



## Table of Contents

---

### INTRODUCTION 1

About This Manual .....	1-1
Safety Messages Used In This Manual .....	1-1
Owner InfoCase .....	1-2
Chassis Operating Guide .....	1-2
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 .....	1-5
Owner Information .....	1-6
Emergency Information .....	1-6
2006 New Vehicle Limited Warranty .....	1-7

### SAFETY / PRECAUTIONS 2

General Warnings .....	2-1
Driving .....	2-1
Formaldehyde Information .....	2-1
LP Gas Leak Detector .....	2-1
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 .....	2-5
Engine Overheat .....	2-6
Effects of Prolonged Occupancy .....	2-6

### DRIVING YOUR MOTOR HOME 3

Seats .....	3-1
Seat Belts .....	3-2
Child Restraints .....	3-3
Key One Lock System .....	3-4
Power Electric Mirrors .....	3-4
Rearview Monitor System .....	3-5

# Table of Contents



---

Electronic Compass and Outside Thermometer .....	3-5
Power Sunvisors .....	3-5
Brake-Shift Interlock .....	3-5
Foot-Pedal Parking Brakes .....	3-6
Automatic Pull-Button Parking Brakes .....	3-6
Grade Brake .....	3-6
Fuel Pump Shut-Off Switch .....	3-7
Over-Drive Switch .....	3-7
Dome Light Switch .....	3-7
Battery Boost Switch .....	3-7
Auto Air Conditioner/Heater .....	3-8
In-Dash Radio .....	3-8
CB Radio .....	3-9
Engine Access .....	3-10
Engine Cooling System .....	3-11
Tires .....	3-12
Suspension Alignment And Tire Balance .....	3-12
Lights .....	3-12
Automotive 12-Volt Fuses and Circuit Breakers .....	3-12
Loading The Vehicle .....	3-13
Roof Loading .....	3-13
Weighing Your Loaded Vehicle .....	3-13
Car or Trailer Towing .....	3-15
Trailer Wiring Connector .....	3-16
Towing Guidelines .....	3-16
Mountain Driving .....	3-17
Tools & Ladder Storage .....	3-18
Storage Compartment Doors .....	3-18
Power Awning .....	3-19

## APPLIANCES & SYSTEMS 4

Refrigerator .....	4-1
Refrigerator Service Access Compartment .....	4-2
Range and Oven .....	4-2
Microwave Oven/ Range Hood .....	4-3
Systems Monitor Panel .....	4-3
Solar Charger Panel .....	4-5
Energy Management System (EMS) .....	4-5
Washer/ Dryer .....	4-5
LP Gas Furnace .....	4-6
Heat Pump .....	4-7
Central Air Conditioner .....	4-7
Central Heat/Air Conditioning System .....	4-8

---



---

Thermostat Operation .....	4-10
Gas/ Electric Water Heater .....	4-10
Pressure- Temperature Relief Valve .....	4-11
Water Heater Bypass Valve .....	4-12
Motor Aid Water Heater .....	4-13
Electric Entrance Step .....	4-13
Windows .....	4-14
Power Roof Vents .....	4-15
<b>LP GAS 5</b>	
LP Gas Supply .....	5-1
Safe Use of the LP Gas System .....	5-2
LP Gas Warnings and Precautions .....	5-3
Pressure Regulator .....	5-4
<b>ELECTRICAL 6</b>	
Electrical Cautions .....	6-1
110-Volt AC System .....	6-1
External Power Cord (Shoreline) .....	6-1
Power Center .....	6-3
110-Volt Circuit Breakers .....	6-3
110-Volt Receptacles (Outlets) .....	6-4
Ground Fault Circuit Interrupter .....	6-4
Auxiliary 110-Volt Generator .....	6-4
12-Volt DC System .....	6-5
Auxiliary Battery (AUX BATT) Switch .....	6-6
Battery Access .....	6-6
Battery Care .....	6-6
12-Volt House Circuit Breakers .....	6-8
<b>PLUMBING 7</b>	
Fresh Water System .....	7-1
Utility Light .....	7-2
Water Pump .....	7-2
Water Purifier System .....	7-4
Disinfecting Fresh Water Systems on RVs .....	7-4
Shower Hose Vacuum Breaker .....	7-5
Exterior Shower / Wash Station .....	7-6
Toilet .....	7-6
Waste Water System .....	7-6
Winterizing Procedure .....	7-9
Water System Drain Valve Locations .....	7-14

---

---

**ENTERTAINMENT 8**

Video Control Center .....	8-1
Front TV Ignition Switch Interlock .....	8-1
Television with DVD/ VCR Combo Player and Theater Surround Sound .....	8-1
Compact Disc Changer .....	8-2
DC-AC Inverter - 600 Watt .....	8-2
TV Antenna .....	8-2
Cable TV, Satellite and Phone Hook-Ups (Input) .....	8-4
Digital Satellite Television System .....	8-4
Exterior Entertainment Center .....	8-5
Two-Way Radios .....	8-5

**FURNITURE & SOFTGOODS 9**

Swivel Rocker Lounge Chair .....	9-1
Table and Chairs .....	9-1
Sleeping Facilities .....	9-2
Dinette/ Bed Conversion .....	9-2
Couch Bed Conversion .....	9-3
Rest Easy Multi-Position Lounge .....	9-4
Sleep Number® Bed .....	9-6
Day/ Nighter Pleated Blinds .....	9-6
Quartz Wall Clock .....	9-6
Wood Furniture and Cabinetry .....	9-7

**SLIDEOUT / LEVELING 10**

General Slideout / Leveling Warnings .....	10-1
Slideout Room Operation .....	10-1
Slideout Room Troubleshooting .....	10-4
Checking Hydraulic Oil Level .....	10-7
General Slideout Care .....	10-8
Hydraulic Coach Leveling System .....	10-8

**MAINTENANCE/STORAGE 11**

Sealants .....	11-1
Roof .....	11-1
Underbody .....	11-1
Exterior Finish .....	11-2
Care of Decals .....	11-2
Front End Masks and Paint Damage .....	11-2
Plastic Parts - Cleaning .....	11-3
Hood Cowl Panel Cleaning .....	11-3
Headlights and Exterior Lights .....	11-3
Interior Soft Goods .....	11-4

---



## Table of Contents

---

Cabinetry .....	11-5
Vinyl Wallboard .....	11-5
Tables and Countertops .....	11-5
Galley Sink .....	11-5
Range and Refrigerator .....	11-6
Bathroom .....	11-6
Doors and Windows .....	11-6
Day/ Nighter Pleated Blinds .....	11-6
Preparing Vehicle For Storage .....	11-7
Removal From Storage .....	11-8
Coach Maintenance Chart .....	11-9
Recommended Sealant Application .....	11-12

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## SECTION 1 INTRODUCTION

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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 dependability as well as safety. Before sliding into the driver's seat, please become familiar with operations and features. This manual was prepared to aid you in the proper care and operation of the vehicle and equipment. We urge you to read it completely. In addition, spend some time with the dealer when you take delivery; you will want to learn all you can about your new motor home.

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### ABOUT THIS MANUAL

Please read this operator's 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.*

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### 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

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



#### 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.*



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## OWNER INFOCASE

The materials in your Owner 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. Throughout the Operator's manual when referred to the InfoCase keep in mind that much of this information will be found in the Operator Manual Supplement. Please read the FAQ in section 1 of the Operator Manual Supplement for more details.*

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## CHASSIS OPERATING GUIDE

Throughout this manual, frequent reference is made to the vehicle chassis operating guide. The chassis guide is the operator's manual provided by the manufacturer of the chassis on which this motor home is built (e.g., Workhorse or Ford). Consult the chassis guide for operating safety and maintenance instructions pertaining to the chassis section of the motor home.

---

## 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.

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## 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.

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## 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 dealership directory in your Owner InfoCase.

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



## VEHICLE CERTIFICATION LABEL

This label contains vehicle identification and other important reference information. The label is affixed to the armrest panel or wall to the left of the driver seat.

MANUFACTURED BY		INCOMPLETE VEHICLE MANUFACTURED	
		BY <u>1</u>	<u>2</u>
GAWR: <u>3</u>		GVWR <u>4</u> LB	KG
FRT	LB <u>5</u> KG	SUITABLE TIRE AND RIM CHOICE	COLD INFLATION PRESSURE
RR	LB <u>5</u> KG	TIRE	RIM
		<u>6</u>	<u>7</u>
			<u>8</u> PSI
			KPA <u>SING</u>
			PSI <u>9</u> KPA <u>DUAL</u>
THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE.			
SERIAL NO.	<u>10</u>	VIN	<u>11</u>
TYPE	<u>12</u>	MODEL	<u>13</u>
		COLOR	<u>14</u>

### 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. (5=2005, 6=2006, 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.

# SECTION 1 INTRODUCTION



## BODY AND CHASSIS SPECIFICATIONS

Model	33V	35A	35U	37B	38J	38R	38T
Length (Bumper to Bumper)	33' 8"	36' 0"	35' 9"	38' 2"	38' 10"	39' 0"	38' 11"
Exterior Height	12' 3"*	12' 2"*	12' 3"	12' 1"*	12' 0"***	11' 11"***	12' 1"***
Exterior Width	8' 5.5"	8' 5.5"	8' 5.5"	8' 5.5"	8' 5.5"	8' 5.5"	8' 5.5"
Exterior Storage (cu. ft.)	68.2	88.6	94.8	107.4	106.9	134.2	109.3
Interior Height	7' 2.5"	7' 2.5"	7' 2.5"	7' 2.5"	7' 2.5"	7' 2.5"	7' 2.5"
Interior Width	8' 0.5"	8' 0.5"	8' 0.5"	8' 0.5"	8' 0.5"	8' 0.5"	8' 0.5"
<b>Ford</b>							
GVWR (lbs.)	22,000	22,000	22,000	NA	NA	NA	NA
GAWR - Front (lbs.)	7,500	7,500	7,500	NA	NA	NA	NA
GAWR - Rear (lbs.)	14,500	14,500	14,500	NA	NA	NA	NA
GCWR (lbs.)	26,000	26,000	26,000	NA	NA	NA	NA
<b>Workhorse</b>							
GVWR (lbs.)	22,000	22,000/ 24,000	22,000	24,000	24,000	24,000	24,000
GAWR - Front (lbs.)	8,500	8,500/ 9,000	8,500	9,000	9,000	9,000	9,000
GAWR - Rear (lbs.)	15,000	15,000/ 15,500	15,000	15,500	15,500	15,500	15,500
GCWR (lbs.)	26,000	26,000/ 30,000	26,000	30,000	30,000	30,000	30,000
Wheelbase	208"	228"	228"	248"	248"	248"	266"

*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.*

\*If equipped with digital satellite dish, add 2". If equipped with In-Motion dish, add 6".

