.

**Gear preselection** means the selection of a lower gear to match the driving conditions you encounter or expect to encounter. Preselection will give you better control on slick or icy roads and on downgrades. Downshifting to lower gears increases engine braking. The selection of a lower gear often prevents cycling between a gear and the next higher gear on a series of short up-and-down hills.

---

**WARNING**

Do not park or idle the motor home over combustible materials such as tall grass or dried leaves. Combustible materials may catch fire from the hot exhaust gases, soot or sparks that could escape through corrosion holes or cracks. This is particularly important if the exhaust system has not been properly maintained.

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**USING THE ENGINE TO SLOW THE MOTOR HOME**

**NOTE**

Although your motor home is equipped with power steering, the front wheels may be difficult to turn when at a dead stop. When maneuvering in some close situations, give yourself some room to move either forward or backward. The vehicle has to be in motion for the front wheels to be turned with ease.
Your motor home is equipped with an exhaust brake. This exhaust brake is an auxiliary braking device for slowing down your vehicle. It reduces the need to use the service brakes, thus reducing wear and tear on the service braking system. When the exhaust brake is activated, the brake lights on the vehicle and the dash brake indicator light will illuminate.

The exhaust brake system is controlled by a master ON/OFF switch on the dash and a throttle switch located in the throttle system. This unit will only function when the master switch is ON and the throttle pedal is at or near idle.

On dry road conditions your exhaust brake master switch can be left on at all times.

Using the exhaust brake on wet or slippery roads – especially on curves – may cause over-braking of the wheels and cause you to skid. It may also increase the stopping distance. See the Chassis Operator's/Owner's Guide/Manual for additional information.

Your motor home is equipped with a rear view video monitor system. The camera is located at the top rear of the motor home. The rear view picture is displayed on a video monitor screen. The monitor screen may be overlaid with a distance scale reference which gives approximate distance of objects to the rear of the motor home.

To operate the video monitor:
1. Turn on the ignition switch.
2. Shift the transmission to R.
   To override normal operation, the ignition switch must be on and power must be on at the monitor.

Using the video monitor will take practice. Always allow more space for maneuvering until you are comfortable with the system. Check the rear view mirrors often while driving and especially during lane changes and when backing up.
The camera lens is exposed to road dirt and will get dirty. When necessary, clean the camera lens and monitor screen with a quality glass cleaner and nonabrasive cloth or towel.

The camera can be manually adjusted to change the view seen in the monitor. To adjust the camera, remove the plastic housing over the camera and loosen the four angle adjustment screws attaching the camera bracket to the camera. Adjust the camera angle, then tighten the screws. Reattach the plastic housing. See the camera’s Operating Instructions located in the Owner’s Information Package.

In keeping with good engineering practice, and to meet the requirements of chassis manufacturers, certain chassis and underbody components of your motor home have been coated with an undercoating material. This material is intended to assist in protecting these components from corrosion or other effects of weather and road conditions. Please be aware that certain areas of the motor home do not have undercoating applied.

See the Chassis Operator’s/Owner’s Guide/Manual for chassis fuel recommendations. The generator is designed to run on the same fuel as the chassis. Consult the generator operating instructions for special cautions about maintenance with different types of fuels.
Fuel fills are located on the left and right side of the motor home just behind the front wheels. Modern fuel systems may build up vapor pressure within the tank as the fuel warms during use or hot weather.

Replace lost or damaged fuel fill caps with caps of the same design which are available from your Fleetwood motor home dealer.

Clean up fuel spills immediately. Fuel spilled on the motor home could damage the exterior finish, and is a serious fire hazard.

Cummins, the engine manufacturer, recommends the use of ASTM No. 2 diesel fuel. At operating temperatures below 32 degrees, acceptable performance can be obtained by using blends of No. 2 and No. 1 diesel fuels. The use of lighter fuels can reduce fuel economy.

Also, you should be familiar with the “summer” and “winter” diesel fuel blends formulated specifically for hot and cold climates. If you have a “summer” blend fuel in a cold climate, additives can be added to the fuel tank to “winterize” the fuel.
When the engine is under load or requires maximum cooling, the engine fan turns faster. The engine cooling fan RPM is directly proportional to engine RPM. There is a relief valve which limits the maximum RPM of the fan. The fan may be noisy at high speed and when maximum cooling is required. High speed fan noise can sometimes be misinterpreted as transmission slippage. This is not the case. This fan noise indicates that the fan is doing what it is supposed to do. This noise is not a defect in the fan or the transmission.

Your motor home engine has been designed to conform to Federal and State emission requirements. To meet these requirements, engine operating temperatures are high. As a result, the engine and exhaust systems radiate a great deal of heat.

Special heat shields are built into your motor home to protect wiring and other components from possible heat damage caused by the exhaust system. Do not remove these shields, modify the exhaust system, or add additional equipment, such as wiring, plumbing, or other components, which will be affected by exhaust system heat.

Engine temperature gauges have been calibrated to indicate a midrange reading as the “normal” operating temperature. The reason for this is that many owners perceive 212°F as the boiling point. However, this is not the case in an engine with a pressurized cooling system and a coolant mixture of glycol and water. As a motor home owner, be aware that the gauge is intended to provide a warning of any rapid change in engine coolant temperature from the “normal” reading of the gauge rather than an absolute temperature reading.
Carbon monoxide is a colorless, tasteless, odorless gas. It is a by-product of the burning of fossil fuels (gasoline, LP gas, diesel fuel, etc.). The chassis and generator engines, furnaces, water heater, LP gas refrigerator and range in your motor home produce it constantly while they are operating. **CARBON MONOXIDE IS DEADLY.** Please read and understand the following precautions to protect yourself and others from the effects of carbon monoxide poisoning.

**Beware of the symptoms of exhaust gas (carbon monoxide) poisoning:**

- Dizziness
- Vomiting
- Nausea
- Muscular twitching
- Intense headache
- Throbbing in temples
- Weakness and sleepiness
- Inability to think clearly

If you or others experience any of these symptoms, get out into fresh air immediately. If symptoms persist, seek medical attention. Shut down the unit and do not operate it until it has been inspected and repaired.
Your motor home is equipped with a carbon monoxide (CO) detector/alarm. It is usually located in the main sleeping area.

If the indicator sounds, it is an indication that carbon monoxide gas is present. This may occur while idling in high traffic concentrations or in campgrounds where other vehicles as well as your motor home are contributing to the carbon monoxide level in the surrounding air. Sounding of the alarm does not indicate a faulty alarm. The detector is doing its job of warning you of potentially high concentrations of carbon monoxide. See the section on Carbon Monoxide in this manual.

Test the CO detector/alarm after the motor home has been in storage, before each trip, and at least once a week during use. The carbon monoxide detector uses a 9-volt battery. Please refer to the operating instructions included in your Owner’s Information Package.

Structural members are located specifically to mount and attach factory-installed components and accessories, and may not be located to support after-market accessories not specifically designed for use on or in your motor home.

Please consult with your dealer before attempting to install or mount accessories on the sidewalls of your motor home. Holes drilled in the sidewall may cause damage, and may affect portions of your warranty coverage.
If your motor home needs to be towed, please use the following guidelines:

» Tow the vehicle in compliance with all state and local laws.

» See the Chassis Operator’s/Owner’s Guide/Manual. The vehicle MUST be towed from the front.

» Tow truck operators willing and able to tow motor homes will be familiar with the type of device required to tow your motor home.

» Be prepared to give the tow truck operator at least the following information when you call:
  length and height of motor home
  chassis manufacturer gross vehicle weight rating
  axle weight ratings.

» To prepare your motor home for towing:
  1. Secure any loose or protruding body parts of the disabled vehicle.
  2. Secure any heavy, loose items in the interior.
  3. Turn off LP gas appliances and the LP gas tank valve.
  4. Do not allow any person to ride in the towed vehicle.

WARNING
DO NOT go under a coach that is being lifted by towing equipment.

CAUTION
Do not allow your motor home to be towed without having the tow truck operator read this section and related sections of the Chassis Operator’s/Owner’s Guide/Manual.

CAUTION
Do not tow the motor home from the rear. Towing from the rear will cause serious overloading of the front tires and suspension, possibly resulting in tire or front suspension failure. The rear frame extensions are not designed to withstand the load imposed by lifting from the rear.

CAUTION
The air brake system and air suspension system may require recharging with air before towing to release the brakes and provide proper ride height. Tow truck operators should be equipped to re-charge these air systems. The air system recharging connection is located in the driver’s side front storage compartment.
Controls for the leveling system are located on the instrument panel. A detailed operating and maintenance guide is included in your Owner's Information Package. Read all instructions for this system carefully before operating the system.

The leveling system and the chassis air suspension system work together. Please note that when the leveling system is activated, air pressure is released and you may feel a momentary "floating" sensation before the leveling system is fully engaged. This is normal. When the leveling system is retracted, the suspension system will be recharged with air.

**Semi-Automatic Leveling System**

**WARNING**
The leveling system is intended solely to level the motor home. DO NOT USE THE LEVELING SYSTEM AS A JACK. DO NOT ATTEMPT TO LIFT THE MOTOR HOME OFF THE GROUND WITH THE LEVELING SYSTEM for any reason.

**NOTE**
The leveling system fluid pump and manual override valves are located in the rear curbside engine access area.

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**Levelling System Controls**

- "FRONT" raises front of coach
- "PARK BRAKE" flashes when disengaged; off when engaged
- "NEUTRAL/PARK" flashes when disengaged; off when engaged
- "LEFT" raises left side of coach
- "JACKS DOWN" illuminates when any jack is not fully retracted
- "LOW VOLTAGE" illuminates when voltage at control falls below 9.5 volts for 4 seconds
- "REAR" raises rear of coach

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**Electronic Level Light**: Amber light indicates which side of the coach is low and what switch to push to obtain level

**ALL JACKS RETRACT** retracts all jacks. Jacks retract automatically and "Jacks Down" light goes off when complete.

**ALL JACKS EXTEND** extends all jacks. Must be held down to function

**LEVEL**: Green light indicates when coach is level
Before you operate the leveling system, verify the following:

» The engine is running.

» The automotive batteries are ON (check the disconnect switch) and have a minimum charge of 11 volts.

» The brake system is functioning (at least 90 psi on the air pressure gauge) and the PARK BRAKE is set.

» The transmission selector is in NEUTRAL.

» The touch-pad leveling system ON.

» There are no obstructions anywhere under the motor home.

To level the unit:

1. Press ON/OFF switch on control panel. ON/OFF light and Electronic Level lights will illuminate.

2. Push and HOLD the ALL JACKS DOWN switch until all jacks contact the ground.

3. Observe the FRONT and REAR Electronic Level lights (arrows). Push and HOLD the corresponding pad until the pump turns off and the leveling action stops.

4. Observe the LEFT and RIGHT Electronic Level lights (arrows). Push and HOLD the corresponding pad until the pump turns off and leveling actions stops.

5. Observe the green indicator light. It should be illuminated, indicating the motor home is level. If not repeat steps 3, 4 and 5.

6. If further adjustments are required, push the appropriate switch to override the system and level the coach as desired.

7. Visually confirm that all jacks are firmly on the ground.

**LEVELING PROCEDURE**

**NOTE**

If the grade is too steep for the leveling system to level the motor home, the motor home may have to be moved to a more level location.
To retract the system:

1. Press ON/OFF switch on the touch-pad. The ON/OFF light, the green LEVEL indicator light (if level) and the JACKS DOWN light will illuminate.

2. Momentarily press the ALL JACKS RETRACT switch. The jacks will start to retract and return to the fully retracted position automatically.

3. When the JACKS DOWN light goes out, push the ON/OFF switch on the touch-pad to de-energize the system.

4. Visually confirm that all jacks are retracted.

If the touch-pad is left on and inactive for four minutes, it will shut off automatically.

If leveling controls operation is improper, turn the ignition key off, check the leveling control box fuses located on the ceiling of the 2nd or 3rd curbside storage compartment from the front of the coach. Turn ignition and touch-pad back on, if problem persists see an authorized dealer or call Power Gear's customer service at 1-800-334-4712.

Correct oil level is critical for proper operation. Low hydraulic fluid will sound the touch-pad alarm and flash the jacks down light with the jacks in the fully retracted position.

Fill fluid to lip of fill port to eliminate this condition.
1. Be sure no one is under the motor home.
2. Be sure all obstacles are removed from under the motor home.
3. Turn ignition OFF.
4. Transmission to NEUTRAL position.
5. Set PARKING BRAKE.
6. Keep all body parts from beneath the motor home.
7. To override: locate hydraulic pump and valve block. Release the dump valve first, then the leg valve you wish to override by pushing, turning and locking.
   - F: Front
   - RR: Roadside
   - CR: Curbside
8. Return all manual overrides to their original positions.
9. Have the leveling system checked and serviced by an authorized dealer.

EMERGENCY RETRACTING PROCEDURE

WARNING
Do not use this procedure if retraction with the leveling touch-pad controller is possible.

CAUTION
The suspension air bags (if equipped) may not reinflate after this procedure. Contact your dealer if this happens.

Motor Pump/Valve Block

Oil tank fill procedure:
1. Retract all jacks
2. Shut off engine
3. Remove fill port plug
4. Fill with Dextron III transmission fluid until it runs out of the fill port
5. Replace the fill plug
The power entry step is controlled by the ignition switch and by a switch near the entry step. Power for the entry step is supplied by the coach battery. The battery must be connected for the step to operate as described below. The switches operate the step according to the following table.

<table>
<thead>
<tr>
<th>IGNITION SWITCH POSITION</th>
<th>STEP SWITCH POSITION</th>
<th>STEP POSITION/ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>ON</td>
<td>Step extends and retracts with the opening and closing of the door. Light under step will be on.</td>
</tr>
<tr>
<td>OFF</td>
<td>OFF</td>
<td>Step is inactive. Will not move regardless of door movement. Light under step will be off.</td>
</tr>
<tr>
<td>ON</td>
<td>ON</td>
<td>Step extends and retracts with opening and closing of door. Light under step will be on.</td>
</tr>
<tr>
<td>ON</td>
<td>OFF</td>
<td>Step extends and retracts with opening and closing of door. Light under step will be off.</td>
</tr>
</tbody>
</table>

Your motor home is equipped with an air operated slideout stepwell cover. The stepwell cover closes off the stepout area when you are traveling. When the cover is extended, it provides a floor surface for the front seat passenger.

