# Table of Contents

## INTRODUCTION 1
- About this Manual ............................................................... 1-1
- Safety Messages Used in this Manual .................................. 1-1
- Pre-Delivery Inspection ...................................................... 1-2
- Front Axle Tire Alignment .................................................. 1-2
- Service and Assistance ...................................................... 1-2
- Reporting Safety Defects .................................................... 1-2
- Vehicle Certification Label ................................................. 1-3
- Body and Chassis Specifications ........................................ 1-4
- Tank Capacities ................................................................. 1-6
- Owner Information ............................................................. 1-7
- Emergency Information ..................................................... 1-7
- 2007 New Vehicle Limited Warranty ................................. 1-8

## SAFETY/PRECAUTIONS 2
- General Warnings ............................................................. 2-1
- Driving ............................................................................... 2-1
- Formaldehyde Information ................................................ 2-1
- Propane Gas Leak Detector ............................................... 2-2
- Carbon Monoxide Warning ............................................. 2-2
- Carbon Monoxide Alarm .................................................... 2-2
- Smoke Alarm .................................................................... 2-3
- Fire Extinguisher ............................................................. 2-3
- Emergency Exits ............................................................... 2-4
- Roadside Emergency ......................................................... 2-4
- Jump Starting .................................................................... 2-6
- Engine Overheat ............................................................... 2-6
- Effects of Prolonged Occupancy ........................................ 2-6
- Mold, Moisture and Your Motor Home ............................. 2-6

## DRIVING YOUR MOTOR HOME 3
- Front Seats ........................................................................ 3-1
- Folding Dinette Seat ......................................................... 3-1
- Seat Belts .......................................................................... 3-1
- Child Restraints ............................................................... 3-2
- Keys ................................................................................ 3-3
- Mirrors – Exterior ............................................................. 3-3
- Rearview Monitor System .............................................. 3-3
- Battery Boost Switch ....................................................... 3-4
# Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Conditioner/ Heater – Automotive</td>
<td>3-4</td>
</tr>
<tr>
<td>In-Dash Radio</td>
<td>3-4</td>
</tr>
<tr>
<td>Engine Access</td>
<td>3-5</td>
</tr>
<tr>
<td>Engine Cooling System</td>
<td>3-5</td>
</tr>
<tr>
<td>Tires</td>
<td>3-5</td>
</tr>
<tr>
<td>Suspension Alignment and Tire Balance</td>
<td>3-5</td>
</tr>
<tr>
<td>Air Springs – Rear</td>
<td>3-6</td>
</tr>
<tr>
<td>Lights</td>
<td>3-6</td>
</tr>
<tr>
<td>Fuses and Circuit Breakers – Automotive 12V</td>
<td>3-6</td>
</tr>
<tr>
<td>Loading the Vehicle</td>
<td>3-6</td>
</tr>
<tr>
<td>Roof Loading</td>
<td>3-7</td>
</tr>
<tr>
<td>Weighing Your Loaded Vehicle</td>
<td>3-7</td>
</tr>
<tr>
<td>Car or Trailer Towing</td>
<td>3-9</td>
</tr>
<tr>
<td>Trailer Wiring Connector</td>
<td>3-10</td>
</tr>
<tr>
<td>Towing Guidelines</td>
<td>3-10</td>
</tr>
<tr>
<td>Mountain Driving</td>
<td>3-11</td>
</tr>
<tr>
<td>Tool and Ladder Storage</td>
<td>3-11</td>
</tr>
<tr>
<td>Roof Ladder Extension</td>
<td>3-12</td>
</tr>
<tr>
<td>Storage Compartment Doors</td>
<td>3-14</td>
</tr>
<tr>
<td><strong>APPLIANCES &amp; EQUIPMENT 4</strong></td>
<td></td>
</tr>
<tr>
<td>Refrigerator</td>
<td>4-1</td>
</tr>
<tr>
<td>Refrigerator Service Access Compartment</td>
<td>4-2</td>
</tr>
<tr>
<td>Range and Oven</td>
<td>4-2</td>
</tr>
<tr>
<td>Microwave Oven</td>
<td>4-3</td>
</tr>
<tr>
<td>Range Hood</td>
<td>4-3</td>
</tr>
<tr>
<td>Systems Monitor Panel</td>
<td>4-3</td>
</tr>
<tr>
<td>Water Heater</td>
<td>4-5</td>
</tr>
<tr>
<td>Pressure-Temperature Relief Valve</td>
<td>4-5</td>
</tr>
<tr>
<td>Water Heater Bypass Valve</td>
<td>4-6</td>
</tr>
<tr>
<td>Propane Gas Furnace</td>
<td>4-6</td>
</tr>
<tr>
<td>Heat Pump</td>
<td>4-7</td>
</tr>
<tr>
<td>Ducted Roof Air Conditioning System</td>
<td>4-7</td>
</tr>
<tr>
<td>Entrance Step – Manual</td>
<td>4-9</td>
</tr>
<tr>
<td>Entrance Step – Electric</td>
<td>4-9</td>
</tr>
<tr>
<td><strong>PROPANE GAS SYSTEM 5</strong></td>
<td></td>
</tr>
<tr>
<td>Propane Gas Supply</td>
<td>5-1</td>
</tr>
<tr>
<td>Safe Use of the Propane Gas System</td>
<td>5-2</td>
</tr>
<tr>
<td>Propane Gas Warnings and Precautions</td>
<td>5-3</td>
</tr>
<tr>
<td>Pressure Regulator</td>
<td>5-4</td>
</tr>
<tr>
<td>Cold Weather Propane Vaporization</td>
<td>5-5</td>
</tr>
</tbody>
</table>
### ELECTRICAL 6
- Electrical Cautions .................................................................................................................. 6-1
- Electrical System – 110V AC ..................................................................................................... 6-1
- External Power Cord .................................................................................................................. 6-1
- Power Center .............................................................................................................................. 6-2
- Circuit Breakers – 110-Volt ......................................................................................................... 6-3
- Receptacles (Outlets) – 110V ....................................................................................................... 6-4
- Ground Fault Circuit Interrupter .................................................................................................. 6-4
- Generator – Auxiliary 110-Volt AC ............................................................................................. 6-5
- Electrical System – 12V DC ......................................................................................................... 6-6
- Auxiliary Battery Switch ............................................................................................................. 6-7
- Battery Care ................................................................................................................................. 6-7
- Fuses and Circuit Breakers – House 12V DC ............................................................................. 6-8

### PLUMBING 7
- Fresh Water System .................................................................................................................... 7-1
- Water Pump .................................................................................................................................. 7-2
- Disinfecting Fresh Water Systems on RV’s .................................................................................. 7-3
- Shower Hose Vacuum Breaker ..................................................................................................... 7-3
- Exterior Shower/Wash Station ....................................................................................................... 7-4
- Toilet ........................................................................................................................................... 7-4
- Waste Water System .................................................................................................................... 7-5
- Holding Tank Heater ..................................................................................................................... 7-6
- Water Line and Tank Drain Valves .............................................................................................. 7-6
- Winterizing Procedure .................................................................................................................. 7-7
- Water System Drain Valve Locations .......................................................................................... 7-10

### ENTERTAINMENT 8
- Swing-Out TV Mounts .................................................................................................................. 8-1
- Video Selection System .................................................................................................................. 8-1
- Front TV Ignition Switch Interlock ................................................................................................ 8-1
- Home Theater System .................................................................................................................. 8-2
- TV/DVD Master Power Switch – 12-Volt ..................................................................................... 8-2
- Electrical Inverter .......................................................................................................................... 8-2
- TV Antenna ................................................................................................................................. 8-3
- TV Signal Amplifier ....................................................................................................................... 8-3
- Cable TV Hook-Up ......................................................................................................................... 8-3
- Digital Satellite Television System ................................................................................................ 8-4
- Satellite System Wiring .................................................................................................................. 8-4
- Exterior Entertainment Center ....................................................................................................... 8-4
- Two-Way Radios ........................................................................................................................... 8-5
### Table of Contents

#### FURNITURE & SOFTGOODS 9
- Sleeping Facilities ................................................................. 9-1
- Overhead Front Bunk .............................................................. 9-1
- Couch/Bed Conversion ............................................................ 9-2
- Dinette/Bed Conversion .......................................................... 9-2
- U-Shaped Dinette/Bed Conversion ........................................ 9-3
- Pleated Blinds ........................................................................ 9-4
- Quartz Wall Clock ................................................................. 9-4
- Wood Furniture and Cabinetry ............................................... 9-5

#### SLIDEOUT 10
- Slideout Room Operation ....................................................... 10-1
- Slideout Room – Extreme Weather Precaution .................. 10-3
- Troubleshooting .................................................................... 10-3
- Emergency Retraction ........................................................... 10-4
- General Slideout Care ........................................................... 10-7

#### MAINTENANCE 11
- Sealants ................................................................................ 11-1
- Roof .................................................................................... 11-1
- Underbody ........................................................................... 11-2
- Exterior Finish ..................................................................... 11-2
- Care of Stripes and Decals ..................................................... 11-2
- Plastic Parts – Cleaning ........................................................ 11-3
- Exterior Lights ..................................................................... 11-3
- Interior Softgoods ................................................................. 11-3
- Care of Ceiling Fabric ........................................................... 11-4
- Cabinetry ............................................................................ 11-5
- Vinyl Wallboard .................................................................. 11-6
- Tables and Countertops ......................................................... 11-6
- Galley Sink .......................................................................... 11-6
- Range and Refrigerator ........................................................ 11-6
- Bathroom ............................................................................ 11-6
- Doors and Windows .............................................................. 11-7
- Pleated Blinds – Adjustment and Care ............................... 11-7
- Preparing Vehicle for Storage .............................................. 11-7
- Coach Maintenance Chart .................................................... 11-9
- Recommended Sealant Application ..................................... 11-12
Congratulations! We welcome you to the exciting world of motor home travel and camping. You will find it convenient and enjoyable to have all the comforts of home and still enjoy the great outdoors wherever you choose to go. Your motor home has been carefully designed, engineered and manufactured to provide years of enjoyment.

Before sliding into the driver’s seat, please become familiar with operations and features. In addition, spend some time with the dealer when you take delivery to learn all you can about your new motor home.

ABOUT THIS MANUAL

This operator manual was prepared to aid you in the proper care and operation of the vehicle and equipment.

Please read this manual completely to understand how everything in your coach works before taking it on its “maiden voyage.”

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 or unavailable on your model. Because of Winnebago Industries’ continuous program of product improvement, it is possible that recent product changes and information may not be included.

The instructions included in this manual are intended as a guide, and in no way extend the responsibilities of Winnebago Industries beyond the standard written warranty as presented in this manual. The descriptions, illustrations, and specifications in this manual were correct at the time of printing. We reserve the right to change specifications or design without notice, and without incurring obligation to install the same on products previously manufactured.

The materials in your InfoCase contain warranty information and operating and maintenance instructions for the various appliances and components in your motor home.

NOTE: Many of the instruction sheets and manuals for the various appliances and components have been incorporated into the Operator Manual Supplement for your convenience. Please read the FAQ in section 1 of the Operator Manual Supplement for more details.

Throughout this manual, frequent reference is made to the vehicle chassis manual that is provided by the manufacturer of the chassis on which this motor home is built.

Consult the chassis manual for operating, safety and maintenance instructions pertaining to the chassis section of the motor home.

SAFETY MESSAGES USED IN THIS MANUAL

Throughout this manual, certain items are labeled Danger, Warning, Caution or Note. These terms alert you to precautions that may involve damage to your vehicle or a risk to your personal safety. Read and follow them carefully.

DANGER indicates a directly hazardous situation which, if not avoided, will result in death or serious personal injury.
SECTION 1
INTRODUCTION

WARNING
WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious personal injury.

CAUTION
CAUTION indicates a potentially hazardous situation which, if not avoided, could result in damage mainly to equipment or property, but in some cases may also result in minor or moderate personal injury.

NOTE: A ‘Note’ is not necessarily safety related but indicates a recommendation or special point of information that could assist in understanding the use or care of a feature item.

PRE-DELIVERY INSPECTION
This motor home has been thoroughly inspected before shipment. Your dealer is responsible for performing a complete pre-delivery inspection of the chassis and all motor home components.

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

FRONT AXLE TIRE ALIGNMENT
We recommend that you have the front suspension and steering alignment checked and adjusted after you have fully loaded the vehicle according to your needs. Thereafter, have alignment inspected periodically to maintain vehicle steering performance and prevent uneven tire wear.

SERVICE AND ASSISTANCE
Your dealer will be glad to provide any additional information you need, as well as answer any questions you might have about operating the equipment in your motor home. When it comes to service, remember that your dealer knows your vehicle best and is interested in your satisfaction. Your dealer will provide quality maintenance and any other assistance that you may require during your ownership of this vehicle.

If you need warranty repairs while traveling you may take your motor home to any authorized Winnebago or Itasca dealership and request their assistance.

See the Motor Home Service Dealer directory in your InfoCase.

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

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 Winnebago Industries.

To contact NHTSA, you may either call the Vehicle Safety Hotline toll-free at 1-888-327-4236 (TTY: 1-800-424-9153) or go to their website at http://www.safercar.gov

You can also obtain other information about motor vehicle safety from the NHTSA website at http://www.safercar.gov

WARNING

CAUTION
VEHICLE CERTIFICATION LABEL

This label is affixed to the lower driver side armrest panel, driver door or the driver side door jamb, depending on model. It contains vehicle identification numbers and other important reference information.

EXPLANATION OF DATA

1. Chassis manufacturer.
2. Chassis manufacture date.
3. Month and year of manufacture at Winnebago Industries.
4. Gross Vehicle Weight Rating: Total permissible weight of the vehicle, including driver, passengers, total cargo carried (including all liquids) and equipped with all options.
5. Gross Axle Weight Rating: Total permissible weight allowed for the front and rear axles (listed in pounds and kilograms).
6. Suitable Tire Choice: Tires recommended to meet handling and safety requirements. When replacing any of the tires on your vehicle, always replace with a tire that meets these specifications.
7. Suitable Rim Choice: Wheel rims recommended to meet handling and safety requirements. When replacing any of the rims on your vehicle, always replace with a rim that meets these specifications.
8. Cold Inflation Pressure: Inflation pressures at Gross Axle Weight Ratings recommended (while Cold) for the tires originally equipped on your vehicle. These pressure levels must be maintained to assure proper handling, safety and fuel economy.
9. Rear Axle Wheel Configuration: Single or Dual as it relates to the inflation.
10. Serial Number: This is the serial number assigned to the completed vehicle by Winnebago Industries.
11. Vehicle Identification Number (VIN): This number identifies the chassis on which the motor home is built. The 10th digit of the VIN designates the chassis model year. (6=2006, 7=2007, etc.). This information is useful when ordering chassis repair parts.
12. Type: States the NHTSA designated usage classification for your motor home. MPV signifies a Multi-purpose Passenger Vehicle.
13. Model: Lists the Winnebago product model number of your vehicle.
14. Color: Signifies the color code number of the decor used throughout the vehicle. This number is necessary for ordering replacement cushions, curtains, carpet, etc.
### BODY AND CHASSIS SPECIFICATIONS

<table>
<thead>
<tr>
<th>Model</th>
<th>22ER</th>
<th>22RR</th>
<th>24VR</th>
<th>25FR</th>
<th>26AR</th>
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<tr>
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<td>Chevy</td>
<td>Ford</td>
<td>Chevy</td>
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<tr>
<td></td>
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<td>24’ 8”</td>
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<td>25’ 11”</td>
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<tr>
<td>Exterior Height w/AC</td>
<td>Ford</td>
<td>Chevy</td>
<td>Ford</td>
<td>Chevy</td>
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<tr>
<td></td>
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<td>10’ 11”</td>
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<td>10’ 11”</td>
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<tr>
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<td>8’ 5.5”</td>
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<td>138”</td>
<td>—</td>
<td>158”</td>
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<td>168”</td>
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**NOTE:** The height of each model is based on the curb weight of a typically equipped unit and is measured to the highest standard feature on the roof. The actual height of a vehicle may vary by several inches depending on equipment variations. Refer to Section 3 for Towing Guidelines.
## BODY AND CHASSIS SPECIFICATIONS

<table>
<thead>
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<th>29BR</th>
<th>29KR</th>
<th>31CR</th>
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<td></td>
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<td>28'</td>
<td>28'</td>
<td>31' 5&quot;</td>
<td>31' 5&quot;</td>
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<tr>
<td>Exterior Height w/AC</td>
<td>Ford</td>
<td>Chevy</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>10’ 11&quot;</td>
<td>10’ 11&quot;</td>
<td>10’ 11&quot;</td>
<td>10’ 11&quot;</td>
<td>10’ 11&quot;</td>
</tr>
<tr>
<td>Exterior Width</td>
<td>8’ 5.5&quot;</td>
<td>8’ 5.5&quot;</td>
<td>8’ 5.5&quot;</td>
<td>8’ 5.5&quot;</td>
<td>8’ 5.5&quot;</td>
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<tr>
<td>Exterior Storage (cu. ft.)</td>
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<td>6’ 8&quot;</td>
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<td>6’ 8&quot;</td>
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<td>182”</td>
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</tbody>
</table>

**NOTE:** The height of each model is based on the curb weight of a typically equipped unit and is measured to the highest standard feature on the roof. The actual height of a vehicle may vary by several inches depending on equipment variations. Refer to Section 3 for Towing Guidelines.
# TANK CAPACITIES

## Chassis Fuel Tank
- Ford 22’ models ................................................................. 37 gal.
- Ford 24’-32’ models ............................................................ 55 gal.
- Chevy 24’-31’ models .......................................................... 55 gal.

## Propane Gas Tank
- All Models ................................................................. 14.1 gal.* (17.6 gal. w.c.)

## Fresh Water Tank
- Models 22ER & 22RR .......................................................... 27 gal.
- Models 24VR & 26AR .......................................................... 37 gal.
- Models 31CR & 32GR .......................................................... 30 gal.

## Water Heater
- All Models ................................................................. 6 gal.

## Gray Water Holding Tank
- Model 22ER (Galley & Shower) ............................................. 32 gal.
- Model 22RR (Galley & Shower) ............................................. 39 gal.
- Model 24VR, 25FR & 26AR (Galley & Shower) ......................... 29 gal.
- Model 31CR (Galley & Shower) ............................................. 28 gal.

## Black Water Holding Tank
- Model 22RR (Toilet & Lavatory) ......................................... 32 gal.
- Model 27LR (Toilet) .......................................................... 34 gal.
- Models 29BR, 29KR & 32GR (Toilet) ..................................... 30 gal.
- Model 31CR (Toilet & Lavatory) ......................................... 35 gal.

*Propane Gas tank capacity shown is the usable “full” propane gas capacity, which is 80% of the tank manufacturer’s listed water capacity (w.c. shown in parenthesis). A propane tank must have at least 20% of tank volume free to allow for expansion and proper vaporization of the liquid fuel. The tank is also equipped with mandatory safety shut-off equipment that prevents filling above this level.

**NOTE:** Capacities shown are approximate volumes based on computer design calculations. Usable capacities may vary according to fabrication and installation of tanks and compartments.
OWNER INFORMATION

Owner’s Name ________________________________________________________________
Street Address ________________________________________________________________
City and State (or Province in Canada) ____________________________________________
Motor Home Serial Number ______________________________________________________
Vehicle Chassis Identification No (VIN) ____________________________________________
Vehicle Mileage at Time of Delivery ______________________________________________
Selling Dealer Name and Address ________________________________________________
_____________________________________________________________________________

EMERGENCY INFORMATION

YOUR WINNEBAGO INDUSTRIES DEALER
Name ________________________________________________________________
Address ________________________________________________________________
Contact Person _____________________________________________________________
Phone ________________________________________________________________

CHASSIS DEALER/SERVICE CENTER
Name ________________________________________________________________
Address ________________________________________________________________
Contact Person _____________________________________________________________
Phone ________________________________________________________________

INSURANCE POLICY
Company ________________________________________________________________
Policy Number _____________________________________________________________
Phone ________________________________________________________________
2007 NEW VEHICLE LIMITED WARRANTY
WINNEBAGO INDUSTRIES, INC.

WARRANTY COVERAGE TO OWNER

Winnebago Industries, Inc. of Forest City, Iowa, ("Winnebago") warrants each new Winnebago and Itasca recreational motor home to the owner for use in the U.S.A. and Canada as follows:

BASIC LIMITED WARRANTY

WINNEBAGO’S RESPONSIBILITY

Any part of the vehicle subject to this warranty that is found to be defective in material or workmanship under normal use and maintenance will be repaired or replaced at Winnebago’s option without charge to the customer for parts or labor upon notice of the defect.

WARRANTY PERIOD

The basic Warranty Period is 12 months or 15,000 miles (24,135 kilometers), or the odometer, whichever occurs first. The Warranty Period for all coverages begins on the date the vehicle is delivered to the first retail purchaser or first placed in service as a demonstrator or company vehicle.

ONLY WARRANTY

This limited warranty is the only warranty made or authorized by Winnebago. Winnebago makes no other promises, representations or warranties concerning the vehicle or other matters set forth herein. Winnebago does not authorize any person to create for it any other obligations or liability in connection with this vehicle.

DEALER’S REPRESENTATIONS EXCLUDED

Winnebago shall not be bound by any undertaking, representation, or warranty made by any dealers selling its product to any purchaser of its products.

EXCLUSIVE REMEDY

THE PERFORMANCE OF REPAIRS IS THE EXCLUSIVE REMEDY UNDER THIS LIMITED WARRANTY OR ANY IMPLIED WARRANTY, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE APPLICABLE TO THIS VEHICLE ARISING BY WAY OF STATE LAW IS LIMITED IN DURATION TO THE DURATION OF THIS WRITTEN WARRANTY AS HEREBEFORE OR HERECOTHERWISE PROVIDED.

LIMITATION ON LIABILITY

WINNEBAGO SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM BREACH OF THIS WRITTEN WARRANTY OR ANY IMPLIED WARRANTY. SUCH DAMAGES INCLUDE, BUT ARE NOT LIMITED TO, LOSS OF TIME, INCONVENIENCE, OR OTHER CONSEQUENTIAL DAMAGE INCLUDING EXPENSE FOR GASOLINE, TELEPHONE, TRAVEL, LODGING, LOSS OR DAMAGE TO PERSONAL PROPERTY, OR LOSS OF REVENUE.