\*\*If equipped with digital satellite dish, add 3". If equipped with In-Motion dish, add 7".



## TANK CAPACITIES

### Chassis Fuel Tank

All Models ..... 75 gal

### LP Gas Tank

All Models ..... 23 gal\* (28 gal. w.c.)

### Fresh Water Tank

Model 33V .....	76 gal
Model 35A .....	78 gal
Model 35U .....	76 gal
Model 37B .....	78 gal
Model 38J .....	78 gal
Model 38R .....	78 gal
Model 38T .....	98 gal

### Water Heater

All Models ..... 10 gal

### HT1-Black Water Holding Tank

Model 33V (Toilet) .....	55 gal
Model 35A (Toilet) .....	50 gal
Model 35U (Toilet) .....	45 gal
Model 37B (Toilet) .....	50 gal
Model 38J (Toilet) .....	51 gal
Model 38R (Toilet) .....	45 gal
Model 38T (Toilet) .....	53 gal

### HT2-Gray Water Holding Tank

Model 33V (Galley, Shower & Lavatory) .....	43 gal
Model 35A (Galley, Shower & Lavatory) .....	75 gal
Model 35U (Galley, Shower & Lavatory) .....	49 gal
Model 37B (Galley, Shower & Lavatory) .....	58 gal
Model 38J (Galley, Shower & Lavatory) .....	53 gal
Model 38R (Galley, Shower & Lavatory) .....	49 gal
Model 38T (Galley & Washer/Shower & Lavatory)† .....	70 gal

† Model 38T has separate tanks for Shower & Lavatory (49 gal) and Galley & Washer/Dryer (19 gal)

\*LP Gas tank capacity shown is the usable “full” LP gas capacity, which is 80% of the tank manufacturer’s listed water capacity (w.c. shown in parenthesis). An LP 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.

**SECTION 1  
INTRODUCTION**



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**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 \_\_\_\_\_



2006 NEW VEHICLE LIMITED WARRANTY  
WINNEBAGO INDUSTRIES, INC.



**WARRANTY COVERAGE TO OWNER**

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

**WARRANTY PERIOD**

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.

**BASIC COVERAGE**

The basic Warranty Period is 12 months or 15,000 miles (24,135 kilometers), on the odometer, whichever occurs first. This is the only warranty authorized by Winnebago. There are no other promises, representations or warranties concerning the matters set forth herein. Winnebago Industries does not authorize any person to create for it any other obligations or liability in connection with this vehicle. ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE APPLICABLE TO THIS VEHICLE IS LIMITED IN DURATION TO THE DURATION OF THIS WRITTEN WARRANTY AS HEREINBEFORE OR HEREINAFTER PROVIDED. THE PERFORMANCE OF REPAIRS IS THE EXCLUSIVE REMEDY UNDER THIS WRITTEN WARRANTY OR ANY IMPLIED WARRANTY. WINNEBAGO INDUSTRIES SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR 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 RESULTING FROM BREACH OF THIS WRITTEN WARRANTY OR ANY IMPLIED WARRANTY. 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\*
- Service Items, such as Windshield Wiper Blades, Lubricants, Fluids & Filters
- Adjustments

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

**36 MONTHS/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 failure to properly maintain sealants is not covered by this warranty.

**WINNEBAGO INDUSTRIES' RESPONSIBILITY**

Any part of the vehicle subject to warranty which is found to be defective in material or workmanship, will be repaired or replaced at Winnebago Industries' option upon notice of the defect without charge to the customer for parts or labor. 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.

**CUSTOMER RESPONSIBILITY WHEN REPAIRS ARE NEEDED**

If a part of the system covered by this 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 or manufacturer no later than 10 days after the expiration of the warranty.
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., 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 beyond the 12 months/15,000 miles basic warranty coverage by the individual manufacturer's warranty. Please refer to the component's information supplied in the owner's information InfoCase for any additional warranty coverage after the basic warranty has expired.

**DEALER'S REPRESENTATIONS EXCLUDED**

Winnebago Industries, Inc. does not undertake the responsibility to any purchaser of its products for any undertaking, representation, or warranty made by dealers selling its product beyond those herein expressed.

**INSTALLATION NOT COVERED**

Winnebago Industries, Inc. cannot, however, 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 Industries, Inc. Such installation of equipment or accessories by any other party will not be covered by the terms of this warranty.

# SECTION 1

## INTRODUCTION

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### **CARE AND MAINTENANCE**

It is the owner's responsibility to perform the care, maintenance and proper load distribution described in the owner'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.

### **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.  
P.O. Box 152  
Forest City, Iowa 50436  
Atten: 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

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### 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 swiveling 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.

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### FORMALDEHYDE INFORMATION



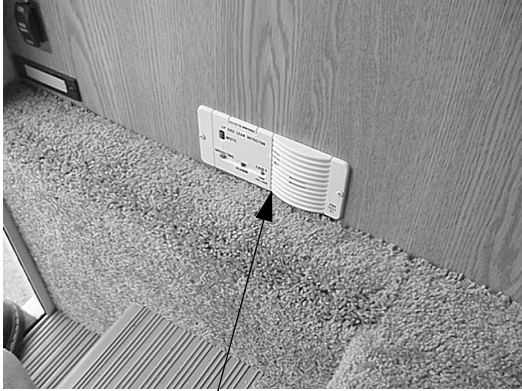
#### WARNING

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.

---

### LP GAS LEAK DETECTOR

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



LP Gas Leak Detector

 **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.

### Power Connection

The LP 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 LP gas leak detector fuse is located in the 12-volt house electrical load center.

Because the LP 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 Owner InfoCase for further instructions on nuisance alarms and care and testing of the LP gas leak detector.

---

## CARBON MONOXIDE WARNING

 **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.**

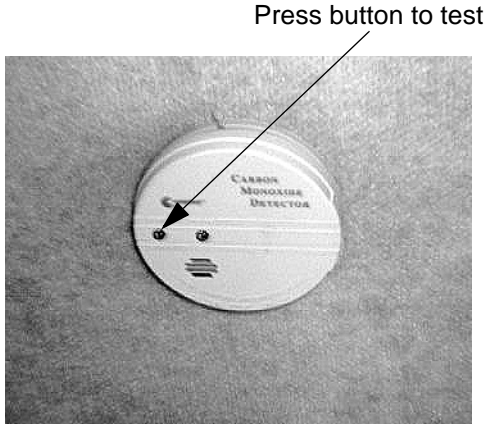
Do not run engine in confined areas, such as a garage, except to move vehicle into or out of the area.

---

## CARBON MONOXIDE ALARM

Your coach is equipped with a carbon 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.

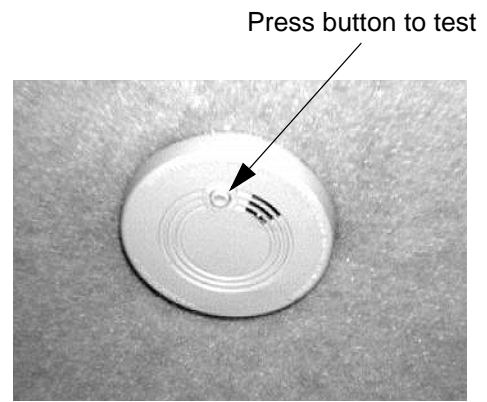




Carbon Monoxide Alarm

**Further Information**

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



Smoke Alarm

**Further Information**

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

**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.



**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 Owner InfoCase.

We also recommend that you inspect the fire 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.

 **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.

 **WARNING**

This window should be kept closed while driving to avoid drawing dangerous exhaust gases into the vehicle.

---

## EMERGENCY EXITS

 **WARNING**

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

### 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.



Lift latch handles upward to open Escape Window.

### 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 window 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.



Pull latch outward to slide window open

---

## 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.

### 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.*

 <span style="font-size: 1.2em; font-weight: bold; margin-left: 10px;">CAUTION</span>
<p>Do not lift on bumper. Damage will result to front end body parts.</p>

 <span style="font-size: 1.2em; font-weight: bold; margin-left: 10px;">WARNING</span>
<p>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.</p>

### JUMP STARTING

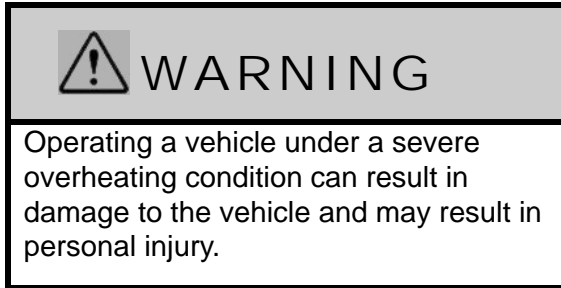
If your coach will not start from the automotive batteries, try using the Battery Boost Switch to divert power from the coach batteries to the starter. (See Battery Boost Switch) If you wish to try jump starting the engine using another vehicle or booster system, see your chassis owner’s manual for connecting jumper cables to the automotive electrical system.

 <span style="font-size: 1.2em; font-weight: bold; margin-left: 10px;">WARNING</span>
<p>Do not attempt to push-start this vehicle. Damage to the transmission or other parts of the vehicle will occur.</p>

---

## 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.



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.



## SECTION 3 DRIVING YOUR MOTOR HOME


The information in this section refers only to features installed or adapted to the dash and driver compartment area by Winnebago Industries.

See your chassis owner's manual for all original chassis related controls, instrumentation, switches and other features. This includes items such as cruise control, gauges, wipers, lights, etc.

### SEATS

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

The seats may be swiveled to provide easy entrance and exit. The swivel feature also allows the seats on most models to be turned toward the living area for additional seating while the unit is parked.