If the chassis air storage tanks contain less than 90 psi air pressure, the stepwell cover will not function. Check the air pressure on the air pressure gauge on the driver’s instrument panel. The stepwell cover control is located on the passenger side of the overhead.
Living With Your Motor Home

To operate the stepwell cover:

» To extend the cover, move the control switch forward.

» To retract the cover, move the control switch rearward.

The stepwell cover can be pushed in manually to retract. To retract the cover manually:

» Be sure that the dash air pressure gauge shows no pressure (0 psi).

» The top surface of the cover should drop a couple of inches. If it doesn't, move it slightly by hand.

» Push the cover into the retracted position.

Your motor home is equipped with dual pane windows which reduce heat and cooling loss. They operate by turning the lock, and sliding window and/or screen open.

![WARNING]
Feet, legs, hands, and other body parts could be pinched or injured during stepwell cover operation. Keep clear of the stepwell cover during operation.

Dual Pane Windows

![NOTE]
Screens on slider windows are not removable for cleaning. They may be pushed out of their frames if the window must be used for emergency exit. In this case, the screens will be destroyed and will probably have to be replaced. Screens on torque pane windows are removable for cleaning.
Read and understand these instructions before you need to use them. The emergency exit window provides an emergency means of escape if the motor home doors are blocked or disabled for any reason or in case the motor home must be evacuated under emergency conditions.

Sun visors at the driver and passenger positions swing down and are adjustable to provide relief from glare and bright sun.

To raise mini-blinds:
1. Release bottom of blind from retainer.
2. Pull straight down on cord and release at desired height.
3. It is not necessary to pull the cord to one side or the other to secure blind.

To lower mini-blind:
1. Pull straight down on the cord slightly, and move it about 45 degrees to either the left or right and lower the blind.
2. Stop the blind in mid-travel by moving it back to the straight down position.
3. Reattach the retainers when traveling.
4. To adjust the angle, turn the adjusting rod either direction.

These window shades are split into a “daytime” area and “nighttime” area.

To close the “daytime” shade, pull down on the lower handle. To open, pull up on this handle.

To close the “nighttime” shade, pull down on upper handle. To open, pull up on this handle.
Exterior storage compartments maximize available space and should accommodate most of your storage needs. All of the storage compartments, except the LP gas and generator compartments, can be locked. Fire prevention regulations require that the LP gas and generator compartments be unlocked at all times.

Please note: Your motor home could be overloaded or out of balance if not properly loaded. Refer to the Motor Home Loading section of the On The Road chapter of this manual, and follow the loading and weighing instructions in that section. When storing equipment and supplies:

» Always keep tools and equipment stored in areas where they will not shift while traveling.

» Whenever possible, place heavy articles in storage compartments which are low and in the best location for better weight distribution. Pack articles carefully in the storage compartments to minimize shifting. If necessary, use straps to prevent movement.

» Be sure liquid containers are capped and cannot tip or spill. Secure all glass containers and dishes before traveling.

» Exterior storage compartments may not be watertight in all climate conditions. Carry any articles which could be damaged by water inside the motor home.

The closets and cabinets have friction catches along one edge of the door. Overhead doors may have supports to hold them open. Drawers rest in notches when they are closed. To open drawers, lift up slightly, then pull open.

Closets may be equipped with 12-volt lights that turn ON when the closet door is opened. Be sure the light goes OFF when the closet door is closed – your battery will be discharged if it stays ON. If the light stays on when the door is closed, the door switch requires adjustment. The same loading considerations apply to interior storage areas as to exterior. Consult the Motor Home Loading section in the On The Road chapter.
The materials used inside your motor home have been selected for durability and comfort. With reasonable care, these materials will stand up under years of recreational living. The Maintenance chapter in this manual outlines care requirements for the various upholstery fabrics, floor, cabinet, and wall finishes.

To convert the dinette into a bed:
1. Unfasten and remove cushions.
2. Reach under the table. Either remove leg or fold it up under the table top.
3. Raise the front portion of table several inches to disengage inserts from the wall supports.
4. Lower table top to the dinette frame to complete bed base.
5. Slide seat and back cushion into place over bed base.

To convert a sofa/lounge into a bed:
1. Remove sofa bolsters.
2. Lift front of sofa frame up and out.
3. Push the back of the lounge back and down.
4. Push the seat belts through the space between the lounge back and seat.

To restore the sofa/lounge:
1. Pull the seat belts back up through the space.
2. Lift the front edge of the sofa frame up, and push it back.
3. The sofa back will come up.
4. Push the sofa into position and replace sofa bolsters.
Living With Your Motor Home

The dividers allow you to separate areas in the motor home. They glide on nylon rollers. They are held closed by a catch. When the dividers are open for traveling, be sure to attach the catch to keep them from sliding back and forth.

Both decorative and 'utility' style 12-volt or 110-volt lighting fixtures may be used in your motor home. Utility style fixtures may be either single or dual brightness. A slide switch selects either single or dual brightness. For your convenience, some lights are operated from wall switches. Clean the lenses with soapy water.

Overhead vents are located in the galley and bathroom areas for fresh air circulation and exhausting heat, odors and water vapor.

Turn the crank in the center of the vent to open and adjust. Some vents may also be equipped with a 12-volt fan. A switch controls fan operation. Be sure to turn the fan OFF before closing the vent.

Close the vents or lower them before traveling to avoid damage from wind and low overhead clearances.

The vent may be cleaned from the top of the motor home. Use soapy water on the vent cover. The screens may be vacuumed or lightly brushed to remove accumulation of leaves or other debris.

Lubricate the gears and mechanism yearly with a light, water resistant grease.
In some models, loose folding chairs are provided for your convenience. The chairs are stored in the wardrobe cabinet.

The fluid monitor panel allows you to conveniently check the approximate levels in the fresh, gray, black water holding tanks, and the LP gas tank. The electrical monitor panel allows checks of the 12-volt motor home system and the charging status of the solar charging system.

Monitor panel controls and display panels are located in an interior overhead cabinet on the right side of the motor home.

Electrical probes installed in the tanks measure the levels at various points in the tanks.
To check tank levels:

1. Press and hold the tank switch you wish to read the fluid level in, FRESH (potable water), GRAY (sinks, shower and washing machine), BLACK (toilet), LPG (liquefied petroleum gas).

2. The E or empty indicator light will always be lit when the rocker switches are depressed. If the tank is full, all lights will be on. Lights are sequential, and indicate the level in approximately ¼-tank increments. If the tank selected is approximately ½-full, for example, lights E, ¼ and ½ will be on.

Erroneous tank level indications can be caused by:

**Water with low mineral content.** The level is measured by a very low level electrical signal traveling through the liquid. Some water 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.

**Material trapped on the sides of the holding tanks** may give a full reading when the tank is actually empty.

**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. See your dealer for additional information.
The Link 1000 is an instrumentation and control panel designed for use with the Source Manager Series Inverter/Chargers operated with a single house battery bank.

**Link 1000 Quick Start**

**Basic Operations**

This **Quick Start** is **not** intended to replace reading the **Link 1000** manual. Please take time to read and understand the manual in order to get the most from your **Link 1000** and **Tweder**.

1. **SET BATTERY CAPACITY**
   - (See P. 17 of your manual)
   - Press SET 5 sec. (SEL in display)
   - Press SEL 3 times. (Ah light on)
   - Present Ah setting is displayed. 200 Amp-hours is default.
   - Hold SET. Display scrolls up. When the value you want appears, release the SET button.
   - If no keys are pressed for 10 seconds the new Ah number is stored.

2. **SET BATTERY TYPE**
   - (See P. 22 of your manual)
   - Press SET 5 sec. (SEL in display)
   - Press SEL until FUNC F10 is displayed.
   - Press SET to toggle battery Type 1 (liquid cell) or Type 2 (gel cell).

3. **VERIFY MEASUREMENTS**
   - With the system wired, and the charger light OFF, turn on a load such as some lights. Press SEL once.
   - The A (Amps) light will come on. The number of Amps being consumed should be a negative number. If there's no minus sign (-) in front of the number, your shunt leads are reversed.

**Understanding Status Lights**

- **BATTERY STATUS**
  - (See Page 5)
  - Percent Full
    - 100%
    - 80-99.9
    - 60-78.8
    - 40-59.9
    - 20-38.8
    - 0-19.9
  - Press SEL to show V=Volts, A=Amps, Ah=Amp-hours, T=Time remaining. (pages 16-18)

- **CHARGER STATUS**
  - Charger in Float mode.
  - Charger in Charge rate.
  - Flashes Red in Equalize mode.
  - AC is present.

**Battery Data**
- Data order: CEF [E95].
- Cycles [r 1999],
- Deepest Discharge [-1999],
- Average Discharge [1999]. (See P. 26)

**Key Functions**
- Pwr Share & Idle Mode (See P. 7)
- Pwr Share helps prevent breaker trips!
- F01 (Scanning) On/Off.
- F02 (Sleep) On/Off.
- F03 (Temp) in 10F steps.
- F08 (Peaked Exponent) (See P. 28-32)
- F10 (Set Battery Type) 1=Li, 2=Gel)
- F13 (Display test) (checks lights)
Living With Your Motor Home

Your motor home was designed primarily for recreational use and short term occupancy. If you intend to occupy the motor home for an extended period, you should understand that the additional wear will cause premature deterioration of structure, interior finishes, fabrics, carpeting, drapes, appliances and fixtures. You should also be prepared to properly manage and control condensation and the humid conditions that may be encountered. The relatively small volume, and tight, compact construction of modern recreational vehicles mean that normal living activities of even a few occupants will lead to rapid saturation of the air, 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 motor home during use in cold weather when humidity of the interior air is high. Water vapor 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 stained panels. Appearance of these conditions indicates a condensation problem. When you recognize the signs of excessive moisture and condensation, you should take action to minimize their effects.
You can reduce or eliminate interior condensation during cold weather by taking the following steps:

**Ventilate with outside air.**
Partially open one or more roof vents and one or more windows to provide controlled cross flow circulation of outside air into the interior. While this ventilation will increase furnace heating load, it will greatly reduce, or eliminate, condensation. Even when it is raining or snowing, outside air will be far drier than interior air and will effectively reduce condensation.

**Reduce moisture released inside the motor home.**
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 motor home. 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 motor home.

**Ventilate closets and cabinets.**
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 preventing possible ice formation.

**Install a dehumidifier appliance.**
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.

**Ventilate while driving.**
Positive air ventilation will help reduce the buildup of moisture while driving. The movement of the motor home at highway speeds can cause a partial vacuum inside. This vacuum can draw in odors or dust from the outside through the windows or vents. Setting the dash heater/air conditioner controls to VENT or FRESH AIR will help create the positive air pressure needed to force out excessive moisture, odors or airborne dust.
The hazard and possibility of fire exists in all areas of life, and the recreational life-style is no exception. Your motor home is a complex machine made up of many materials, some of them flammable. But like most hazards, the possibility of fire can be minimized, if not totally eliminated, by recognizing the danger and practicing common sense, safety and maintenance habits.

The fire extinguisher furnished with your motor home is rated for Class B (gasoline, diesel fuel, grease, flammable liquids) and Class C (electrical) fires since these are the most common types of fires in vehicles. Read the instructions on the fire extinguisher. Know where it is located and how and when to use it. Remember that portable fire extinguishers are appliances intended for use by the occupants of a building or area that is threatened by fire. They are most valuable when used immediately on small fires. They have a limited amount of fire-extinguishing material, and therefore must be used properly so this material is not wasted.

Fire extinguishers are pressurized, mechanical devices. They must be handled with care and treated with respect. They must be maintained as outlined in any maintenance instructions provided with the device so they are ready to operate properly and safely. Parts or internal chemicals may deteriorate in time and need replacement. Always follow maintenance and recharging instructions provided by the fire extinguisher manufacturer.
Explosive fuel clouds may be present at fuel filling stations. Before refueling (either diesel or LPG) be sure to turn off all pilot flames, their ignitors, and appliances in your motor home. Turning off the propane at the tank is insufficient.

Pilotless appliances may still spark or pilot flames may not extinguish immediately.

Instruct occupants on what to do in case of fire, and hold fire drills periodically.

Maintain proper charge in the fire extinguisher.

If you experience a fire while traveling, maintain control of the vehicle until you can safely stop. Evacuate the vehicle as quickly and safely as possible.

If you experience a fire while camped, evacuate the vehicle as quickly and safely as possible.

Consider the cause and severity of the fire and risk involved before trying to put it out. If the fire is major or is fuel-fed, move away from the coach, especially the LP storage tank area and wait for the fire department or other emergency assistance.

If your motor home is damaged by fire, do not drive or live in it until you have had it thoroughly examined and repaired.
Living With Your Motor Home

A battery-powered smoke detector is mounted on the ceiling in the living/cooking area of your motor home. Please read the smoke detector operating instructions for details on testing and caring for this important safety device.

Test the smoke detector after the motor home has been in storage, before each trip, and at least once a week during use.

The smoke detector should never be disabled due to nuisance or false alarm from cooking smoke, a dusty furnace, etc.

Ventilate your motor home with fresh air and the alarm will shut off. Do not disconnect the battery.

Replace the battery once a year or immediately when the low battery BEEP signal sounds.

If the smoke detector fails to operate with new batteries, replace it with a new unit, available through an authorized Fleetwood Service Center.

Your motor home may be equipped with a slide-out room. The slide-out room is designed to provide additional living space for site set-up.

A detailed operating and maintenance guide is included in your Owner's Information Package. Read all instructions for this system carefully before operating the slide-out.

Smoke Detector

Slide-out Rooms

CAUTION
Never attempt to move your motor home with the slide-out room extended. Damage can occur to the slide-out or motor home.
The fresh water system allows flexibility in the sources of your fresh water, and in how you sanitize and winterize the system.