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

ITEMS NOT SUBJECT TO WARRANTY COVERAGE

Chassis, drivetrain and related components*
Wheels*
Tires*
Any other part or component covered by a written warranty issued by its manufacturer*
Service items, such as Windshield Wiper Blades, Lubricants, Fluids & Filters
Adjustments

*These items are covered under the manufacturer's individual warranty.

ADDITIONAL EQUIPMENT NOT COVERED

Winnebago cannot and does not accept any responsibility in connection with any of its motor homes for additional equipment or accessories installed at any dealership or other place of business, or by any other party other than Winnebago. Such installation of equipment or accessories by any other party will not be covered by the terms of this warranty.

36 MONTH/36,000 MILE STRUCTURAL WARRANTY

At the expiration of the Basic Coverage and for the remainder of the period of 36 months or 36,000 miles (57,924 kilometers), on the odometer, whichever occurs first, Winnebago Industries warrants the following:

1. Structural defects of the subfloor, floor, and slide-out room assembly. Floor lamination failure and lamination failure of the subfloor panels and risers are covered by the structural warranty.
2. Body Thermo-Panel® Lamination of the sidewalls and backwall against delamination. Body Thermo-Panel® Lamination is the bonding of the exterior skin and the interior paneling to an insulating core material. Delamination (separation of layers) caused by other factors such as physical damage or failed sealants is not covered by this warranty.

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

Also, this warranty shall not apply to failures, damage or malfunctions resulting from normal wear, misuse, abuse, negligence, alteration, accident, fire, improper repair of the vehicle or failure to follow recommended maintenance requirements.

OWNER’S RESPONSIBILITY-CARE AND MAINTENANCE

It is the owner’s responsibility to perform the care, maintenance and proper load distribution described in the operator’s manual which accompanies your motor home. Any damage which results to your vehicle as a result of your failure to perform such duties, is not covered.

Damage to appearance items such as fiberglass, metal, paint, fabrics and trim, may occur during manufacturing or transporting. Normally, any factory defect or damage is corrected at the factory. In addition, dealers are obligated to inspect each vehicle upon delivery to them and prior to delivery to you. You should also immediately inspect appearance items and advise your selling dealer of any discrepancies. Damage and normal deterioration due to use and exposure is not covered by this warranty.
OBTAINING WARRANTY REPAIRS

While any Winnebago Industries motor home dealer can perform warranty service, we recommend you return to the dealership that sold you your vehicle. If you are touring or have moved, contact any Winnebago Industries motor home dealer in the United States or Canada for warranty service.

If a part of the system covered by this limited warranty fails to function or requires service during the warranty period:

1. Promptly take the vehicle to the selling dealer for repair or inspection.
2. Written notice of defects must be given to the selling dealer and manufacturer.
3. If the dealer is incapable of making the repairs, request that he contact Winnebago Industries, Inc.
4. If, after the above steps are completed and the repair is not made, the customer should contact Winnebago Industries, Inc., 605 West Crystal Lake Road, P.O. Box 152, Forest City, Iowa 50436, Attention: Owner Relations Department (800-537-1885) and furnish the following information:
   - The complete serial number of the vehicle
   - Date of retail purchase
   - Selling dealer’s name
   - Nature of the service problem, and a brief explanation of the steps or service the dealer has performed, and the results obtained. The customer may be directed to another dealer or service center for repairs to be completed, if such a dealer or service center is better able to complete the repair.

Winnebago Industries may, at its option, request the vehicle be returned to Forest City, Iowa for repair. If the customer refuses to allow repairs to be performed at the Forest City, Iowa facility, the warranty on that repair will be voided.

5. If after the above steps are completed and the repairs are not satisfactory, the customer may contact the Service Administration Manager of Winnebago Industries, and request a customer relations board meeting to resolve the problem. This action, however, is not mandatory.
6. Certain components are covered by warranties provided by individual component manufacturers. Please refer to the component’s information supplied in the vehicle’s InfoCase.

COMMENCEMENT OF ACTIONS

Any action for breach of The Basic Limited or Structural Warranty or any implied warranty shall be commenced within one-year after expiration of the warranty.

CHANGES IN DESIGN

Winnebago Industries, Inc. reserves the right to make changes in design and changes or improvements upon its products without imposing any obligation upon itself to install the same upon its products theretofore manufactured.

NEW YORK:

If your motor home has been repaired three or more times for the same nonconformity, defect, or condition, or if your motor home has been out of service by reason of repair for twenty-one days, Section 198-a of the General Business Law of the State of New York requires you to provide written notice by certified mail, return receipt requested, to Winnebago Industries or its authorized dealer before making any claim under that section of the law. If you do have problems with your motor home, you should provide written notice to Winnebago Industries at the following address:

Winnebago Industries, Inc.
605 West Crystal Lake Road
P.O. Box 152
Forest City, Iowa 50436
Attn: Owner Relations

CALIFORNIA:

Winnebago Industries participates in the Consumer Arbitration Program for Recreation Vehicles (CAP-RV). This third-party dispute resolution program is available, at no charge to you, to settle unresolved warranty disputes for recreational vehicles. This dispute resolution program reviews eligible product and service related complaints involving warranty covered components.

To find out more about the program, or to request an application/brochure, please call the Arbitration Administration office toll-free 800-279-5343.

The CAP-RV program operates as a certified mechanism under the review of the California Arbitration Certification Program. You must utilize the arbitration program before claiming rights conferred by 15 USC section 2310 (Uniform Commercial Code) or Civil Code section 1793.22(b) (Tanner Consumer Protection Act). You are not required to use the program if you choose to seek redress by pursuing rights and remedies not created by those laws.
SECTION 2 SAFETY/PRECAUTIONS

GENERAL WARNINGS

• Only seats equipped with seat belts are to be occupied while the vehicle is moving.
• Make sure all passengers have seat belts fastened in a low and snug position so the force exerted by the belt in a collision will be spread across the strong hip area. Pregnant women should wear a lap-shoulder belt whenever possible, with the lap belt portion worn low and snug throughout the pregnancy.
• All moveable or swivel seats should be placed and locked in forward facing positions while the vehicle is moving.
• Never let passengers stand or kneel on seats while the vehicle is moving.
• Sleeping facilities are not to be utilized while vehicle is moving.
• Examine the escape window and be familiar with its operation.
• Inspect the fire extinguisher monthly for proper charge and operating condition. This should also be done before beginning a vacation or any extended trip.

DRIVING

• Do not attempt to adjust the driver’s seat while the vehicle is moving.
• Do not adjust tilt steering in a moving vehicle.
• Do not operate the cruise control on icy or extremely wet roads, winding roads, in heavy traffic, or in any other traffic situation where a constant speed cannot be maintained.
• Use care when accelerating or decelerating on a slippery surface. Abrupt speed changes can cause skidding and loss of control.
• Driving through water deep enough to wet the brakes may affect stopping distance or cause the vehicle to pull to one side. Check brake operation in a safe area to be sure they have not been affected. Never operate any vehicle if a difference in braking efficiency is noticeable.
• Adverse weather conditions and extremes in terrain may affect handling and/or performance of your vehicle. Refer to your chassis manual for related information.

FORMALDEHYDE INFORMATION

WARNING

Some components in this vehicle contain formaldehyde based adhesives which may release formaldehyde fumes into the air for an unknown period of time until total dissipation occurs. Individuals who are allergic to formaldehyde gas fumes may experience irritation to eyes, ears, nose and throat. Reaction in infants may be more severe. Although long range effects are not well understood, testing to date has not revealed any serious health effects in humans at the level of emission from these products.
PROpane GAS LEAK DETECTOR

Your coach is equipped with a propane gas leak detector which sounds an alarm if an unsafe amount of propane gas is present inside the coach. Because propane gas is heavier than air, the leak detector is located on a cabinet face near the floor of the coach.

Power Connection

The propane gas leak detector is powered by the coach batteries. If the auxiliary battery switch is shut off or the battery cable is disconnected from the batteries, the alarm will not work. The propane gas leak detector fuse is located in the 12-volt house electrical load center.

Because the propane gas leak detector is connected to the auxiliary battery, it is always drawing a small amount of current. Even though this current draw is slight, it could drain the coach battery during storage periods when the house battery will not be charged regularly by the engine or shoreline. Turn the Aux. Batt switch OFF to avoid current drain during storage periods.

Further Information

See the manufacturer’s information in your InfoCase for further instructions on nuisance alarms and care and testing of the propane gas leak detector.

CARBON MONOXIDE WARNING

Avoid inhaling exhaust gases, as they contain carbon monoxide, which is a colorless, odorless and poisonous gas.

The best protection against carbon monoxide entry into the vehicle body is a properly maintained engine exhaust and ventilation system. It is recommended that the exhaust system and body be inspected by a qualified motor home service center.

- Each time the vehicle is serviced for an oil change.
- Whenever a change in the sound of the exhaust system is noticed.
- Whenever the exhaust system, underbody or rear of the vehicle is damaged.

To allow proper operation of the vehicle’s ventilation system, keep front ventilation inlet grill clear of snow, leaves or other obstructions at all times. DO NOT OCCUPY A PARKED VEHICLE WITH ENGINE RUNNING FOR AN EXTENDED PERIOD.

Do not run engine in confined areas, such as a garage, except to move vehicle into or out of the area.

CARBON MONOXIDE ALARM

Your coach is equipped with a carbon

WARNING

Never use an open flame to test for gas leaks. When testing for gas line leaks with a soapy water solution, DO NOT use a detergent containing ammonia or chlorine. These substances may generate a chemical reaction causing corrosion to gas lines, resulting in dangerous leak conditions.

Avoid inhaling exhaust gases, as they contain carbon monoxide, which is a colorless, odorless and poisonous gas.
monoxide (CO) alarm located on the ceiling in the bedroom area. The CO alarm is powered by a 9-volt battery and has a sensor that is designed to detect toxic carbon monoxide gas fumes resulting from incomplete combustion of fuel. It will detect CO gas from any combustion source such as the furnace, gas range/oven, water heater, refrigerator, chassis engine, and electric generator engine.

**Further Information**

Please read the information provided by the manufacturer, which is included in your InfoCase. It includes information on precautions, operational testing, and battery replacement.

**SMOKE ALARM**

Your motor home is equipped with a smoke alarm located on the ceiling in the galley area. The smoke alarm is powered by a 9-volt battery and has a sensor that is designed to detect smoke. This alarm meets U.L. Standard 217 and NFPA Standard 74 for operation of smoke detection devices.

The following label is affixed either to the smoke alarm or on the ceiling near the smoke alarm.

**Further Information**

See the manufacturer’s information in your InfoCase for further instructions on battery replacement and testing of the smoke alarm.

**FIRE EXTINGUISHER**

A dry chemical fire extinguisher is located near the main entrance door.

We recommend that you become thoroughly familiar with the operating instructions displayed on the side of the fire extinguisher or in the information supplied in your InfoCase.

We also recommend that you inspect the fire
SECTION 2
SAFETY/PRECAUTIONS

extinguisher for proper charge at least once a month in accordance with National Fire Protection Association (NFPA) recommendations as stated on the label.

If the charge is insufficient, the fire extinguisher must be replaced.

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**WARNING**
Do not test the fire extinguisher by discharging it. Partial discharge can cause leakage of pressure or contents which would render the unit inoperative when needed. When using the fire extinguisher, aim the spray at the base of the fire.

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**EMERGENCY EXITS**

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**WARNING**
Use care when exiting emergency window, as broken glass may be present in the exit area.

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**Escape Window**
The bedroom escape window is secured by two red safety latches at the bottom of the window.

To open, lift both latches up and toward the center of the window, then push outward near the bottom of the window.

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**Using Slider Windows As Emergency Exits**

Most slider windows along the side of the motor home can also be used as emergency exits, should the need arise.

To use a slider windows as an exit, first slide the window open, then slide the screen open or push the screen material out, depending on window type.

Coaches that are required to have a slider window as an alternate exit window will be marked EXIT and have a red handled latch.

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**ROADSIDE EMERGENCY**

Because of the size and weight of this vehicle and its tires, and the possible complications involved in tire changing, we strongly advise obtaining professional road service to change a flat tire whenever possible. However, if an emergency requires you to change the tire yourself, please exercise extreme caution and read all tire changing information in the chassis operating guide.

Never get beneath a vehicle that is held up by a jack only.
If You Get A Flat Tire

- DO NOT panic.
- Grip the steering wheel firmly and steer the vehicle as straight as possible. Avoid quick maneuvers. You may need to counter-steer to compensate for “pull” created by the failed tire.
- DO NOT stomp on the brake. This abruptly shifts the vehicle’s weight forward, making it nose-dive and pull toward the blown-out side.
- DO NOT jerk your foot off the accelerator. Just ease back on the accelerator slowly and gently to continue momentum. The deflated tire will slow the vehicle.
- If you must change lanes to get to a safe stopping place, use your signals to warn other motorists and change lanes smoothly and carefully after you are certain the lane is clear.
- Let the vehicle coast to a stop, gently steering to a safe stopping place off the traffic lanes of the road. Don’t worry about damaging the tire or wheel rim by driving on it. A tire or wheel replacement is cheaper than damaging the vehicle or injuring yourself.
- When you have come to a stop, activate your hazard flashers to warn other motorists, then exit the vehicle carefully.
- Set out flares or other warning devices.
  
  Check your tires for proper inflation before each trip and at least once a month with an accurate tire gauge.

Spare Tire Storage

The spare tire is fastened to a swing-down carrier beneath the rear of the coach.

- Support tire carrier with a jack or block while removing wire pin and wing nut from bolt at front of carrier.
- Carefully lower tire carrier to ground.
- Remove 2 bolts and retainer plate that hold wheel to carrier bracket.
- Lift or slide tire from carrier.
- Do not over-tighten wing nut when returning carrier to storage position.

Recovery Towing

When calling a professional towing service, we recommend that you advise them of your coach length and approximate front axle weight listed on your Vehicle Certification Label. This will allow the towing operator to determine the proper towing equipment to use.

We recommend that you ask for an underlift (wheel lift or frame lift) type towing assembly for safe towing.

Winnebago Industries does not assume responsibility for damage incurred while towing this vehicle.

NOTE: Consult the chassis owner’s manual for any additional towing instructions or precautions provided by the chassis manufacturer.

![WARNING]

Do not lie beneath tire carrier while removing tire. The tire and carrier assembly are heavy.

![CAUTION]

Do not lift on bumper. Damage will result to front end body parts.

![WARNING]

Stay out from beneath the motor home while it is suspended by the towing assembly unless the vehicle is adequately supported by safety stands. Do not allow passengers to occupy a towed vehicle.
SECTION 2
SAFETY/PRECAUTIONS

JUMP STARTING

If your coach will not start from the automotive batteries, try using the battery boost switch to divert power from the coach batteries to the starter. (See Battery Boost Switch)

If you wish to try jump starting the engine using another vehicle or booster system, see your chassis owner’s manual for connecting jumper cables to the automotive electrical system.

WARNING

Do not attempt to push-start this vehicle. Damage to the transmission or other parts of the vehicle will occur.

ENGINE OVERHEAT

If you see or hear steam escaping from the engine compartment or have any other reason to suspect an extreme engine overheating condition, pull the vehicle over to the roadside as soon as it is safe to do so, stop the engine and get all passengers out of the vehicle.

WARNING

Operating a vehicle under a severe overheating condition can result in damage to the vehicle and may result in personal injury.

For information on what to do in case of overheating, consult your chassis operating guide.

EFFECTS OF PROLONGED OCCUPANCY

Your motor home was designed primarily for recreational use and short term occupancy. If you expect to occupy your coach for an extended period, be prepared to deal with condensation and humid conditions that may be encountered.

Humidity And Condensation

Moisture condensing on the inside of windows is a visible indication that there is too much humidity inside the coach. Excessive moisture can cause water stains or mildew which can damage interior items such as upholstery and cabinets.

When you recognize the signs of excessive moisture and condensation in your coach, you should take immediate action to minimize their effects.

You can help reduce excessive moisture inside the motor home by taking the following steps:

Ventilate with outside air:

Partially open one or more windows and a roof vent to circulate outside air through the coach. In cold weather, this ventilation may increase use of the furnace, but it will greatly reduce the condensation inside the coach.

Minimize moisture released inside the coach:

Run the range hood fan while cooking, and open a bath vent while bathing or showering to carry water vapor out of the coach. Avoid making steam from boiling water excessively or letting hot water run. Avoid bringing extra moisture into the coach by way of soaked clothing or snow on shoes. Do not hang-dry wet overcoats or clothing inside the coach.

MOLD, MOISTURE AND YOUR MOTOR HOME

What is Mold?

Molds are part of the natural environment. They are as old as the Earth itself. And mold spores are almost everywhere at some level waiting to grow. Mold plays a part of nature by breaking down dead organic matter such as fallen leaves and dead trees. Indoors, however, mold growth should be avoided. Molds reproduce by means of tiny spores. Those spores are invisible
to the naked eye and float throughout the outdoor and indoor air. Because of the nature of the use of a motor home, it is natural for a motor home to be introduced into an environment with mold spores.

Mold is a plant and requires its own special environment to grow. That environment includes organic materials, nutrients, moisture, and proper temperature.

**How Can I Avoid Mold?**

To reduce the ability for mold to grow, you must reduce what constitutes its growth environment. Mold can grow with the smallest of a nutrient base. Just small amounts of dirt or dust on the carpet can be enough to allow the mold process to begin. Keep the environment as clean as possible. Vacuum the carpet. Clean food spills thoroughly and quickly. Avoid grease buildup near the stove or sink. Clean the exhaust fan above the stove often.

Minimize moisture in your motor home and keep humidity low. Clean spills quickly. Do not allow condensation to build up. You can open windows and vents to minimize condensation. Use of the air conditioner can assist in removing moisture from the air. Avoid leaks and if leaks do occur, make repairs promptly.

Avoid bringing mold into your motor home. Plants, cloths, books, and other household items may already have mold present. It is easy to transfer mold into your motor home environment.

Monitor your motor home. Periodically check those hidden areas in corners, closets, and cabinets to assure mold is not present.

**What if I Have Mold?**

If mold develops, clean the area with a concentrate of soap and bleach. Items that contain mold that cannot be cleaned should be removed from the vehicle.

**Can Mold Harm Me?**

The effects of mold and airborne mold spores may cause irritation to some people. Experts disagree on the level of exposure that may cause health concerns.

**If Mold Is Present, What Will Winnebago Industries Do?**

If Winnebago Industries determines that mold is present in the Winnebago/Itasca motor home as a result of a manufacturing defect reported to Winnebago Industries within the limited warranty period, Winnebago will clean the affected areas and/or replace affected items as it deems necessary. This is the extent of coverage provided by Winnebago Industries. Winnebago Industries, however, will not assume responsibility for mold deemed to be a result of a motor home users lack of timely and appropriate action to mitigate circumstances should a problem occur.

If Winnebago Industries determines that mold is present due to conditions it determines is not a result of a manufacturing defect found within the warranty period, Winnebago Industries will not provide any financial assistance to the repair of the condition.

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The information in this section refers only to features installed or adapted to the dash and driver compartment area by Winnebago Industries. It also includes passenger seating in the living area of the coach.

See your chassis owner’s manual for all original chassis related controls, instrumentation, switches and other features. This includes items such as cruise control, climate controls, gauges, wipers, lights, front seats and three-point safety belts, etc.

**FRONT SEATS**

The driver and co-pilot seats may be independently adjusted to suit individual preference.

See your chassis owner’s manual for instructions on seat adjustments.

**FOLDING DINETTE SEAT**

If your model has a dinette seat located directly behind the driver or passenger front seat, the dinette seat back is hinged and can be folded down to allow full use of the front seat reclining feature. Simply remove the seat back cushion and unlatch the bolt latches on both sides of the dinette seat as shown, then fold downward.

**SEAT BELTS**

Seats intended for occupancy while the vehicle is in motion are equipped with seat belts for the protection of the driver and passengers.

**Lap Belts**

The lap belts must be worn as low as possible and fit snugly across the hip area. Always sit erect and well back into the seat. To gain full protection of the safety belt, never let more than one person use the same safety belt at any one time, and do not let the safety belts become damaged by pinching them in the doors or in the seat mechanism. After any serious accident, any seat belts which were in use at the time should be replaced.
Adjustment:
To lengthen belt, turn tongue at a right angle to belt and pull to desired length. To shorten, pull loose end of belt.

To Fasten:
Be sure belt is not twisted. Grasp each part of the belt assembly and push tongue into buckle. Adjust to a snug fit by pulling the loose end away from the tongue.

To Release:
Press button in center of buckle and slide tongue out of buckle.

**WARNING**
Snug and low belt positions are essential. This will ensure that the force exerted by the lap belt in a collision is spread over the strong hip area and not across the abdomen, which could result in serious injury.

Lap-Shoulder Belts

Fastening:
Hold the belt just behind the tongue using the hand nearest to the door. Next, bring the belt across the body and insert the tongue into the buckle until the latch engages.

Unfastening:
Press the release button in the buckle. Hold onto the tongue when you release it from the buckle to keep it from retracting too rapidly.

When the lap-shoulder belt is in use, the lap belt must ride low across the hip area and the shoulder belt must ride diagonally over the shoulder toward the buckle.

The shoulder belt is designed to lock only during a sudden stop, sudden body movement or a collision. At all other times it will move freely with the occupant.

**WARNING**
Never wear the shoulder belt in any position other than as stated above. Failure to do so could increase the chance or extent of injury in a collision.

Seat Belt Care and Cleaning
- Be careful not to damage the belt webbing and hardware. Take care not to pinch them in the seat or doors.

- Inspect the belts and hardware periodically. Check for cuts, frays, and loose parts. Damaged parts should be replaced. Do not remove or modify the belt system.

- Keep belts clean and dry. If the belts need cleaning, use only a mild soap and water solution. Do not use hot water. Do not use abrasive cleaners, bleach or dyes. These products may weaken the belts.