 **WARNING**

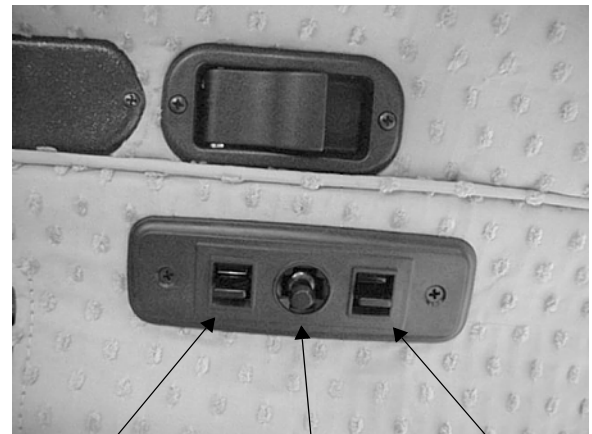
Do not adjust driver's seat while vehicle is in motion.  
After adjusting seat, always use body pressure to make sure slide and swivel locking mechanism have engaged.

### Front Seats



### Multi-Adjustable Power Seat - Optional

The power seat controls are located on the lower right hand side of the driver seat base.



Hip Area Up/Down

Main Seat Position Up/Down Fore/Aft

Knee Area Up/Down

### To Face Driver's Seat Rearward: Manual Seat

- Tilt the steering wheel all the way up.
- Put the left armrest down.
- Swivel the seat to the right until it just contacts the steering wheel, then slide the seat forward all the way.
- Lift the recliner lever and let the seat back tilt forward to clear the steering wheel.
- Swivel the seat the rest of the way to face the living area.

## SECTION 3 DRIVING YOUR MOTOR HOME



- Tilt the steering wheel down.
- Reverse the procedure to face the seat forward.

### Power Seat

- Tilt the steering wheel all the way up and put the left armrest down.
- Move the seat rearward fully and then forward a few inches.
- Swivel the seat to the right until it just contacts the steering wheel, then move the seat forward all the way to clear the steering wheel.
- Swivel the seat the rest of the way to face the living area.
- Position the tilt wheel down and to provide maximum clearance to recline the seat.
- Reverse the procedure to face the seat forward.

### Armrest Adjustment

The armrests may be swung upward out of the way for easy exit or access to the front seats. A roller on the underside of the front of the armrest also lets you adjust the resting angle for personal comfort, whether the seat is upright or reclined.



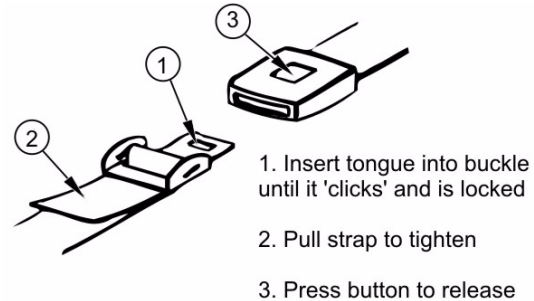
## SEAT BELTS

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.

Only seats equipped with seat belts are to be occupied while vehicle is in motion.

## Lap-Shoulder Belts

### Fastening:

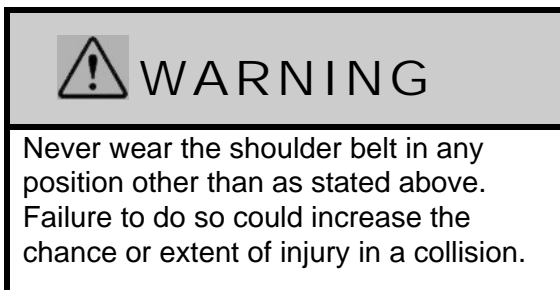
Hold the belt just behind the tongue using the hand nearest to the door. Next, bring the belt across the body and insert the tongue into the buckle until the latch engages.

### 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.



## 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 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.

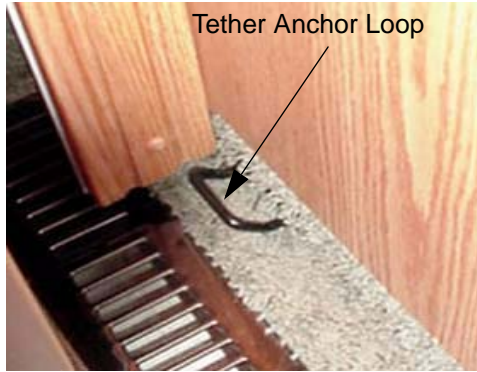
When purchasing a child restraint system:

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.

## SECTION 3 DRIVING YOUR MOTOR HOME



Tether Anchor Loop

### KEY ONE LOCK SYSTEM

Your coach is equipped with the Key One™ lock system. A single key will open every door lock in the entire motor home (except the security deadbolt lock on the entrance door).

The key number for your coach is registered in our factory database, so if you ever lose your keys, any Winnebago Industries dealership can order a new key for you.

### POWER ELECTRIC MIRRORS

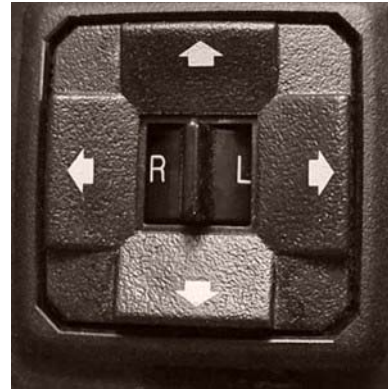
The electric mirrors are adjusted using a multi-directional switch located on the driver's side armrest.



Power Mirror Controls

Select the mirror to be adjusted by pushing the switch in the middle of the control to the right or left. Then press the arrow buttons as necessary to obtain the best view.

Press to move mirror in indicated direction

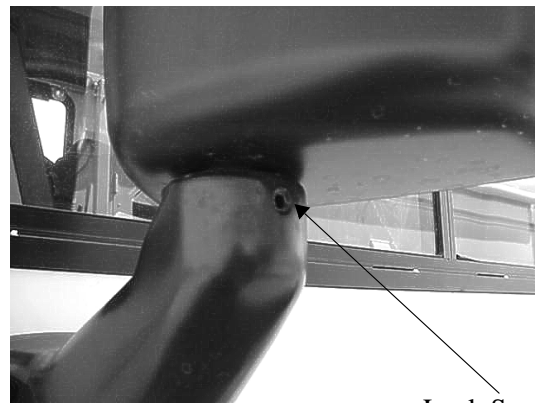


Move L or R to select mirror, or center for "neutral".

When mirrors are adjusted to preference, place the selector switch back in the middle position to cancel power to the buttons. This prevents accidental misadjustment of mirror settings.

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.

If you cannot adjust the mirror properly using the control switch, the mirror may need a coarse adjustment by repositioning the mirror head.



Side Mirror

Loosen screw to make coarse adjustment

*\* Lock screws may be located on the window side of the mounting arm of some mirrors.*



### REARVIEW MONITOR SYSTEM



Refer to the Owner InfoCase for specific operating instructions provided by the manufacturer.

### ELECTRONIC COMPASS AND OUTSIDE THERMOMETER



See the compass manufacturer's guide in your Owner InfoCase for operating instructions, calibration, specifications and other information.

### POWER SUNVISORS

#### - Optional

The powered sunvisors are controlled by switches on the driver and passenger armrest panels. The driver side contains switches for both sides to allow driver control. The passenger side has a switch only for the passenger side visor.

Press and hold DOWN side of the switch to extend, then release at the desired position. Press and hold UP side of the switch to retract the visor.



**⚠ CAUTION**

If both the driver and the passenger try to operate the passenger side visor in opposite directions at the same time (one pressing UP and the other pressing DOWN) the circuit breaker may trip.

*NOTE: Do not position visors where they will impair the driver's forward vision or side mirror view.*

### BRAKE-SHIFT INTERLOCK

Workhorse and Ford chassis are equipped with a brake-shift interlock safety feature. The shift lever cannot be moved from the Park position unless the ignition is ON and the service brake pedal is pressed.

*NOTE: On Ford chassis, if the brake light fuse is blown, the interlock feature will not work properly and an alternate method must be used. See your Ford Owners Guide for detailed instructions on what to do in this situation.*

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## FOOT-PEDAL PARKING BRAKES

### **Workhorse 22,000 Lbs GVWR and All Ford Chassis**

The parking brake foot pedal and release lever are located beneath the left side of the dash.

Step the pedal down fully to apply and pull the brake release knob to disengage.

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## AUTOMATIC PULL-BUTTON PARKING BRAKES

### **Workhorse 24,000 Lbs GVWR**

These chassis are equipped with parking brakes that apply automatically when the transmission is shifted into Park.

The pull-button parking brake switch is located on the dash to the right of the steering column.



The pull-button knob can be used to apply the park brake when the coach is in any other gear than park. Pull to apply. Push to Release.

*Note: Never drive your vehicle with the parking brake set. It will reduce parking brake effectiveness and cause excessive wear.*

See your Chassis Operator's Manual for further information on this switch.

---

## GRADE BRAKE

### **Workhorse Chassis Only**

This feature will enable the transmission to control the speed of the vehicle on long downhill grades to help avoid brake overheating and unnecessary brake wear.



### **To Activate the Grade Brake**

- Press the Grade Brake switch on the left side of the dash to activate the feature.
- A green icon (shown below) will appear on the instrument cluster when the grade brake system is active.



Grade Brake Symbol

- Press and release the brake pedal once - the grade brake will downshift the transmission a gear to help control the vehicle speed.
- Press the accelerator to reset the transmission to shift normally until the next time you press the brake pedal.
- Turn the Grade Brake system off when not on steep or long downhill grades.

The grade brake has a built-in, self protection feature that will not allow the transmission to downshift at high speeds which could damage the transmission or engine if downshifted.

See your Chassis Operator's Manual for further information on this switch.

### FUEL PUMP SHUT-OFF SWITCH

#### (Ford Chassis Only)

Vehicles built on Ford chassis are equipped with an inertial type switch that shuts off the fuel pump in the event of collision. This switch must be manually reset to resume the fuel supply to the engine.

See your Ford chassis operating guide for location and reset procedures for this switch.

*NOTE: It is possible to accidentally trigger the fuel pump shut-off switch by abruptly striking an object such as a curb or parking block. If your vehicle exhibits symptoms of running out of fuel immediately after such an occurrence, the fuel pump shut-off switch may need to be reset.*

*Consult your chassis operating guide for additional information.*

### OVER-DRIVE SWITCH

#### Workhorse Chassis only

The Overdrive Switch allows you to deactivate the automatic overdrive feature of the transmission when necessary.