A system of valves and inlets allows you to configure the system for your circumstances. You can enjoy fresh water from either the on-board storage tank, with the system pressurized by the 12-volt water pump, or from an externally pressurized source, such as a park or campground water system. An externally pressurized water system is also known as "city water." Instructions in this manual will use the term "city water" to mean any pressurized source of water that is connected by a garden-type hose to the city water inlet.

You will usually connect to city water when you set up at a campground or other facility that provides water hook-ups. These hook-ups typically use a standard garden hose fitting and valve, similar to an outdoor utility faucet at your home. You can also fill your on board water tank from the city water connection.

To connect to city water without filling the on-board tank (all models): (See the illustration)

1. Open the plumbing utility compartment door. The city water inlet is in this compartment. This inlet is a female garden hose fitting with a one-way check valve.
2. Connect one end of a potable water supply hose to the park or campground city water supply outlet, which will be a male garden hose fitting, similar to your garden hose valve at home. "Potable water" hoses are available at RV supply stores.
3. Turn the city water supply outlet valve ON and let it run for a few seconds to clear the line and hose. Turn the outlet valve OFF.

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**CAUTION**

Since water pressures at campgrounds vary, we recommend you install an in-line pressure regulator at the water supply faucet. This will protect the motor home water system and your supply hose from excessively high water pressure.
4. In the plumbing utility compartment, turn the WATER TANK BYPASS valve, the COLD WATER DRAIN valve, and the HOT WATER DRAIN to the right (clockwise) to close them, if necessary.

5. In the 3rd curbside storage compartment from the front of the coach, turn the 2nd set of COLD and HOT DRAIN valves clockwise to close them (models 40VS and 40DS). Turn VALVE 2 vertical and VALVE 1 horizontal (models 40VS and 40DS).

6. Attach the free end of the city water supply hose to the city water inlet fitting. Tighten securely.

7. Turn the city water supply valve ON. The system is now pressurized by the city water supply. Water is available at the exterior utility washdown faucet and all interior faucets.

8. Open each faucet in the galley and bathroom. After any sputtering stops and water flows freely, close the faucet.
As long as you are connected to a city water supply, you have pressurized water at all faucets. You do not need to run the water pump. With the valves set this way, the water pump is isolated from the system.

To disconnect the city water:
1. Turn OFF the city water supply.
2. Remove the hose from the city water supply valve.
3. Drain and store the hose on shelf provided.

The on-board fresh water tank can be filled in two ways: (1) city water pressure or (2) gravity:

1. City water pressure – When connected to the city water supply as described in the previous section, turn the water tank bypass valve counter-clockwise to fill the onboard fresh water tank. Check the monitor panel often to determine if the tank is full. If water is flowing from the vents, your tank is filled. Stop filling by turning the water tank bypass valve clockwise.

2. Gravity fill – The external gravity water fill is located inside the city water/cable compartment on the exterior of the motor home. The on-board water tank can be filled here. To fill the fresh water tank, remove the cap and fill the tank using a potable water hose. Check the monitor panel often to determine if the tank is full. If water is flowing from the top vent, your tank is overfilled. Stop filling.

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**CAUTION**

Overfilling the fresh water tank from a pressurized source will cause serious damage to the water tank or structural components. Monitor water tank filling continually.
Avoid leaving the water in the tank when the motor home is not in use. To drain the fresh water tank, open the cold low point drain valve located in the basement utility compartment. Turn the water pump OFF before draining the water tank. Whenever possible, drain the fresh water tank before traveling. Water in the tank will reduce the carrying capacity of the motor home. See Motor Home Loading section of the On The Road chapter.

The on-board fresh water system is pressurized by a self-priming, 12-volt DC pump. The pump operates automatically when the pump power switch is ON and a faucet is opened. When the faucets are closed, the pump shuts off. At free flow, the pump draws approximately 7 to 7 ½ amps. It can run dry for extended periods without damage. See Electrical Systems chapter.

Turn the pump master switch ON to pressurize the system. When a faucet is opened after the initial filling of the tank, the not cause for concern. The water flow will become steady when all air is bled from the water lines.

Dirt, mineral scale, and organic matter are filtered out of the fresh water system by an in-line water filter on the inlet side of the water pump. If you suspect a clogged filter, it is easily removed and cleaned.

Inspect the filter after running the first full tank of water. Clean and inspect monthly thereafter. See illustration for filter location.

1. Loosen the water line at the inlet end of the filter, and remove.
2. Unscrew the filter cap from the filter.
3. Remove the filter screen
4. Flush out and clean screen.
5. Reverse procedure to install.
6. Operate the water pump and check for leaks.
To drain hot and cold lines (all models):

1. In the plumbing utility compartment turn the HOT and COLD LOW POINT DRAIN VALVES counter-clockwise to open.

2. In the 3rd curbside storage compartment from the front of the coach, turn the 2nd set of COLD and HOT DRAIN valves clockwise to close them (models 40VS and 40DS).

3. After the water stops flowing close the low point drain valves.

4. Open the valves to the outdoor washdown shower and depress the shower handle until all water has drained from the lines.

Water system problems usually fall into two categories: Inherent system problems, and problems caused by neglect. System problems are usually the result of road vibration and campsite water pressure variations. Problems of neglect usually stem from failure to clean filters, improper winterization, and poor battery maintenance. Most water system problems can be avoided by conscientious maintenance.
Vibration, flexing and twisting while traveling can work pipe fittings loose. Check all plumbing for leaks at least once a year. If the water pump runs when a faucet is not open, suspect a leak. Be sure the tank drain valves are tightly closed. Leaks occur most often around threaded fittings. If necessary, tighten or clean and tighten the fittings. Do not overtighten fittings. Connections at galley and lavy fixtures should not be tightened with a wrench. They will normally seal with hand-tightening. If a leak persists at one of the fittings, disconnect it completely and check for mineral deposits or other foreign matter at the seating surfaces. Clean the surfaces thoroughly and reinstall the fitting.

Connections at the water tank, pump and valves are made with special clamps. They can be replaced with standard automotive type hose clamps.

Leaks caused by freezing damage can be prevented by proper winterization of the system. See the Storage chapter of this manual. Freezing damage is usually extensive and may include a burst water tank, split piping, and a damaged water pump, toilet, and water heater. If you experience this type of damage, repairs can best be made by an authorized Fleetwood dealer.
Sanitize the fresh water tank and piping approximately every three months, and whenever the motor home sits for a prolonged period. This will discourage the growth of bacteria and other organisms that can contaminate the water supply.

Sanitizing or winterizing the fresh water system requires four major steps:

» Getting the sanitize/winterize solution into the water tank
» Filling the water tank with water
» Pumping the solution through the system
» Draining/flushing the system

The procedure is the same for both sanitizing and winterizing, although the solution used is different. To winterize, you will need an approved RV water system antifreeze. To sanitize, prepare the following solution:

» 1 cup household liquid chlorine bleach (5% sodium hypochlorite) to one gallon of water for each 15 gallons of tank capacity. Models 40VS and 40DS have a 100-gallon tank and require 6 and ½ gallons of solution. (The total amount of chlorine bleach is 1 and ½ cups.) Model 37RS has a 85-gallon tank and requires 5 and ½ cups solution. (The total amount of chlorine bleach is approximately 1 and ½ cups.)

To sanitize/winterize all models follow these steps:

1. Prepare the required solution (either the chlorine solution or antifreeze product) and have it standing by at the gravity water fill.
2. Close all drain valves and faucets.
3. Pour the solution into the external gravity fill.
4. Fill the fresh water tank
5. Be sure 12-volt DC power is available, and turn the water pumps ON.
Plumbing Systems

6. Open all faucets individually until water flows steadily, then turn OFF. This will purge air from the lines.

7. Let the solution stand in the water system for three hours.

8. Drain the entire system by opening all drain valves, faucets, and tank drain valve.

9. When the system is completely drained, flush the system with fresh water. Be sure to run water through each faucet for several minutes to thoroughly flush out the solution.

10. After you stop flushing the system, close the fresh water tank drain valve, system drain valves, and faucets.

11. Fill the fresh water tank if desired. The system is now ready to use.

A shower fixture is mounted in the basement utility compartment, located on the left rear of the motor home. The water pump must be ON or city water pressure must be available for the shower to operate.

The water filter cartridge helps provide consistent drinking water quality as you travel. The filter cartridge is located in the cabinet under the galley sink. Your Owner's Information Package contains detailed operating and maintenance instructions concerning this system.

Please note that the cold faucet at the galley, and the optional icemaker are the only outlets for the filtered water. Although this filtered water is not available at the other galley and lavy outlets, the water available at those outlets is filtered by the water pump filter. Note also that this system is not designed for or effective in removing or neutralizing bacterial contaminants.

EXTERIOR SHOWER

NOTE

The Hot and Cold knobs on the exterior shower fixture must be turned OFF when not in use to prevent uneven water temperatures at galley, lavy and shower fixtures.

DRINKING WATER FILTER SYSTEM

NOTE

Turn water pump off before traveling. Road vibration could cause a faucet to open. If the water pump is on, your fresh water supply could be pumped into the holding tank.
The waste water system in your motor home is made up of sinks, tub, shower, toilet, plumbing drain and vent lines, a grey water holding tank, and a black water holding tank.

The water from the sinks and shower drains into the grey water tank, the toilet drains into the black water tank. The holding tanks make the system completely self-contained and allow you to dispose of waste water at your convenience. A flexible sewer hose is required to connect the holding tank outlet to the inlet of an approved waste water dump station or sewer system.

The drain plumbing is similar to that used in your home. The system is trapped and vented to prevent waste gases from backing up into the motor home. The drain plumbing is made of ABS plastic, and is durable and resistant to most chemicals.

Your motor home is equipped with a toilet designed for use in marine and RV applications. It may differ in some respects from residential toilets. Please follow the operating instructions found in your Owner's Information Package.
The holding tanks terminate in a valve arrangement that permits draining each tank separately.

The valves are called knife valves, and are mounted in the utility compartment located at the left rear of the motor home. A blade closes the opening in the sewer drain pipes. The blade is connected to a T-handle that is pulled to release the contents of the tank(s).

During self-containment use, the sewer line is securely capped to prevent leakage of waste material onto the ground or pavement. Do not pull the holding tank knife valve open when the protective cap is installed on the pipe. Always drain the tank into an acceptable sewer inlet or dump station.

Whenever possible, drain the holding tanks before traveling. Waste water and sewage in the holding tanks reduce the carrying capacity of the motor home. See the Motor Home Loading section in the On The Road chapter in this manual.

Drain the holding tanks only when they are at least \( \frac{1}{2} \) full. If necessary, fill the tanks with water to \( \frac{3}{4} \) full. This provides sufficient water to allow complete flushing of waste material into the sewer line.

During extended or semi-permanent hookups to sewage systems, waste materials will build up in the tank and cause serious plugging if the tank valves are continuously open. In these cases, keep the valves closed until the tanks are \( \frac{3}{4} \) full, and then drain into the sewage system.

The holding tank drain valve outlet is to be used with a removable termination fitting that locks onto the outlet with a clockwise twist. Clamp the sewer drain hose to this fitting. A protective cap should remain in place when you are not draining the tanks.
To drain the holding tanks:

1. Attach the sewer hose to the holding tank outlet. Insert the end of the hose into the sewer or dump station inlet, pushing it firmly far enough into the opening to be secure. In some cases, adapters may be necessary between the line and the inlet.

2. Arrange the sewer hose so it slopes evenly.

3. Drain the black water holding tank first. Grasp the handle of the black water knife valve (the large one) firmly and slide the valve open with a quick, steady pull.

4. Allow enough time for the tank to drain completely. Rinse and flush the tank through the toilet.

5. When the tank is empty, push the handle in to close the valve.

6. Run enough water into the tank to cover the bottom. This will aid the break up of solid wastes.

7. To drain the grey water tank, repeat the steps above using the small knife valve. This tank is drained last to aid in flushing the outlets and hose. The grey water knife valve may be left open in a semi-permanent hookup.

8. Remove the sewer hose and cap the outlet.

9. Rinse out the sewer hose with fresh water and remove the sewer hose from the dump station.

10. Replace sewer or dump station covers.

Please...Practice good housekeeping when draining wastes at a campsite or disposal station. Leave the site in good order. Above all, do not pollute.
Since holding tanks don’t rely on any sophisticated mechanical devices for their operation, they are virtually trouble free. The most common problem is also an unpleasant one - clogging. You can minimize the chances of clogging by keeping the following considerations in mind:

» Keep the black water tank knife valve closed. Fill tank to at least ¾ full before draining. Be sure to cover the tank bottom with water after draining.

» Use only toilet tissue formulated for use in septic tank or RV sanitation systems.

» Keep both knife valves closed and locked, and the drain cap tightly in place when using the system on the road.

» Use only cleaners that are approved for use in septic tank or RV sanitation systems.

» Use a special holding tank deodorant chemical approved for septic tank systems in the black water holding tank. These chemicals aid the breakdown of solid wastes and make the system much more pleasant to use. Do not put facial tissue, paper, ethylene glycol-based or other automotive antifreeze, sanitary napkins or household toilet cleaners in the holding tanks.

» Do not put anything solid in either tank that could scratch or puncture the tank.

If the drain system does get clogged:

» Use a hand-operated probe to loosen stubborn accumulations.

» Seriously clogged P-traps may require disassembly. Be careful not to overtighten when reassembling.

» Do not use harsh household drain cleaners.

» Do not use motorized drain augers.

» Sometimes the holding tank valve will get clogged. In this case, a hand-operated auger may be necessary. Be ready to close the valve quickly once the clog is cleared. If the seal gets damaged, it is easily replaced.
ELECTRICAL SYSTEMS

Your motor home is equipped with three electrical systems:

the chassis 12-volt system
the Fleetwood 12-volt house system
the 120-volt AC system.

They operate together to give you electrical power for many different situations.

These electrical systems comply with all regulations and codes in effect at the time the motor home was built.

This chassis/vehicle 12-volt system includes:

the vehicle batteries
engine charging system
ignition system
instrument panel and controls
the headlights, taillights, turn signals
other vehicle lights and accessories.