- Replace any belt assembly that was used during a severe impact. Replace the complete assembly even if damage is not apparent.

**CHILD RESTRAINTS**
A properly installed and secured child restraint system can help reduce the chance or severity of personal injury to a child in an accident or during a sudden maneuver. Children may be injured in an accident if they are seated in a child restraint system which is not properly secured.

A child restraint system is designed to be secured in a vehicle seat by a lap belt or the lap belt portion of a lap-shoulder belt. According to accident statistics, children are also safer when properly restrained in rear seating positions than in front seating positions.
When purchasing a child restraint system:

1. Look for the label certifying that it meets all applicable safety standards.

2. Make sure that it will attach to your vehicle and restrain your child securely and conveniently so that you are able to install it correctly each time it is used.

3. Be certain that it is appropriate for the child's height, weight and development. The instructions and/or the regulation label attached to the restraint typically provides this information.

4. Review the instructions for installation and use of the restraint. Be sure that you understand them fully and can install the restraint properly and safely in your vehicle.

**Tether Anchor Loop**

If your coach has a dinette, a child seat tether anchor loop is located in the floor of the coach directly behind the forward facing dinette seat. The dinette table must be in the lowered position when a child seat is in use.

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**KEYS**

Your motor home is supplied with several sets of keys. In addition to the chassis manufacturer’s ignition key, you receive keys for the entrance door and exterior compartment doors.

Keys have an identification number, either a small metal tag or stamped into the key head. These numbers are recorded on the vehicle’s component model/serial sheet which is included in your InfoCase. In case keys are lost or stolen, your dealer or a locksmith can provide you with duplicate keys or modify the locks.

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**MIRRORS – EXTERIOR**

Always adjust mirrors for maximum rear visibility before driving off. Make sure the seat is adjusted for proper vehicle control and that you are sitting back squarely into the seat.

See your chassis owner’s manual for instructions on mirror adjustments.

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**Mirror Heaters**

The mirrors also contain heating elements to defog or de-ice the mirror glass during cold weather operation. An ON-OFF switch for the mirror heaters is located near the remote mirror controls.

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**REARVIEW MONITOR SYSTEM**

–Optional

The compact rearview monitor is mounted either into the driver side sunvisor or a housing on the ceiling of the driver compartment.
If your motor home is equipped with this optional system, refer to the InfoCase for further instructions provided by the manufacturer.

**BATTERY BOOST SWITCH**

This switch can be used to provide emergency starting power from the motor home auxiliary battery if the automotive battery is discharged.

If engine battery is discharged, press and hold while turning ignition key for emergency starting power.

*NOTE: The Aux Battery switch must be ON and house batteries sufficiently charged for this feature to work.*

**IN-DASH RADIO**

The dash radio in your coach can receive AM/FM stereo and Weather band stations. It also has a compact disc (CD) player for your listening enjoyment through quality high-output speakers located in several areas of the coach.

Please refer to the radio manufacturer’s operating guide in your InfoCase for detailed instructions on programming preset station buttons and using this full-featured radio/audio system.

**Satellite Radio**

–Optional

Your coach may be equipped with a Sirius satellite radio receiver that plays through your radio.

See the receiver manufacturer’s information in your InfoCase for programming and operating instructions.

**Radio Remote Controls**

A steering wheel mounted remote control for the radio lets you change radio stations or CD selections without taking your eyes off the road or hands off the wheel. See the radio owners guide in your InfoCase for remote control instructions.

**AIR CONDITIONER/HEATER – AUTOMOTIVE**

See your chassis owner’s manual for instructions on operating the heating, air conditioning and ventilation systems.
An additional hand-held remote allows these same conveniences for the passenger. The hand-held radio remote is in your InfoCase.

**Radio Power Switch**

The radio power switch lets you connect the dash radio to the coach batteries with the ignition switch turned off for listening while parked. This prevents accidental draining of the chassis (starting) battery with prolonged use of the radio.

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**ENGINE ACCESS**

Refer to your chassis owner’s manual.

**ENGINE COOLING SYSTEM**

Refer to your chassis owner’s manual for information and precautions on filling, servicing and checking the fluid level.

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**TIRES**

Improper tire pressure can result in tire overloading and abnormal wear and also affects handling, ride characteristics and fuel economy.

**WARNING**

Make sure all replacement tires are of the same size and ply rating as those installed as original equipment.

See your Vehicle Certification Label for tire information.

**SUSPENSION ALIGNMENT AND TIRE BALANCE**

The front suspension and steering system of this vehicle was factory aligned using highly accurate equipment prior to delivery to the dealership. However, alignment should be checked and adjusted, after you have fully loaded the motor home according to your personal needs. Thereafter, the alignment should be periodically inspected to help prevent uneven tire wear.

Any excessive or abnormal tire wear may indicate worn or misaligned suspension or steering, unbalanced tire or other tire/suspension problem.

Alignment can be affected by worn steering/suspension parts or by incidents which happen during driving, such as hitting a curb, pothole or 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. Have your dealer inspect your vehicle’s suspension and steering components periodically for misalignment or wear.
SECTION 3
DRIVING YOUR MOTOR HOME

Out-of-balance tires will not roll smoothly and can lead to vibrations and uneven tread wear such as cupping and flat spots. Tires may need to be balanced if uneven wear is detected or if ride comfort decreases noticeably.

See your chassis owner’s manual for further information.

AIR SPRINGS – REAR
–Optional

Check and adjust the air bag pressure periodically to maintain optimal ride and handling characteristics according to cargo weight.

Min. press.: 20 p.s.i.
Max. press.: 100 p.s.i.

Lights

All exterior lights should be checked for proper operation each time the vehicle is prepared for a trip. Any bulbs which fail to light should be checked and replaced, when necessary, with a new bulb of the same size. A failure of more than one light, such as both taillights not operating, may indicate a burned out fuse. Check fuse and replace with one of the same rating when necessary. If a fuse is not the cause of the problem, the wiring system should be checked immediately by an authorized service center.

Refer to your chassis owner’s manual for further information.

FUSES AND CIRCUIT BREAKERS – AUTOMOTIVE 12V

See your chassis owner’s manual for information on chassis fuses, circuit breakers and relays.

LOADING THE VEHICLE

NOTE: Your motor home’s load capacity is designated by weight, not by volume, so you cannot necessarily use all available space when loading your motor home.

• Store or secure all loose items inside the motor home before traveling. Possible overlooked items such as canned goods or small appliances on the countertop, cooking pans on the range, or free-standing furniture items can become dangerous projectiles during a sudden stop or evasive maneuver.

• Be aware of GVWR, GAWR and individual load limit on each tire or set of duals.

When loading the vehicle, distribute the cargo load equally so that you do not exceed either the Front or Rear Gross Axle Weight Rating (GAWR) or the Gross Vehicle Weight Rating (GVWR). The Gross Axle Weight Rating (GAWR) means the weight value specified by the chassis manufacturer as the load carrying capacity of a single axle system as measured at the tire-to-ground interfaces. This is the total weight a given axle is capable of carrying. Each axle has its own rating.

Have your vehicle weighed to determine the proper load distribution for your vehicle. Also distribute cargo side-to-side so the weight on each tire or dual set does not exceed one half of the GAWR for either axle.
For example, if the Front GAWR is 6,000 lbs., there should be no more than 3,000 lbs. on each tire. (If the left side weighs 3,100 lbs. and the right side weighs 2,700 lbs., at least 100 lbs. of the load must be shifted from the left side to the right side.) The GVWR is listed on the Vehicle Certification Label. (See sample in Specifications Section).

The GCWR (Gross Combination Weight Rating) means the maximum allowable loaded weight of this motor home and any towed trailer or towed vehicle.

NOTE: We recommend that you dump all holding tanks before traveling to avoid carrying unnecessary weight.

LOADING

Load your vehicle completely as if you were going on a long trip, with everything you would carry, including food, clothing, bedding, lawn chairs, etc., a full fuel tank, full propane tank, and a partial tank of fresh water - but empty holding tanks.

Finding a Scale

In urban areas, the most common places to find a public access scale are commercial truck stops. In rural areas, most grain storage elevators have scales available. Most scales charge a nominal fee for weighing a vehicle.

WEIGHING YOUR LOADED VEHICLE

To check the weight of your fully loaded coach, locate a commercial weighing scale that is capable of weighing large trucks.

CAUTION

The weight of the loaded vehicle (including options, attachments, passengers, water, fuel, luggage, trailer tongue load and all other cargo) must not exceed the GVWR or GAWR of either axle.

ROOF LOADING

The roof is capable of carrying up to 10 pounds per square foot to a maximum of 100 pounds while the vehicle is in motion.

When the vehicle is stationary, a cargo load of 100 pounds plus the weight of a 225 pound person to load the cargo or to conduct inspection and maintenance is permissible.

Weight added to both the roof and the trailer hitch contribute to the gross vehicle weight, which must not exceed the vehicle’s GVWR.
You will receive a weight ‘ticket’ that states your current Front Gross Axle Weight, Rear Gross Axle Weight and Gross Vehicle Weight. You can compare these weights to the weight ratings listed on your Vehicle Certification Label to use as a guideline for future loading limits and weight distribution.

The gross weight of the vehicle must not exceed the Gross Vehicle Weight Rating (GVWR) specified on the Vehicle Certification Label. The front and rear axle weight also should not exceed the corresponding Axle Weight Rating specified on the Vehicle Certification Label.

**Corner Weighing (Side-to-Side)**

Weighing each corner of the coach separately (single L/R front wheels or L/R rear dual sets) is an accurate method to determine how to distribute your cargo to avoid overloading, especially on tires.

To determine the weight distribution on each tire or dual set, you will need to find a scale capable weighing side-to-side, or all four ‘corners’ of the vehicle, separately. A truck scale may be used if the ground is level with the scale surface and the scale has clearance to drive one side of the coach onto the scale as shown below.

Drive the coach on the level area next to the scale and straddle the scale so that only one side of the coach will be on the scale pad. Pull only the front wheel onto the pad as shown.

When the front wheel has been weighed, pull the coach straight ahead until only the rear wheel/dual set is on the scale pad as shown.

After the rear wheel set has been weighed, turn the coach around and repeat this process for the other side.

The load on each wheel or dual-wheel set should not exceed one-half of the corresponding GAWR. For example, if the GAWR for the rear axle is 12,000 lbs., then the load on each rear dual set (left rear duals or right rear duals) should not exceed 6,000 lbs.

Tires must be filled to the recommended air pressure for the highest loaded tire set on that axle. For example, on the rear axle, if the left side weighs more than the right, fill the left tires to the pressure required for that weight, then fill the right tires to the same pressure as the left ones.

If your actual weight is considerably less than GAWR, you may be able to lower your tire pressure. See a tire dealer for a load/pressure chart.

**NOTE:** The Hitch Load from a Towed Vehicle or carrier box must also be counted on the Rear GAWR and subtracted from the rear axle cargo capacity.
Be aware that hitch load can affect handling characteristics. The more weight on the hitch, the lighter the front end will feel at the steering wheel.

**CAR OR TRAILER TOWING**

**Hitch pulling capacity:** 5,000 lbs. max. (Ford)  
**Hitch pulling capacity:** 3,500 lbs. max. (Chevy)  
**Tongue weight:** 350 lbs. max.

The factory installed hitch towing capacity and vertical (tongue) weight may vary according to chassis and model combinations. Do not exceed either the GVWR, the rear axle GAWR, or the chassis GCWR by the combined loaded weight of the coach and the towed vehicle. *See preceding items “Loading the Vehicle” and “Weighing Your Loaded Vehicle” for explanation of weight ratings.*

Because of individual vehicle use and loading habits, we recommend weighing the vehicle while fully loaded to avoid exceeding any of the listed Gross Weight Ratings. See “Vehicle Certification Label” in the Introduction Section for information on gross weight ratings.

Towing will affect vehicle handling, durability and fuel economy. Exceeding any of the listed Gross Weight Ratings will result in unacceptable overall vehicle performance. Maximum safety and satisfaction when towing depends on proper use of correct equipment.

Select a drawbar that mates properly with the towing hitch receiver and provides proper alignment to the vehicle tow bar. The tongue of the tow bar must be as close as possible to parallel with the ground when attached to the hitch ball.

Installation of a proper trailer brake system is recommended. Check state regulations on trailer weight and trailer brake requirements to be sure you select the right equipment before towing.

Before descending a steep or long grade when towing a trailer, reduce speed and shift into a lower gear to control vehicle speed. Avoid prolonged or frequent application of brakes which could cause overheating and brake failure.

**WARNING**

For safe towing and vehicle handling, maintain proper trailer weight distribution. The total weight of the motor home and the vehicle towed must not exceed the Gross Combined Vehicle Weight rating. See table in Section 1 to obtain the Gross Combined Vehicle Weight rating for your chassis.

**CAUTION**

Exceeding any of the recommended gross vehicle weight ratings may result in vehicle damage. Do not install a frame equalizing type hitch on your vehicle.
TRAILER WIRING CONNECTOR

Your coach is pre-wired for trailer or car towing lights with a 7-pin socket on the rear bumper. The connector plug is supplied in the coach parts package provided to you by your dealer when you took delivery of the vehicle.

The diagram shows proper connection of trailer or tow vehicle wiring to the coach light system. We recommend connections be made by a qualified auto electrical technician to avoid ‘shorts’ or other malfunctions.

GROSS COMBINATION WEIGHT RATING (GCWR):

This is the maximum allowable weight of the motor home and loaded trailer, including the items noted in GVWR above. The “trailer” can be an actual trailer, a vehicle towed on a towing dolly, or a vehicle towed by means of a towing bar. GCWR is typically specified based on durability and performance of the tow vehicle drivetrain: engine cooling systems, transmission, drive line, drive axle, and others. The tow vehicle brakes may be rated for operation at GVWR, not GCWR.

NOTE: If the “trailer” weighs 1,000 lbs. or more, state or provincial laws/regulations may require the “trailer” to be equipped with brakes that are activated when the motor home brakes are applied. The user is responsible to know and understand the laws of the state or province being traveled. The Department of Transportation in a given state or province should be able to provide specific information.

HITCH RATINGS:

SAE Standard J684 defines Class 1 trailers as “GVWR not to exceed 2,000 lbs.”;
Class 2 trailers as “GVWR over 2,000 lbs. and not to exceed 3,500 lbs. GVWR”;
Class 3 trailers as “GVWR over 3,500 lbs. and not to exceed 5,000 lbs. GVWR”;
Class 4 trailers as “GVWR over 5,000 lbs. and not to exceed 10,000 lbs. GVWR”.

Hitches are to be permanently marked with “Maximum trailer GVWR to be drawn” and “Maximum vertical tongue weight to be imposed...” The SAE standard does not specify a vertical load rating, as such. Traditionally, hitches are labeled 3,500/350 as Class 2 and 5,000/500 as Class 3.

The vertical tongue load value of 10 percent of drawn rating apparently comes from the collective experience that 10 percent is the minimum value that provides stable towing of a
Class C

SECTION 3
DRIVING YOUR MOTOR HOME

trailer. Ford’s towing guide suggests 10 to 15 percent for trailers over 2,000 lbs. (Hitch ratings are independent of towing vehicle ratings.)

NOTE: Some Winnebago Industries models equipped with a Class 3 hitch may have a label limiting vertical tongue load to 350 lbs.

The user must verify that the hitch equipment being used is adequate for the application.

MOUNTAIN DRIVING
Special techniques must be used when driving in mountainous or hilly country.

Climbing A Hill
The transmission will automatically downshift as needed to climb most hills. If the hill is long or very steep, however, you may need to manually shift to a lower gear to keep the transmission from repeatedly upshifting and downshifting. Select the lowest adequate gear range for the duration of the incline. See your chassis owner’s manual for specific information.

Descending A Hill
When going down a long grade, you may need to manually shift to a lower gear rather than keeping your foot on the brake pedal. A lower gear will allow the engine to provide a degree of braking action. Holding your foot on the brake pedal for an extended period may cause brakes to overheat, which could cause you to lose control of the vehicle. See your chassis owner’s manual for specific information.

TOOL AND LADDER STORAGE
Various supplied tools are stored in clips on the walls of one or two of the exterior storage compartments. Actual locations depend on the storage compartment configuration of your model.

CAUTION
Observe the engine temperature gauge more frequently than normal. If overheating occurs, pull off to the side of the road and allow the engine to thoroughly cool before refilling the radiator and restarting the engine.

Descending A Hill
When going down a long grade, you may need to manually shift to a lower gear rather than keeping your foot on the brake pedal. A lower gear will allow the engine to provide a degree of braking action. Holding your foot on the brake pedal for an extended period may cause brakes to overheat, which could cause you to lose control of the vehicle. See your chassis owner’s manual for specific information.

CAUTION
Observe the engine temperature gauge more frequently than normal. If overheating occurs, pull off to the side of the road and allow the engine to thoroughly cool before refilling the radiator and restarting the engine.
ROOF LADDER EXTENSION

The ladder provided on your motor home is for limited access to the roof of your coach. If you are working on your roof, create an environment that provides safety as a first priority.

Before Using the Ladder

- **Inspect the ladder** to make sure it is not damaged. Never use a damaged ladder.
- **Keep the rungs of the ladder clean and dry** while in use. Never use the ladder when it is raining, snowing or icy. The rungs can become slippery. Do not step onto the rungs if the rungs are wet, or if your shoes are wet or carry mud or debris that could result in a loss of footing.
- **Maximum Capacity: 225 lbs.**
- **Do not overload.** Ladder is intended for one person.
- **Make sure you are physically capable** to safely use the ladder. Strength, flexibility and stability are required.
- **Be aware that the vehicle may sway** as you climb the ladder. Do not use the ladder in high winds.
- **As you climb the ladder,** grasp the side rails firmly and always use both hands. Keep your body centered between the side rails. Do not over-reach.
- **Always store** the ladder extension when not in use.
- **Never allow children** on the ladder.
- **Do not transport items** anchored to the ladder. You could damage the ladder.

All Models except 25FR

To Use the Roof Ladder Extension:

- Pivot the ladder support pad outward into place as indicated in the photo and insert both side pins.

- Hold the ladder extension horizontally with the support pad pointing downward and hook the open ends of the C-shaped rung retainers onto the bottom rung of the roof ladder as shown in the photo.

- Lower the extension into place and push downward while adjusting it slightly to ‘seat’ the retainers onto the ladder rung.
- **Make sure retainer brackets are properly engaged onto ladder rung** before using ladder.
- **Reverse the above steps** to remove and store.
Model 25FR with Rear Storage Trunk
To Use the Roof Ladder Extension:

- See the general ladder instructions above, but follow these additional steps
- Pivot the upper support pad of the ladder extension outward into place as indicated in the photo and insert both side pins. (Do not extend or pin the bottom pad yet.)
- Hold the ladder extension horizontally with the support pad pointing downward and hook the open ends of the C-shaped rung retainers onto the bottom rung of the roof ladder as shown in the photo.
- Lower the extension into place and pivot the bottom support pad into the retainer bracket on the backwall as shown below.
- Insert both side pins in the support and make sure all retainer brackets are properly engaged before using ladder.
- Reverse the above steps to remove and store.
STORAGE COMPARTMENT DOORS

The high-density gaskets used on the exterior storage compartments are designed to provide a more positive seal against dust and weather. Sometimes this seal firmness can inhibit complete latching of the compartment doors if they are simply ‘dropped shut’ or closing force is applied only to the center of the door.

To ensure that exterior storage compartment doors have latched properly, press firmly on the bottom edges of the doors with the palms of your hands. If the door is ajar you will hear and feel a loud ‘click’ when the latches engage properly.
The appliances installed in your motor home are manufactured by reputable RV appliance makers and have been tested by independent laboratories to meet all applicable standards and codes set for RV appliances.

**REFRIGERATOR**

The refrigerator in your coach can be operated from either of two power sources available to the motor home:
- 110-Volt AC electric
- Propane gas

The refrigerator is an absorption type which uses an ammonia-water solution for cooling. Basically, ammonia vapor is distilled from the solution by heat, produced from either propane gas or electricity, and then carried to the finned condenser where it liquefies. The liquid then flows to an evaporator where it creates cold temperatures through evaporation.

**Leveling**

Before operating the refrigerator when the motor home is stationary, place a small level on the freezer plate and make certain the unit is level.

If over 1/2 of the bubble is inside the circle in any direction, the coach is level enough for continuous operation of the refrigerator while parked.

**Further Information**

For further information and operating cautions, see the refrigerator operating instructions included in your InfoCase.

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**CAUTION**

To prevent permanent damage to the refrigerator cooling unit, turn the refrigerator off if the vehicle will be parked on an incline of over 3° side-to-side or 6° front-to-rear (such as steep driveways or parking lots, etc.) for more than one hour.
REFRIGERATOR SERVICE ACCESS COMPARTMENT (Exterior)

The exterior refrigerator compartment allows access to the rear of the refrigerator for inspection, maintenance and service.

To Open:
1. Use a screwdriver or coin to turn the latch knobs to the vertical position as shown.
2. Remove the door from the opening.

To Close:
1. Replace the door into the opening.
2. Push the latch knobs in while turning to the horizontal position as shown.

RANGE AND OVEN

The range and oven in your motor home operate on propane gas.

Avoiding Asphyxiation

The following warning label has been located in the cooking area to remind you to provide an adequate supply of fresh air for combustion.

Unlike large homes, the oxygen supply inside a recreational vehicle is limited due to its size. To avoid danger of asphyxiation, provide proper ventilation when using the gas rangetop or gas oven. It is especially important not to use the gas oven and range top for comfort heating. Danger of asphyxiation is greater when these appliances are used for long periods of time.
Further Information

For further information and operating cautions, see the operating instructions included in your InfoCase.

**WARNING**

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

**SYSTEMS MONITOR PANEL**

The Systems Monitor Panel provides a convenient central location for checking the condition of all utility systems in your coach. At the touch of a button this panel will display the fresh water and holding tank levels, propane gas tank level, plus the coach battery condition. You can start the auxiliary generator or turn on the water pump and water heater. Indicator lights tell you if the water pump is on or if the water heater pilot light is out.

**Water And Holding Tank Levels**

Press and hold the “Levels Test” switch to show approximate level on the monitor lights.