When this switch is ON, the transmission will automatically shift to the overdrive gear whenever possible for greatest fuel economy.

Some driving situations, however, may require the transmission to be temporarily disabled from shifting into overdrive gear, such as when towing a car or trailer, driving in rolling hill country or driving into a strong headwind where the transmission will repeatedly shift up and down causing annoyance and reduced fuel economy.

See your Workhorse Operator's Manual for further information on this switch.

### DOME LIGHT SWITCH

Turn the 'dome light' map light on using the Panel Dim thumbwheel. Roll it up to maximum position until you feel it click into the maplight 'on' position.



See your Chassis Operator's Manual for further information on this switch.

### 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.



Battery Boost Switch

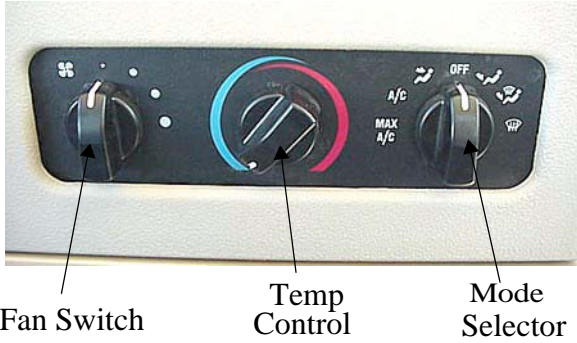
If engine battery is discharged, press and hold to ON position while turning ignition key for emergency starting power.

*NOTE: The Aux Battery Switch by the entrance door must be ON and house batteries sufficiently charged for this feature to work.*

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## AUTO AIR CONDITIONER/ HEATER

Controls for the air conditioner, heater, defroster and vent are all combined into one control panel.



### Further Information

Please read the information provided by the manufacturer, which is included in your Owner InfoCase.

### Rear Coach Heater - Optional

To provide auxiliary heat to the rear of the vehicle, turn the coach heater fan switch to the desired speed.



Rear Coach Heater Switch

## Defrost Fan Switch

The two-speed defrost fans are intended to assist the automotive windshield defroster system in clearing fog and frost in cold weather or humid conditions. The middle position on the switch is OFF.



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## IN-DASH RADIO

The 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 manufacturer's operating guide in your Owner 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 Owner 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 owner's guide in your Owner InfoCase for remote control instructions.

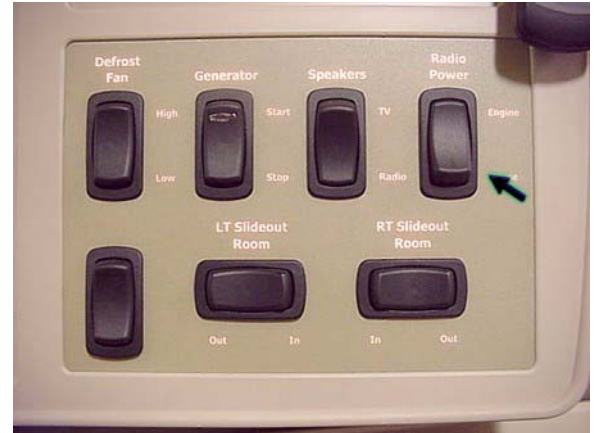


Radio Remote Control  
(typical)

An additional hand-held remote allows these same conveniences for the passenger. The hand-held radio remote is in your Owner InfoCase.

### Radio Power Switch

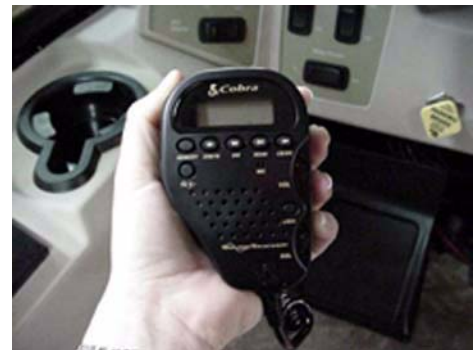
The radio power switch lets you connect the dash radio to the coach batteries with the ignition switch turned off for listening while parked. This prevents accidental draining of the chassis (starting) battery with prolonged use of the radio.



### CB RADIO

#### - Optional

For complete operating instructions, refer to the manufacturer's information provided in your Owner InfoCase.



### CB Radio Wiring

Your coach is pre-wired for CB radio installation. The wires are located beneath the dash to the left of the steering wheel.

Look for a pair of wires, yellow (+) and white (-), with connectors and flag labels, suspended from the wiring harness.



CB Power Wires  
(in plastic sheath)

### SWR Adjustment - Antenna

To adjust CB antenna SWR (standing wave ratio), turn the adjusting ring of the antenna to achieve the lowest SWR reading. This procedure will help optimize transmitting and receiving capabilities of the radio system.



**TO ADJUST:**

CHECK SWR. ON  
CH. 1 & CH. 40.

IF **CH. 1** IS  
**HIGHER THAN CH.  
40** TURN TUNING  
RING **CLOCKWISE.**

IF **CH. 40** IS  
**HIGHER THAN CH.  
1** TURN TUNING  
RING **COUNTER-  
CLOCKWISE.**

USUALLY  $\frac{1}{4}$  -  $\frac{1}{2}$   
TURN IS ENOUGH.

REPEAT UNTIL  
CH. 1 & 40 ARE  
THE SAME.

**DO NOT TRIM  
WHIP.**

TUNING  
RING

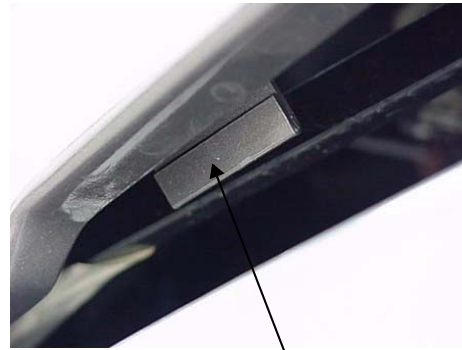
## ENGINE ACCESS

### Hood

The hood latches are located behind the bottom edge of the hood panel near both ends of the grille. Squeeze or pull both latch handles at the same time toward the hood panel to release the latches. Then pull the hood panel outward slightly and raise it into the open position.



Latch Handle Locations



Squeeze latch handles toward hood panel and raise hood into open position.

To close the hood, pull downward and swing inward. Press top edge of hood panel inward firmly with palms of your hands to ensure proper latching.

With the hood open, the engine oil dipstick, oil fill, radiator fill, power steering reservoir and windshield washer reservoir are accessible.

Engine Coolant Reservoir

Transmission Fluid Dipstick

Engine Oil Fill



Windshield Washer Fluid Reservoir

Engine Oil Dipstick

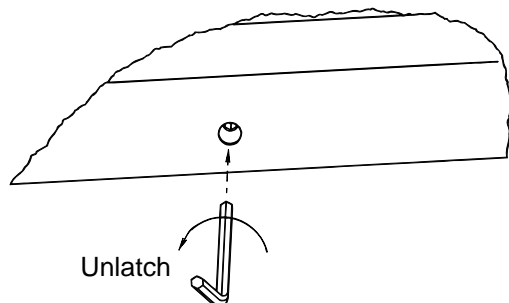
Brake Fluid Reservoir



Power Steering Fluid Reservoir

### Interior Engine Cover

- Insert the supplied hex wrench into the hole in the rear top or edge of the engine cover.



- Turn the hex wrench to the left (counterclockwise) to unlatch.

*NOTE: There may be a screw at each front lower corner.*

- Lift the rear end of the cover upward and pull the cover from the opening.
- To reinstall the cover, position the front end of the cover first, then lower the rear end. It is important to be sure the front edge is pushed completely forward to the radiator cover to ensure an air-tight seal.
- Press the rear end of the cover down and turn the hex wrench to the right (clockwise) until the latch pulls the cover downward and stops.

### ENGINE COOLING SYSTEM

Refer to your chassis operating guide for information and precautions on filling, servicing and checking the fluid level.

Do not remove the radiator cap while engine and radiator are still hot. Always check coolant level visually at the see-through coolant reservoir.

*NOTE: Your chassis engine cooling system is filled with special extended-life coolant that is not the same as common anti-freeze available at retail outlets. The coolant system **MUST** be refilled or topped up with the same type of coolant as equipped to maintain the special long-life properties. Workhorse chassis use GM Dexcool LLC, which is a bright, pink/orange color. Ford chassis use Ford Premium Gold (GO 5), which is a golden color.*

**CAUTION**

When refilling the coolant system of a vehicle equipped with a rear auxiliary automotive heater and motoraid water heater, be sure to allow for additional coolant capacity of the heater and its supply and return hoses.

---

### TIRES

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



See the 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, we recommend that 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.

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 operating guide for further information.

---

### 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 operating guide for further information.

---

### AUTOMOTIVE 12-VOLT FUSES AND CIRCUIT BREAKERS

The automotive fuses and breakers are conveniently located behind the panel in front of the driver’s seat.

The circuit breakers will pop outward if they are tripped. Simply push in to reset.



Automotive Fuse/Breaker Panel  
(In Front of Driver’s Seat)





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 Introduction 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.*

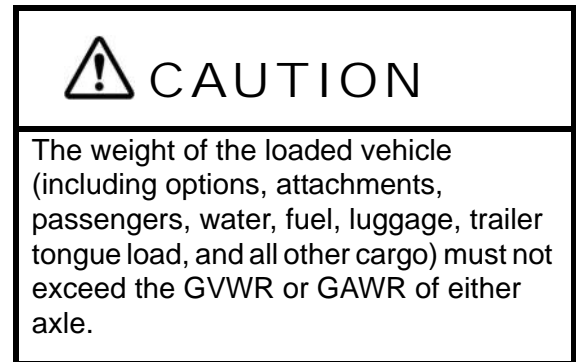
### LOADING THE VEHICLE

*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 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.



### 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.

### 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.

## SECTION 3 DRIVING YOUR MOTOR HOME



### 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 LP 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

There is typically a scale operator to direct you but the basic routine is to take three separate weights - front axle, whole vehicle, and rear axle. You will first drive only your front wheels onto the scale pad, then drive ahead so that the whole vehicle is on the scale, then finally pull off until just the rear wheels are on the pad.