The four locations for chassis fuses, breakers, relays, diodes, flashers and solenoids are:

Front Panel ..........................Under the Dash Bonnet
Rear Panel ..........................Battery Compartment
Engine Preheat ....Under the Bedtop Engine Access Lid
Engine Disconnect
Switch .........................Rear Engine Access Compartment

If replacement of an electrical component is needed, use only equivalent types as marked on the component.

Electrical Systems

This system includes:
- the house batteries
- all 12-volt interior lighting fixtures & outlets
- fresh water pump
- 12-volt accessories
- solar panel

Twelve-volt power is provided by four, special deep-cycle, high capacity 6-volt storage batteries located on a tray in the battery compartment. Power is also provided by an AC/DC power converter for use when the motor home shore cord is plugged into a 120-volt AC power source or when the generator is operating. Battery charge is maintained by the motor home chassis engine charging system, or by the converter. A power inverter supplies 120-volt AC power from these batteries.

This motor home uses a combination of fuses and circuit breakers in the house 12-volt DC and 120-volt AC systems to protect individual circuits.

The fuses are electrical safety devices with a fusible strip of metal that melts and interrupts the circuit when the current exceeds a particular amperage. If the circuit is overloaded, it will blow the fuse and the fuse must be replaced. Check the circuit for an overload. Remove the overload and replace the fuse with same type and amperage rating.

A circuit breaker is a switch that automatically interrupts an electric circuit under an infrequent abnormal condition. If a circuit breaker is tripped, look for an overload on the circuit, remove the overload, then reset the breaker. Some breakers are reset by pushing in a button; others by turning the switch OFF then ON. Do not try to reset a breaker the second time without removing the overload problem.

See Section 9 Maintenance of this manual for circuit descriptions, ratings and locations.
Your motor home has two battery systems. One system supplies 12-volt DC power to start the vehicle engine and generator. The other system supplies 12-volt DC power to the house living area.

Some accessories or equipment such as clocks, radios or the refrigerator may draw small amounts of current even when turned OFF. A relay-operated disconnect system allows you to disconnect either the chassis batteries or the coach batteries or both. Disconnecting the batteries will help reduce the likelihood of battery discharge over long storage periods.

If you plan to store the motor home for over ten days, press the disconnect switches to OFF. Remember to press the switches to ON when you take the motor home out of storage. A green light on the switch indicates that the power is on.

The battery disconnect switches are located by the entry door.

Check the external condition of the batteries periodically. Look for cracks in the cover and case. Check the vent plugs and replace any that are cracked or broken. Keep the batteries clean. Acid film and dirt on the battery tops may permit current to flow between the terminals and discharge the batteries.

To clean the battery:
1. Be sure the vent caps are installed and tight.
2. Wash the battery with a diluted solution of baking soda and water to neutralize any acid present.
Electrical Systems

3. Flush with clean water. Foaming around terminals or on top of the battery is normal acid neutralization. Avoid getting the soda solution in the battery.

4. Dry the cables and terminals.

5. Do not use grease on the bare metal inside the cable terminals to prevent corrosion. Grease is an insulator. Electricity will not flow through it. A plastic ignition spray will protect the terminals after you have cleaned and reinstalled them.

6. Check the battery, including water level, at least once a week. Keep the carrier and hold down hardware clean and free of corrosion and chemical accumulation.

WARNING
Disconnect the 120-volt shore cord and the negative terminal from the coach and chassis batteries before working on either electrical system. If you work on the electrical systems with the power cord connected, you may be shocked, electrocuted, or severely burned.

WARNING
Remove rings, metal watchbands, and other metal jewelry before working around a battery. Use caution when using metal tools. If a tool contacts a battery terminal or metal connected to it, a short circuit could occur which could cause personal injury, explosion or fire.

WARNING
Do not allow battery electrolyte to contact skin, eyes, fabrics, or painted surfaces. The electrolyte is a sulphuric acid solution which could cause serious personal injury or property damage. Wear eye protection when working with batteries.
Both sets of batteries will be kept charged by the chassis charging system while you are driving. The AC/DC power converter will also charge both sets of batteries when connected to 120-volt AC power through shore cord service or by operating the generator. If the batteries are disconnected while the shore cord is plugged in or the generator is running, then the batteries will not be charged. If the batteries need to be charged from a different charging source, please follow these safety guidelines:

» Leaving a charger connected to a battery for an extended period of time can shorten battery life.

» Do not smoke near batteries being charged or which have been recently charged.

» Do not break live circuits at the terminals of the battery. Use care when connecting or disconnecting booster leads or cables. Attaching booster cables, and poor connections are a common cause of electrical arcs which can cause explosion.

» Check and adjust the electrolyte level before charging. Fill each cell to the indicator with distilled water.

» Always remove all vent caps before charging the battery.

» Do not charge the battery at a rate that causes the electrolyte to spew out.

When the battery requires replacement, always choose a battery with the same physical and electrical characteristics as the original equipment. Your dealer or an authorized Fleetwood Service Center can advise you on proper battery selection.
The solar charging panel installed on your motor home is designed to “trickle-charge” your battery systems. It is not intended to be a fast charger. It also cannot supply large amounts of current to operate 12-volt DC electrical equipment. When the sky is clear and under bright sun, the solar panel will help keep your batteries “topped-up.” Do not try to operate 12-volt DC appliances with the output of the solar panel. A light on the monitor panel indicates when the solar panel is operating.

You can use the **Auxiliary Start System** to start the chassis engine or the generator with the house batteries if the chassis batteries are discharged. If the chassis engine alternator is operating properly, both battery systems will be charged while driving.

To use the **Auxiliary Start System** to start the chassis engine:

1. Be sure the motor home is stopped. Shift the transmission to **N** and apply the parking brake.
2. Press and hold the **Auxiliary Start** switch on the instrument panel.
3. Start the chassis engine with the ignition switch.
4. Release the **Auxiliary Start** switch.

To use the **Auxiliary Start System** to start the generator:

1. Press and hold the **Auxiliary Start** switch on the instrument panel.
2. Press the **Generator Start** switch until the generator is running.
3. Release the **Auxiliary Start** switch.
This system provides 120-volt AC electrical service (with ground) for appliances such as air conditioners, TV's, microwave oven, etc. This system includes:

- the generator
- the main electrical power cord ("shore cord")
- the DC inverter

The 120-volt AC house electrical panel is located under the bed. This panel is very similar to a residential breaker panel.

**WARNING**

Do not operate the 120-volt electrical system without a proper ground. Electrocution or severe electrical shock could result.

**CAUTION**

Lightning strikes during thunderstorms may affect the electrical system in your motor home. Sensitive electronic equipment may be damaged by the electrical spikes and surges caused by electrical disturbances in the atmosphere. Disconnect the electrical power cord and cable TV service if you expect atmospheric electrical disturbances.

Your motor home is equipped with one heavy duty, 50-amp power cord. It is commonly called the "shore cord." This cord is used to connect to external 120-volt AC service. The cord will supply power to all 120-volt appliances and outlets. The cord and connector is molded together to form a weatherproof cable assembly. Do not cut or alter the cable in any way. Do not remove the ground pin in the cable connector, or defeat the ground circuit in the motor home.
To connect the power cord to external service, push the plug straight into the receptacle until it seats completely. See the illustration.

For proper power cord hook-up, continue pushing plug in until completely seated.

The AC/DC converter will automatically supply 12-volt DC power when your motor home is operating on 120-volt from the generator or a public utility. It will also charge both battery systems.

Your motor home is equipped with a diesel-powered generator located in the front of the vehicle. It will provide complete electrical self-containment when regular public utility AC power is unavailable, or use of the inverter is not practical. Controls are located on the generator and on the instrument panel.

**CAUTION**

Switch off the 50-amp main breakers located in the 120-volt AC load center (breaker panel) before you insert or remove the 50-amp power plug. Be sure to insert or remove the plug straight into or out of the receptacle. The neutral and both 120-volt pins should make contact at the same time to avoid excessive voltage on one leg of the circuit that could damage 120-volt appliances.

**POWER CONVERTER**

**NOTE**

Generator remote controls are located on the generator and on the instrument panel. The generator is started using the chassis battery system.
With the generator operating, power is available at all of the 120-volt power outlets in the motor home, just as if the main power cord were connected to an external source. The generator is also connected to the power converter, and will supply 12-volt DC power as well.

Fuel for the generator is taken from the main fuel tank through a special feeder tube which is higher in the tank than the feeder tube to the motor home engine. This arrangement prevents the generator from running the motor home fuel tank dry.

To start the generator:

1. Push the control switch to its START position and hold it there while the status indicator light blinks rapidly indicating preheat. Let go when the light comes on continuously, indicating that the generator is running and that the starter has been disconnected. (Depending on how cold it is, preheat can take up to 15 seconds, extending the time that the light blinks.)

2. See the Troubleshooting Guide in Onan’s RV Genset Operator’s Manual located in the Owner’s Information Package if the generator does not start after several tries.

To stop the generator:

1. Run the generator at no load for a few minutes to allow the engine to cool down and then push the control switch briefly to its STOP position.

**CAUTION**

Excessive cranking can overheat and damage the starter motor. Do not crank for more than 30 seconds at a time. Wait at least 2 minutes before trying again.

**NOTE**

Refer to the generator operating instructions provided in your Owner’s Information Package for information before starting the generator. Do not start the generator unit with a heavy power load. Always wait at least three minutes after starting generator before turning on (or plugging in) heavy electrical loads, such as the roof air conditioner.
**Electrical Systems**

The generator is liquid-cooled. The cooling system includes a radiator, cooling fan, water pump, a coolant reservoir/recovery container, and is similar to the automotive engine cooling system.

Check and maintain the coolant level at the coolant recovery container located on the front of the generator.

Refer to the generator manufacturer’s information in the *Owner's Information Package* for additional details on the generator operation and maintenance.

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**Generator Cooling System**

**WARNING**

Do not check the coolant system at the radiator cap when the generator is hot. The coolant is under pressure and VERY HOT. If you release the radiator cap when the engine is hot, the coolant will spew out violently. You may be seriously burned by the hot coolant. Check the system at the coolant recovery container only.

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**Generator Operating Safety Precautions**

**WARNING**

Do not place flammable material or store any other materials in the generator compartment.

**WARNING**

Do not operate the generator when parked in or near high grass or brush. Exhaust heat may cause a fire.

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Read and understand the generator operating, maintenance and safety instruction furnished in your *Owner’s Information Package*.

- Do not smoke or use an open flame near the generator unit or fuel tank.

- Do not use generator ventilation air for heating any interior living space. Ventilating air can contain high concentrations of deadly gases, including carbon monoxide.

- Check engine fuel lines often. Fuel leakage in or around the compartment is an extreme fire hazard. Do not use the generator until fuel leaks are repaired.
Be aware of exhaust gas (carbon monoxide) poisoning symptoms. Refer to the section on Carbon Monoxide Safety Precautions in the On The Road chapter.

Check the generator exhaust system after every eight hours of operation and whenever the system may have been damaged, and repair any leaks or obstructions before further operation. Disconnect the battery before performing any maintenance on the generator. Allow the generator to cool before performing any maintenance.

Do not use the generator as an emergency power source to a general residential or industrial utility line. This is illegal and may cause shock or electrocution to power line utility personnel attempting to repair power lines.

WARNING
Do not block the generator ventilating air inlets or outlets. The engine requires a constant supply of cooling air. Restricted ventilating air inlets or outlets can cause engine failure or fire from engine overheating.

WARNING
Do not block the generator while sleeping. You would not be able to monitor outside conditions to assure that generator exhaust does not enter the interior, and you would not be alert to exhaust odors or symptoms of carbon monoxide poisoning.

WARNING
Exhaust gases are deadly. Inspect the generator exhaust system thoroughly before starting the generator engine. Do not block the tail pipe or situate the motor home in a place where the exhaust gases have any possibility of accumulating either outside, underneath, or inside your vehicle or any nearby vehicles. Outside air movements can carry exhaust gases inside the vehicle through windows or other openings remote from the generator exhaust. Operate the generator only when safe dispersion of exhaust gases can be assured, and monitor outside conditions to be sure that exhaust gases continue to be dispersed safely.

WARNING
Do not modify the generator installation or exhaust system in any way.
**Electrical Systems**

The power inverter is designed to provide 120-volt AC power to all appliances except the roof air conditioners and electrical panel 2, which includes the washer/dryer, roadside patio receptacle, refrigerator, and converter. The inverter uses 12-volt DC power from the house battery system and transforms it into 60-cycle, 120-volt AC power to run most of the appliances in the motor home. Controls are located in a doorside overhead cabinet.

Because the inverter uses 12-volt DC power, extended use of any available appliance (TV, microwave, etc.) can run the batteries down. A low power indicator and automatic shut down system built into the inverter can help prevent deep battery discharge. When the inverter shuts down, the batteries will require recharging from the generator, converter, or an external AC power source, the solar charger, or the engine alternator.

Bathroom, galley, and patio 120-volt electrical outlets are protected by a **Ground Fault Circuit Interrupter (GFCI)**. This device is intended to protect you against the hazards of electrical shocks possible when using electrical appliances in the bathroom or galley or in damp areas. Should a circuit or appliance (electric shaver, hair dryer, etc.) develop a potential shock hazard, the GFCI device is designed to disconnect the outlet (and other outlets on the same circuit), limiting your exposure time.

Test the GFCI at least once a month. To test the GFCI:

1. Connect the main power cord to 120-volt AC.
2. Push the TEST button. The RESET button should pop out, indicating that the protected circuit has been disconnected.

---

**Power Inverter**

**NOTE**

The roof air conditioners cannot be operated on power supplied by the inverter. The motor home must be plugged into an external AC service or the generator must be operating to run the air conditioners.

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**Ground Fault Circuit Interrupter (GFCI)**

**NOTE**

If an outlet doesn't work, check the GFCI. Reset it if necessary. If the GFCI continues to trip, have the motor home electrical system checked at an authorized Fleetwood Service Center or by a qualified electrician.
3. If the **RESET** button does not pop out when the test button is pushed, a loss of ground fault protection is indicated. Do not use any electrical outlets. Have the motor home electrical system checked at an authorized Fleetwood Service Center or by a qualified electrician. Do not use the system until the problem has been corrected.