**MICROWAVE OVEN**

Refer to the microwave oven manufacturer’s information provided in your InfoCase for complete operating instructions.

**RANGE HOOD**

The range hood vent draws cooking odors and airborne grease particles into the filtration grid and recirculates the air or vents it to the outside of the coach. A light on the underside of the hood provides illumination for food preparation.

See the manufacturer’s information for instructions on replacement of light bulbs and grease filter elements.

**WARNING**

Some models may be equipped with a knife holder built into the countertop behind the rangetop. Exercise caution to avoid burns when retrieving or replacing knives while range is in use.
The approximate fluid levels are measured by electronic sensors on the sides of the tanks. There is generally more fluid in a tank than indicated on the monitor panel.

For example, if the fluid level is 1-2” below the FULL sensor, the monitor will show the level to be only 2/3 even though the tank is nearly full. If the fluid level is below the 1/3 sensor, the monitor will register an empty tank because the fluid is no lower than the 1/3 sensors. There may actually be some fluid left in the tank. However, when the indicator reads FULL, the tank is actually full.

**Tank Capacities**

See “Tank Capacities” in Section 1.

**Propane Gas Level**

Press and hold the “Levels Test” switch to show approximate propane tank level.

The propane level is registered by a sending unit on the tank. The gauge mounted on the side of the tank will give a more accurate indication of actual tank level if needed.

**Battery Charge Meter**

Push the “Levels Test” button to check the level of charge (voltage) in the 12-volt coach battery. The colored segments (red, yellow and green) will light from the bottom up to the amount of charge the battery contains.

- Green - good or adequate charge.
- Yellow - marginal charge.
- Red - battery needs charging before use.

To get an accurate reading;

1. Both the chassis engine and the auxiliary generator engine must be shut off and 110 Volt AC shoreline unplugged.
2. An interior light should be turned on to provide a small load which draws off the battery surface charge.

**Water Pump Switch**

When use of the self-contained water system is desired, turn the “Water Pump” switch on. The “Pump On” light will illuminate when the pump switch is on and the system is operable. Water will be available as soon as a faucet is opened.

Refer to “Water Pump” for additional information on the water pump and initial start-up. (There is also a pump switch in the water system compartment on the outside of the coach.)
WATER HEATER

Operating Instructions

Read the Water Heater Manufacturer’s Installation and Operation Manual for complete Safety Warnings, Operating Instructions and Maintenance Information before operating the water heater.

Be sure the water heater is filled with water before starting. To fill the water heater, turn the Water Pump switch on and open a hot water faucet anywhere in the coach. When water begins to flow steadily from the faucet, the water heater is full.

Propane Gas Operation

Press the Water Heater switch on the Monitor Panel. The “Pilot Out” light will glow for about 10-15 seconds, then it will go out. The “Heater On” indicator will remain lit. If the “Pilot Out” light comes on during gas operation, it means that the burner has gone into “lockout” mode and must be restarted. If this happens, turn the Water Heater switch off for about 5 minutes, then turn it back on.

PRESSURE-TEMPERATURE RELIEF VALVE

On occasion, water may be seen seeping from the water heater pressure temperature relief valve. This is no cause for repair or replacement of the valve.

Propane Gas Operation

Press the Water Heater switch on the Monitor Panel. The “Pilot Out” light will glow for about 10-15 seconds, then it will go out. The “Heater On” indicator will remain lit. If the “Pilot Out” light comes on during gas operation, it means that the burner has gone into “lockout” mode and must be restarted. If this happens, turn the Water Heater switch off for about 5 minutes, then turn it back on.

To Replace the Air Gap:

1. Turn off the water heater switch and incoming water supply (city water and/or demand pump).
2. Open a faucet in the motor home to relieve water pressure.
3. Pull the handle of the P-T valve straight out and allow water to flow until it stops.

Pressure-Temperature Relief Valve

Normally there is an air gap at the top of the water heater tank which acts as a pressure buffer. In time, however, heated water may expand and fill this air gap, causing a slight increase in water pressure. This may cause the P-T valve to “weep” until the air gap is manually replaced.

CAUTION

Operate this valve only when the water heater and engine cooling system are cold!

To Replace the Air Gap:

1. Turn off the water heater switch and incoming water supply (city water and/or demand pump).
2. Open a faucet in the motor home to relieve water pressure.
3. Pull the handle of the P-T valve straight out and allow water to flow until it stops.
4. Let the handle of the P-T valve snap shut.
5. Close the faucet and turn on the water supply before switching the water heater on.
   Manually operate the pressure temperature relief valve at least once a year.

**WATER HEATER BYPASS VALVE**

Your coach is equipped with a water heater by-pass valve for easier winterization of water lines using RV antifreeze. See Water System Drain Valve Location chart in Plumbing Section for valve location.

Turn the handle as shown to either bypass or flow through the water heater.

![Normal Flow and By-Pass Mode](attachment:image)

**CAUTION**

Leave by-pass valve handle in NORMAL FLOW position if draining water and blowing out water lines. Place in BYPASS position ONLY when using antifreeze solution in water lines.

**PROPANE GAS FURNACE**

**Start Up:**
1. Open the propane gas tank valve by turning fully counterclockwise.
2. Move thermostat switch from OFF to HEAT and press the Temp Selector button (Up/Down arrows) until the desired temperature is shown on the display.
3. Furnace fan will start to blow soon after setting thermostat.
4. After about 30 seconds, the furnace burner will light.
5. The furnace will now cycle off and on automatically as the thermostat demands just like a household furnace.

**NOTE:** If heat does not come out of the heat ducts after a minute or so the burner is not lit. Turn thermostat off for 3-5 minutes, check to be sure propane gas tank valve is open and tank is not out of fuel, then try steps 2-4 again. If it still will not light after three attempts, go to Shut Down steps and contact your dealer or a local RV service center.

**To Shut Down:**
1. Slide thermostat switch to OFF position.
2. Close propane tank valve.

**NOTE:** Metal coatings used during manufacture of the furnace burner parts may smoke when the furnace is used for the first time, which may also set off your smoke alarm. If this happens, provide adequate ventilation to avoid a nuisance smoke alarm. We do not recommend removing the smoke alarm battery.

**For Further Information**

Please see the furnace operating instructions provided in your InfoCase for further information, including operating precautions.
and periodic maintenance. See the Coach Maintenance Schedule for recommended intervals.

**HEAT PUMP**  
- Optional

Your coach may be equipped with an air source heat pump built into the air conditioning system. Because the heat pump operates on electricity, it provides economical heat inside your coach and helps reduce the use of propane gas for heating in cooler weather.

A heat pump can be thought of as an air conditioner running in reverse. An air conditioner absorbs heat from the air on the inside of the coach and moves it to the outside. The heat pump does exactly the opposite. Even cold air contains some heat, so a heat pump will extract heat from the outside air on a cold day and carry it to the inside of the coach to maintain a comfortable temperature.

The efficiency of a heat pump decreases as the outdoor air temperature drops, so supplementary heat is often needed when the outside temperature nears freezing. This system is set to automatically start the propane gas furnace to assist the heat pump if room temperature cools to 5 degrees or more below the thermostat set temperature. You may wish to manually switch to furnace heat to maintain a higher temperature when outside temperatures begin to reduce the efficiency of the heat pump. The heat pump will not operate when the outside temperature falls below 36 degrees F.

**To operate the heat pump:**

See the air conditioning/heat pump manufacturer’s information in your InfoCase for complete operating instructions.

**Check your Air Filter**

Closed or blocked vents and a dirty air filter can hinder the efficiency of a heat pump.
- Be sure ceiling vents are open to distribute heat pump output air.
- The washable foam filter should be checked monthly for dirt build-up and cleaned or replaced as needed. It is located in the ceiling mounted AC air return grille in the lounge area.

**DUCTED ROOF AIR CONDITIONING SYSTEM**

The furnace thermostat also controls ducted roof air conditioner operation when the thermostat switch is placed in ‘cool’ position.

All cooling functions controlling to setpoint have a short cycle protection time delay of 3 minutes. There will be no delay if the cycle OFF time exceeds 3 minutes.

**NOTE:** The ducted roof air conditioning system has ceiling registers that can be closed if necessary to force more cool air toward a specific area of the coach or to route cool air away from a specific area. If too many vents are closed, however, it can cause the air conditioner unit to shut down, particularly in high humidity conditions.
Further Information

Refer to the air conditioner manufacturer’s information in your InfoCase for complete operating instructions.

Thermostat Operation

The following chart shows the system functions with the “Heat/Cool” thermostat. Disregard references to heat functions when using the “Cool Only” thermostat in the rear bedroom.

<table>
<thead>
<tr>
<th>FAN MODE SWITCH</th>
<th>THERMOSTAT SWITCH</th>
<th>FAN SPEED SWITCH</th>
<th>WHAT HAPPENS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto</td>
<td>On</td>
<td>Cool</td>
<td>Off</td>
</tr>
<tr>
<td>■</td>
<td>■</td>
<td>■</td>
<td>■</td>
</tr>
</tbody>
</table>

If the Thermostat Switch is Off, the whole heating and cooling system is off—nothing is happening.

**Gas Furnace Heating:**
Furnace Blower runs along with the LP Gas Furnace which turns on and off as needed according to thermostat setting.

**Heat Pump Heating:**
A/C Fan runs at Low Speed along with the Heat Pump which turns on and off as needed according to thermostat setting.

A/C Fan runs continuously at Low Speed while the Heat Pump turns on and off as needed according to thermostat setting.

**A/C Cooling:**
A/C Fan runs at Low Speed along with the Air Conditioner which turns on and off as needed according to thermostat setting.

A/C Fan runs at High Speed along with the Air Conditioner which turns on and off as needed according to thermostat setting.

A/C Fan runs continuously at Low Speed while the Air Conditioner turns on and off according to thermostat setting.

A/C Fan runs continuously at High Speed while the Air Conditioner turns on and off according to thermostat setting.

*Note: These instructions include the optional heat pump, which may not be equipped on your model. If you do not have a heat pump, the Thermostat Switch Gas position is the same as the Heat position on your thermostat— in this case, ignore the Elec Heat switch settings which apply to the heat pump only.
ENTRANCE STEP – MANUAL

To extend the entrance step, lift up on the front of the step and pull out until it drops into position. To retract, lift up on front of step and push back until step locks into travel position.

Further Information

For additional information on the step, see the manufacturer’s operators manual included in your InfoCase.

ENTRANCE STEP – ELECTRIC

-Optional

The power switch for the electric entrance step is located to the left of the main entry door as you enter the coach.

WARNING

Do not use step unless it is fully extended.

CAUTION

Always remember to store the entrance step before traveling or moving the vehicle.

WARNING

Do not use step unless fully extended. Do Not Stand on step when vehicle ignition switch is turned to either the “On” or “Start” position. The step will automatically retract, which may cause personal injury.

Automatic Mode - Step Switch ON

(Step Operates with Door)

With the Step switch in the ON position the step is in Automatic Mode. This means it will extend and retract automatically whenever the screen door is opened or closed.
Stationary Extended Mode - Step Switch OFF

(Step Remains Extended)

With the Step power switch in the OFF position the step will extend when the screen door is opened and will stay extended whether the door is opened or closed.

This position is normally used to keep the step extended when parked at a campsite or whenever people will be entering and exiting the vehicle frequently.

Automatic Retraction Feature

The step is equipped with an automatic retraction feature that stores the step automatically when the Ignition Switch key is turned to the On or Start positions and the entrance door is closed.

The step will retract regardless if the Step power switch is ON or OFF.

This feature is intended to prevent injury or damage by an extended step while the vehicle is moving.

Further Information

For additional information on the step, see the manufacturer’s operators manual included in your InfoCase.
SECTION 5 PROPANE GAS SYSTEM

PROPANE GAS SUPPLY

The propane gas system supplies fuel for the range, water heater, furnace and refrigerator (while in gas mode). When used and handled properly, this system is safe and economical and provides modern living conveniences wherever you travel.

How Propane Gas Works

Propane is a type of LP (Liquefied Petroleum) gas compressed into liquid form for easy transportation and storage. Propane gas may also be called tank gas, bottle gas, or simply LP.

Propane is used by appliances in vapor form only, but is stored in the tank as a liquid under very high pressure. As the liquid gas is released, it reverts back to a vapor and expands to many times its compressed volume.

Propane Tank System

The storage reservoir for the propane gas system is a horizontally mounted tank which is permanently attached to the vehicle frame. The tank supply valve is accessible only from the outside of the vehicle.

WARNING

Do not alter or remove propane tank gauge at any time.

Refilling Propane Tank

Since the propane tank is permanently mounted to the frame, the motor home must be taken to a propane dealership for filling. Do not attempt to remove the propane tank from the vehicle. The tank is equipped with a fill adapter with both internal and external threads which allows easy filling with any propane filling equipment. The tank is full when liquid propane gas appears at the overflow valve.

NOTE: The propane tank is equipped with an automatic 80% stop-fill device.
SECTION 5
PROPANE GAS SYSTEM

Selecting LP Fuel Types

We recommend using only straight propane in your LP tank. Propane gas is commonly available at all LP gas outlets in the U.S. (According to the National LP Gas Association, LP gas outlets in the United States do not offer any other type of liquefied petroleum gas than propane to the general public.) Check local phone directory yellow pages for locations of local propane gas refilling stations or bulk dealerships.

NOTE: If you travel outside the U.S. with your motor home, you may find butane or propane/butane mixtures available in addition to propane. Because gas-burning RV appliances are designed to run on propane only, we recommend that you request straight propane only. Butane burns about 30 percent hotter than propane and can overheat some appliances, particularly refrigerators, and cause permanent damage. Other appliances designed to operate on propane can become sooted and lose efficiency by using butane fuel.

Air in the Propane Gas Tank

If your propane gas appliances do not stay lit or require frequent adjustment, even though you know the propane tank contains sufficient fuel, the problem may be air in the propane gas tank. Air in the tank mixes with the propane gas vapors causing them to burn poorly. This condition could linger for weeks if the air is not purged from the tank. Most propane gas dealers have equipment for purging air from propane gas tanks and will purge before refilling the tank.

SAFE USE OF THE PROPANE GAS SYSTEM

The propane system is designed and built with strict adherence to federal, state and recreational vehicle industry requirements for mobile propane gas equipment.

For your safety, there are many safety devices and backup systems installed, such as tank fill overflow valves, an interior propane gas detector/alarm, and an interior carbon monoxide (CO) detector/alarm.

Propane gas also contains an odor additive that you can smell if propane is present in the air.

Listed below are a few precautions to observe that will help you to use the propane gas system safely.
• Exercise caution at all times. Be familiar with the distinctive odor of propane gas. If a leak is suspected, turn off the supply valve immediately. Have the propane gas system checked by your dealer or other qualified propane gas service center.

• Do not tamper with the propane gas piping system, pressure regulator or gas appliances. Service and maintenance of propane gas system components should be performed only by your dealer or a qualified propane gas service center.

• Never attempt to connect natural gas to the propane gas system.

• Have the entire propane gas system inspected for possible leaks and missing or damaged parts at each tank filling. Also inspect before and after each trip, and any time trouble is suspected.

• Turn the propane supply valve off when not using the propane gas system.

• Never use a wrench to tighten the tank supply valve. It is designed to close leak-tight by hand. If a wrench is required to completely close the valve, it is defective and must be replaced.

• Be sure appliance and outside vents are open and free from obstruction when using the propane gas system.

• Never attach a lock or any device requiring a key to the propane tank compartment door. According to standards set for recreation vehicles, the propane supply valve must be readily accessible in an emergency.

• Exercise caution when drilling holes or attaching objects to the walls. Gas lines and electrical wiring could be seriously damaged and present an extreme safety hazard.

**PROPANE GAS WARNINGS AND PRECAUTIONS**

It is illegal for vehicles equipped with propane tanks to travel on certain roadways or through certain tunnels in the U.S. To avoid inconvenience, check state regulations concerning flammable gas transportation.

**Propane Gas Leaks**

The following label is located in the vehicle near the range area. If you smell gas within the vehicle, quickly and carefully perform the procedures listed.

**DANGER**

**IF YOU SMELL GAS**

1. EXTINGUISH ANY OPEN FLAME, 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 CONNECTIONS.
4. OPEN DOORS AND OTHER VENTILATING OPENINGS.
5. LEAVE THE AREA UNTIL ODOR CLEAR.
6. HAVE THE GAS SYSTEM CHECKED AND LEAKAGE SOURCE CORRECTED BEFORE USING AGAIN.

FAILURE TO COMPLY COULD RESULT IN EXPLOSION RESULTING IN DEATH OR SERIOUS INJURY.

• All pilot lights must be extinguished and appliances turned off while refilling the fuel tank or propane tank.

• Never smoke while refilling vehicle fuel tank or propane gas tank.

• Avoid inhaling exhaust gases produced by burned gasoline, diesel fuel or propane gas in items such as the range, chassis engine, generator engine, refrigerator, furnace and water heater. They contain carbon monoxide, which is an odorless, colorless and poisonous gas.

• Do not bring or store propane gas containers, gasoline or other flammable liquids inside the vehicle because a fire or explosion may result. propane gas containers are equipped with
safety valves which relieve excessive pressure by discharging gas to the atmosphere.

- Never use an open flame to test for propane gas leaks. Replace all protective covers and caps on propane system after filling. Make sure valve is closed and door latched securely.
- Portable fuel-burning equipment, including wood and charcoal grills and stoves, shall not be used inside the recreational vehicle. The use of this equipment inside the recreational vehicle may cause fires or asphyxiation.
- Regulators are equipped with a protective cover. Make sure that the regulator vent faces downward and that the cover is kept in place to minimize vent blockage which could result in excessive gas pressure causing fire or explosion.

**PRESSURE REGULATOR**

The pressure regulator is protected from the elements by a plastic cover which should be left in place at all times. Only your dealer or a qualified propane gas service should remove the regulator cover for adjustments.

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**WARNING**

Visually inspect the pressure regulator vent periodically for blockage by accumulated debris or insect nests, etc. Vent obstruction could result in excessive pressure which could cause a fire or explosion.

If any obstruction is apparent, have the regulator serviced by your dealer or a qualified propane gas service center.

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**Regulator Freeze-up**

Regulator freeze-ups are caused by the presence of moisture in fuel. This moisture will pass through the cylinder valve and into the regulator where it can freeze.

Fuel producers, tank and bottle manufacturers and propane gas dealers take every precaution to reduce moisture, but sometimes only a fraction of an ounce of moisture entering the tank can cause problems.
To help avoid the possibility of freeze-up, always keep tank control valve closed when not in use, even when tank is empty, to prevent moisture from collecting on the inside.

If regulator freeze-up should occur, you may attempt to thaw the regulator using a light bulb. **DO NOT USE AN OPEN FLAME OR HEAT LAMP.**

If moisture begins to cause problems, have your propane gas dealer inject a small amount of dry methyl alcohol in your tank (approximately one ounce to 20 pounds or one pint to 100 gallons) to help guard against regulator freeze-ups.

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**COLD WEATHER PROPANE VAPORIZATION**

Propane gas vaporization increases and decreases in direct relation to ambient temperature. In other words, the lower the temperature, the slower liquid propane vaporizes into a usable gas for appliances.

This means that in very cold weather when a large volume of gas is being used by the furnace for heating, it is possible to experience a loss of gas pressure. The demand for propane to produce heat increases to the point where the system cannot maintain production.

At first, this problem may appear to be caused by a regulator freeze-up, but is actually caused by failure of the liquid gas to vaporize as fast as it is needed by the furnace.

The only solution to this problem is to reduce gas usage where possible. Adjusting the temperature on the gas/electric refrigerator may be a first step. Using less hot water will also help, as well as refraining from using the gas cooktop. A final step is to lower the thermostat setting to reduce gas usage by the furnace.
Your coach is equipped with an electrical system consisting of two separate voltages; a 12-volt DC system and a 110-volt AC system. The 12-volt system consists of two internal power sources, while the 110-volt system is operated from an outside power source or the optional 110-volt generator. All systems operate through a single power converter control center to provide electrical power to the motor home.

**ELECTRICAL CAUTIONS**

- Careless handling of electrical components can be fatal. Never touch or use electrical components or appliances while feet are bare, while hands are wet, or while standing in water or on wet ground.
- Improper grounding of the vehicle can cause personal injury. Do not plug the utility power cord into an outlet which is not grounded and do not adapt the plug to connect to a receptacle for which it is not designed.
- Do not attach an extension cord to the utility power cord.
- Be sure that all electrical appliances to be used contain 3-prong plugs for proper grounding.
- Avoid overloading electrical circuits. Replace fuses or circuit breakers with those of the same size and amperage rating only. Never use a higher rated fuse or breaker.
- Use caution when handling or working near electrical storage batteries. Always remove jewelry and wear protective clothing and eye covering. Avoid creating sparks.

**EXTERNAL POWER CORD**

(Shoreline)

The external power cord (commonly referred to as a “shoreline”) is stored in the utility compartment on the left (driver’s) side of the coach.

**WARNING**

Do not connect the external power cord to any receptacle until you have contacted the owner and/or attendant of the premises to verify proper polarity and grounding.

It is the responsibility of the owner of the electrical receptacle to ensure that the receptacle is properly wired and grounded. Reverse polarity and improper grounding of the vehicle can cause personal injury or death.

The three-prong power cord is designed to ground the electrical system through the receptacle. It is also designed to carry the amperage output of most campground outlets. If the electrical receptacle to be used is designed to
mate with the three prongs on the power cord plug, the electrical connection can be expected to carry rated load.

![30 Amp Receptacle](image1)

**WARNING**

**Do not** plug the power cord into an outlet which is not grounded, or adapt the plug to connect to a receptacle for which it is not designed. 
Be sure that all three prongs of the supply cord are properly plugged into the receptacle. 
**Do not** connect the power cord to an extension cord.

**Connecting the Power Cord**

To connect to an external power source, remove the power cord from the utility compartment and plug it into a suitable power receptacle. 
A small hatch in the compartment door lets you route the power cord out of the compartment so you can shut the compartment door while the cord is connected.