Front Axle Only



Both Front and Rear Axles



Rear Axle Only

You will receive a weight 'ticket' that states your current Front Axle Weight, Rear Axle Weight and 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 must 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 of 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.



Weighing Left Front 'Corner'

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.



Weighing Left Rear ‘Corner’

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 weight from a Towed Vehicle or carrier box must also be counted on the Rear GAWR and subtracted from the rear axle cargo capacity. If you tow other than a light trailer or a vehicle by means of a tow bar, you should have your trailer coupled when weighing your motor home.*

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.

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.

*NOTE: If you tow a car or trailer that weighs over 1,000 lbs., it may need to be equipped with automatically activated brakes. Check your state laws.*

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.

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## CAR OR TRAILER TOWING

**Hitch pulling capacity: 5,000 lbs. max.**

**Tongue weight: 500 lbs. max.**

The factory installed towing hitch on this coach is capable of pulling 5,000 lbs. load (max.). Do not exceed either the GVWR, the rear axle



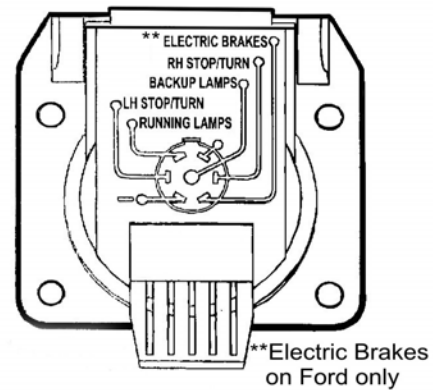
## WARNING

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. 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 below shows proper connection of trailer or tow vehicle wiring to the coach light system. The ‘pigtail’ assembly with the (car/trailer end) connector plug should be wired by a qualified technician. Provision for an electric brake controller is located near the steering column.

## TOWING GUIDELINES

### Gross Vehicle Weight Rating (GVWR):

This is the maximum allowable weight of the fully loaded vehicle. Included are fuel, water, LP, passengers, cargo, tools, and optional equipment installed by the motor home manufacturer, dealer, or owner. This value is found on the Vehicle Certification Label.

### Gross Axle Weight Rating (GAWR):

This is the total weight a given axle is capable of carrying, measured at the ground. Each axle has its own rating. These values are also found on the Vehicle Certification Label: front, rear, and tag, if applicable.

### Gross Combination Weight Rating (GCWR):

This is the maximum allowable weight of the motor home and loaded trailer, including the items noted in GVWR. 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 trailer. Ford’s towing guide suggests 10 to 15 percent for trailers over 2,000 lbs. (Hitch ratings are independent of towing vehicle ratings.)

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

downshifting. Select the lowest adequate gear range for the duration of the incline. See your chassis operating guide 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.

### **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 operating guide for specific information.

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## **MOUNTAIN DRIVING**

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

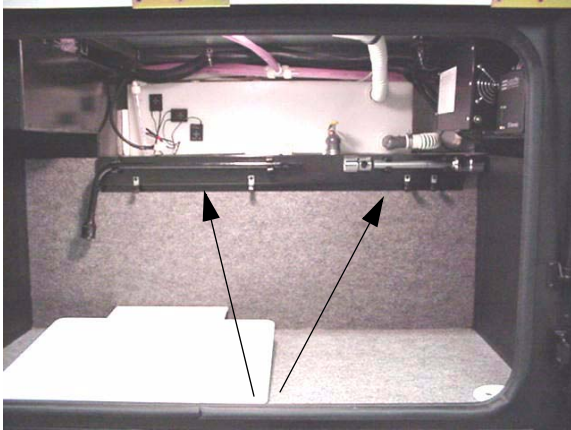
### **Climbing A Hill**

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

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## TOOLS & LADDER STORAGE

The roof ladder extension and various supplied tools are stored in clips on the walls of one or two of the exterior storage compartments. Actual locations depend on storage compartment configuration of your model. The following photos show typical arrangements.



Tire Tools



Ladder Extension Storage Compartment

### Roof Ladder Extension

To use the ladder extension:

- Unfold the ladder support and pin into place as indicated in the photo.
- Hold the ladder extension horizontally with the bumper pad pointing downward.
- Slide the open ends of the C-shaped retainers over the lowest ladder rung as shown in the photo.

- Lower the extension into place and push downward while adjusting it slightly to 'set' the retainers.



- The ladder is now ready to use.
- Reverse steps to remove and store.



**CAUTION**

Always store the ladder extension before traveling.

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## STORAGE COMPARTMENT DOORS

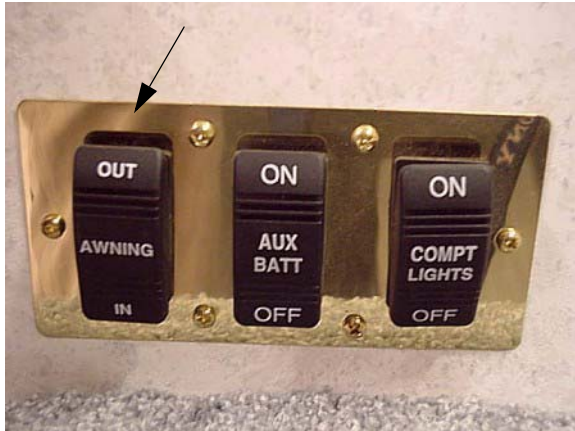
The high-density gaskets used on the exterior storage compartments are designed to provide a more positive seal against dust and weather. Sometimes this seal firmness can inhibit complete latching of the compartment doors if they are simply 'dropped shut' or closing force is applied only to the center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

## POWER AWNING

### -Optional

The awning control switch is on the switch panel just inside the entrance door.



### Wind Sensor Auto-Retract Feature

If the Wind Sensor is activated, the system will automatically retract the awning when the wind speed becomes strong enough to be a threat to the awning.

The awning control box is located on a wall in an exterior storage compartment. The Wind Sensor switch is on the inboard end of the control box.



Wind Sensor Control Switch on inboard end of control box.

*NOTE: If the awning will not retract using the switch it may be manually cranked in using the crank rod stored in one of the exterior storage compartments. The crank hooks into a loop at the rearward end of the awning.*

### Further Information

For complete operating instructions, refer to the manufacturer's information provided in your Owner InfoCase.








## SECTION 4 APPLIANCES & SYSTEMS

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
- LP gas

 <b>CAUTION</b>
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.

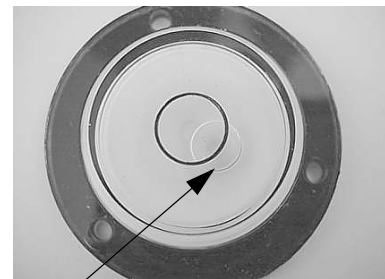
### Leveling

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.

Normal vehicle leveling to provide comfort for the occupants is satisfactory for refrigerator operation.



Place bubble level in bottom of refrigerator



Bubble must be 1/2 inside circle

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 Owner InfoCase.

### Ice Maker

Some refrigerators are optionally equipped with an automatic ice maker system. The ice maker unit is installed in the freezer compartment of the refrigerator.

### Further Information

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

---

**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.



Refrigerator Access Door Latches

**To Close:**

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

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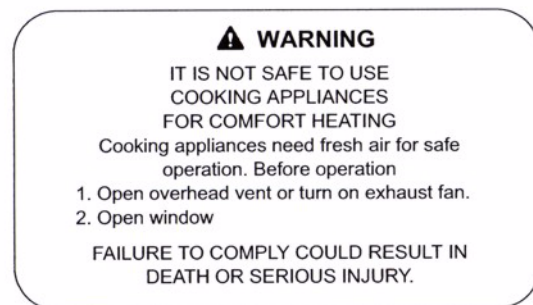
**RANGE AND OVEN**  
**-Optional**



The range in your motor home operates on LP 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. It is especially important not to use the gas range top for comfort heating. Danger of asphyxiation is greater when gas appliances are used for long periods of time in confined spaces.

**Further Information**

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

## MICROWAVE OVEN/ RANGE HOOD

The range hood vent is built into the underside of the microwave oven. The range hood fan carries cooking odors and gas fumes to the outside of the coach. A light on the underside of the hood provides illumination for food preparation. The hood fan and light switches are located on the microwave control panel.



### Further Information

See the manufacturer's information in your Owner InfoCase for instructions on replacement of light bulbs and grease filter elements.

## SYSTEMS MONITOR PANEL



One Place 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 can display the fresh water and holding tank levels, LP gas tank level, plus the coach battery condition. You can start the auxiliary generator or turn on the water pump or water heater. Indicator lights tell you if the water pump is on or if the water heater pilot light is out.

At the push of a button the monitor panel simultaneously displays the coach battery condition and levels of the water tank, holding tanks and LP tank.

### Water And Holding Tank Levels

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

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 lower than the 1/3 sensors. There may

## SECTION 4 APPLIANCES & SYSTEMS



actually be some fluid left in the tank. However, when the indicator reads FULL, the tank is actually full.



Water Pump  
Switch

### Tank Capacities

See “Tank Capacities” in Section 1.

### LP Gas Level

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

The LP 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.

### 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 utility compartment on the outside of the coach.)

### Battery Voltage Meter

Push the “Levels Test” button to check the level of charge (voltage) in the 12-volt coach battery.

To get an accurate reading;

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



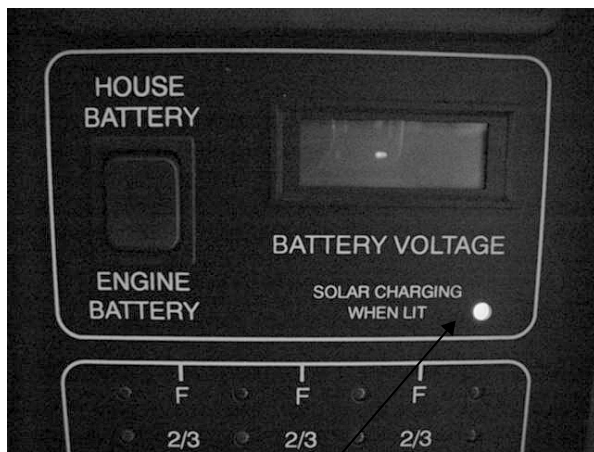
The LCD display will show the current battery voltage to the nearest tenth of a volt.