4. To restore power push the **RESET** button.

Your *Owner's Information Package* contains a card that can be used to record test dates. Keep the card in a conspicuous place and keep it up to date.

Because of the many model, floor plan and option variations available, detailed wiring diagrams are not included in this manual. Below is a basic diagram to help you understand the electrical system. In certain situations, specific wiring diagrams may be available to help troubleshoot a problem. If you need specific wiring information, please contact American Coach Service at 1-800-435-7345
This page intentionally blank.
Liquefied petroleum (LP) gas is the fuel used to operate the range, oven, furnace and water heater in your motor home. It is also used to power some refrigerators. LP gas is safe if it is handled and stored carefully and properly. It allows you to have the conveniences of home wherever you travel.

The LP gas storage tank is mounted on the motor home chassis. The gas is stored in the tank as a liquid under pressure. A pressure regulator controls the flow of the gas to your appliances.

A typical LP gas tank installation is illustrated below. Although specific details of the system may differ in your motor home, the major components and their relationships will be similar to those shown.
**LP Gas System**

As with any other volatile and flammable material, LP gas must be handled and used with caution. Because LP gas systems are so reliable, they are often taken for granted. Neglect can be a very dangerous habit. If the system is maintained regularly, you can expect almost trouble-free operation.

---

**LP Gas Safety Precautions**

**WARNING**

LP gas is flammable and potentially explosive. Use proper handling, lighting and ventilating procedures.

1. The distinctive odor of LP gas indicates a leak. If you smell gas:

   Do not touch electrical switches. Extinguish all open flames, pilot lights and all smoking materials. Shut off the gas supply at the tank valve(s) or gas supply connection.

   Open the door and leave the area until the odor clears.

   Have the gas system checked by a professional and the cause of the leak corrected before using the motor home again.

2. Inspect the entire LP gas system for leaks or damaged parts before each trip and before filling tank. See section on *LP Gas System Leak Checks*.

3. Never check for leaks with an open flame. Use an approved leak detection solution or a non-ammoniated, non-chlorinated soap solution only. If the leak cannot be located, take the unit to an LP gas service representative.

4. Always be careful when drilling holes or fastening objects to the motor home. The gas supply lines could be punctured by a nail or screw.
WARNING

5. Do not restrict access to LP tanks. In an emergency, the tank service valve must be easily identified and accessible. The tank compartment door must always be unlocked, and the LP label should be visible.

6. Do not carry or store filled or empty LP gas containers. Including accessories such as gas barbecues, in your motor home. LP gas containers are equipped with a safety device that relieves excessive pressure by discharging gas to the atmosphere. Leaks can occur at valves and fittings. Always store LP tanks outside with the valves closed and plugged.

7. Do not use any LP gas tank other than the one furnished with your motor home without being sure that all connecting components are compatible.

8. Turn off LP gas main valve before filling LP gas tank or entering an LP gas bulk plant or motor fuel service station. Turn off all pilot lights and appliances individually before refueling of motor fuel tanks and/or LP gas containers.

When not individually turned off, automatic ignition appliances may continue to spark when LP gas is turned off at the container.

9. Do not fill LP gas containers to more than 80% capacity. Overfilling can result in uncontrolled gas flow which can cause fire and explosion, a properly filled container holds about 80% of its volume as liquid.

10. LP gas regulators must always be installed with the diaphragm vent facing downward. Make sure that the regulator vent faces downward and that the cover is kept in place to minimize vent leakage which could result in excessive gas pressure causing fire or explosion.
**LP Gas System**

**WARNING**

11. Do not use a wrench or pliers to close the tank shut-off valve. This valve is designed to be closed leak tight by hand. If a tool is required to stop a leak, the valve probably needs repair or replacement.

12. If you do not have the special tools and training necessary, do not attempt to repair or modify LP gas system components.

13. Always think safety.

The hoses used in your LP gas system meet UL or CSA requirements. Although they are designed for efficient and trouble free use, they can be damaged by sunlight and impurities in the air. The average life of LP hoses is two to three years. Check the hoses for signs of deterioration every time you have the gas tank filled or serviced. When you replace hoses, be sure that replacements are properly rated and approved for RV use.

The regulator is the heart of the LP gas system. It reduces the high pressure of the gas in the tank down to the pressure that the appliances require. This pressure reduction occurs in two stages for safety and efficiency.
The regulator is equipped with a vent. This vent must stay clean and open. The most common causes of regulator problems are clogging from corrosion, dirt, insect nests or other material. Even a small piece of material that finds its way into the vent can result in improper pressure in the system. This could damage the system or cause other parts of the system to fail.

The regulator is mounted so that the vent is facing downward and is protected from water and dirt by a water-resistant cover. Be sure the cover is on at all times. If the vent becomes clogged, it can be cleaned with a toothbrush. If you see corrosion, contact a qualified LP gas service technician for a replacement regulator.

Your LP gas system will function at low temperatures, as long as the system components are kept at a temperature above the vapor point of the LP gas. Ask your LP gas supplier or your motor home dealer for information on LP gas blends available in your area and the areas in which you will be traveling.

The availability of gas is reduced at lower temperatures. With this in mind, keep your LP tank as full as possible during cold weather. Check the BTU/hr. rating plates on your LP gas appliances. This information will help you manage your LP gas use in the best way.

LP gas systems can freeze up in very cold weather. Some people believe that the regulator or the gas itself freezes. Actually, the gas does not freeze. The moisture or water vapor that gets trapped in the system or absorbed by the gas freezes and causes the problem. This ice can build up and partially or totally block the gas supply.

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**WARNING**

Do not attempt to adjust the regulator. It has been preset by the regulator manufacturer. If any adjustment is required, it must be made by a qualified LP gas service technician using special equipment.
**LP Gas System**

To prevent LP gas system freeze up:

1. Be sure the gas tank is totally moisture-free before it is filled. If you are not sure, have an LP service station inject an approved antifreeze or deicer into the tank.

2. Be sure the tank is not overfilled. This is also a safety consideration.

3. Have the gas tank purged by the LP gas service station if freeze up occurs.

4. Be sure you have the proper gas blend for your traveling area. If you have the proper gas blend, it is very unlikely that the gas is at fault. If, despite precaution, you do experience freeze up, ask your LP gas supplier to service the tank or regulator as required.

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### WARNING

Do not fill LP gas containers to more than 80% capacity. Overfilling can result in uncontrolled gas flow which can cause fire and explosion. A properly filled container holds about 80% of its volume as liquid.

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To fill the LP gas tank, drive the motor home to an LP gas supplier or a service station which sells LP gas. Do not attempt to fill the tank yourself.

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### FILLING LP GAS TANKS

### WARNING

Turn off LP gas main valve before filling LP gas tank or entering an LP gas bulk plant or motor fuel service station. Turn off all pilot lights and appliances individually before refueling of motor fuel tanks and/or LP gas containers. When not individually turned off, automatic ignition appliances may continue to spark when LP gas is turned off at the container.
The garlic-like smell of LP gas indicates a leak. Fittings, valves and couplings are the most common places for a gas system to leak.

For your safety, check for leaks in your gas system each time the tank is filled and before each trip. Always check the system any time you detect a garlic-like odor. Listen for a hiss or hum when you turn the gas on. This may indicate a leak.

The first time you have your LP tank filled, have the attendant bleed a little LP gas out of the small outage valve (this also lets you check that the tank is not overfilled) and note the odor. It should smell like garlic or onions. If you cannot detect this odor, you must take extra care in checking for leaks, as well as whenever you use LP gas appliances.

To perform a leak check:

1. Swab a mixture of an approved leak detection solution over each fitting, joint and connection in the system.
2. Open the tank valve.
3. Inspect each joint.
4. If even the smallest bubbles appear at any joint, it is leaking and must be corrected. Take the motor home to an authorized Fleetwood service center or your LP gas service facility. Do not attempt to repair gas piping unless you have the proper tools and skill.

Leaks most likely will occur where piping runs close to chassis and frame. Look for scrapes and cracks around pipe hangers. If you find defects in any part of the LP gas system have it repaired or replaced before using the system.
LP Gas System

Always check all exposed piping and fittings after you have arrived at a campsite and before you use any gas appliance. Travel and road shocks may have caused damage to the system that must be repaired before using the appliances.

Keep the tank valve closed and turn off all appliances if the motor home is not being used.

An LP gas leak detector is located near the floor in the galley area. The leak detector will sound a loud alarm if low levels of potentially dangerous LP gas are in the air, or similar gases such as hair spray or cleaning solvent.

The detector unit is powered by both 12-volt DC systems in your motor home. A power switch is located on the panel. A green light on the detector front panel indicates that the detector has power.

Test the leak detector each time the motor home is relocated and set up for use.
Testing Procedure:

1. Hold a butane-fueled pocket lighter near the sensor.

2. Open the lighter valve without striking the flame. The leak detector should respond within a few seconds.

3. Lightly fan the area around the detector to insure complete dispersion of the gas from the lighter, and to prevent another sounding of the alarm.

4. To reset the alarm, turn OFF then ON.

5. If the alarm does not sound during a test or if the green indicator light is not visible. See your dealer or an authorized Fleetwood Service Center. There are no batteries or user serviceable parts inside the unit.

You will find detailed operating information for the LP gas appliances in your Owner's Information Package. Please read and follow these instructions.

Air trapped in the gas lines may delay the first lighting of any appliance. It could take several seconds or minutes for the gas to reach the appliance. To purge some of the air from the gas system, first light a burner on the range. The other appliances will then light more quickly.

We recommend lighting the pilot light at the range, if equipped, rather than individually lighting each burner. This will help prevent accidental leaks at the burner. Be sure to turn the pilot light OFF while traveling.
The appliances installed in your motor home are tested by independent laboratories and comply with rigid standards established by these organizations. All appliances are covered by Fleetwood’s Ownercare Warranty program. Each appliance is also warranted by its manufacturer.

**Note**
The individual appliance manuals included in your Owner’s Information Package contain detailed operating and maintenance instructions. Always refer to the respective manual for the appliance in question.

**Warning**
The water heater and furnace combustion air exhaust ports may be extremely hot when the water heater and furnace are operating. Do not touch these outlets or allow any material to come near the exhaust ports while operating the water heater and/or furnace.

**Water Heater**

**Caution**
Do not light water heater until it is filled with water.

The water heater operates on LP gas, and is much like the one in your home. It contains an automatic shut off valve which stops the gas supply if the water temperature rises too high. The water heater is reached through an access panel on the outside of the motor home.

Turn on the hot water faucet at the galley sink. If water flows continuously the heater is full.
Appliances

This valve is provided to cut off the flow of water to the water heater. The bypass valve greatly reduces the quantity of antifreeze required to winterize the water system. The valve is located inside the bathroom lavy cabinet.

To bypass the water heater, turn the valve lever vertical. To supply water heater with water, turn lever horizontal.

Read the operating instructions furnished in your Owner’s Information Package. Before operating the refrigerator when the motor home is parked, make sure it is level. If it is not level, the refrigerant will not circulate, cooling action will stop, and the refrigeration system may be damaged.

The refrigerator uses the absorption principle of operation. If you plan to cool food or drinks in high outside temperatures, precool the food, and park the motor home with the refrigerator vent door in the shade. Once the interior of the refrigerator is cool, the refrigeration system will usually maintain this temperature. If the inside of the refrigerator is hot, the food is not precooled, and the outside temperature is high, it will take longer for your food to be cooled.

Your motor home is equipped with a Two Way Automatic Energy Selector (AES) refrigerator. The refrigerator will automatically select the best available energy source for the conditions, 120-volt AC power or LP gas. The refrigerator also requires 12-volt DC power to operate the Automatic Energy Selector and the humidity controller.
The furnace is a forced-air unit fueled by LP gas. All furnaces are equipped with a wall thermostat for individual temperature settings.

The furnace will not operate properly if your stored personal items block the free flow of air at the registers or the return air to the furnace. Storage under cabinets should be done carefully so as to not crush or damage the furnace ducting.

Smoke and fumes created as a result of burning off manufacturing compounds are sometimes present the first time the furnace is used. This is normal; however, when you light the furnace the first time, open all windows and doors until the residues are completely burned off. These materials should burn off after the first 15 to 20 minutes of appliance operation.

Always follow the appliance manufacturer's lighting and operating instructions.

The gas oven and burners are operated with LP gas. The basic operation is the same as the range in your home.

A 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 is limited in an RV due to the size and construction of the vehicle. Proper ventilation when using the cooking appliances will prevent the dangers of asphyxiation. Refer to Lighting LP Gas Appliances section in the LP Gas System chapter of this manual.
Appliances

The range hood filters vapors and cooking odors.

The 120-volt range hood is a recirculating type with a charcoal filter canister. This filter requires periodic maintenance. See the microwave/convection oven operating manual in the Owner’s Information Package for more information.

The range hood will only operate when the motor home has 120-volt AC service supplied by an external hook-up, the generator, or the inverter operating on 12-volt DC battery power. The range hood will not operate on battery power except through the inverter.

The roof-mounted air conditioners can operate only when the motor home is connected to 120-volt AC power from either a public utility or the generator. Be sure to turn the air conditioner circuit breakers ON.

Each return air duct is equipped with a filter. Check these filters at regular intervals for accumulations of dust that could restrict air flow. To check the filters, remove the return air duct cover with a screwdriver.

For best performance, park the motor home in the shade and close curtains. Close doors and windows and turn the temperature control knob for desired coolness. Refer to the air conditioner manufacturer’s instructions for detailed operating and preventive maintenance requirements. Remember that air conditioners use a large portion of your available electric power.

Range Hood

Air Conditioner

NOTE
Your motor home is equipped with a ceiling-ducted air conditioning system. Each roof-mounted air conditioner is connected to a duct system. For most efficient operation, adjust each vent so that is completely open. If you change the vent opening to regulate air flow try not to restrict the vent opening to below 70% open. Restricting air flow below this opening will affect the efficiency of the air conditioner.
Appliances

If the generator is running, or if the motor home is plugged into 50-amp AC service, either or both air conditioners can be operated.