**Park Fuses or Breakers**

Most campgrounds are equipped with a fuse or circuit breaker at the receptacle. This protects the park’s wiring, as well as the power cord on your vehicle, from electrical damage. If electrical power fails, contact the park attendants and have them check the fuse or breaker for your supply receptacle.

After disconnecting the power cord, neatly stow it in the utility compartment.

**POWER CENTER**

**(Converter)**

The power converter is generally located in a lower cabinet face in the galley, living area, or beneath a bed depending on the floorplan of your model.

The converter power panel contains the coach electrical system 110-volt circuit breakers and 12-volt fuses. 

The power converter changes 110-volt AC current from the auxiliary generator or the shoreline into 12-volt DC current for use by 12-volt equipment in the motor home.
Certain circuits, however, remain unchanged for use by items which require 110-volt current, such as the air conditioner(s), the refrigerator in AC mode, the microwave oven, etc.

**NOTE:** The converter will not change 12-volt DC current to 110-volt AC.

Current drawn from the coach batteries passes through the power converter unchanged, although it is routed through a series of protective fuses located on the power panel.

**CAUTION**

Do not block the converter cover vents in any way. The converter generates heat while operating, and needs unrestricted air flow for proper cooling.

**Further Information**

See the manufacturer’s operation, care and maintenance information in your InfoCase.

**Charging Section**

The converter charges coach batteries while 110-volt external power is connected. The converter will automatically “sense” the condition of the RV battery. If it is below “full charge”, the Charging Section will start charging the batteries.

If the coach batteries have been extremely discharged, they will accept charge at a relatively high amperage rate. If they are only slightly discharged, they will charge at a lower amperage rate. The rate of charge will decrease as the batteries reach “full charge”, then will continue “trickle” charging at a very low amperage rate. If your battery does not charge as described above, it is possible the battery is defective.

**Thermal Overload**

A thermal overload will “break” the 110-volt AC power to the converter section of the Power Center if the power converter becomes overheated. This can result from operating above its maximum limit for an extended period of time or by obstruction of ventilation to unit.

**NOTE:** The power converter section will automatically route 12-volt lights and motors to battery power in this event.

The thermal overload will reset itself after a period of time, and the lights and motors will again resume operation from the power converter section. If the breaker trips again shortly after reset, take immediate steps to correct the cause of overheating. A portion of the coach 12-volt load (lights or motors or both) should be turned off to reduce total load. Also, inspect the power converter section to make sure ventilation is not obstructed.

**CIRCUIT BREAKERS – 110-VOLT**

The breaker panel protects all 110-volt components in the motor home from either an overload on the circuit or a short in the wiring or component itself. When an overload or short develops, the breaker will open preventing damage to the system.
Shut off the equipment (example: roof air conditioner) and allow a brief cooling period. Then reset the breaker by moving the switch to “Off” and back to “On”. If the breaker is continually tripped and no overload is evident, have the system checked for a short in the wiring or the appliances.

Should this occur, unplug all the appliances on that circuit and press the reset button on the GFCI equipped outlet.

If the GFCI keeps tripping, have the electrical system checked and repaired, if necessary, before using again.

*Typical view of breaker panel. Breaker arrangement may vary according to appliance and equipment options. Fuses and breakers are labeled on panel.

**RECEPTACLES (OUTLETS) – 110V**

A number of standard AC electrical outlets are provided throughout the coach for connecting small appliances such as televisions, radios, toasters, etc. An outlet is also located on the outside of the coach near the entrance door.

**GROUND FAULT CIRCUIT INTERRUPTER**

Bath, galley and exterior outlets are connected to a GFCI (Ground Fault Circuit Interrupter), which is an extremely sensitive circuit breaker that will help to protect against severe electrical shock if a ground fault develops. If such a condition occurs, the GFCI will break the circuit by turning off the power to the protected outlets.

The GFCI will not completely eliminate electrical shock. Small children and persons with heart conditions or other disabilities which make them especially sensitive to electrical shock may still be injured by a 110-volt receptacles even though protected by a Ground Fault Circuit Interrupter.
GENERATOR – AUXILIARY
110-VOLT AC
–Optional

**WARNING**

Careless handling of the generator and electrical components can be fatal. **Never** touch electrical leads or appliances when your hands are wet, or when standing in water or on wet ground. **Do not** attempt to repair the generator yourself. Service should be performed by an authorized service center. **Do not** plug the power cord into the generator receptacle while the generator is running.

To use the 110-volt generator, plug the power cord into the generator receptacle within the utility compartment before starting the generator.

Generator Receptacle

**Generator Operation**

See the manufacturer’s operation, care and maintenance in your InfoCase.

**Generator Hourmeter**

This meter is located on the monitor panel. It registers the total number of hours that the generator has been operated.

Refer to the hourmeter to determine when periodic maintenance is due and to record services which have been performed.

**Operation Warnings and Cautions**

**WARNING**

The exhaust of all internal combustion engines contains carbon monoxide (CO). This poisonous gas is colorless, odorless, tasteless, and lighter than air. The exhaust systems of both your motor home engine and your generator engine have been installed with your safety in mind. However, certain precautions must be taken when using them to protect yourself from conditions beyond the control of the manufacturer.

1. **Do not** simultaneously operate the generator engine and a ventilator which could draw exhaust gases into the vehicle.
2. **Do not** open windows or ventilators on the end or side of the vehicle where exhaust pipe of the generator is located.
3. **Park the vehicle** so that the wind will carry the exhaust away from the vehicle. Also, note the position of other vehicles to be sure their exhaust will not enter your vehicle.
4. **Do not** operate the generator engine while parked if vegetation, snow, buildings, vehicles, or any other object can deflect the exhaust under or into the vehicle.
Check auxiliary generator oil level frequently during periods of use.

Refer to the generator manufacturer’s maintenance information in your InfoCase for specific recommendations.

**WARNING**

Never check generator oil level while generator engine is running.

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### ELECTRICAL SYSTEM – 12V DC

The DC voltage system consists of the chassis battery, the 12-volt house auxiliary batteries, and the 12-volt power converter.

**Converter**

See “Power Center”.

**Chassis (Starting) Battery**

The chassis battery is used to operate the engine starter and automotive accessories and controls found on the instrument panel. The slideout room systems and the electric step are also connected to the chassis battery.

The chassis battery is located in the engine compartment. See your chassis owner’s manual for instructions.

**House (Aux.) Batteries**

The house batteries supply current to 12-volt equipment located in the living area of the motor home. This includes interior lights, range exhaust fan, furnace fan, water pump, water level and holding tank gauges, 110-volt generator starting, refrigerator and bath roof vent fan. The house batteries may also be used to start the engine if the chassis battery is discharged. Refer to “Battery Boost Switch” in section 3.

The house batteries are “deep-cycle” type batteries specially designed for recreational vehicle use. They will provide longer lasting power than standard automotive batteries, and will withstand the frequent drain-and-recharge cycles that occur under the demanding conditions of a camping outing.

The house batteries are automatically charged by the engine alternator while the engine is running.

**House Battery Access**

On 22ER and 22RR models the auxiliary battery is located in an exterior battery storage compartment for convenient access for periodic inspection or maintenance.

- [House Battery Compartment Models 22ER & 22RR](#)
- [House Battery Storage in Entrance Step All Models except 22ER & 22RR](#)
### AUXILIARY BATTERY SWITCH

(Aux. Batt)

The AUX BATT switch disconnects the auxiliary (coach) batteries from the 12-volt system of your coach to avoid long-term battery drain by electrical items that are hooked directly to the coach batteries, such as clock displays and radio memories, etc.

Always leave this switch ON except during storage periods. Some electronic displays and memory functions may need to be reset after power has been reconnected.

See also Battery Care elsewhere in this section.

### BATTERY CARE

Lead-acid type batteries are electro-chemical devices for storing and releasing electrical charge. As such, they are simply an electrical reservoir, not an electrical source. As soon as energy is removed from the battery, it should be replaced by the engine alternator or the RV converter system.

If a battery sits unused for 30 days or more, especially during warm weather, it can develop a deposit of sulfate crystals on the metal plates inside the battery. This condition is called ‘sulfating’ and prevents the battery from either releasing or accepting a charge. If this condition occurs, the battery must be replaced.

If a battery does not contain at least 80% charge during freezing temperatures, the electrolyte can freeze and crack the battery case.

**The two best defenses against sulfating and insufficient charge are to:**

1. Turn off the Auxiliary Battery switch to avoid parasitic discharge (the trickle discharge caused by directly connected components like propane gas detectors or digital clock displays, etc.)
2. Check the battery and recharge as necessary at least once a month during long storage periods. Turn the Aux. Batt. Switch off to avoid electrical arcing when attaching or detaching charger clamps.

### WARNING

Refasten the battery retainer strap when returning the battery to the compartment.

**WARNING**

California Proposition 65 Warning: Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the state of California to cause cancer and reproductive harm. Wash hands after handling.

**NOTE:** We do not recommend leaving the shore-line plugged in continuously during storage periods because the batteries can lose electrolytic fluids and become damaged from continuous charging without periodic use or maintenance.
We recommend following regular battery inspection and maintenance, especially in cold weather.

Further precautions are:

- Remove the battery from the coach.
- Store it in a cool place on a wooden or rubber pad to inhibit conductive transfer.
- Check the state of charge periodically to avoid discharge or sulfating.

To ensure that the battery will always accept and hold a charge, follow these simple maintenance practices.

- Make sure the batteries always remain securely clamped in the battery tray.
- Make sure battery cable clamps are tight on the terminal posts and are free of corrosion.
- Neutralize corrosion buildup or acid film on top of battery by washing with a baking soda/water solution. Rinse with clear water.

**NOTE:** Make sure vent caps are on securely to prevent baking soda solution from entering the battery and contaminating the electrolyte fluid.

**WARNING**

Before removing any battery cables or battery, make sure all 12-volt equipment in the motor home is off and the power cord has been disconnected. Be sure to replace the battery terminal boot back onto the positive terminal after servicing. Care must be taken to avoid pinching the cable between any metal parts. Should the cable be damaged, a short circuit could result in personal injury or damage to equipment. Replace any damaged cables at once. Always remove jewelry and wear protective clothing and eye covering when checking or handling batteries.

- Clean and tighten battery terminals and have the specific gravity checked at least once a year.
- Check the battery fluid level every month, or more often in hot weather. Fill to approximately 3/8 inch above the plates. DO NOT OVERFILL. If fluid is added during freezing weather, the motor home should be driven several miles to mix water and electrolyte to prevent freezing.
- Fluid level check may be omitted if equipped with maintenance-free batteries.

**WARNING**

To prevent wiring damage, it is essential when replacing the cables on the battery, or when using a “booster” battery, that the positive post and the positive cable be attached and the negative post and negative cable be attached. The posts are marked (+) plus and (-) minus. If a “boost charger” is used while battery is in the motor home, disconnect both battery cables before connecting the charger to avoid damage to engine electronic components. Never attempt to charge or boost a frozen battery.

**FUSES AND CIRCUIT BREAKERS – HOUSE 12V DC**

All 12-volt circuits and equipment in the coach area of the motor home are protected by either a fuse panel or breaker panel. When a circuit is overloaded or a short develops in any part of the system, a fuse or breaker will shut down that circuit. If this happens, turn off all affected lights or appliances and reset the breaker or replace the fuse with a new one of equal amperage rating.
A label on the panel states the amperage rating and circuit protected for each fuse or breaker.

**12-Volt Fuse Panel**

The fuse panel is on the right-hand side of the power converter.

The fuse panel accepts only blade type plug-in fuses. Always replace fuses with those of the same amperage rating.

**Battery Charge Meter**

See related item under “Systems Monitor Panel” in section 4.

**Battery Boost Switch**

See section 3, Driving Your Motor Home for information on the Battery Boost Switch.
The fresh water system provides water to the galley sink, shower, bathroom lavatory, toilet and water heater. Water may be supplied by either of two sources:

- a water tank located within the motor home, or
- any external water source to which the motor home may be connected, known as “city water.”

**Fresh Water Tank Filling Procedures:**

Always fill the fresh water tank at an approved potable water filling facility or a known purified drinking water source.

**Gravity Fill**

Insert the water hose into the fill opening and turn the city water supply on. The tank is full when water flows from the tank vent tube beneath the coach.

The gravity fill is located behind a small, lockable door on the sidewall toward the back of the coach.

**City Water Use**

When connected to an outside source of water, the water bypasses the demand pump and storage tank and supplies pressure directly to individual faucets and toilet. A check valve built into the pump prevents water from entering the pump and filling the water tank.

**To Connect to an External City Water Source:**

1. Turn the demand pump switch to off.
2. Attach a hose from the external water source to the fresh water inlet on the left side of your vehicle.

3. Turn on the city water source.

**NOTE:** Because city water pressure varies from location to location, we recommend using an in-line water pressure regulator to prevent damage to any components, connections and seals in your fresh water system.

A water pressure regulator may be obtained from any well stocked RV dealership retail center and some retail discount centers. These devices simply connect in-line between the supply hose and the city water input on the coach.

We recommend a regulator that controls water pressure to **40 psi maximum**.
To Disconnect from the City Water Source:

1. Turn the city water source off.
2. Open a faucet inside the vehicle to relieve line pressure.
3. Disconnect the hose from the vehicle and replace the cap on the city water connection.

WATER PUMP
(Located beneath bed)

When your coach is not connected to a city water supply, water is supplied from the fresh water tank by a water system demand pump. A demand pump is designed to run only when you are using water. When you open a faucet, the water line pressure drops and the pump begins to run, and it will continue to run as long as the faucet is open. When you close the faucet, the line pressure backs up to the pump, and it shuts itself off.

The pump is self-priming and will run briefly to build up line pressure when the Water Pump Switch is first turned on. See “Initial Water Line Priming” for instructions on using the water system for the first time.

Further Information

See the water pump manufacturer’s operation, care and maintenance information in your InfoCase.

Pump Strainer

The pump is equipped with a cleanable strainer to capture any possible tank borne particles that could damage pump components. 

NOTE: We recommend that you check and clean the strainer after each tankful of water during the first few uses of the water pump system. Thereafter, remember to check it at least yearly, and be sure to empty water from it during winterization procedures.

To Clean Pump Strainer

Be sure all water pump switches are OFF.

- Twist the inlet cap (bowl) counterclockwise to unscrew from the strainer assembly.
- Remove the bowl and pull the strainer screen out of the bowl to tap out any particles and rinse clean.
- Insert the strainer screen back into the bowl, then screw the bowl back onto the strainer assembly.

NOTE: You must also empty the strainer when winterizing your coach to avoid water freezing and cracking the filter bowl.

Water Pump Switch

Water pump switches are located on the systems monitor panel and in the water service center. While the switch is in the “ON” position, the pump will automatically supply water pressure as it is needed. It is recommended that the pump switch be turned off whenever you are away from the vehicle or not using the water system. A slow leak in a faucet could drain the water system and discharge the coach battery.

Initial Water Line Priming

1. Make sure that all water drain valves are closed, including water heater valve.
2. Turn water pump switch to “OFF” position.
3. Fill water tank.
4. Open all faucets, hot and cold.
5. Turn on pump switch.
6. Close each faucet as it begins to deliver a steady stream of water (close cold water first). Leave hot water faucets on until they also deliver a steady stream of water. This will ensure that the water heater is filled with water.
7. Check to be sure pump stops soon after all faucets have been closed.
8. Pump is now ready for automatic operation. Pump will start when a faucet is opened and stop when the faucet is closed.

### DISINFECTING FRESH WATER SYSTEMS ON RV’S
(As approved by the U.S. Public Health Service)

To assure complete disinfection of your fresh water system, it is recommended that the following procedure be followed on a new system, one that has not been used for a period of time, or one that may have become contaminated. This procedure is also recommended before long periods of storage such as over winter.

1. Prepare a chlorine solution using 1 gallon of water and 1/4 cup of household bleach (sodium hypochlorite solution). With tank empty, pour chlorine solution into the tank. Use 1 gallon solution for each 15 gallons of tank capacity. This procedure will result in a residual chlorine concentration of 50 ppm in the water system. If a 100 ppm concentration is required as discussed in item 3, use 1/2 cup of household bleach with 1 gallon of water to prepare the chlorine solution. One gallon of the solution should be used for each 15 gallons of tank capacity.

2. Complete filling of tank with fresh water. Open each faucet and run the water until a distinct odor of chlorine can be detected in the water discharged. Do not forget the hot water taps.

3. Allow the system to stand at least 4 hours when disinfecting with 50 ppm residual chlorine. If a shorter time period is desired, then a 100 ppm chlorine concentration should be permitted to stand in the system for at least 1 hour.

4. Drain and flush with fresh water.

### WARNING
Chlorine is poisonous - recap bottle and clean utensils after use.

### SHOWER HOSE VACUUM BREAKER

After using the shower, you may notice water dripping from the shower faucet assembly. The dripping results when vacuum in the shower hose (after closing the shower faucet) slowly releases and allows water remaining in the hose to drain down. This is a normal function of the shower valve assembly and is not a leak or defect.

The International Association of Plumbing and Mechanical Officials Standard TSC 21-85 (PAR. 4.3) states:

“Shower heads which incorporate shutoff valves, shall have a minimum “drip rate” of one (1) quart in thirty (30) minutes.”

### CAUTION
If items are placed into the shower tub before shower valve vacuum release is complete, they may become wet.
SECTION 7
PLUMBING

EXTERIOR SHOWER/WASH STATION
- Optional

The exterior wash station feature allows you to do things such as rinse off sand or salt after a swim, rinse off muddy boots, or bathe your pet outside the coach. A water pump switch is located near the shower faucet for your convenience.

- The wash station is located in the water service center on the left side of the coach.

TOILET

The toilet in your motor home is very similar to the household type, except that it is designed to use only a small amount of water per flush. It uses a high velocity jet of water, producing a swirl effect, to efficiently cleanse the bowl.

Important “Don’ts”

- Don't use facial tissue or regular toilet tissue in the RV toilet. These will not disintegrate sufficiently and will often cling to the sides of the holding tank. Toilet tissue made specifically for use in RV toilets and holding tanks is available at most RV supply centers.

- Don’t dispose of sanitary napkins or other non-dissolving items in the toilet.

- Don’t put automotive antifreeze or caustic chemicals, such as laundry bleach or heavy detergents into the toilet or holding tank. These products may damage plastic or rubber parts in the system.

See winterizing instructions at the end of this section to prepare the toilet for storage in freezing conditions.

Further Information

See the toilet manufacturer’s operation information in your InfoCase for complete operating, care and maintenance information.
WASTE WATER SYSTEM
(Holding Tanks)

The drainage system is self-contained and uses two separate holding tanks to contain the waste water until it can be dumped at an appropriate waste water disposal site. This means you can use the toilet, sinks and shower even in areas where utility hookups are not available.

The black water holding tank contains the sewage from the toilet and may include bathroom lavatory on some models. The gray water holding tank contains the waste water from the galley sink and shower, and may include bathroom lavatory. See Tank Capacities in Section 1 for your model.

Dumping Holding Tanks
1. Remove drain hose from water service center.
2. Remove dust cap from drain and connect sewer hose. Be sure it is firmly attached.
3. Place the outlet end of sewer hose into disposal opening.
4. Open the black water valve (black handle) with a quick pull. Make sure there are no sags in the hose. Move the hose gently about to dislodge any solids and ensure complete drainage. Close black water valve as soon as tank is empty.

NOTE: Do not open the gray water valve until the black water tank is drained and dump valve closed to avoid sewage back-up into gray tank. Gray water also rinses any black water solids from the drain hose.

5. Open the gray water valve (gray handle). Be sure there are no sags in the hose to ensure complete drainage. Close gray water valve as soon as tank is empty.
6. Add an odor control chemical to the sewage holding tank through the toilet. These chemicals are available at most R.V. stores.
7. Rinse sewer hose thoroughly with water and stow.

NOTE: We recommend that you dump all holding tanks before traveling to avoid carrying unnecessary weight.

Using On-Site Sewer Hook-Ups

The drain hose may remain attached to the dump outlet and be routed out the bottom of the compartment while the motor home is parked and connected to an on-site sewage hook-up.
When using a sewer hook-up, keep the dump valves closed until a tank becomes full or when preparing to leave the site. This keeps the solids in suspension, allowing them to be carried out with the liquids when the dump valve is opened. If the valve is left open, the liquids will drain off, leaving solids in the tank. Should this accidentally happen, disconnect the hose, fill the tank about half full with water, and drive a few miles to dislodge the solids. A few starts and stops will aid in the process. Then reconnect the hose and drain in the normal manner.

**Holding Tank Level Indicators**

See Systems Monitor Panel in Section 4 for further information on the monitor panel and checking tank levels.

---

**HOLDING TANK HEATER**

-Optional

Your coach may be optionally equipped with black water and grey water holding tank heaters to allow use of waste utilities in freezing temperatures. The holding tank heater power switch is located near the monitor panel. The illuminated switch will glow when the power is on.

DO NOT operate the holding tank heater unless you are providing a supplemental 12-volt power source to recharge the house batteries. This means either the shoreline cord must be plugged into a 110-volt source, or the auxiliary generator must be operating, or the chassis engine must be running (such as when driving down the road). This will prevent excessive discharge (draining) of the house battery.

**NOTE:** The holding tank heater pads are electrical resistance type heating elements. This type of heating element typically uses a large amount of current while operating. If the tank heaters are used without a recharging source, they will drain the house batteries in a relatively short period. Typically the batteries would not support overnight heating without a supplemental charging source.

---

**WATER LINE AND TANK DRAIN VALVES**

The water drain valves are used to drain water from the water tank and the water supply lines when preparing the motor home for storage or when sanitizing the water system.

To open or close the drain valves, turn the handles in the directions indicated by the following illustration.

Drain valve locations are listed on the following pages.
WINTERIZING PROCEDURE

Blow Out Procedure

1. Level the motor home and drain the entire plumbing system as described in the following steps.

2. Open water line drain valves and drain fresh water tank. (See Water System Drain Valve Locations chart at the end of this section for locations of drain valves on your model.)

3. Open the Exterior Wash Station shower knobs and lay shower head on ground to drain any water left in the shower line. Also place the tip of your finger into the city water inlet and gently press the backflow valve “button” in the center of the inlet to drain any water trapped in the inlet line.