- A 12-volt battery typically registers anywhere from 12.5V to 13V when adequately charged.
- Voltage below 12V indicates a discharged condition; 11.5V or less is dead.
- Voltage above 13V typically indicates that the battery is being charged by the converter charging section.

## SOLAR CHARGER PANEL

The 10-watt roof-mounted solar charger panel uses the sun to help keep your house batteries charged. A charge indicator light is provided on the monitor panel to show you when the solar panel is actively charging the house batteries.

The red light will glow when the solar panel is charging the coach batteries. The greater the rate of charge, the brighter the light. When the batteries reach full charge, the light will gradually dim, then darken.



Solar Charging Indicator

*NOTE: The solar battery charger is not intended to make the coach battery system “maintenance free.” The solar panel will not completely compensate for continuous low amperage draw from components such as the LP gas leak detector, the clock in the dash radio and the radio station memory circuitry, for example.*

*Although the solar panel system can help to extend battery life, the coach shoreline should be plugged in routinely to “top off” the batteries. We also recommend following regular battery inspection and maintenance, especially in cold weather.*

## ENERGY MANAGEMENT SYSTEM (EMS)

The Energy Management System (EMS) monitors the electrical usage of the appliances and equipment in the coach and distributes the electrical loads to avoid nuisance tripping of the shoreline circuit breaker. This system works together with the energy efficient central air conditioner to allow you to run both AC compressors at the same time on a 30-amp shoreline connection.



EMS Display on Monitor Panel

Please read your Energy Management System Owners Guide for important information on system operation. This guide will also explain how this system operates under several conditions, whether 20-amp, 30-amp or 50-amp connections.

## WASHER/ DRYER

### - Optional

For complete operating instructions, see the manufacturer’s information provided in your Owner InfoCase.



**To Open the Door During a Wash Cycle:**

Follow these steps if you need to open the door to your washer-dryer after a cycle has already begun.

1. Advance the Program Selector to 'Reset' and wait 5 seconds.
2. Advance the Program Selector to 'Drain' (8 o'clock) and allow the machine to drain completely.
3. Advance the Program selector to 'Reset' (the 'Status/Door Lock' LED will blink quickly to indicate that the cycle has stopped, but the door is **STILL LOCKED**)
4. When the 'Status/Door Lock' LED blinks **SLOWLY** (takes 1-2 minutes), you can open the door.

**To Open During a Dry Cycle:**

1. Advance the Program selector to 'Reset' (the 'Status/Door Lock' LED will blink quickly to indicate that the cycle has stopped, but the door is **STILL LOCKED**)
2. When the 'Status/Door Lock' LED blinks **SLOWLY** (takes 1-2 minutes), you can open the door.

***IMPORTANT!** Once a wash cycle is underway, the washer-dryer door will **LOCK** for the duration of the cycle and will **STAY LOCKED** for up to 2 minutes after the cycle ends. **DO NOT** attempt to open the door unless the '**STATUS/DOOR LOCK**' LED is **BLINKING SLOWLY!***

**Water Supply Faucets**

The washing machine water supply faucets are located inside the cabinet door above the machine. Always turn supply faucets off when not using washing machine to avoid possible water leaks if a hose or hose gasket should fail.



Water Supply Faucets  
-typical

See Winterization Procedure in section 7 Plumbing.

---

**LP GAS FURNACE**

**To Start Up:**

1. Open the LP gas tank valve by turning fully counterclockwise.
2. Move thermostat switch from OFF to GAS 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 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 LP 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.*

### Further Information

Please see the furnace operating instructions provided in your Owner InfoCase for further information, including operating precautions, and periodic maintenance. See the Coach Maintenance Schedule in Section 11 for recommended intervals.

## HEAT PUMP

Your coach is 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 LP gas for heating in cooler weather.

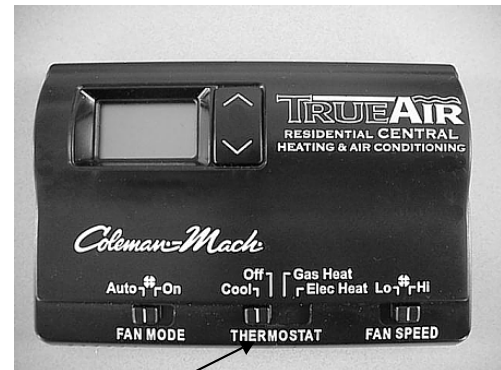
A heat pump can be thought of as an air conditioner running in reverse. An air conditioner absorbs heat from the air on the inside of the coach and moves it to the outside. The heat pump does exactly the opposite. Even cold air contains some heat, so a heat pump will extract heat from the outside air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

For complete operating instructions, refer to the manufacturer's information provided in your Owner InfoCase.



Thermostat Switch  
Gas Heat = Furnace Only  
Elec Heat = Heat Pump

## CENTRAL AIR CONDITIONER

*NOTE: See "Electronic Thermostat" for instructions on turning the air conditioner on and changing the thermostat settings.*

The central air conditioner is located behind the louvered body panel on the right (passenger) side of the coach. The panel can be opened for maintenance and periodic service. (See "Condenser Coils") The cooled air is forced through ducts in the ceiling of the coach. Inside air returns to the air conditioner through a filter system beneath the rear bed. (See "Air Conditioner Filters".)

**Air Conditioner/ Heat Pump Filter**

The disposable furnace type filter must be inspected and replaced periodically so the air conditioner will operate efficiently.

- Be sure ceiling vents are open to distribute heat pump output air. Also make sure furniture, clothing items, packages or other obstructions do not block the return air grilles beneath the rear bed.
- The filter should be checked monthly for dirt build-up and replaced as needed. The air filter is a disposable woven fiberglass type, which cannot be cleaned and should be replaced when coated with dust.



**Beneath Bed**

Lift mattress board as shown above. A finger hole is provided near the middle of the panel for lift-out removal.

**A/C Filter Size:**

- 14" x 20" x 1"
- 14" x 20" x 1" & 10" x 20" x 1" (33V)

*NOTE: Do not block the filter in any way, such as by setting packages or newspapers, etc. in front of the bed base grate. There must be free air flow for the air conditioner to operate efficiently.*

**Condenser Coils**

The condenser is located behind the louvered body panel on the right side of the coach. The condenser is the large, black, rectangular area that looks like a car radiator. The panel is hinged

at the top edge to allow opening for periodic cleaning or service. Remove the screws under the lower edge of the panel and swing it upward for access to the condenser.

Periodically sweep debris carefully from the fins of the condenser. Rinse dust off with clean water. The condenser coils must be clean and free of dust, debris and insect particles, etc., for the air conditioner to cool efficiently.

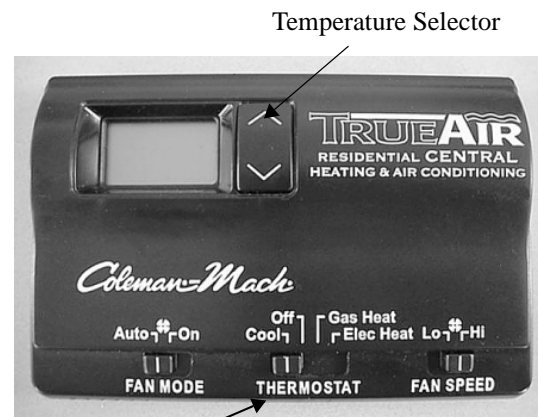
**Further Information**

See the air conditioner manufacturer's operating instructions supplied in your Owner InfoCase for detailed operating instructions, special precautions, and basic troubleshooting.

**CENTRAL HEAT/AIR  
CONDITIONING SYSTEM**

**Electronic Thermostat**

The thermostat controls heating, air conditioning, cooling fan and heat pump operation.



Heat Source Switch  
ELECTRIC = Heat Pump  
GAS = Furnace

Temperature Selector

True Air Thermostat

*NOTE: The thermostat does not automatically switch between heating and cooling. You must place the thermostat switch in the desired position.*



**Heating:**

- Slide the thermostat switch to “Gas Heat” position.

*NOTE: Follow proper furnace lighting procedures described previously in this section.*

*NOTE: Your coach is equipped with an electric Heat Pump, be sure the Thermostat switch is in Gas Heat position. See Heat Pump for details.*

- Adjust the temperature setpoint to personal preference if needed. See “Changing Temperature Setpoints.”

**Digital Thermostat Display**

The digital display normally shows current room temperature, with the word “ROOM” in small letters at the left side of the display. When you press the temperature selector button up or down, the display will show the word “SET” and the new temperature setpoint until you release the button.

**Change Temperature**

To set the temperature to a new temperature, simply press the Temperature Selector button up or down until the temperature you want appears in the display. The word “SET” will also appear at the left side of the display while you are changing the temperature setpoint. A few seconds after you release the temperature selector button, the display will return to showing the current room temperature.

**Cooling (A/C):**

- Slide the thermostat switch to Cool position.
- Slide the Fan Mode and Fan Speed Switches to the desired positions.

**On/Low:** A/C compressor cycles on and off with the thermostat while fan runs continuously at low speed.

**On/High:** A/C compressor cycles on and off with the thermostat while fan runs continuously at high speed.

**Auto/Low:** Fan runs at low speed and cycles

on and off with the A/C compressor as controlled by the thermostat.

**Auto/High:** Fan runs at high speed and cycles on and off with the A/C compressor as controlled by the thermostat.

- Adjust the temperature setpoint to personal preference if needed. See “Changing Temperature Setpoints”.

**To Run Fan Only (No Heat or Air)**

- Set Thermostat switch to OFF.
  - Slide Fan Mode switch to On.
  - Place Fan Speed switch to Lo or Hi as desired
- The fan will run continuously at the selected speed and is not controlled by thermostat setting. The display will show current room temperature.



**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.

■ Switch position    —■— Switch position does not matter or is inactive for this feature

FAN MODE SWITCH		THERMOSTAT SWITCH				FAN SPEED SWITCH		WHAT HAPPENS
Auto	On	Cool	Off	Gas*	Elec*	Lo	Hi	
			■					If the Thermostat Switch is Off, the whole heating and cooling system is off— nothing is happening.
<b>Gas Furnace Heating:</b>								
—■—	—■—			■		—■—	—■—	Furnace Blower runs along with the LP Gas Furnace which turns on and off as needed according to thermostat setting.
<b>Heat Pump Heating:*</b>								
■					■	—■—	—■—	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.
<b>A/C Cooling:</b>								
■		■				■		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: The thermostat is equipped with a replaceable 2 Amp fuse located on the back of the thermostat body.*

**GAS/ ELECTRIC WATER HEATER**

**(with Motor Aid water heating system)**

The gas/electric water heater has a dual power feature. It can operate from LP gas or 110-volt house current; or it can use both at the same time for quicker recovery at times when you are using a lot of hot water.