Dual Air Conditioners
50-Amp Service

Additional Equipment

If additional equipment requiring 12-volt power is installed in the motor home. Obtain the 12-volt source from a properly fused battery circuit located under the dash bonnet. Consult an authorized Fleetwood dealer before adding any additional equipment to your motor home.

The 120-volt VCR can operate only when the motor home is connected to 120-volt power from either a public utility or the generator, or when the inverter is on.

120-Volt VCR

Both TVs operate on 120-volt AC from the generator, public utility, or the inverter (powered by 12-volts DC). The living room TV is mounted on a lift system that allows you to position it for convenient viewing.

120-Volt Televisions
Appliances

The TV lift will raise the front TV to any height between the floor and ceiling. The lift operates on 120-volt AC power from the generator, a public utility, or the inverter (operating on 12-volts DC). The lift switch is located on the passenger side of the dash panel.

To operate the lift:
1. Turn the ignition key to OFF or ACCESS position. The TV lift will not operate if the ignition key is in any other position. Be sure 120-volt AC power is available.
2. Press and hold the top of the TV lift switch.
3. Release switch at the desired TV height.
4. Press and hold the bottom of the switch to lower the TV.

The video switcher, located in a front overhead cabinet, allows routing of the antenna, cable or VCR signals to both the front and rear TVs independent of each other.

The roof-mounted antenna is designed for reception of VHF and UHF television signals.

Before traveling, remember to lower the antenna and secure it to prevent damage to the antenna, motor home roof, or objects in the path of the antenna, such as overhead wires. Do not travel with the antenna raised.

Your motor home may be equipped with a Digital Satellite System (DSS) option. Please refer to your Owner’s Information Package for additional information.
The television and radio systems in your RV have been chosen to provide good performance under varied signal conditions. Occasionally, though, you may experience ghosts on TV, flutter when listening to FM broadcasts, or other signal interference.

The fault is normally not with your receiver or antenna system. The idea that antennas, whether amplified or not, “pull in” a signal is a popular misconception. An antenna does not pull a signal out of air by virtue of its “power.” The antenna only responds to signals present at the antenna elements. Antennas with boosters only amplify these signals.

Since distance from the broadcast tower is critical to reception clarity, remember that TV and FM signals have a range of only about 75 miles under the best of atmospheric and geographic conditions. The good reception you get at parks located at great distances from broadcast facilities is probably the result of satellite, microwave or other cable distribution systems. The antenna on your RV is no competition for these very expensive installations.

In addition, TV and radio frequency interference results from the electromagnetic fields produced by electric arc discharge. This arcing is found in lightning, vehicle ignition systems, and in 12-volt DC (brush type) motors used in power vents and furnaces. Note that nearly every DC motor has brushes. Most alternating current (AC) motors do not have brushes, and therefore do not generate the arcing interference. This is why this type of interference is less noticeable in a household environment.

As the signal diminishes with distance and geographical features (mountains, etc.), the effect of electric arc interference may become more and more noticeable. Eventually, the signal will be overcome by the interference. The following suggestions can improve reception:
Appliances

» Use the "park cable" TV antenna system of your RV in remote areas rather than the roof antenna if the campground provides cable hook-up.

» Turn the television antenna. Sometimes turning the antenna will pick up a stronger signal. Try turning or rotating the antenna throughout its range. You may find your signal in a very unexpected direction.

» With FM stereo signals, switch the unit to MONO, if possible. Some of the phase and noise components of a stereo signal will disappear in MONO mode.

» Reduce the treble setting to reduce background noise. Although not yielding the best high-frequency performance, at least you may be able to reduce the irritation of the distortion and noise.

You may have additional appliances in your unit which operate only when connected to 120-volt power from either a public utility or the generator.
Your motor home has been designed to provide you with many years of use with a minimum amount of maintenance. This section will familiarize you with the areas of your motor home that require scheduled care. Time spent taking care of your motor home on a regular basis will pay for itself in extended service and will protect your investment.

If you are mechanically inclined and regularly perform routine maintenance and repairs on your car or truck, you may want to do the mechanical work on your motor home yourself. If you prefer, your dealer can perform these services for you. His trained personnel will assure that your motor home is maintained and repaired in keeping with original performance expectations.

This section is intended to provide the owner and operator with a general overview of service and maintenance information for the motor home. Detailed service and maintenance information may be found in the owner's/operator's manuals contained in the *Owner's Information Package*.

While the information in this section is intended to establish proper maintenance and inspection procedures, there may be times when detailed diagnostic and repair procedures may be required. Consult your dealer or an authorized Fleetwood Service Center in these situations.
Maintenance

Some exterior parts of your motor home are made of fiberglass. The finish on these parts is durable, but not indestructible. Any material and finish will deteriorate in time. Exposure to sunlight, moisture and airborne pollutants can cause dulling and fading of the finish. Generally, changes in the finish due to weathering are cosmetic - they are on the surface of the part and do not affect its strength. Weathering can take the form of chalking, fading and yellowing.

The best insurance against these effects is routine maintenance. If the finish is not washed and waxed thoroughly, the surface can deteriorate very rapidly. The following maintenance guidelines can help you reduce these weathering effects:

1. Wash the exterior with a mild soap monthly, at least. Avoid strong alkaline cleaners and abrasives.

2. Wax the exterior at least once a year — twice, if possible — with a wax formulated for fiberglass. When waxing, always read and follow the instructions and precautions on the container. Some cleaners and waxes are recommended for use on only certain types of surfaces.

3. In some cases, a light rubbing compound may be required. Always follow rubbing compound with a high-quality wax.

Stains are generally caused by two types of substances - water soluble and non-water soluble. Water soluble stains can usually be washed away with water and mild detergent. Follow the washing with wax.

Non-water soluble stains are usually oil-based. Removal of this type of stain may require the use of highly flammable or poisonous solvents. Refer this type of service to your dealer or an authorized Fleetwood Service Center. Never use strong solvents or abrasives to clean plastic surfaces.
Keep moving parts, hinges and latches adjusted and maintained. Lubricate with a light oil at least once a year. Check and tighten the screws holding the windows in place as required. Clean screens by gently wiping with a damp cloth or soft flat brush. Not all screens are removable.

Inspect the sealants around doors and windows every three months. See Sealant Renewal section.

Lubricate locksets in doors and exterior storage compartments at least annually with powdered graphite. If the motor home is located at a beach or is exposed to salt air, more frequent lubrication may be required.

For normal cleaning, standard household detergents or cleansers may be used. Use a nonabrasive, common household detergent and plenty of water. Be sure to keep the side-walls wet to reduce streaking. Road tar, tree sap or other stubborn stains can be removed with a soft rag and xylene.

WARNING
Xylene is a flammable liquid. Use extreme care when handling and using. Do not expose to open flame, spark or smoking material. Do not use in unventilated area.
**Maintenance**

The rubber roof 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. This is required under the terms of the warranty.

Repair kits are available through your dealer. The roof requires special adhesives and material.

The adhesives and sealants used in the construction of your motor home were developed to remain waterproof under sustained effects of weather and vibration. However, even the finest materials will eventually dry out and lose their effectiveness under the constant heat of the sun and attack by other elements. This section outlines the procedures you must follow to maintain the weatherproof integrity of your motor home.

Your dealer can perform the resealing inspection and work for you. Your dealer also has current information on sealants used in your motor home, and can recommend the appropriate sealants for you if you prefer to do this work yourself. Always use the recommended sealants.

---

**WARNING**

The rubber roof material is slippery when it is wet.

**NOTE**

Failure to seal could cause serious damage and will affect your warranty coverage.

**Sealant Renewal**

**CARE**

**09-4**
Inspect the sealants around windows and doors at least every three months. Also inspect roof vents, other roof components, moldings at front and rear caps, and perimeter molding. If any of the following defects are evident during inspection, the affected areas must be resealed.

- Excessive amount of sealant protruding from joints.
- Sealant cracked or peeling.
- Voids in sealant.

If you find any of the above defects:

1. Use a plastic scraper to remove excess sealant.
2. Clean all areas to be resealed with mineral spirits and clean rags.
3. Make sure that all areas to be resealed are absolutely dry before new sealant is applied.

**NOTE**

Do not seal the bottom flanges of windows and doors. Special gaps in the sealant have been intentionally left in the bottom flange to provide exterior drainage in the event of leakage.

**WARNING**

Mineral spirits is a flammable liquid. Use extreme care when handling and using. Do not expose to open flame, sparks, or smoking material. Do not use in unventilated areas.
Interiors appointments such as draperies, bedspreads, mattress covers, upholstery and wall pads are manufactured from high quality materials and should be dry cleaned only. Frequent vacuuming will keep them free of dust and dirt. Minor spills should be cleaned up quickly to avoid staining. The affected area should be blotted, not rubbed, to prevent the stain from working deeper into the fabric.

Corian® is a solid surface material that requires little care. Routine care involves wiping the surface with a damp cloth to remove water marks. For stains, wipe with soapy water or ammonia-based cleaners. Remove stubborn stains on the “matte/satin” finish with an abrasive cleanser.

For cleaning laminate surfaces, use mild dishwashing liquid with warm water. Use a soft cloth for both washing and drying.

Do not use abrasive cleaners, steel wool, or gritty cleaners or damage will occur to the surface.
The paneling and the ceiling of your motor home may be any of several finishes and textures. Never use harsh detergents or abrasive cleaners on walls or ceilings. Most surfaces will clean with a soft cloth moistened with mild liquid detergent in warm water. Do not use large amounts of water which could saturate the material.

Some cleaners attack the plastic causing it to discolor and become brittle. The following cleaners have been tested and approved when mixed with water:

- Distilled vinegar
- Mild dishwashing detergent
- Liquid deodorizing cleaner.

Avoid cleaners with any level of abrasives, acetone or MEK (methyl ethyl ketone).

Tile flooring requires only washing and periodic waxing. Vacuum carpeting regularly, and clean it with a quality carpet cleaner.

For routine cleaning use a damp cloth or sponge and polish dry with a towel. If needed, use regular household liquid detergents and scouring powders.

Do not use abrasive cleaners, steel wool, or gritty cleaners or damage will occur to the surface.
MAINTENANCE

Do not use abrasive cleansers or petroleum-based solvents to clean brass faucets, cabinet door pulls, or other brass finished fixtures.

The top of the engine may be accessed from inside the motor home for service by lifting or removing the engine cover under the bed top.

From outside, doors on both the left and right sides and a rear hood may be raised to provide engine access.

WARNING

The interior engine cover is heavy. Use care when opening or closing the cover. Use the engine cover prop to hold the cover open.

WARNING

When installing the engine cover, be sure the cover is fully seated on the gasket seal and secured by the clamps. Do not allow insulation, carpeting, or other material to interrupt the seal between the cover and the engine compartment. If the engine cover is not installed correctly, engine exhaust gases could leak into the passenger compartment creating a safety hazard. If the engine must be run with the engine cover off for maintenance purposes, be sure the vehicle interior is adequately ventilated.
Refer to this chart to schedule maintenance.
Options and accessories usually have their own owner/user manuals that often contain added maintenance instructions. Consult these manuals as required.

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<tr>
<td>Lubricate power step mechanism</td>
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<tr>
<td>Lubricate TV antenna</td>
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<tr>
<td>Check all exterior sealants, around windows, doors, sidewall seams, windshield, lamps, all exterior openings and roof components. Re-seal if necessary.</td>
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<tr>
<td>Inspect and clean fuel-fired appliance vents: water heater, refrigerator, furnace.</td>
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<tr>
<td>Inspect and test safety equipment: fire extinguisher, LP CO and smoke detectors, and GFI receptacles.</td>
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<tr>
<td>Service appliances and equipment: refrigerator, roof air conditioner, furnace, generator</td>
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<tr>
<td>Inspect generator exhaust system</td>
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<tr>
<td>Inspect LPG system including leak check</td>
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<tr>
<td>Sanitize fresh water tank</td>
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<tr>
<td>Clean drapes and interior fabrics</td>
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<tr>
<td>Check exterior lamp operation</td>
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<td>Fire extinguisher inspection</td>
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<tr>
<td>Smoke detector operation</td>
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<tr>
<td>LPG leak detector operation</td>
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<tr>
<td>Check tire pressures</td>
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</tr>
</tbody>
</table>

A - Start of Season
B - Each Trip or Monthly
C - Every 8 Hours
D - Weekly
E - Every 3 Months
F - Every 6 Months
G - Each Year
H - End of Season
I - At Specified Mileage or Interval
J - At Specified Mileage for Heavy Duty Service
MAINTENANCE

**Interior**

Ceiling 48" fluorescent ........................................ GE FT8CW, 12-volt
Ceiling 12" fluorescent ........................................ GE FT8CW, 12-volt
Halogen 10-watt lights ........................................ Hella 78241, 12-volt
Halogen 20-watt lights ........................................ Hella 78240, 12-volt
Driver/Passenger dome light ................................. Jensen 1003, 12-volt
Dinette decor light ........................................... GE 1141F, 12-volt
Bedroom reading lamps ...................................... Jensen 1003, 12-volt
Wardrobe light ................................................ GE 1141, 12-volt
Range hood ...................................................... GE 912, 120-volt
Bedroom sconce .............................................. GE 921F, 12-volt
Bath vanity light .............................................. GE 40G16C, 12-volt

**Exterior**

Headlight, halogen high beam .............................. GE 9007 12v
Headlight, halogen high-low beam .......................... GE 9007 12v
Turn signal, amber ........................................... GE 1157A 12v
Front clearance lights ........................................ GE 67DP 12v
Side marker lights ........................................... GE 194 12v
Mirror turn signal lights .................................... GE 1895 12v
Porch lights .................................................... Jensen 1003 12v
Entry step light ................................................ GE 193 12v
Hood light ....................................................... GE 193 12v
Rear clearance lights ......................................... GE 67DP 12v
Back-up lights .................................................. GE 1156 12v
Stop/turn/tail lights ......................................... GE 1157 12v
License plate light ............................................ Truck-Lite 19206 12v
Entry assist handle .......................................... GE 1156 12v
Fog lights ....................................................... Sirius H3 55watt 12v
Docking lights .................................................. Trucklite 60 12v