4. Turn on water pump and open all sink faucets and shower head knobs. Leave open after water stops flowing.

5. Press the toilet flush pedal and hold until water stops flowing in the toilet. Then turn water pump switch off.

6. Turn off the water heater power switch before draining the water heater tank to avoid damage to the heating element. Drain the water heater by removing the plug from the base of the water heater tank, accessible from the outside of the coach. (Requires socket and ratchet.)

Also open the Pressure-Temperature relief valve at the top right portion of the tank to prevent air locking in the tank while draining.
7. After water has stopped draining at all faucets and drain valves, leave faucets open and connect a “blow-out” plug to the city water connection on the coach. Then use a compressed air hose regulated to 30 psi or less to force air through the system. (A “blow-out” plug can be purchased at any Winnebago or Itasca dealer. P/N 701705-01-000.)

NOTE: DO NOT burst air into the system. This can damage the water pump. It is better to let air in slowly.

8. Let air flow for five minutes until water is completely drained out of faucets and drain valves. Then close faucets one at a time.

9. Operate and hold toilet flush pedal until water is completely drained from toilet.

10. Now turn air pressure off and disconnect water purge adapters. Recap the city water connection to avoid contamination by dirt or insects.

11. Follow Procedure listed in “Final Steps…”

Water System Antifreeze Procedure

NOTE: As an alternative to totally draining the plumbing system, you may winterize tanks and lines by pumping non-toxic RV antifreeze through the system. This product is available from your dealer and from most RV supply stores. Follow directions on the container to determine the correct amount to use for your coach.

Your coach is equipped with a manually operated water line winterization system for your convenience in winterizing fresh water lines.

The system features a diverter valve with suction tube to draw non-toxic RV water system antifreeze into the water lines. There is also a water heater bypass valve to avoid filling the water heater with antifreeze. This feature is located near the water pump in the water center or utility compartment.

CAUTION

Limit air pressure to 30 psi to avoid damage to pump or water lines.

NOTE: DO NOT burst air into the system. This can damage the water pump. It is better to let air in slowly.

WARNING

NEVER use automotive antifreeze/coolant in your RV water system. Auto antifreeze contains ethylene glycol which, if ingested, can cause blindness and can be fatal.
• Turn water heater by-pass valve to BY-PASS position.
• Remove and save the protective cap from the end of the antifreeze draw tube.
• Insert the end of the draw tube into a pail or other container with 2 to 3 gallons of non-toxic RV antifreeze solution.

When Done Adding RV Antifreeze:
• Turn water pump switch off.
• Turn the diverter valve handle so it points toward the suction tube.
• Turn the water pump switch on.
• Open each hot and cold water faucet handle in the coach one at a time until antifreeze solution just begins to flow from the faucet, then close.

Dump and Clean Holding Tanks:
• Completely drain the sewage and waste water holding tanks at an approved waste disposal site. Drain the sewage tank first so the following waste water can rinse any waste solids from the dump outlet and sewer hose.
• Close dump valves and refit the dust cap onto the drain outlet.

Final Steps for “Blow-Out” or “Water System Antifreeze” Procedure
1. Close all drain valves and faucets to avoid contamination by dirt or insects. Reinstall water heater drain plug and close P-T relief valve.
2. Pour about one cup of non-toxic RV antifreeze into the kitchen sink drain, bathroom sink drain and shower drain. This prevents any holding tank odors from entering the coach during storage.

NOTE: It is not necessary to add antifreeze to the toilet since the flush valve will be closed.

Do not add automotive antifreeze or caustic chemicals such as bleach or laundry detergents into the toilet bowl or holding tanks. Although these products may have a deodorizing effect, they may damage plastic and rubber parts in the system.
3. Place a bucket beneath the sewage drain valve outlet and re-drain the sewage and waste holding tanks of any clean water that may have entered during the “blow-out” procedure. Close dump valves to prevent valve shafts from rusting and to prevent entry by rodents and insects. Refit the dust cap onto the drain outlet.
4. Empty the water pump strainer filter bowl to avoid water freezing and cracking the filter bowl. Strainer is shown previously in this section.

Your drainage and fresh water systems are now totally winterized.
<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYSTEM</th>
<th>DRAIN VALVE LOCATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>22RR</td>
<td>Water Lines:</td>
<td>Two (2) valves beneath front dinette seat. Lift seat board to access. Two (2) valves behind the removable face panel of the shower pan base.</td>
</tr>
<tr>
<td></td>
<td>Water Tank:</td>
<td>One (1) valve beneath couch. Lift couch seat to access.</td>
</tr>
<tr>
<td></td>
<td>Water Heater:</td>
<td>Drain plug on outside of coach, behind service door. Use socket to remove drain plug.</td>
</tr>
<tr>
<td></td>
<td>Water Heater By-Pass Valve:</td>
<td>Beneath front dinette seat. Lift seat board to access.</td>
</tr>
<tr>
<td></td>
<td>Winterization (Antifreeze) Valve:</td>
<td>Beneath couch. Lift seat cushion frame to access.</td>
</tr>
<tr>
<td>22ER</td>
<td>Water Lines:</td>
<td>Two (2) valves beneath the shower base. Remove access panel on the lower left front of the shower cabinet.</td>
</tr>
<tr>
<td></td>
<td>Water Tank:</td>
<td>One (1) valve beneath the rear of the couch. Lift couch to access.</td>
</tr>
<tr>
<td></td>
<td>Water Heater:</td>
<td>Drain plug on outside of coach, behind service door. Use socket to remove drain plug.</td>
</tr>
<tr>
<td></td>
<td>Water Heater By-Pass Valve:</td>
<td>On floor beneath galley range. Access through storage cabinet door.</td>
</tr>
<tr>
<td></td>
<td>Winterization (Antifreeze) Valve:</td>
<td>Beneath rear of the couch. Lift couch seat to access.</td>
</tr>
<tr>
<td>MODEL</td>
<td>SYSTEM</td>
<td>DRAIN VALVE LOCATIONS</td>
</tr>
<tr>
<td>-------</td>
<td>--------</td>
<td>-----------------------</td>
</tr>
<tr>
<td><strong>24VR (with rear bed) 26AR</strong></td>
<td>Water Lines:</td>
<td>Two (2) valves beneath shower. Access through removable panel on lower front of shower cabinet. Two (2) valves beneath bed. Lift mattress to expose access hole.</td>
</tr>
<tr>
<td></td>
<td>Water Tank:</td>
<td>One (1) valve beneath the bed. Lift mattress to expose access hole.</td>
</tr>
<tr>
<td></td>
<td>Water Heater:</td>
<td>Drain plug on outside of coach, behind service door. Use socket to remove drain plug.</td>
</tr>
<tr>
<td></td>
<td>Water Heater By-Pass Valve:</td>
<td>Beneath the bed. Lift mattress to expose access hole.</td>
</tr>
<tr>
<td></td>
<td>Winterization (Antifreeze) Valve:</td>
<td>Beneath the bed. Lift mattress to expose access hole.</td>
</tr>
<tr>
<td></td>
<td>Exterior Shower:</td>
<td>Lay shower head on ground and open faucet valves to drain lines and hose.</td>
</tr>
<tr>
<td><strong>24VR (with rear dinette)</strong></td>
<td>Water Lines:</td>
<td>Two (2) valves beneath shower. Access through removable panel on lower front of shower cabinet.</td>
</tr>
<tr>
<td></td>
<td>Water Tank:</td>
<td>One (1) valve beneath the dinette cushion along the backwall. Lift cushion to expose access hole by bath wall.</td>
</tr>
<tr>
<td></td>
<td>Water Heater By-Pass Valve:</td>
<td>Beneath rear dinette. Lift cushion along the sidewall to expose access hole on front side of dinette.</td>
</tr>
<tr>
<td></td>
<td>Winterization (Antifreeze) Valve:</td>
<td>Located beneath rear dinette. Lift cushion along backwall to expose access hole by the sidewall.</td>
</tr>
<tr>
<td></td>
<td>Exterior Shower:</td>
<td>Lay shower head on ground and open faucet valves to drain lines and hose.</td>
</tr>
</tbody>
</table>
## WATER SYSTEM DRAIN VALVE LOCATIONS

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYSTEM</th>
<th>DRAIN VALVE LOCATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>25FR</td>
<td>Water Lines:</td>
<td>Two (2) valves beneath galley. Lift bottom shelf to access.</td>
</tr>
<tr>
<td></td>
<td>Water Tank:</td>
<td>One (1) valve beneath galley. Lift bottom shelf to access.</td>
</tr>
<tr>
<td></td>
<td>Water Heater:</td>
<td>Drain plug on outside of coach, behind service door. Use socket to remove drain plug.</td>
</tr>
<tr>
<td></td>
<td>Water Heater By-Pass Valve:</td>
<td>In bottom of refrigerator cabinet. Remove drawer to access.</td>
</tr>
<tr>
<td></td>
<td>Winterization (Antifreeze) Valve:</td>
<td>Beneath galley. Lift bottom shelf to access.</td>
</tr>
<tr>
<td></td>
<td>Exterior Shower:</td>
<td>Lay shower head on ground and open faucet valves to drain lines and hose.</td>
</tr>
<tr>
<td>27LR</td>
<td>Water Lines:</td>
<td>Two (2) valves in exterior storage compartment ahead of left (driver) side rear wheels.</td>
</tr>
<tr>
<td></td>
<td>Exterior Shower:</td>
<td>Open exterior shower knobs and lay shower head on ground. <em>NOTE: If coach is not equipped with exterior shower, there are two drain valves below the metal face panel on the left (forward) side of the water center.</em> Also place the tip of your finger inside the city water connection and gently press the backflow valve (small “button” in center of connector) to drain any water left in the city water line.</td>
</tr>
<tr>
<td></td>
<td>Water Tank:</td>
<td>One (1) valve in exterior storage compartment ahead of left (driver) side rear wheels.</td>
</tr>
<tr>
<td></td>
<td>Water Heater:</td>
<td>Drain plug on outside of coach, behind service door. Use socket to remove drain plug.</td>
</tr>
<tr>
<td></td>
<td>Water Heater By-Pass Valve:</td>
<td>Behind wardrobe cabinet. Remove bottom wardrobe drawer to access.</td>
</tr>
<tr>
<td></td>
<td>Winterization (Antifreeze) Valve:</td>
<td>In exterior storage compartment ahead of left (driver) side rear wheels.</td>
</tr>
</tbody>
</table>
## WATER SYSTEM DRAIN VALVE LOCATIONS

<table>
<thead>
<tr>
<th>MODEL</th>
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</tr>
</thead>
<tbody>
<tr>
<td>29BR</td>
<td>Water Lines:</td>
<td>Two (2) valves beneath shower. Access through removable panel on lower front of shower cabinet.</td>
</tr>
<tr>
<td>29KR</td>
<td>Water Tank:</td>
<td>In drivers side 2nd storage compartment.</td>
</tr>
<tr>
<td></td>
<td>Water Heater:</td>
<td>Drain plug on outside of coach, behind service door. Use socket to remove drain plug.</td>
</tr>
<tr>
<td></td>
<td>Water Heater</td>
<td>In rear wardrobe. Remove drawer to access.</td>
</tr>
<tr>
<td></td>
<td>By-Pass Valve:</td>
<td>In driver’s side 2nd storage compartment.</td>
</tr>
<tr>
<td></td>
<td>Winterization</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Antifreeze)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Valve:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Exterior Shower:</td>
<td>In compartment above driver side rear wheels. Lay shower head on ground and open faucet valves to drain lines and hose.</td>
</tr>
<tr>
<td>31CR</td>
<td>Water Lines:</td>
<td>Two (2) valves beneath the removable bottom panel in the bathroom lavatory cabinet.</td>
</tr>
<tr>
<td></td>
<td>Water Tank:</td>
<td>One (1) valve beneath the queen bed or driver side twin bed. Lift head of mattress to expose access hole.</td>
</tr>
<tr>
<td></td>
<td>Water Heater:</td>
<td>Drain plug on outside of coach, behind service door. Use socket to remove drain plug.</td>
</tr>
<tr>
<td></td>
<td>Water Heater</td>
<td>In bottom of refrigerator cabinet. Remove drawer to access.</td>
</tr>
<tr>
<td></td>
<td>By-Pass Valve:</td>
<td>Beneath the queen bed or driver side twin bed. Lift head of mattress to expose access hole.</td>
</tr>
<tr>
<td></td>
<td>Winterization</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Antifreeze)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Valve:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Exterior Shower:</td>
<td>Lay shower head on ground and open faucet valves to drain lines and hose.</td>
</tr>
</tbody>
</table>
### WATER SYSTEM DRAIN VALVE LOCATIONS

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SYSTEM</th>
<th>DRAIN VALVE LOCATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>32GR</td>
<td>Water Lines:</td>
<td>Two (2) drains at foot of bed on drivers side.</td>
</tr>
<tr>
<td></td>
<td>Exterior Shower:</td>
<td>Close valves under bed head drivers side. Move mattress to</td>
</tr>
<tr>
<td></td>
<td>Tank Drain:</td>
<td>Move mattress to expose hole at head of bed.</td>
</tr>
<tr>
<td></td>
<td>Winterization Valve:</td>
<td>Move mattress to expose hole at head of bed.</td>
</tr>
<tr>
<td></td>
<td>Water Heater By-Pass Valve:</td>
<td>Under galley remove panel along RH side.</td>
</tr>
<tr>
<td></td>
<td>Water Heater:</td>
<td>Drain plug on outside of coach, behind service door. Use</td>
</tr>
<tr>
<td></td>
<td></td>
<td>socket to remove drain plug.</td>
</tr>
</tbody>
</table>
SWING-OUT TV MOUNTS

CAUTION

Swing-out TV mounts are not intended for viewing while the vehicle is in motion. If your model is equipped with a swing-out TV mount, the TV should be stowed and latched while traveling.

VIDEO SELECTION SYSTEM
–If Equipped

The video selection system allows you to switch the antenna, cable TV, satellite TV system or VCR/DVD signal to any TV set location in the coach.

This means one person can watch a program coming in on the roof antenna on the bedroom TV while another person watches a satellite or cable TV program or video on the front TV.

To Watch Broadcast TV (Antenna)
• Press ANT button on FRONT TV section of Video Selection System panel.

To Watch Cable TV
• Press CABLE button on FRONT TV section of Video Selection System panel.

To Watch Satellite TV (Dish)
• Press SAT button on MAIN TV section of Video Selection System panel.

To Watch DVD
• See “Audio-Video System Basic Operation” elsewhere in this section for basic DVD and home theater setup.

To Watch VCR (if self-installed)
• Press VCR button on MAIN TV section of Video Selection System panel.

To Watch Rear/Bedroom TV (if equipped)
• Video selection for the rear TV is similar to front TV viewing except all selections are made with buttons in the TV2 grouping.

VCR Group Buttons
• The buttons in the VCR group are for selecting the signal input to a self-installed VCR for taping programs.
• If you wish to tape a program from cable TV press CABLE button. If the program is on the dish, press SAT, and so forth.

FRONT TV IGNITION SWITCH INTERLOCK

If your coach is equipped with a front overhead TV, it is plugged into a special electrical outlet with a built-in ignition switch interlock. The device allows the front overhead TV to operate only when the ignition key is in the Off or Accessory positions.
HOME THEATER SYSTEM
DVD/VCR Combination Player - Optional

The home theater system operates from 110V AC household current only, so you must have either the shoreline plugged in, or the optional generator running or the optional inverter turned on.

The sound from this system emits from the five surround sound cube speakers located near the ceiling in the lounge area of the coach. These speakers are not connected to the dash radio speakers. Refer to the manufacturer’s operating guide for complete operation and troubleshooting information.

ELECTRICAL INVERTER
300-Watt DC-to-AC
–If Equipped

The inverter changes 12-volt DC automotive current into 120-volt AC household current. This allows you to operate your TV and DVD player from the house batteries when shoreline hookup or generator power are not available.

In some models the inverter is also connected to the 120-Volt AC outlet for the bedroom TV*.

The inverter is typically located in the video center cabinet or on the lower face of the galley cabinet.

TV/DVD MASTER POWER SWITCH – 12-VOLT
–If Equipped with Side Swing-Out TV

The TV and DVD player unit on models with side-mounted swing-out TV are powered by 12-volt coach current and have a master power switch located on the underside of a side overhead cabinet. The switch is labeled ‘12 VOLT TV’ as shown.

Turn this 12-volt power switch off when not using the TV to conserve house battery charge.

300-Watt DC-AC Power Inverter
• Turn Inverter On to operate TV.
• Low Battery indicator will light if 12V house batteries are becoming drained. (Turn Off inverter to avoid total drain.)
• Turn Inverter Off when not in use to avoid draining house batteries.
• The inverter will shut down when the Aux Battery Disconnect switch is turned off.
*NOTE: Running high-amperage appliances like the TV and DVD on the inverter can drain the house battery rather quickly unless the chassis engine is running to charge the batteries.

Further Information

See manufacturer’s information provided in your InfoCase for more information.

**TV ANTENNA**

The TV antenna on your motor home can be easily raised, rotated a full 360° and lowered from inside the vehicle by simply turning a crank or directional handle. A built-in signal amplifier designed to strengthen signals, is controlled by a power switch built into the TV jack assembly.

See the antenna manufacturer’s operation, care and maintenance information in your InfoCase.

---

**WARNING**

Never allow the antenna to touch electrical power lines or any other electrical wires.

---

**CAUTION**

Always align directional handle to “DOWN” position before lowering.

---

**TV SIGNAL AMPLIFIER**

*NOTE: For coaches without the video control center option, be sure the TV antenna amplifier switch is turned OFF while connected to cable. The antenna amplifier will make the cable TV signal snowy.*

To operate amplifier, turn on power switch.

---

**CABLE TV HOOK-UP**

The cable television connector is located in the utility compartment.
SECTION 8
ENTERTAINMENT

DIGITAL SATELLITE TELEVISION SYSTEM
–Optional

The Digital Satellite Television System allows you to receive TV programs directly from satellite to your coach. The programs are transmitted in digital format so the quality is equal to laser disc or CD.

See your RV Digital Satellite Antenna System Owner Manual for instructions about aiming the satellite antenna dish. The coach must be level before attempting to aim the antenna dish.

SATELLITE SYSTEM WIRING

This coach is pre-wired for installation of a digital satellite system (DSS). Coaxial cable connections to hook up your satellite receiver are located in the left or right front overhead compartment, depending on model.

See your authorized Winnebago Industries dealer for proper installation and sealing of roof mounted components.

EXTERIOR ENTERTAINMENT CENTER

The exterior entertainment center contains a stereo radio/CD player with remote. Convenient TV hook-ups and 12-volt and 110-volt outlets are also provided.

NOTE: These electronic devices and speakers are not designed to be waterproof. Please take measures to prevent rain or other precipitation from entering the entertainment center by closing the compartment door or ensuring that an awning will prevent entrance of precipitation.
Further Information

See the radio manufacturer’s information in your InfoCase for radio and CD operating instructions.

TWO-WAY RADIOS
- Optional

If your coach is equipped with the available two-way radios, the charger/docking bay is located on a cabinet end near the entrance door - for easy access as you head out the door.

Further Information

Please read the manufacturer’s operating information in your InfoCase for details on charging and using the radios.
SECTION 9 FURNITURE & SOFTGOODS

SLEEPING FACILITIES

OVERHEAD FRONT BUNK
–If Equipped

The overhead front bunk is located above the driver’s compartment. The rear mattress section can be stacked on top of the front section for storage while traveling or when not in use.

The bunk ladder (supplied) can be hooked onto the brackets on the rear edge of the bunk mattress for access.

Before Using Bunk Ladder

- **Inspect the ladder** to make sure it is not damaged. Never use a damaged ladder.
- **Keep the rungs of the ladder clean and dry** while in use. Do not step onto the rungs if the rungs are wet, or if your shoes are wet or carry debris that could result in a loss of footing.
- **Maximum Capacity: 225 lbs.**
- **Do not overload.** Ladder is intended for one person.
- **Make sure you are physically capable** to safely use the ladder. Strength, flexibility and stability are required.
- **Grasp the side rails firmly** and always use both hands as you climb the ladder. Keep your body centered between the side rails. Do not over-reach.
- **To protect children,** do not leave the ladder set up and unattended.
- **Always store** the ladder in a safe and dry location when not in use. Stow properly while in transit.
- **Do not store items** on the ladder. You could damage the ladder.

To Use the Bunk Ladder

The top of the ladder can be hooked onto the brackets on the rear edge of the bunk as shown.

![Attaching Bunk Ladder](image)

- **Attach the ladder** horizontally
- **Slide C-shaped retainer ends onto brackets at the top of the bunk.**
- **Lower ladder to floor.**
- **Make sure ladder is properly engaged onto retainer brackets and ladder is resting firmly on floor before using.**
Straps are provided on the mattress section to secure and store the ladder while traveling or when not in use.

COUCH/BED CONVERSION

Couch to Bed:
Lift the front edge of the couch seat upward and pull outward from the wall while gently pushing downward on the backrest until the cushions lie flat. The bed is now ready for use.

Bed to Couch:
Push the front edge of the seat toward the wall while lifting upward on the backrest until the couch is fully seated against the wall.

DINETTE/BED CONVERSION
–If Equipped
(Typical view – your coach may vary)

Dinette to Bed:
1. Release the catch on the table leg brace and fold the leg up against the bottom of the table.
2. Remove the table from the wall support bracket by lifting the end of the table. Then lower the table to rest on the cleats attached to each dinette bench.
SECTION 9
FURNITURE & SOFTGOODS

3. Arrange dinette cushions to cover bed area.

2. Make sure that the table leg is secured into the floor support bracket and the leg brace is locked.

**U-SHAPED DINETTE/BED CONVERSION**

- Optional (Model 27LR only)

   The round dinette can be converted into additional sleeping space when needed by lowering the table and moving a cushion into place as shown below.

1. Lift the table upward off the support tubes and set the table edgewise onto the floor.
2. Remove the table leg tubes.

**Bed to Dinette:**

1. Reattach the table onto the wall support and lower the table leg.
3. Store table leg tubes in compartment beneath dinette seat.
4. Be sure leaf extension is lowered.
5. Place the table, ‘flat’ side outward, in the ‘notch’ - lowering it onto the table support columns on the dinette seat face.