Read the Water Heater 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 either electric or LP operation.**

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.

**For Electric Operation**

Turn on the Water Heater electric element switch. The shoreline must be connected or the generator running for electric operation.



Electric Water Heater Switch  
(Typical)

### For LP 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 LP 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. See the water heater user’s guide in your Owner InfoCase for further information.



### For Quick Recovery Operation (Dual)

Turn on both Water Heater switches; the gas one on the monitor panel and the electric one. This will help reheat the water heater tank more quickly than a single source would alone. Use this mode when you are using a larger than normal volume of hot water.

### To Turn Water Heater Off

1. Turn switch on monitor panel to Off position.

2. Turn electric water heater switch off.
3. Turn off LP gas supply (if not to be used for extended period).
4. Drain water heater tank if the coach is to be stored or water heater will be Off during freezing temperatures. (See Draining and Storage Instructions in *Water Heater Operation Manual* in your Owner InfoCase.)

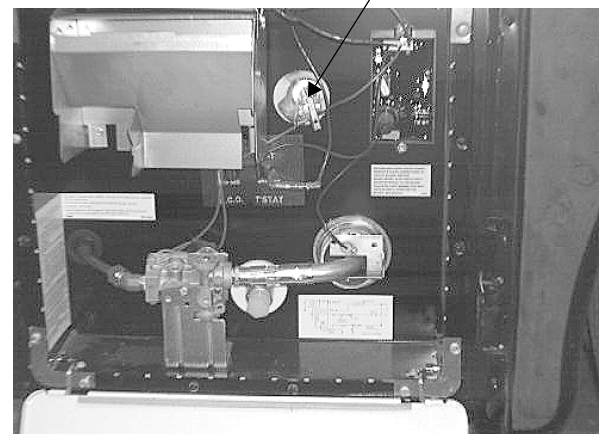
### PRESSURE- TEMPERATURE RELIEF VALVE

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.



Water Heater Service Access Panel

P-T Valve  
(Lift Straight Out Slowly -  
Let Snap Back)



Water Heater - Exterior Service View

## SECTION 4 APPLIANCES & SYSTEMS



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.



Lift handle straight out to open P-T valve

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.

\*If your water heater is equipped with the optional Motor Aid system, it uses an extension from the engine cooling system to heat water in the water heater while driving. The engine cooling system must also be cold before opening the pressure-temperature relief valve. See “Motor Aid” for more information.

## WATER HEATER BYPASS VALVE

Your coach is equipped with a water heater bypass valve for easier winterization of water lines using RV antifreeze.

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



Water Heater Bypass Valve  
(Typical)



### CAUTION

Leave bypass 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.

## MOTOR AID WATER HEATER

The motor aid uses heat from the chassis engine cooling system to heat water in the water heater while driving. Hoses are routed from the engine to a heat exchanger on the water heater tank.

Under normal conditions, the entire contents of the water heater can be heated in about two hours or 100 miles of driving. This means you can have hot water at the faucets immediately upon arriving at a site, or even while driving if needed.

The motor aid also increases the capacity of the engine cooling system, allowing the engine to run cooler under many conditions.

**CAUTION**

Any leak in the heat exchanger or its supply or return lines could cause loss of coolant and subsequent engine failure. We recommend that you periodically inspect these connecting lines and the heater to insure that no leaks have developed.

### Motor Aid Water Heater and Rear Auxiliary Heater Maintenance

Have your authorized dealer check all hose clamp connections on the rear automotive heater and the motor aid water heater at least every six months and tighten them if necessary.

## ELECTRIC ENTRANCE STEP

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 fully extended. Do Not Stand on step when vehicle's ignition switch is turned to either the "On" or "Start" position. The step will automatically retract, which may cause personal injury. Always remember to retract the step before moving the vehicle.

### 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 Owner InfoCase.

If the window will not open after three or more full turns of the knob, the glass may be stuck to the sealing gasket. Go to the outside of the coach and gently free the glass with your fingers. A periodic light dusting of talcum powder on the gasket should prevent this from recurring.

### **Slider Windows**

#### **Horizontal Slider Windows**

Swing the latch handle straight out from the window. Grasp the sliding window edge frame and slide the window to the side. Be sure the latch is open before trying to slide the window closed.



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## **WINDOWS**

### **Crank-out Side Windows**

Turn the crank-out knob clockwise to open window; counterclockwise to close. Do not use excessive force on the knob to open or lock into closed position. This could cause permanent damage to the crank mechanism.

When closing the window, crank the window in snugly, then back off 1/4 turn to help avoid glass warping which can result in wind noise.



### **Vertical Slider Windows**

Vertical Slider Windows have spring-loaded catches on both sides of the window that pop out to hold the window in its fully raised position. Press the catches outward toward the frames while lowering the window.



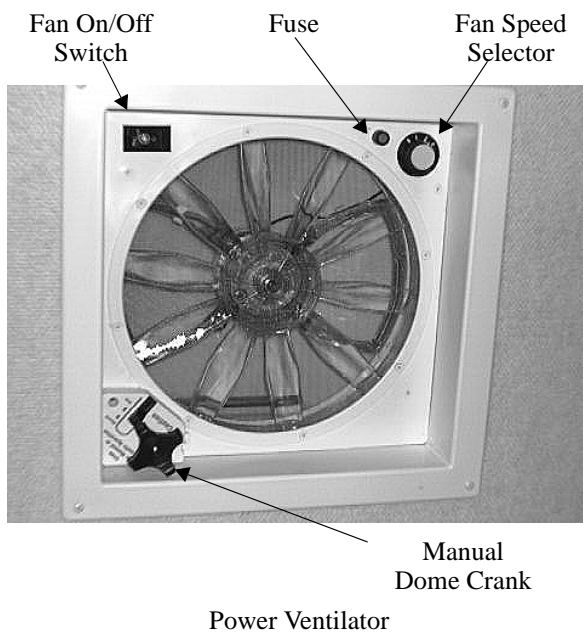
Vertical Window Catches

## POWER ROOF VENTS

The power roof vent in the galley and bath ceiling utilizes a 3-speed turbine fan.

The vent is controlled by a switch on the galley or bath wall which will raise or lower the dome and turn the fan on or off automatically.

The fan shroud on the ceiling has a fan power switch that lets you turn the fan off if you want just the vent dome raised with no fan running. The fan speed switch allows you to adjust the amount of circulation you need at any time.



### Further Information

See the power vent manufacturer's operating instructions supplied in your Owner InfoCase.







## SECTION 5 LP GAS

### LP GAS SUPPLY

The LP 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.

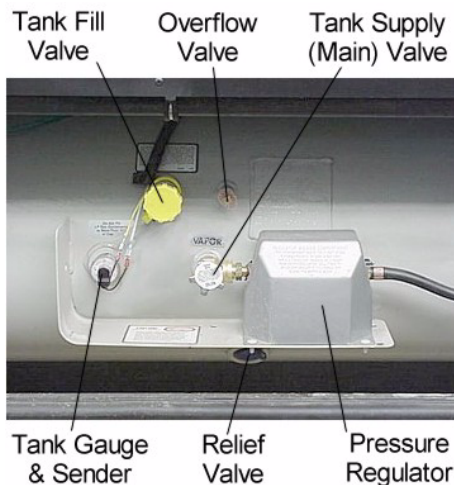
### How LP Gas Works

LP (Liquefied Petroleum) gas is a true gas compressed into liquid form for easy transportation and storage. LP gas is available in two types - propane and butane. It is also called tank gas, bottle gas, or simply LP.

LP 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.

### LP Tank System

The storage reservoir for the LP gas system is a horizontally mounted tank which is permanently attached to the vehicle frame. The tank is accessible only from the outside of the vehicle. The tank supply valve is located near the top center of the tank, next to the regulator.



### WARNING

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

### Refilling LP Tank

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

*NOTE: The LP tank is equipped with an automatic 80% stop-fill device.*

 **DANGER**

DO NOT FILL CONTAINER TO MORE THAN 80 PERCENT OF CAPACITY. FAILURE TO COMPLY COULD RESULT IN A FIRE OR PERSONAL INJURY.

Make sure the motor home is level when filling. It is possible to accidentally overfill the tank if the vehicle is unlevel, with the fill valve on the uphill side. Overfilling the LP gas tank can result in uncontrolled gas flow, which can cause fire or explosion. A properly filled container will contain approximately 80 percent of its volume as liquid LP gas.

**All pilot lights must be extinguished** and supply valve closed before refilling LP gas tanks or vehicle fuel tanks.

**Do not smoke or expose an open flame** while near an LP refueling area. LP gas is heavier-than-air and extremely flammable.

**Never** fill the LP tank with engine or generator running.

Before opening the supply valve, check to be sure all controls for gas appliances are in the "Off" or "Pilot Off" position. If this step is not performed, LP gas could accumulate inside the motor home creating a fire or explosion hazard.

**Never use an open flame** to test for LP gas leaks.

Replace all protective covers and caps on LP system before filling.

## Selecting LP Fuel Types

We recommend using 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 LP 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 LP Gas Tank

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

## SAFE USE OF THE LP GAS SYSTEM

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

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

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

Listed below are a few precautions to observe that will help you to use the LP gas system safely.

- Exercise caution at all times. Be familiar with the distinctive odor of LP gas. If a leak is suspected, turn off the supply valve immediately. Have the LP gas system checked by your dealer or other qualified LP gas service center.

- Do not tamper with the LP gas piping system, pressure regulator or gas appliances. Service and maintenance of LP gas system components should be performed only by your dealer or a qualified LP gas service center.
- Never attempt to connect natural gas to the LP gas system.
- Have the entire LP 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 LP supply valve off when not using the LP 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 LP gas system.
- Never attach a lock or any device requiring a key to the LP tank compartment door. According to standards set for recreation vehicles, the LP 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.