**LAMPS AND BULBS**
## 120-Volt Circuits

<table>
<thead>
<tr>
<th>Circuit Description</th>
<th>Rating</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main - 1</td>
<td>50A</td>
<td>Bedroom</td>
</tr>
<tr>
<td>Air Conditioner # 1</td>
<td>20A</td>
<td>Bedroom</td>
</tr>
<tr>
<td>Portable Appliances</td>
<td>20A</td>
<td>Bedroom</td>
</tr>
<tr>
<td>General Purpose</td>
<td>20A</td>
<td>Bedroom</td>
</tr>
<tr>
<td>Food Center or Microwave</td>
<td>20A</td>
<td>Bedroom</td>
</tr>
<tr>
<td>Main - 2</td>
<td>50A</td>
<td>Bedroom</td>
</tr>
<tr>
<td>Air Conditioner #2</td>
<td>20A</td>
<td>Bedroom</td>
</tr>
<tr>
<td>Washer/Dryer</td>
<td>20A</td>
<td>Bedroom</td>
</tr>
<tr>
<td>Roadside Patio Receptacle</td>
<td>20A</td>
<td>Bedroom</td>
</tr>
<tr>
<td>Inverter/Converter</td>
<td>30A</td>
<td>Bedroom</td>
</tr>
<tr>
<td>Refrigerator</td>
<td>15A</td>
<td>Bedroom</td>
</tr>
<tr>
<td>Water Heater (option)</td>
<td>15A</td>
<td>Galley</td>
</tr>
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</table>

## 12-Volt Circuits

<table>
<thead>
<tr>
<th>Circuit Description</th>
<th>Rating</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bedroom Area</td>
<td>20A</td>
<td>Bedroom</td>
</tr>
<tr>
<td>Water Pump/Water Heater</td>
<td>15A</td>
<td>Bedroom</td>
</tr>
<tr>
<td>Galley Area</td>
<td>20A</td>
<td>Bedroom</td>
</tr>
<tr>
<td>Galley Ceiling Lights</td>
<td>20A</td>
<td>Bedroom</td>
</tr>
<tr>
<td>Bath Area</td>
<td>20A</td>
<td>Bedroom</td>
</tr>
<tr>
<td>Living Area</td>
<td>20A</td>
<td>Bedroom</td>
</tr>
<tr>
<td>Living Area Ceiling Light Switch</td>
<td>20A</td>
<td>Bedroom</td>
</tr>
<tr>
<td>Slide-Out Room</td>
<td>30A</td>
<td>Batt Comp</td>
</tr>
<tr>
<td>Living Area # 1 (Dinette Lights)</td>
<td>20A</td>
<td>Bedroom</td>
</tr>
<tr>
<td>Rear Furnace</td>
<td>15A</td>
<td>Bedroom</td>
</tr>
<tr>
<td>Front Furnace</td>
<td>15A</td>
<td>Bedroom</td>
</tr>
<tr>
<td>Antenna Booster</td>
<td>20A</td>
<td>Bedroom</td>
</tr>
<tr>
<td>Luggage Compartment Lights</td>
<td>20A</td>
<td>Batt Comp</td>
</tr>
<tr>
<td>Water Pump Switch</td>
<td>15A</td>
<td>Bedroom</td>
</tr>
<tr>
<td>Water Heater Switch</td>
<td>15A</td>
<td>Bedroom</td>
</tr>
<tr>
<td>Water Heater Lights</td>
<td>15A</td>
<td>Bedroom</td>
</tr>
<tr>
<td>Main Power</td>
<td>150A</td>
<td>Batt Comp</td>
</tr>
<tr>
<td>Inverter</td>
<td>300A</td>
<td>Batt Comp</td>
</tr>
<tr>
<td>Transmission Power</td>
<td>10A</td>
<td>Batt Comp</td>
</tr>
<tr>
<td>Brake Lights</td>
<td>5A</td>
<td>Dash</td>
</tr>
<tr>
<td>Ignition Power</td>
<td>10A</td>
<td>Dash</td>
</tr>
<tr>
<td>Horn Power</td>
<td>10A</td>
<td>Dash</td>
</tr>
<tr>
<td>Hazard Power</td>
<td>10A</td>
<td>Dash</td>
</tr>
<tr>
<td>ABS Power</td>
<td>20A</td>
<td>Dash</td>
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</table>
# MAINTENANCE

## 12-Volt Circuits (Continued)

<table>
<thead>
<tr>
<th>Circuit Description</th>
<th>Rating</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marker/CC Lights</td>
<td>20A</td>
<td>Dash</td>
</tr>
<tr>
<td>Headlights</td>
<td>15A</td>
<td>Dash</td>
</tr>
<tr>
<td>Cigar Lighter</td>
<td>15A</td>
<td>Dash</td>
</tr>
<tr>
<td>Driver's Seat Power</td>
<td>30A</td>
<td>Dash</td>
</tr>
<tr>
<td>Passenger Seat Power</td>
<td>30A</td>
<td>Dash</td>
</tr>
<tr>
<td>Dome Light Power</td>
<td>15A</td>
<td>Dash</td>
</tr>
<tr>
<td>Radio Memory Power</td>
<td>5A</td>
<td>Dash</td>
</tr>
<tr>
<td>Turn Signal Power</td>
<td>10A</td>
<td>Dash</td>
</tr>
<tr>
<td>Instrument Power</td>
<td>5A</td>
<td>Dash</td>
</tr>
<tr>
<td>Cruise Power</td>
<td>10A</td>
<td>Dash</td>
</tr>
<tr>
<td>ABS Ignition Power</td>
<td>5A</td>
<td>Dash</td>
</tr>
<tr>
<td>Wiper Power</td>
<td>20A</td>
<td>Dash</td>
</tr>
<tr>
<td>Leveling Jacks</td>
<td>15A</td>
<td>Dash</td>
</tr>
<tr>
<td>Dock Light Power</td>
<td>15A</td>
<td>Dash</td>
</tr>
<tr>
<td>Fog Lights</td>
<td>15A</td>
<td>Dash</td>
</tr>
<tr>
<td>Exhaust Brake Power</td>
<td>10A</td>
<td>Dash</td>
</tr>
<tr>
<td>Heater/Defrost Power</td>
<td>30A</td>
<td>Dash</td>
</tr>
<tr>
<td>Radio Power</td>
<td>10A</td>
<td>Dash</td>
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<tr>
<td>CB Radio Power</td>
<td>15A</td>
<td>Dash</td>
</tr>
<tr>
<td>Overhead Fan Power</td>
<td>15A</td>
<td>Dash</td>
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<tr>
<td>WI Ignition Power</td>
<td>10A</td>
<td>Batt Comp</td>
</tr>
<tr>
<td>Stop Light Power</td>
<td>15A</td>
<td>Batt Comp</td>
</tr>
<tr>
<td>Right Turn Relay Power</td>
<td>5A</td>
<td>Batt Comp</td>
</tr>
<tr>
<td>Left Turn Relay Power</td>
<td>5A</td>
<td>Batt Comp</td>
</tr>
<tr>
<td>Back-up Light Power</td>
<td>7.5A</td>
<td>Batt Comp</td>
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<tr>
<td>Air Dryer</td>
<td>10A</td>
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</tr>
<tr>
<td>Moisture Ejector</td>
<td>20A</td>
<td>Dash</td>
</tr>
<tr>
<td>Tow Vehicle</td>
<td>30A</td>
<td>Batt Comp</td>
</tr>
<tr>
<td>Tail/Marker Power</td>
<td>20A</td>
<td>Batt Comp</td>
</tr>
<tr>
<td>Alternator Ignition</td>
<td>10A</td>
<td>Batt Comp</td>
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<tr>
<td>Engine Preheat</td>
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<tr>
<td>Hood Lamps</td>
<td>5A</td>
<td>Dash</td>
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<tr>
<td>Heater A/C</td>
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<td>Dash</td>
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<tr>
<td>Auto Heater</td>
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<td>Batt Comp</td>
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<tr>
<td>Condenser Fan</td>
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<td>Batt Comp</td>
</tr>
<tr>
<td>Heated Mirror</td>
<td>10A</td>
<td>Dash</td>
</tr>
<tr>
<td>Remote Mirror</td>
<td>5A</td>
<td>Dash</td>
</tr>
<tr>
<td>Camera Power</td>
<td>5A</td>
<td>Batt Comp</td>
</tr>
</tbody>
</table>

09-12 American Tradition
Windshield ................................................. Silka Flex #255 Black
All roof except skylight and clearance lights........... Uniroyal Silaprene M5260
Exterior (except roof) ......................... Geoseal 2300 Tripolymer Clear
Skylight ................................................................. Surebond SB140
Holding tank threaded black pipe ...................... Permatex 80726
All fresh water threaded fittings ........ Rectorseal #100 virgin Teflon
All threaded LPG black pipe .................. Rectorseal Slow Dry 5 Soft pipe thread compound

See Generator Owner's Manual in the Owner's Information Package.
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The following checklists will help you perform the steps necessary to prepare your motor home for storage. Use the checklist that applies to the storage conditions you anticipate. These checklists do not include every detail required, and you may want to expand them to suit your needs. Contact your dealer for additional suggestions suitable to your climate and storage conditions, particularly extremes of hot and cold.

- Wash the motor home exterior and underside. Hose off accumulations of mud and road salts.
- Thoroughly clean the interior of the motor home, including carpets, counter tops, lavy, tub and shower, and galley. Inflate tires to maximum rated cold pressure.
- Park the motor home as level as possible front to rear and side to side. Block wheels front and rear, and leave the parking brake ON.
- Check the charge in the battery. Recharge as necessary.
- Remove battery cables. Refer to the Chassis Owner's Manual for proper removal and installation sequence. Clean terminals, top and sides of batteries and battery boxes. Reinstall cables, dress with a plastic ignition spray. Use battery disconnect switches, if equipped.
- Drain holding tanks, toilet, and fresh water tank.
- Turn off water pump and water heater master switches.

**Storage Checklists**

**Short-Term Storage**
(LESS THAN 60 DAYS)

**WARNING**
The transmission in your motor home does not have a PARK position. Place the transmission in neutral (N) and set the parking brake when parking the motor home. When storing the motor home, chock the wheels and leave the parking brake ON.
**STORAGE**

- Turn off LP gas at tank valve.
- Turn off refrigerator and furnace.
- Turn off all range and oven burner valves and pilot valves (if equipped).
- Remove all perishables from refrigerator and galley cabinets. Block refrigerator open to reduce odor buildup. An open box or tray of baking soda in the refrigerator will help absorb odors.
- Open closet doors, drawers, and cabinets so air can circulate.
- Close and lock all windows. Be sure vent fan and range hood fan switches are off.
- Cover exterior appliance vents (water heater, furnace, range hood, refrigerator) to prevent insects from getting in. Be sure to remove all covering material before using appliances or vents.
- Cap or close holding tank drain, city water inlet and fresh water fill spout.
- Turn off all radios, TVs, interior and exterior lights.
- Close curtains and/or mini-blinds, and pull shades.
- Disconnect the 120-volt power cord (shore cord), and store in compartment.
- Cover tires with cloth, plywood, or aftermarket tire covers. Prepare generator (if equipped). Refer to generator operating manual included in your *Owner's Information Package*. 
Run the engine for about 15 minutes every 30 days.
Turn the vehicle air conditioner ON during this run.
Check engine oil, transmission fluid and coolant levels.

Refer to the Chassis Owner's Manual for further storage procedures and for start up procedures after storage.

Perform all steps as required for short-term storage.
Run engine to normal operating temperature. Operate air conditioner to lubricate compressor seals. Drain engine oil, replace filter, refill engine with fresh oil.
Remove windshield wiper blades and store inside the motor home.
Charge and remove both the vehicle and auxiliary batteries. Store them in a cool, dry place, and check the charge and water level every 30 days. For batteries with removable vent caps, check the specific gravity of the electrolyte periodically with a hydrometer or boost charge every three months. If the specific gravity is being checked, recharge the battery when it reaches 1.220. The time it takes the battery to reach 1.220 depends on its condition and the temperature. The colder the storage area, the slower the battery will self-discharge. A normal time between charges is three months.
Remove, clean and replace air conditioner filters.
Cover the air conditioner shroud(s).
Cover the windows on the inside with foil, cardboard, paper, etc. to reduce curtain, drape, and carpet fading.

NOTE
Your motor home is equipped with a solar battery charger that will trickle charge both house and automotive batteries. The battery disconnect switch must be ON for the solar charger to charge the batteries.
STORAGE

☐ Remove batteries in clocks or other battery-powered devices.

☐ During extended periods of storage, fuel may deteriorate due to oxidation. This can damage rubber and other materials in the fuel system. It may also clog small orifices. Commercially available fuel stabilizers may be added whenever actual or expected storage periods exceed 60 days. Follow the additive manufacturer's instructions. Operate the vehicle regularly during the storage period to mix and circulate the anti-oxidant agent throughout the fuel system.

☐ Refer to the Chassis Owner's Manual for procedures on extended vehicle storage.

☐ Check tire inflation pressures every 30 days. Maintain maximum rated cold inflation pressure.

☐ Check the sealant around all roof and body seams and windows. Reseal if necessary. See Sealant Renewal section.

☐ Lubricate all locks and hinges as described in the Maintenance chapter.

☐ Remove high grass or weed growth.
Thoughtful planning and preparation for the winter season can help eliminate equipment failures and breakdowns, and can extend the life of your motor home and its systems. Your dealer can advise you concerning specific winterization procedures and products for your climate area or the areas through which you will be traveling. Your dealer may also provide winterization service for all appliances and systems in the motor home. The following is a check list if you prefer to perform these procedures yourself:

- Check engine coolant level and antifreeze protection. Drain and flush engine cooling system and add antifreeze to protect the system to the lowest expected storage temperature or at least -20° F.
- Service and winterize the generator (if equipped) as outlined in the generator operating manual included in your Owner's Information Package.
- Winterize the LP gas system. Your LP dealer or service station will perform this for you.
- Winterize all appliances as outlined in the individual operator's manuals.
- Remove snow accumulations as often as possible.
- Be sure the fuel remaining in the tank is "winter blend," or add an appropriate amount of non-gelling fuel additive.
- Read this section completely before performing winterization.
- Remove water filter cartridge, if equipped, and install the winterizing plug.