6. Place large, rounded back cushion into place over the table to complete the bed cushion conversion.
   Reverse steps to reassemble to dinette configuration.

**Round Table Leaf Extension**

Lift the leaf extension upward then reach beneath the tabletop and slide the support arms outward to hold the extension. Reverse steps to lower the extension.

**PLEATED BLINDS**

Your coach may feature pleated window blinds for nighttime privacy and daytime room darkening purposes.

See Maintenance & Storage section for tension adjustment and care instructions.

**QUARTZ WALL CLOCK**

To adjust the time or replace the battery, the clock must be removed from its mounting socket on the wall. The clock uses a standard “AA” battery.
Carefully remove the clock from the socket by rotating to the left (counterclockwise) about 1/4 turn as shown.

After replacing the battery, place the clock back into the socket with the 12 at the 9 o’clock position as shown, then rotate clockwise so it is upright.

WOOD FURNITURE AND CABINETRY

People are drawn to the natural beauty of wood. At Winnebago Industries, our craftsmen work with the art found in each piece of wood to create cabinets of superior quality, backed by the Winnebago Industries warranty.

• Oak is a strong, open-grained hardwood that ranges in color from white to pink and reddish tones. Streaks of green, yellow and even black may appear due to mineral deposits. Oak may also contain wormholes and wild, varying grain patterns. This distinct graining is considered a desirable quality and has made oak one of the most popular woods used for cabinetry.

• Maple is a close-grained hardwood that is predominately white to creamy-white in color, with occasional reddish-brown tones. While maple typically features uniform graining as compared to other wood species, characteristic markings may include fine brown lines, wavy or curly graining, bird's eye dots and mineral streaks. These traits are natural and serve to enhance maple's natural beauty.

• Cherry is characterized by its red undertones, but may vary in color from white to a deep, rich brown. Cherry is a close-grained wood with fairly uniform texture, revealing pin knots and curly graining. All wood will age with time and the finish will darken. This is especially true for cherry. This is a sought-after quality in cherry cabinetry, and those who select it expect this evolution.

No matter which species you choose for your new Winnebago Industries motorhome cabinetry, please keep in mind that no two pieces of wood are exactly the same. Stains are likely to exaggerate the difference between open and closed grains and other markings in wood. Grain variation and color change should be expected. As hardwood ages, it will darken when exposed to different types of light. Color differences or changes in wood can also be caused by exposure to harsh chemicals, extreme heat or other contributing external conditions.

Any color change that occurs in both the finish and the wood is considered part of the natural aging process and is not to be considered defect or damage.
Additionally, wood species exhibit other defining characteristics, such as mineral deposits/streaks, knots, sap runs, pin holes and wormholes. These markings make the wood unique and contribute to its enduring beauty.

Therefore, since wood is a product of nature and will have certain natural characteristics and variances they are not covered under the warranty.
SLIDEOUT ROOM OPERATION

The slideout living room provides a spacious living area at the push of a button. The slideout room is extended and retracted using a motorized mechanism with an electronic control system.

The slideout room system uses a 12-Volt DC motorized room mechanism to insure smooth operation and positive weather seal.

The slideout control switch is located near the entrance door or Systems Monitor Panel.

Note: We recommend that you KEEP THE ENGINE RUNNING WHILE EXTENDING OR RETRACTING SLIDEOUT ROOMS so the engine alternator can provide maximum power for proper operation of the slideout mechanisms.

Before Extending the Slideout Room:
1. Level the coach and set the Parking Brake.
2. Make sure exterior compartment doors are closed so that they will not interfere with slideout operation.
3. Make sure that there are no people who could be harmed or obstacles that could cause damage due to room extension.
4. Release the safety travel straps inside the coach.

If the slideout room has a couch or other furniture, make sure no people or pets are seated on them until the room has been fully extended.

Travel Strap

The travel strap must be released before extending the room or damage to the coach will result.

The travel strap is designed only to help keep the room extension secured against the coach sidewall to maintain an effective weather seal while the vehicle is in motion. It is not designed to withstand the force exerted by the room extension mechanism and will not prevent accidental extension of the room.

The travel strap is located near the floor at the front end of the slideout room.

To Release:
- Pull the strap buckle outward and up to release tension on strap.
- Pull a short length of the excess strap back through the buckle to provide sufficient slack.
- Unhook the strap end peg from the mooring bracket on the floor and wall edge. Store strap in location of your choice. (Under the couch is one choice.)
To Fasten Strap:
- Hook the strap end peg into the mooring bracket.
- Flip buckle downward and press toward strap until it “snaps” snugly into place against the strap.
- If a strap is loose or too tight after closing the buckle, release the buckle and pull the loose end of the strap in or out to adjust tension as needed. Then reclose the buckle.

**WARNING**
Keep all persons clear of the slideout room and moving parts while extending or retracting. Do not occupy the slideout room while it is being extended or retracted.

To Extend Slideout Room:
- Be sure the coach is level.
- Set Parking Brake.
- Release travel strap.
- To extend the room, press and hold the “OUT” button.

- When the room has reached its full extension it will stop automatically.
- To stop the room during operation, release the button.

**Before Retracting the Slideout Room:**
1. Be sure the coach is level and the Parking Brake is set.
2. Check the outside of the coach to make sure that there are no people who could be harmed or no obstacles between the outer wall flange and the outside sidewall of the coach.
3. Make sure that there are no people who could be harmed or no obstacles that could interfere with the room’s retraction on the inside of the coach.
4. If the slideout room has a couch or other furniture, make sure no people or pets are seated on them until the room has been fully retracted.
5. Park Brake must be set.
SECTION 10
SLIDEOUT

To Retract the Slideout Room
See Operation Safety Precautions before proceeding.
To retract the room, press and hold the “IN” button.

- To stop retracting the room during operation, release the button.
- When the room has retracted completely, it will stop automatically.
- After the room has been retracted, refasten the safety travel straps.

SLIDEOUT ROOM – EXTREME WEATHER PRECAUTION

Certain extreme weather conditions, such as heavy rains, heavy snow, and high winds – or any combination of these – could cause damage to the slideout room awning-cover (if equipped) or reduce effectiveness of the slideout room weather seals.

Also, freezing rain and snow can prevent the slideout awning-cover (if equipped) from closing and may cause damage to the awning-cover, slideout room, weather seals and mechanisms.

To avoid potential damage, we recommend retracting your slideout room(s) during extreme weather conditions.

TROUBLESHOOTING

Battery Voltage or Circuit Breaker Problems
If the slideout room will not work:
- The chassis battery may be low on charge. Press and hold the Battery Boost switch on the dash while pressing the slideout control switch. This momentarily connects the coach batteries to assist in retracting the room.
- The circuit breaker may be tripped. The circuit breaker, labeled ‘Slideout Power’ is located on a panel on an interior wall of the passenger side storage compartment just behind or ahead of the entrance door.

Problems Retracting the Room
Set the Park Brake if the red Park Brake light flashes while pressing the Retract button.
If an error is detected on your DigiSync Room Slide System, the green LED on the left side of the control panel will blink an error code. If an error code appears, see the On Board diagnostics section to determine the problem. The error code must be cleared prior to operating the room. To clear the error, press the “RESET” button with a small tool such as a toothpick. Before operating the room after an error has been detected, check for obvious faults such as obstructions prior to trying to operate the room again. If the error code appears again, the room will need to be retracted using either the manual retraction method or the fully manual method. Both methods listed below are intended as a means to retract the room to prepare the coach for travel to the nearest authorized Service Center.

To retract the room after an error is detected, you override the synchronization programming and operate the room in the Manual Mode.

**Manual Mode:**

Manual Mode lets you individually move the two room arms by pressing the IN and OUT buttons on the control pad. *This mode can be used only if there is not a motor failure or full electrical system failure.* To override the encoder and enter the Manual Mode, press and hold the RESET button until the two LEDs begin to flash.

While in the Manual Mode each of the two, room slide arms are activated by pressing and holding the IN and OUT buttons. The “OUT” button will retract the front arm. The “IN” button will retract the back arm. Both IN and OUT buttons may be held down at the same time to simultaneously activate both arms to retract the room. If one side of the room gets ahead of the other, release that button until the other arm catches up. The current limiting feature of the control still functions in the Manual Mode so each side can be fully retracted until it stops.

Once the room has been retracted, the control will return to the automatic mode after 60 seconds. You can manually return to automatic mode by pressing the stop button.

In the event of a total system failure where Manual Mode cannot be used, two crank handles may be used to retract or extend the room.

**EMERGENCY RETRACTION**

**Front Slideout Crank-In Mode**

If the room will not retract using the buttons and the mechanism is apparently malfunctioning, you may need to manually crank the room in to the travel position. The cranks are stored on clips on the wall of an exterior storage compartment.
The crank sockets are located behind covers on the lower portion of the room on the outside of the coach. Your coach may have one of the two types of covers shown.

**Type A - Twin Arm** - covers on lower face of room (photo 1A): Pry out the snap-in screw cover (photo 2A) and remove the screw to take off the cover plate.

The crank socket is shown in photo 3.

**Type B - Single Arm** - cover mounted beneath face of slideout room: Remove the four bolts that fasten the cover to the arm - two on each side. The crank socket is shown in photo 3.

Insert the crank handle into the socket and align the notches in the crank handle with the pins on the drive shaft as shown in photo 3.
It may be necessary to move the handle slightly from side to side to fit it onto the shaft. The crank handle will only move the arm that it is inserted into. Consequently you will need to alternate between each crank handle on each side to move the room in or out. If help is available a second person cranking on the other handle simultaneously will greatly speed up the process. At no point in the cranking process should you let one side get more than 2 inches (50 mm) ahead of the other. The most effective way to retract the room using a single person is to crank one side ahead of the other, then crank the other side in (“walk” the room in).

Further Information

See the DigiSync Slideout Room operating guide included in your InfoCase for further instructions and troubleshooting information.

Crank-In Mode – Model 27LR Front Slideout only

If the room will not retract using the buttons and the mechanism is apparently malfunctioning, you may need to manually crank the room in to the travel position.

- Use a ratchet wrench with a 7/16” socket on the motor gearshaft to manually crank the room inward.
- The motor/gear assembly is located beneath the vehicle near the rear ‘ram’ shaft of the slideout room, just ahead of the driver side rear tires.

• Crank the room in until it is just ‘snugged up’. Do not overcrank or you could damage the gear assembly.
• Fasten the travel strap before driving the vehicle to your dealer for service of the slideout mechanism.
• See your dealer for service of the slideout system before using again.

Further Information

See the Slideout Room operating guide included in your Owner’s InfoCase for further instructions and troubleshooting information.

Bedroom Slideout Emergency Retraction – Models 27LR & 29BR

1. Locate the tools in the right front side storage compartment - a ratchet wrench, a hex-end shaft and an extension shaft. (The ratchet wrench may be packaged in the InfoCase.)
2. Locate the small, round access hole in the bed base at the foot of the bed.

3. Attach the shaft extension to hex-end shaft and place the ratchet wrench onto the hex end shaft, then insert into the hole in the bed base as shown.

4. The slotted end of the tool must engage with the pin in the endshaft on the slideout gear assembly. See arrow in close-up detail.

5. Crank the ratchet wrench clockwise (to the right) to retract the room. The tool will extend nearly a foot out of the bed base at first, but will be drawn into the bed base as the room is retracted. This is a slow process that will take some time and quite a few turns of the wrench.

6. As the room retracts, the bed base will move away from the gear endshaft, which will eventually cause the tool to lose contact with the shaft. When this happens you must raise the bed, remove the access cover to access the gear endshaft, and continue using the wrench and hex shaft only as shown.

GENERAL SLIDEOUT CARE

- Wipe outer seals occasionally with talc or 303 brand protectant for smooth quiet operation.
- Clean the floors inside before retracting the room to avoid vinyl flooring scratches or carpet pile snags.
- See your authorized dealer for regular maintenance and service of the slideout mechanism.
- See the slideout room guide in your InfoCase for maintenance information.
- Never check for hydraulic fluid leaks using your hands and/or any other body part. The leaking fluid is under pressure and is capable of cutting and penetrating your skin, resulting in severe injury.
SECTION 11 MAINTENANCE

SEALANTS

Water is a recreational vehicle’s worst enemy when it is allowed to enter where it’s not intended. Sealants perform a very important function and should be inspected closely and maintained regularly. Winnebago Industries utilizes many different types of sealants.

Refer to Recommended Sealant Application page at the end of this section.

Sealants, in general, do not have “set” lifetimes. Varying environmental factors affect the pliability and adhesiveness of sealants. You or your dealer must:

• Inspect all sealants, a minimum of every six months.
• Inspect the moldings, windows, clearance lights, exterior compartment doors and all their attachments.
• Check for cracks, voids, gaps, breaks, adhesion, and any sign of physical deterioration.

**NOTE:** Proper sealant inspection includes not just visual observation but running a finger along sealant seams to verify proper adhesion to the surface. Any loosened areas must be replaced.

• Have the sealant replaced if you notice any of the above. Your local Winnebago Industries dealer has the correct and necessary parts and experience to help you maintain your sealants.
• Always use the same type sealant that was removed.
• Immediately have dealership check moldings, windows and exterior attachments for leak source if you notice water inside of unit.

CAUTION

Sealants must be inspected every 6 months and replaced if necessary.

ROOF

The roof is made of Thermo-Panel materials like the walls and floor. It will support the weight of an average adult should it become necessary to repair the roof or roof mounted components. It is not recommended, however, that very large or heavy objects be carried on the roof while the vehicle is in motion. (See Section 3 for roof loading specifications.) Always have damage to the roof area repaired immediately. Damaged or detached sealant around the vents, air conditioner, body-to-roof seams, etc., should also receive immediate attention. Delaying these repairs may allow water leakage and result in damage to interior ceiling and body panels, upholstery, etc., which is not covered by the limited warranty.

UNDERBODY

Buildup of mud and dirt under the body can cause damaging rust on steel parts and can add needless weight to the vehicle. This, in effect, reduces the amount of cargo you can carry and remain within GVWR and GAWR limits.

Corrosive materials, such as those used for ice and snow removal and dust control, also accumulate on the underside of a vehicle. These materials should be removed by flushing the underbody regularly with water, especially areas where mud and other foreign materials collect.

**NOTE:** Anytime an RV technician is beneath the coach or it is on a hoist for service, have the underbody and chassis checked for...
**EXTERIOR FINISH**

The exterior surface of your motor home has an automotive type finish. Frequent washing and thorough cleaning is recommended to prevent damage to the vehicle finish after exposure to damaging salts, calcium chloride, road tar, tree sap, insects and other foreign material. Never wash the vehicle in direct sunlight or while the vehicle surface is hot.

Do not use strong soaps or detergents for washing the motor home. Always use a mild soap in warm water. Be careful when using pressure-type washers to avoid loosening exterior decals or sealants.

*NOTE:* Avoid aiming water flow from a hose or spray from high pressure washing equipment into any appliance intake because damage or difficulty in operating appliances may occur.

After washing the motor home, carefully inspect caulking around window frames and vents and any other joints that may have separated. Recaulking, if necessary, is quite simple. Appropriate compounds are sold at Winnebago and Itasca dealers, and the materials are quickly and easily applied. Also, inspect weather seals around door, etc., and if necessary have a dealer replace them immediately.

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**CAUTION**

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

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**Waxing and Polishing**

When water will not bead up and roll off the finish of your freshly washed vehicle, it’s time to apply a new coat of wax to the finish. Wax not only improves the appearance of the vehicle, but protects the finish against oxidation and corrosive substances.

We recommend using a wax that is compatible with painted and gel-coated fiberglass finishes.

If the finish begins to look dull or discolored, it may need to be cleaned with a polishing or cleaning compound.

*NOTE:* If you use a polish or a cleaning compound that does not contain a wax preservative, we recommend reapplying a coat of hard wax after cleaning or polishing the finish.

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**CARE OF STRIPES AND DECALS**

The pressure-sensitive decals on your coach require very little maintenance. They should be treated like any painted surface on your vehicle. Here are a few helpful hints on caring for decals:

- Wash decals with plain soap and water or any retail car wash soap. Always rinse thoroughly.
- High pressure water spray may damage decals and paint.
- Test any cleaning solution on a small section of decal before using.
- Do Not use any aromatic solvents such as acetone, MEK, toluene, xylene, etc., on decals. Any solvent including alcohol may soften or smear colors.
- Do Not use lacquer thinner on paint or decals.
- Do Not overcoat decals with clear paint.
- Do Not let gasoline or other fuels drip and stay on decals for any length of time. Rinse immediately.
CLASS C

SECTION 11
MAINTENANCE

PLASTIC PARTS – CLEANING

Many parts in your motorhome, such as the dash, exterior light lenses, and certain exterior body panels are made of high-impact plastic materials that can be damaged by wiping with solvents or improper cleaning products.

Always try cleaning plastic parts with the mildest cleaners first and work your way up to stronger cleaning products. Use the following cautionary lists as a guide when selecting cleaning products to use on plastic parts.

Here is a list of mild cleaners that may be used safely:

- Car washing soap and water
- Glass cleaners without ammonia
- Mineral oil
- Multipurpose cleaners (such as Fantastik®, Formula 409®, etc.)

The following products, compounds or solvents must be wiped off immediately to avoid damage:

- Ammonia
- Brake fluid
- Bathroom basin, tub and tile cleaners
- Chlorine
- Ethyl alcohol
- Isopropyl (rubbing) alcohol

- Kerosene or gasoline
- Naptha
- ‘Pine’ type household cleaners

Do not use cleaners containing the following products, compounds or solvents. These products will damage the finish:

- Acetic acid
- Acetone (nail polish remover)
- Aromatic solvents (lacquer thinners)
- Benzene
- Butyl alcohol

EXTERIOR LIGHTS

Most Winnebago Industries vehicles have polycarbonate lenses on exterior lamps, which are very sensitive to a variety of chemical solvents and cleaners.

- Use only soap and water to clean exterior lamp lenses - especially headlights!
- Contact with certain chemicals can cause etching, ‘crazing’ or cracking of the lens, which can significantly reduce the lens clarity and effectiveness of the lamp and may require replacement of the complete lamp housing.
- Some popular citric acid cleaners may cause polycarbonate lenses to become ‘hazy’ or ‘foggy’.
- Do not use a pressure washer to clean headlights.
- Inspect and operate the lights regularly to confirm proper operation and mounting condition.

INTERIOR SOFTGOODS

We recommend a weekly routine of vacuuming all fabrics and carpet throughout the motor home to prevent an accumulation of dirt which can detract from the appearance and shorten the life of carpet and fabrics.
SECTION 11
MAINTENANCE

Fabric Upholstery
Some fabrics used in this motor home may contain fire retardant and fade resistant additives which can be damaged by use of improper cleaning products. Some water-based household cleaning products are not formulated for use on fabrics and may cause excessive shrinkage or fading. Always test any cleaning product on a hidden area of fabric before using on visible areas. For best results, fabric cleaning should be referred to a professional carpet and upholstery cleaner.

NOTE: To minimize fading of upholstery, carpets and other interior fabrics caused by excessive sunlight, the drapes, blinds or shades should be closed when the motor home is parked for an extended period of time.

Vinyl Fabrics
Vinyl should be cleaned with a soft, damp cloth, and a mild detergent only. Do not use solvents. Solvents may damage the surface of the vinyl.

Draperies, Curtains and Bedspreads
These items may be woven from a variety of fabrics. We recommend that these be professionally dry cleaned only. A five percent shrinkage may occur when you have these items dry cleaned.

General Stains
As with any stain or contamination, the quick response is the best, especially when done in conjunction with the proper cleaner for the type of stain.

CARE OF CEILING FABRIC
While using your coach, your ceiling fabric may become soiled and require spot cleaning from time to time.

These materials are made from polypropylene or polyester synthetic fibers, so they clean very well with virtually no damage to the color or fabric itself.

Most commercially available carpet and upholstery cleaners will do an excellent job removing stains. From time to time, additional cleaning methods may need to be used to remove stubborn or difficult stains.

The following cleaning chart is provided as a guideline for care and cleaning of ceiling fabrics used in your coach.

WARNING
When cleaning upholstery and fabric, do not use lacquer thinner, nail polish remover, laundry soaps, or bleach. Never use carbon tetrachloride, gasoline, or naptha for any cleaning purpose. These materials may cause damage to the material being cleaned and most are highly flammable.
### SECTION 11
### MAINTENANCE

#### Class C

**NOTE:** In many cases listed above, repeated steps may be required to fully extract contaminant from material. Items listed above with (*) may also be removed through steam extraction method by a professional cleaner or service. Always check to see that the cleaner used will not cause damage to the material or fabric by testing on an area out of sight.