NOTE
Store your diesel-powered motor home with the fuel tank full of fuel.

WATER SYSTEM WINTERIZING
Drain the fresh water tank by opening the cold low point drain valve located inside the basement utility compartment. Leave the valve open.

Turn water pump on (12-volt power must be on). Open a cold water faucet. When the flow of water stops, turn the pump off.

Open water faucets, then open the low point drain valves on the HOT and COLD water pipes. Leave these valves open. (See Plumbing chapter).

Drain the water heater by opening the drain plug at the bottom of the heater and the safety valve at the top.

Disconnect washer HOT and COLD lines and drain (washer/dryer option only).

Run washer through the spin cycle with lines disconnected to remove water from the washer (washer/dryer option only).

Flush the toilet. Operate toilet sprayer, if equipped.

Drain the showerhead by opening the valve. Let all water drain out the tub spout. Leave the valve open.

When each faucet has been drained, close all faucets, water line drain valves and the fresh water tank drain valve. Install the water heater plug and close the safety valve.

Drain the waste water system by following the normal procedure for draining the holding tanks. (See Plumbing chapter).

Apply silicone lubrication to the knife valve actuator rod(s). Be sure ALL water from ALL plumbing fixtures has been drained.

CAUTION
Draining the water system alone will not provide adequate cold weather protection. If the motor home is to be unheated during freezing temperatures, consult your dealer for the best winterizing procedure for your climate. Your dealer can winterize your motor home for you or can supply you with one of the special antifreezes which are safe and approved for use in RV water systems. Follow the instructions furnished with the antifreeze.

WARNING
Do not use automotive or windshield washer antifreeze in the motor home water system. These solutions may be harmful if swallowed.
Close holding tank drain valves, low point drain valves and fresh water tank drain valve.

Pour approximately five gallons of approved non-toxic antifreeze into the fresh water tank.

Turn the water pump master switch ON.

Open each cold water faucet, run the water pump and let about a cup of antifreeze solution flow continuously through each faucet. Close each cold water faucet.

Flush the toilet until the antifreeze solution flows continuously. Release flush mechanism.

Winterize the water heater according to the instructions provided with the water heater operating manual.

Winterize the hot water lines by opening each hot water faucet, allowing antifreeze solution to flow continuously, and then close each faucet. This will require considerably more antifreeze solution, and you may choose to do this step before winterizing the cold water lines so you can recycle the solution.

When filling the plumbing systems with antifreeze, be sure to open and operate all fixtures and valves allowing the antifreeze solution to flow freely.

Pour one cup of antifreeze solution down each drain. (Tub/shower, galley sink, bathroom sink, washer P-trap)

Install all protective caps:
- Water tank fill
- City water inlet cap
- Waste tank drain outlet cap

A bypass valve (see Water Heater Bypass Valve section in the Appliance chapter) allows the user to bypass the water heater - allowing it to be drained - to reduce the amount of antifreeze required to winterize the fresh water system.
If your refrigerator is equipped with an ice maker, winterize it as follows:

1. Shut off the water supply valve to the ice maker.

2. Place a shallow pan under the water solenoid valve.

3. Remove the inlet fitting to the ice maker water solenoid valve. Drain the water from the supply line.

4. Remove the plastic nut and water line from the outlet side of the water solenoid valve. Drain water from the line.

5. Cycle the ice maker several times while blowing compressed air through the water solenoid valve. Be sure all water is out of the solenoid. **NOTE: Up to 40 PSIG air pressure can be used to clear the valve.**

6. Reconnect and tighten the lines on the solenoid valve. Leave the water supply turned off until temperatures are above 32 degrees F/0 degrees C.

7. Dry out the ice maker mold assembly with a soft cloth. Place the bail arm to the **UP/OFF** position.
If the motor home was properly and carefully prepared for storage, taking it out of storage will not be difficult. The following procedure check list assumes that you stored the motor home with care. If you didn’t, and extensive freeze damage or other serious deterioration has occurred, please consult your dealer or an authorized Fleetwood Service Center for advice.

☐ Thoroughly inspect the outside of the vehicle. Look for animal nests in wheelwells, under the hood, in air cleaner or in other out of the way places.

☐ Remove all appliance vent, ceiling vent and air conditioner coverings. Be sure all furnace, water heater, and refrigerator openings are clear and free of debris or insect nests, webs, etc.

☐ Open all doors and compartments. Check for animal or insect intrusion, water damage, or other deterioration.

☐ Refer to the Chassis Owner’s Manual for procedures onreactivating the vehicle after storage.

☐ Check all chassis fluid levels - engine oil, engine coolant, power steering fluid, brake fluid, transmission fluid, rear axle oil.

☐ Check charge level in batteries. Refill and recharge as necessary. Reinstall batteries if necessary. Be sure cable ends and terminals are clean and free of corrosion.

☐ Check tire pressures. Reinflate to specified cold pressure. Remove covering from inside windows. Open vents and windows for ventilation.
Storage

☐ Be sure engine instruments indicate proper readings. Run engine up to operating temperature. Shut engine down. Check all fluids. Top up if necessary.

☐ During engine run, check the operation of headlights, tail-lights, turn signals, backup lights, clearance lights, license plate light, emergency flashers. Check the exhaust system for leaks or deterioration. Operate the vehicle air conditioner. If air conditioner does not work, or unusual sounds occur, have the system checked by a qualified air conditioner technician.

☐ Drain, flush, and sanitize the fresh water system as outlined in the Plumbing chapter. Inspect the drain hose for leaks. Replace if necessary - repairs are usually not effective.

☐ Install a new water filter cartridge (if equipped).

☐ Operate all faucets and fixtures in the fresh water system. Check for leaks at all joints and fittings. Repair if necessary.

☐ Check 12-volt circuit breakers and inspect fuses.

☐ Operate all 12-volt lights and accessories.

☐ Install new batteries in battery-operated devices.

☐ Check operator's manual for each device for additional requirements.

☐ Test carbon monoxide, LP gas and smoke detectors.

☐ Check monitor panel operation.
Open and operate vents and vent fans, including the range hood fan.

Inspect the 120-volt electrical system - power cord, converter, inverter, all outlets, and any exposed wiring. If defects are found, refer service to your dealer or an authorized Fleetwood Service Center.

Prepare the generator for operation following instructions in the generator operating manual in your Owner's Information Package.

Start and run generator. Check the generator exhaust system for leaks or deterioration.

Operate 120-volt appliances and air conditioners. Be sure to uncover air conditioner shroud(s).

Inspect the LP gas system and check for leaks as described in the LP Gas System chapter. If the LP tank shows signs of rust or corrosion, have it inspected by a qualified LPG technician.

Operate each LP gas appliance. Observe all burner/pilot flames for proper color and size. In any case, have the LP gas regulator adjusted for proper pressure by a qualified technician.

Inspect and clean the interior.

Check the sealant around all roof and body seams and windows. Reseal if necessary. See Sealant Renewal section.

Lubricate all exterior locks, hinges, and latches.
**Storage**

- Reinstall windshield wiper blades. Check wiper/washer operation.

- Wash and wax the exterior. Inspect the body for scratches or other damage. Touch up or repair as necessary. Flush the underside thoroughly.

- Run thorough operational checks of steering, brakes, engine and transmission. Operate vehicle slowly during these checks to allow sufficient circulation of fluids and reseating of components.

Your motor home should now be ready for a new traveling season. If you choose, your dealer can double check your preparation and correct any defects or make any necessary adjustments.
**Glossary**

**AC Inverter** - An electronic device that changes 12-volt DC energy from the batteries to 120-volt 60-cycle, AC energy to operate microwave ovens, TVs, VCRs, or other appliances that require 120-volt 60-cycle power.

**Belted Seating Positions** - These are seats with seat belts. Anyone riding in the motor home must use one of these seats any time the motor home is in motion.

**Black Water Tank** - The water tank in your plumbing system that is designed to contain waste water from the toilet ONLY.

**CAUTION** - Any statement in this Owner's Manual that, if not followed, could result in damage to the vehicle or components.

**Chassis Operator's/Owner's Guide/Manual** - This is the operating and maintenance manual supplied by the chassis manufacturer. It is part of your Owner's Information Package. It contains information on operating and maintaining the engine, transmission, drivetrain and other components of the motor home chassis.

**DC Converter** - An electronic device that changes 120-volt AC energy from the main power connection or the generator to 12-volt DC energy to operate the 12-volt interior lights or other 12-volt DC appliances or accessories.

**Designated Seating Capacity (Canadian units only)** - The number of sleeping positions designated equals the seating capacity.

**Diagnostic Codes** - Features of the electronic transmission control that will help you troubleshoot and/or monitor specific operating conditions of the transmission.
**Doorside** - The right side of the motor home from the driver’s point of view. So named because the main entry/exit door is usually on this side.

**ECU (Electronic Control Unit)** - The electronic “brain” of the transmission. It controls the transmission.

**Engine overspeed/overrevining** - Exceeding the specified RPM of the engine.

**Engine block heater** - An electrical device attached to the motor home engine that will help you start the engine in very cold weather. It warms the oil in the crankcase allowing the engine to turn over more easily.

**FIN (Fleetwood Identification Number)** - This is the number that identifies your motor home as a Fleetwood product. Use this number when ordering parts or requesting warranty service for your motor home.

**Fuel stabilizer** - A chemical additive that helps to keep the diesel fuel in the tank fresh and volatile during long storage periods. Also known as “anti-oxidant.”

**CAWR (Gross Axle Weight Rating)** - The maximum permissible loaded weight a specific axle is designed to carry.

**GCWR (Gross Combined Weight Rating)** - The value specified by the motor home manufacturer as the maximum allowable loaded weight of this motor home with its towed trailer or towed vehicle. Towing and braking capacities may be different. Refer to Fleetwood and the chassis manufacturer’s manuals for complete information.

**Gear Preselection** - The selection of a lower gear to match the driving conditions you encounter or expect to encounter. Preselection will give you better control on slick or icy roads and on downgrades. Downshifting to lower gears increases engine braking. The selection of a lower gear often prevents cycling between a gear and the next higher gear on a series of short up-and-down grades.
**GFCI (Ground Fault Circuit Interrupter)** - An electrical device attached to the bathroom AC circuits that disconnect the outlet if a problem occurs in the ground circuit.

**Gray Water Tank** - The water tank in your plumbing system that is designed to contain waste water from the sinks and shower drains ONLY. No toilet wastes go into this tank.

**GTW (Gross Towing Weight)** - The maximum permissible loaded weight of a trailer or car that this motor home has been designed to tow. This cannot be increased by changing the trailer hitch.

**GVWR (Gross Vehicle Weight Rating)** - The maximum permissible weight of this motor home. The GVWR is equal to or greater than the sum of the Unloaded Vehicle Weight plus the Net Carrying Capacity.

**ICC Switch** - Intermittent Courtesy Circuit. This switch will flash the clearance lights and is useful when signalling other large vehicles when passing or being passed.

**Monitor Panel** - An electronic device that allows you to conveniently measure the approximate levels in the fresh water, gray and black water tanks. You can also check the charge in the battery/batteries.

**NCC (Net Carrying Capacity)** - The maximum weight of all occupants including the driver, personal belongings, food, fresh water, LP gas, tools, the tongue weight of towed vehicle, dealer installed accessories, etc., that can be carried by this motor home. Normal variation of materials may cause the Net Carrying Capacity to be 200 lbs. higher or lower than stated. (NCC is equal to or less than GVWR minus UVW.)

**No. 1 Diesel fuel** - Diesel fuel with lower viscosity and heat value than #2 diesel. It is sometimes blended with #2 diesel fuel for cold weather use.
Glossary

No. 2 Diesel fuel - Diesel fuel sold for over-the-highway use. This grade is specified for the engine in your motor home and will give optimum performance.

NOTE - A statement or instruction in this Owner's Manual with information to help you use the vehicle or equipment more efficiently, such as a tip.

Owner's Information Package - This is a package of papers, manuals, warranty and instruction cards, and other material put together for you by Fleetwood. These materials contain operating and maintenance instructions for most of the components and appliances in your motor home.

Ownercare Card - The card that has your name and vehicle ID (FIN) printed on it. Use this card when you request or need warranty service. Please note that this is NOT a credit card. You cannot purchase anything with it. It is used only to identify you and your motor home.

Park Cable - The F-style video connector that allows you to connect to an outside television signal source, such as the cable TV feed at an RV park, or any other 75-ohm video source. This connector usually carries an RF modulated signal.

Park/City Water Connection - The "garden-hose" style connector that allows you to connect to an outside pressurized water source.

Power/Shore Cord - This is the main power cord coming into your motor home electrical system. You connect it to 120-volt AC power at a park or campsite.

Predelivery Inspection - This is the procedure required by Fleetwood that your dealer performs before you take delivery of the motor home at the time of sale.

Roadside - The left side of the motor home from the driver's point of view. So named because, at least in North America, the "road" outside the vehicle is usually on this side.
Summer blend fuel - Diesel fuel formulated for use during warm weather.

TW (Tongue Weight) - The maximum permissible downward force exerted on the hitch ball by the towed vehicle coupler.

UVW (Unloaded Vehicle Weight) - The weight of the motor home, as built at the factory with full fuel, engine oil and coolants. The UVW does not include cargo, fresh water, LP gas, occupants or dealer installed accessories. Note: Canadian UVW includes designated seating, LP and water.

VIN (Vehicle Identification Number) - The legal, 17-digit vehicle identification number as shown on the vehicle registration certificate.

WARNING - A statement or instruction in this Owner's Manual that, if not followed, could lead to personal injury or death.

Winter blend fuel - Diesel fuel formulated for use in cold weather.
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