<table>
<thead>
<tr>
<th>Type of Stain</th>
<th>Cleaning Agent</th>
<th>How to Remove</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mustard</td>
<td>Dry-Clean Solvent</td>
<td>Scrub-Soak-Blot Dry</td>
</tr>
<tr>
<td>Ketchup*</td>
<td>High Strength Detergent</td>
<td>Scrub-Soak-Blot Dry</td>
</tr>
<tr>
<td>Coffee*</td>
<td>High Strength Detergent</td>
<td>Scrub-Soak-Blot Dry</td>
</tr>
<tr>
<td>Chocolate*</td>
<td>Detergent</td>
<td>Scrub-Soak-Blot Dry</td>
</tr>
<tr>
<td>Tea</td>
<td>High Strength Detergent</td>
<td>Scrub-Soak-Blot Dry</td>
</tr>
<tr>
<td>Chewing Gum</td>
<td>Dry-Clean Solvent</td>
<td>Scrub-Soak-Blot Dry</td>
</tr>
<tr>
<td>Oil</td>
<td>High Strength Detergent</td>
<td>Scrub-Soak-Blot Dry</td>
</tr>
<tr>
<td>Grease</td>
<td>High Strength Detergent/Degreaser</td>
<td>Scrub-Soak-Blot Dry</td>
</tr>
<tr>
<td>Tar/Asphalt</td>
<td>K-1 Kerosene/Thinner</td>
<td>Scrub-Soak-Blot Dry</td>
</tr>
<tr>
<td>Wax</td>
<td>Detergent</td>
<td>Hot Iron on Detergent-Soaked Towel or cloth</td>
</tr>
<tr>
<td>Rust</td>
<td>Rust Remover</td>
<td>Scrub-Soak-Blot Dry</td>
</tr>
<tr>
<td>Dirt*</td>
<td>Detergent</td>
<td>Scrub-Soak-Blot Dry</td>
</tr>
<tr>
<td>Lipstick</td>
<td>Dry-Clean Solvent</td>
<td>Soak-Blot Dry</td>
</tr>
<tr>
<td>Nail Polish</td>
<td>Dry-Clean Solvent</td>
<td>Soak-Blot Dry</td>
</tr>
<tr>
<td>Shoe Polish</td>
<td>Dry-Clean Solvent</td>
<td>Soak-Blot Dry</td>
</tr>
<tr>
<td>Crayon</td>
<td>High Strength Detergent</td>
<td>Scrub-Soak-Blot Dry</td>
</tr>
<tr>
<td>Marker (indelible)</td>
<td>Detergent</td>
<td>Scrub-Soak-Blot Dry</td>
</tr>
<tr>
<td>Ink (Ballpoint Pen)</td>
<td>Dry-Clean Solvent</td>
<td>Soak-Blot Dry</td>
</tr>
<tr>
<td>Pencil Lead (Graphite)</td>
<td>Detergent</td>
<td>Scrub-Rinse-Blot Dry</td>
</tr>
<tr>
<td>Vomit*</td>
<td>High Strength Detergent</td>
<td>Scrub-Rinse-Blot Dry-Deodorize w/Vinegar</td>
</tr>
<tr>
<td>Urine*</td>
<td>High Strength Detergent</td>
<td>Scrub-Rinse-Blot Dry-Deodorize w/Vinegar</td>
</tr>
<tr>
<td>Blood*</td>
<td>High Strength Detergent</td>
<td>Scrub-Rinse-Blot Dry-Deodorize w/Vinegar</td>
</tr>
<tr>
<td>Excrement*</td>
<td>High Strength Detergent</td>
<td>Scrub-Rinse-Blot Dry-Deodorize w/Vinegar</td>
</tr>
</tbody>
</table>

**Water Stains**

Water stains should be cleaned with a mixture of 1/4 cup of white powdered or clear liquid laundry detergent (no coloring) in a bucket of warm water. Working with a clean sponge or white cloth, start from the outside of the stain and work your way to the center. This method will keep the stain from spreading. Do not over saturate as this may cause de-lamination. No need to scrub, simply rub lightly or dab the stain.

You may have to repeat this procedure more than once to achieve desired results. Finish up with clean water, using the same method, and blot dry. **REMEMBER,** this is polypropylene, basic plastic, so do not be afraid to clean it.

Steam cleaning is also an option. Again, take care not to over-saturate the material.

#### CABINETRY

Wooden items may be cleaned with a soft cloth and a good quality wood finish cleaning product.

Vinyl simulated wood panels may be cleaned with a mild, water based cleaner and a soft cloth. Do not use solvents on vinyl wood panels.

**NOTE:** Many cabinetry and furniture items throughout this motor home are constructed either partially or completely of real hardwoods. Because of natural variations in woodgrain density, slight differences in stain hue may exist.
between one item and another. This is the distinctive character and beauty of real wood.

VINYL WALLBOARD
Decorative vinyl covered wallboards may be cleaned with a mild solution of water and isopropyl (rubbing) alcohol or a mild soap solution. Do not use solvents or abrasive cleaning products.

TABLES AND COUNTERTOPS
Work surfaces are covered with a plastic laminate that resists solvents, stains and abrasions. A coat of furniture wax applied to these surfaces on the counters and table will help preserve their beauty and make cleaning easier. Always clean the surface before applying wax.

GALLEY SINK
Care and Cleaning Instructions
The galley sink has been designed and engineered to resist scratches and should not stain under normal household use if used properly.

To keep this product looking its best, we recommend that you take a few easy precautions.

General Cleaning. Rinse all food and beverage residue from the sink as soon as possible. Some food & beverage residues, if left to sit in the sink, may require the use of detergent or an abrasive cleaner.

Hard-to-Remove Food and Beverage Residue. Abrasive cleaners such as Ajax, Comet, Bon Ami or Bar Keeper's Friend, may be used to remove mild stains and for routine cleaning. The use of an abrasive pad such as "Scotch-Brite" will remove most of the tougher stains. For the most stubborn stains, fill the sink about one quarter full with a 50/50 solution of bleach and water. After 10 or 15 minutes of soaking drain solution from the sink as you rinse both sides and bottom. Note: Do not use steel wool or metal scouring pads.

Mineral Based Stains. Cleaners designed to remove iron or rust should not harm the sink, nor will solvents such as denatured alcohol, mineral spirits or acetone.

Marks or Discoloration. White automotive rubbing compound may be used to remove stubborn marks or discoloration. Use of these products will not damage the solid surface. Always follow label directions.

NOTE: Improper use may damage this product and void the warranty.

RANGE AND REFRIGERATOR
For care and appearance maintenance of the range and refrigerator, refer to the operation and maintenance manual for each of the individual appliances included in your InfoCase.

BATHROOM
The tub and shower walls in the bathroom should be cleaned with a mild soap and water solution, or (to obtain maximum luster) use a good quality wax cleaner. Do not use an abrasive cleaner on the shower walls and tub.
DOORS AND WINDOWS

Windows may be periodically cleaned with a good quality glass cleaner or mild soap solution using a soft cloth. Use care when removing ice or frost from the windows. Always use a plastic ice scraper, never one made of metal. Use care when removing ice from the mirrors to protect the reflective surfaces.

Door locks and hinges should be lubricated periodically with powdered graphite to ensure trouble-free operation and to protect against freeze-up.

PLEATED BLINDS – ADJUSTMENT AND CARE

Tension Adjustment:

The tension of the pleated blinds can be adjusted if they become loose and will not stay up when raised, or they are too tight and are difficult to raise and lower.

To tighten tension

Wrap the lower end of the guide cords (on each side of the shade) a few turns around the spools at the lower corners of the blinds.

To loosen tension

Unwrap the guide cords from the spools one turn at a time until desired tension is achieved.

Preserving Shape:

The pleated blinds are made using high quality materials that are designed and woven to retain their shape throughout their useful life. They may lose their crisp shape, however, if left in a lowered position for an extended period of time without being raised periodically. If this happens, the pleats can be restored using this simple method.

- With the blind fully lowered, dampen the entire area of the pleats with a good quality laundry spray starch.
- Raise the blind fully while still damp and let it remain in the raised position for about 24 hours.
- Reapply starch periodically (every few months) as needed.

PREPARING VEHICLE FOR STORAGE

Properly preparing your vehicle for storage will lessen the possibility of damage to your vehicle. Prepare the motor home for vacancy just as you would if you were leaving your house for an extended period:

Clean and Prep Coach for Storage

1. Turn off the propane gas tank
2. Turn the furnace thermostat switch OFF.
3. Remove all foods and items that may cause odors from cabinets and refrigerator.
4. Clean and defrost the refrigerator. Prop the door open slightly to allow any odors to dissipate. Place an open box of baking soda inside the refrigerator to help absorb odors.
5. Fully charge the batteries. Batteries must have at least 80% charge to survive freezing temperatures and long period of non-use. We recommend that you connect a battery charger or plug in the shoreline once a month during long-term storage periods to maintain battery charge and to avoid sulfating. If connecting a charger directly to
batteries, turn the Aux. Battery switch off to avoid electrical arcing when attaching and detaching charge clamps.

**NOTE:** We do not recommend leaving the shoreline plugged in continuously during storage periods because the batteries can lose electrolytic fluids and become damaged from continuous charging without periodic use. We recommend following regular battery inspection and maintenance especially in cold weather. See “Battery Storage and Maintenance” in the Electrical section.

6. After charging batteries, turn the Aux Battery Switch off to disconnect the batteries and avoid parasitic* drain.

   *Parasitic battery drain is the gradual drain by items connected directly to battery power such as clocks, radio memory and the engine computer.*

7. Have the vehicle chassis completely serviced and lubricated. Be sure radiator antifreeze protection level is sufficient for the lowest anticipated temperatures.

8. Wash and wax the coach.

9. Inspect all seams and seals around doors, windows, vents, and any other joints. Replace or repair any that are damaged. Sealing materials and compounds can be purchased from your dealer. Badly damaged weather seals may need to be replaced by your dealer.

10. Close all windows and roof vents. Protect all appliance vent openings from contamination by animals or insects (e.g. bird nest, wasp nests, etc.)

11. Lubricate all door hinges and locks.

12. Clean the interior of the coach. Dirt and stains are more easily removed when fresh.

When storing your vehicle through the winter, or in cold climates, extra preparations need to be made to protect systems that can be damaged by freezing temperatures. See “Winterizing” in Plumbing Section.

### Removal From Storage

1. Completely air out the motor home.
2. Have the entire propane gas system checked for leaks.
3. Check window operation.
4. Check cabinet and door hinges. Lubricate with penetrating oil, if necessary.
5. Close all faucets and drain valves that are open.
6. Add a few gallons of water to the fresh water tank and check for leaks especially at fittings. Sanitize the water system as outlined under “Disinfecting the Fresh Water System” in Plumbing Section.
7. Check operation of all faucets to be sure faucet washers have not hardened during storage.
8. Check the toilet for proper operation.
9. Add water to the holding tank using the toilet flush pedal. Check to be sure dump valve seals tightly.
10. Check around all appliances for obstructions and ensure that all vent openings are clear.
11. Start refrigerator and check for proper cooling.
12. Clean paneling and counter surfaces.
13. Replace batteries if necessary and check out electrical system to make sure all lights and electrical components operate.
15. After washing accumulated winter grime from the vehicle, it is important to carefully inspect the seams and sealants for separation or cracks that may have appeared around the window frames, vents and any other joints. Resealing is quite simple and the material is quickly and easily applied. Appropriate compounds are available from your dealer. Also inspect weather seals around doors, etc., and if necessary, have a dealer replace immediately.
COACH MAINTENANCE CHART

These recommendations apply for normal recreational use. Heavy duty or full-time use may require more frequent maintenance intervals.

<table>
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<tr>
<th></th>
<th>Before Each Use</th>
<th>Weekly</th>
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<td>Pressure regulator - inspect and adjust if needed</td>
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<td>Check propane tank condition, mounting and fittings</td>
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| Check Battery Condition Meter | | | | | | | |◆
| Check battery fluid level & connections | | | | | | | |
| Check 12V fuses & 120V breakers | | | | | | | |◆
| Check GFCI Receptacles | | | | | | | |◆
| **Generator** |                 |        |         |                |                |            |              |
| Visually inspect Generator and Compartment | | | | | | | |◆
| See generator manufacturer’s maintenance guide | | | | | | | |◆
| **Plumbing System** |                 |        |         |                |                |            |              |
| Sanitize plumbing system | | | | | | | |◆
| Winterize plumbing system | | | | | | | |◆
| Clean water pump strainer filter | | | | | | | |◆◆
| **Slide-Out Room System** |                 |        |         |                |                |            |              |
| Check & inspect room seals (bulb seals) | | | | | | | |◆◆
| **Exterior** |                 |        |         |                |                |            |              |
| Clean roof | | | | | | | |◆
| Clean sidewalls | | | | | | | |◆
| Clean windows | | | | | | | |◆
| Flush underside of vehicle | | | | | | | |◆◆
SECTION 11
MAINTENANCE

COACH MAINTENANCE CHART

These recommendations apply for normal recreational use. Heavy duty or full-time use may require more frequent maintenance intervals.

Always use specified sections or manufacturer’s guide for further information and instructions.

<table>
<thead>
<tr>
<th>Safety Equipment</th>
<th>Before Each Use</th>
<th>Weekly</th>
<th>Monthly</th>
<th>Every 3 Months</th>
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<td></td>
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<tr>
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<td>Windshield Wipers &amp; Washers</td>
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<th>Before Each Use</th>
<th>Weekly</th>
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<th>Every 6 Months</th>
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<th>Weekly</th>
<th>Monthly</th>
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<td>Inspect and clean exterior vent &amp; drip tray drain tube</td>
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<th>Weekly</th>
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<td>Check/Replace Filter</td>
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COACH MAINTENANCE CHART

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11-11
This is only a graphic representation for sealants and does not represent actual component position.

Note: In painted areas, clear sealant (094401-04-000) should be used in place of sealant C.

Sealants may be purchased from your Winnebago or Itasca Dealer

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<th>Sealant</th>
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<tr>
<td>C</td>
<td>072889-10-000</td>
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<td>D</td>
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</tbody>
</table>
Index

2007 New Vehicle Limited Warranty........... 1-8
About this Manual ........................................ 1-1
Air Conditioner/ Heater – Automotive ...... 3-4
Air Springs – Rear ........................................ 3-6
Auxiliary Battery Switch ............................. 6-7
Bathroom .................................................... 11-6
Battery Boost Switch ................................... 3-4
Battery Care .................................................. 6-7
Body and Chassis Specifications ............... 1-4
Cabinetry ..................................................... 11-5
Cable TV Hook-Up ....................................... 8-3
Car or Trailer Towing ................................... 3-9
Carbon Monoxide Alarm .............................. 2-2
Carbon Monoxide Warning .......................... 2-2
Care of Ceiling Fabric................................. 11-4
Care of Stripes and Decals.......................... 11-2
Child Restraints............................................. 3-2
Circuit Breakers – 110-Volt ......................... 6-3
Coach Maintenance Chart ....................... 11-9
Cold Weather Propane Vaporization ........... 5-5
Couch/Bed Conversion ................................. 9-2
Digital Satellite Television System............. 8-4
Dinette/Bed Conversion ............................... 9-2
Disinfecting Fresh Water Systems on RV’s .............. 7-3
Doors and Windows................................. 11-7
Driving .......................................................... 2-1
Ducted Roof Air Conditioning System .... 4-7
Effects of Prolonged Occupancy ............... 2-6
Electrical Cautions ........................................ 6-1
Electrical Inverter ........................................ 8-2
Electrical System – 110V AC ....................... 6-1
Electrical System – 12V DC ............... 6-6
Emergency Exits ........................................... 2-4
Emergency Information ............................. 1-7
Emergency Retraction ................................... 10-4
Engine Access .............................................. 3-5
Engine Cooling System ................................ 3-5
Engine Overheat ........................................... 2-6
Entrance Step – Electric............................... 4-9
Entrance Step – Manual ............................... 4-9
Exterior Entertainment Center.................. 8-4
Exterior Finish ............................................. 11-2
Exterior Lights .............................................. 11-3
Exterior Shower/Wash Station ................... 7-4
External Power Cord................................. 6-1
Fire Extinguisher .......................................... 2-3
Folding Dinette Seat .................................... 3-1
Formaldehyde Information ...................... 2-1
Fresh Water System ...................................... 7-1
Front Axle Tire Alignment ....................... 1-2
Front Seats ................................................... 3-1
Front TV Ignition Switch Interlock ............. 8-1
Fuses and Circuit Breakers
– Automotive 12V ........................................ 3-6
Fuses and Circuit Breakers
– House 12V DC ........................................ 6-8
Galley Sink ............................................. 11-6
General Slideout Care ............................... 10-7
General Warnings ......................................... 2-1
Generator – Auxiliary 110-Volt AC ....... 6-5
Ground Fault Circuit Interrupter ............... 6-4
Heat Pump .................................................... 4-7
Holding Tank Heater ................................... 7-6
Home Theater System ................................ 8-2
In-Dash Radio ............................................... 3-4
Interior Softgoods ...................................... 11-3
Jump Starting ................................................. 2-6
Keys ............................................................ 3-3
Lights .......................................................... 3-6
Loading the Vehicle ..................................... 3-6
Microwave Oven .......................................... 4-3
Mirrors – Exterior .......................................... 3-3
Mold, Moisture and Your Motor Home .... 2-6
Mountain Driving ......................................... 3-11
Overhead Front Bunk ................................... 9-1
Owner Information ....................................... 1-7
Plastic Parts – Cleaning ............................... 11-3
<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pleated Blinds – Adjustment and Care</td>
<td>11-7</td>
</tr>
<tr>
<td>Pleated Blinds</td>
<td>9-4</td>
</tr>
<tr>
<td>Power Center</td>
<td>6-2</td>
</tr>
<tr>
<td>Pre-Delivery Inspection</td>
<td>1-2</td>
</tr>
<tr>
<td>Preparing Vehicle for Storage</td>
<td>11-7</td>
</tr>
<tr>
<td>Pressure Regulator</td>
<td>5-4</td>
</tr>
<tr>
<td>Pressure-Temperature Relief Valve</td>
<td>4-5</td>
</tr>
<tr>
<td>Propane Gas Furnace</td>
<td>4-6</td>
</tr>
<tr>
<td>Propane Gas Leak Detector</td>
<td>2-2</td>
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<td>Propane Gas Supply</td>
<td>5-1</td>
</tr>
<tr>
<td>Propane Gas Warnings and Precautions</td>
<td>5-3</td>
</tr>
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<td>Quartz Wall Clock</td>
<td>9-4</td>
</tr>
<tr>
<td>Range and Oven</td>
<td>4-2</td>
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<td>Range and Refrigerator</td>
<td>11-6</td>
</tr>
<tr>
<td>Range Hood</td>
<td>4-3</td>
</tr>
<tr>
<td>Rearview Monitor System</td>
<td>3-3</td>
</tr>
<tr>
<td>Receptacles (Outlets) – 110V</td>
<td>3-3</td>
</tr>
<tr>
<td>Recommended Sealant Application</td>
<td>11-12</td>
</tr>
<tr>
<td>Refrigerator Service Access</td>
<td></td>
</tr>
<tr>
<td>Compartment</td>
<td>4-2</td>
</tr>
<tr>
<td>Refrigerator</td>
<td>4-1</td>
</tr>
<tr>
<td>Reporting Safety Defects</td>
<td>1-2</td>
</tr>
<tr>
<td>Roadside Emergency</td>
<td>2-4</td>
</tr>
<tr>
<td>Roof Ladder Extension</td>
<td>3-12</td>
</tr>
<tr>
<td>Roof Loading</td>
<td>3-7</td>
</tr>
<tr>
<td>Roof</td>
<td>11-1</td>
</tr>
<tr>
<td>Safe Use of the Propane Gas System</td>
<td>5-2</td>
</tr>
<tr>
<td>Safety Messages Used in this Manual</td>
<td>1-1</td>
</tr>
<tr>
<td>Satellite System Wiring</td>
<td>8-4</td>
</tr>
<tr>
<td>Sealants</td>
<td>11-1</td>
</tr>
<tr>
<td>Seat Belts</td>
<td>3-1</td>
</tr>
<tr>
<td>Service and Assistance</td>
<td>1-2</td>
</tr>
<tr>
<td>Shower Hose Vacuum Breaker</td>
<td>7-3</td>
</tr>
<tr>
<td>Sleeping Facilities</td>
<td>9-1</td>
</tr>
<tr>
<td>Slideout Room – Extreme Weather</td>
<td></td>
</tr>
<tr>
<td>Precaution</td>
<td>10-3</td>
</tr>
<tr>
<td>Slideout Room Operation</td>
<td>10-1</td>
</tr>
<tr>
<td>Smoke Alarm</td>
<td>2-3</td>
</tr>
<tr>
<td>Storage Compartment Doors</td>
<td>3-14</td>
</tr>
<tr>
<td>Suspension Alignment and Tire</td>
<td></td>
</tr>
<tr>
<td>Balance</td>
<td>3-5</td>
</tr>
<tr>
<td>Swing-Out TV Mounts</td>
<td>8-1</td>
</tr>
<tr>
<td>Systems Monitor Panel</td>
<td>4-3</td>
</tr>
<tr>
<td>Tables and Countertops</td>
<td>11-6</td>
</tr>
<tr>
<td>Tank Capacities</td>
<td>1-6</td>
</tr>
<tr>
<td>Tires</td>
<td>3-5</td>
</tr>
<tr>
<td>Toilet</td>
<td>7-4</td>
</tr>
<tr>
<td>Tool and Ladder Storage</td>
<td>3-11</td>
</tr>
<tr>
<td>Towing Guidelines</td>
<td>3-10</td>
</tr>
<tr>
<td>Trailer Wiring Connector</td>
<td>3-10</td>
</tr>
<tr>
<td>Troubleshooting</td>
<td>10-3</td>
</tr>
<tr>
<td>TV Antenna</td>
<td>8-3</td>
</tr>
<tr>
<td>TV Signal Amplifier</td>
<td>8-3</td>
</tr>
<tr>
<td>TV/DVD Master Power Switch – 12-Volt</td>
<td>8-2</td>
</tr>
<tr>
<td>Two-Way Radios</td>
<td>8-5</td>
</tr>
<tr>
<td>Underbody</td>
<td>11-1</td>
</tr>
<tr>
<td>U-Shaped Dinette/Bed Conversion</td>
<td>9-3</td>
</tr>
<tr>
<td>Vehicle Certification Label</td>
<td>1-3</td>
</tr>
<tr>
<td>Video Selection System</td>
<td>8-1</td>
</tr>
<tr>
<td>Vinyl Wallboard</td>
<td>11-6</td>
</tr>
<tr>
<td>Waste Water System</td>
<td>7-5</td>
</tr>
<tr>
<td>Water Heater Bypass Valve</td>
<td>4-6</td>
</tr>
<tr>
<td>Water Heater</td>
<td>4-5</td>
</tr>
<tr>
<td>Water Line and Tank Drain Valves</td>
<td>7-6</td>
</tr>
<tr>
<td>Water Pump</td>
<td>7-2</td>
</tr>
<tr>
<td>Water System Drain Valve Locations</td>
<td>7-10</td>
</tr>
<tr>
<td>Weighing Your Loaded Vehicle</td>
<td>3-7</td>
</tr>
<tr>
<td>Winterizing Procedure</td>
<td>7-7</td>
</tr>
<tr>
<td>Wood Furniture and Cabinetry</td>
<td>9-5</td>
</tr>
</tbody>
</table>