## LP GAS WARNINGS AND PRECAUTIONS

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

### LP 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.

<p><b>▲ DANGER</b></p> <p><b>IF YOU SMELL GAS</b></p>
<ol style="list-style-type: none"> <li>1. EXTINGUISH ANY OPEN FLAME, PILOT LIGHTS AND ALL SMOKING MATERIALS.</li> <li>2. DO NOT TOUCH ELECTRICAL SWITCHES.</li> <li>3. SHUT OFF THE GAS SUPPLY AT THE TANK VALVE(S) OR GAS SUPPLY CONNECTIONS.</li> <li>4. OPEN DOORS AND OTHER VENTILATING OPENINGS.</li> <li>5. LEAVE THE AREA UNTIL ODOR CLEARS.</li> <li>6. HAVE THE GAS SYSTEM CHECKED AND LEAKAGE SOURCE CORRECTED BEFORE USING AGAIN.</li> </ol>
<p>FAILURE TO COMPLY COULD RESULT IN EXPLOSION RESULTING IN DEATH OR SERIOUS INJURY.</p>

- All pilot lights must be extinguished and appliances turned off while refilling the fuel tank or LP tank.
- Never smoke while refilling vehicle fuel tank or LP gas tank.
- Avoid inhaling exhaust gases produced by burned gasoline, diesel fuel or LP 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 LP gas containers, gasoline or other flammable liquids inside the vehicle because a fire or explosion may result. LP 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 LP gas leaks. Replace all protective covers and caps on LP 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 LP gas service should remove the regulator cover for adjustments.



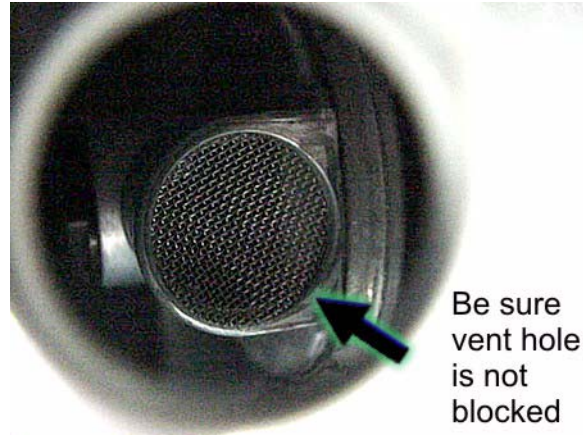
### WARNING

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 LP gas service center.



Look up inside hole on underside of regulator housing to see vent screen



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 LP gas dealers take every precaution to reduce moisture, but sometimes only a fraction of an ounce 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 LP 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.

In very cold weather when a large volume of gas is being used for heating, it is possible to experience a loss of gas pressure. 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. As the temperature becomes colder, it is increasingly harder for the liquid LP gas to vaporize. At the same time, the demand for LP to produce heat increases to the point where the system cannot maintain production.



The only solution to this problem is to reduce the consumption of gas where possible. Adjusting the temperature on the gas/electric refrigerator may be a first step. Using less hot water will help as well.





## SECTION 6 ELECTRICAL

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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 110-volt generator. All systems operate through a single power converter control center to provide electrical power to the motor home.

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### 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.

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### 110-VOLT AC SYSTEM

The 110-volt system operates from the shoreline cord connected to an outside 110-volt utility service such as those at campgrounds, or from the 110-volt generator. When the shoreline cord is connected to an outside power source, or when the generator is in operation, the power converter automatically changes a portion of the


110-volt current to 12-volt DC current. All equipment in the motor home that is normally powered by the auxiliary batteries is then powered through the converter.

In addition, the following equipment is entirely dependent on 110-volt current: air conditioner, refrigerator (when placed in AC mode), microwave oven, and any 110-volt electrical equipment used at convenience outlets.

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### 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 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 prongs of the power cord plug, the electrical connection can be expected to carry rated load.

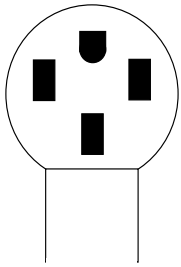
## Connecting the Power Cord

To connect to an external source, remove the cord from the utility compartment and plug it into a suitable power outlet to provide external power to the coach and converter/charger system.

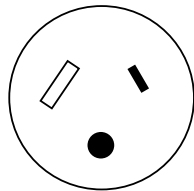
Your coach may be equipped with either a standard 30-amp system or an optional 50-amp system.

*NOTE: Some parks do not have 50-amp service available, so you will need to connect to a standard 30-amp service pole using an adapter.*

*If your coach is equipped with standard 30-amp system, you cannot connect to a 50-amp service. Do not use adapters to connect 30-amp systems to a 50-amp service or you may cause an overload on electrical system components.*



50 Amp.  
Power Receptacle



30 Amp Receptacle

A flip down hatch in the compartment floor lets you route the power cord through a passage in the bottom of the compartment so you can shut the compartment door while the power cord is connected.



1. Swivel the hatch retainers aside and lower the hatch.
2. Swivel the cord notch cover aside.
3. Route the cord through the notch and close the hatch.

## 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 replace it in the utility compartment.

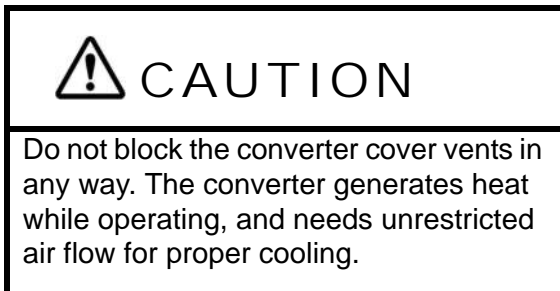


## POWER CENTER (Converter)

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.

Certain circuits, however, remain unchanged for use by items which require 110-volt current, such as the air conditioner, the refrigerator in AC mode, the microwave oven, etc.

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



### Further Information

Refer to the converter manufacturer's information provided in your Owner InfoCase for additional information about your power converter system.

### 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.

## 110-VOLT CIRCUIT BREAKERS

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: 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.

The 110-Volt circuit breaker panel is located behind the cabinet door under the refrigerator or near the galley.



110-Volt House Circuit Breakers

*NOTE: See 12-Volt Breaker Panel elsewhere in this section.*



GFCI Outlet  
(Ground Fault Protector)

Push to Reset circuit after monthly testing or ground fault tripping.

Push to Test at least monthly. Should break circuit. Press Reset button to reconnect.

---

## 110-VOLT RECEPTACLES (OUTLETS)

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. 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.

### WARNING

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.

---

## AUXILIARY 110-VOLT GENERATOR

### 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.

## Automatic Power Transfer Switch

Whenever the generator is needed, an automatic power transfer system automatically switches the household electrical system to the generator 10 seconds after the generator is started. The ten-second delay allows the generator to start easily without the burden of electrical loads.


## Generator Operation

Consult the information provided in your Owner InfoCase for instructions on operation, troubleshooting and maintenance.

## 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 information in your Owner InfoCase for specific recommendations.

 **WARNING**

Never check generator oil level while generator engine is running.

---

## 12-VOLT DC SYSTEM

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

### Converter

See "Power Center" in this Section.

### Chassis (Starting) Battery

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

The chassis battery is located in the entrance step. See your chassis owner's manual for additional information.

### 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

## SECTION 6 ELECTRICAL



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.

---

### AUXILIARY BATTERY (AUX BATT) SWITCH

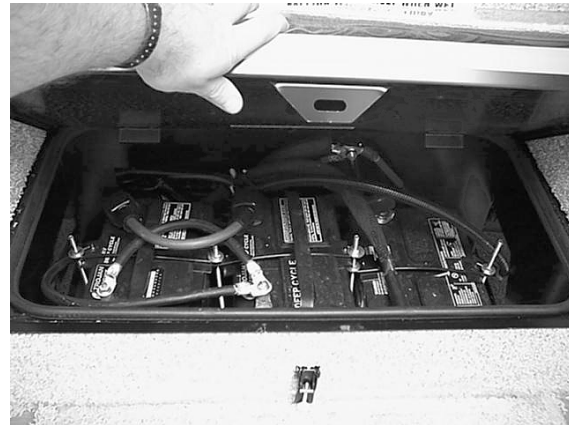
The AUX BATT switch disconnects the auxiliary (coach) batteries from the 12-volt system of your coach to avoid long-term battery drain by electrical items that are hooked directly to the coach batteries, such as clock displays and radio memories, etc.

Leave this switch ON except for periods when the vehicle is not in use.

Some electronic displays and memory functions may need to be reset after power has been reconnected.



Squeeze lock tab upward and pull latch handle outward.



Remove step cover to access batteries



Aux. Batt. Switch  
(near entrance door)

---

### BATTERY ACCESS

The batteries are located beneath the top inside entrance step.

---

### 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 AUX BATT switch to avoid parasitic discharge (the trickle discharge caused by directly connected components like LP gas leak 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**

**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.

- 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 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.

*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 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.

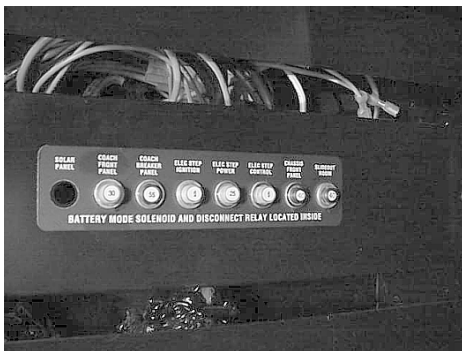
- Clean and tighten battery terminals and have the specific gravity checked at least once a year.
- Every month, or more often in hot weather, check the battery fluid level. Fill to approximately 3/8 inch above the plates. **DO NOT OVERFILL.** If fluid is added during freezing weather, the motor home 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.

## 12-VOLT HOUSE CIRCUIT BREAKERS

All 12-volt circuits and equipment in the coach area of the motor home are protected by a breaker panel. When a circuit is overloaded or a short develops in any part of the system, a breaker will shut down that circuit. If this happens, turn off all affected lights or appliances and reset the breaker.



Auto Chassis 12-Volt Circuit Breaker Panel

A label on the panel states the amperage rating and circuit protected for each breaker.

## Fuse Panel

The House 12-Volt Breaker Panel is located behind the small cabinet door near the galley or below the refrigerator.



House 12-Volt Circuit Breaker Panel

*\*Typical view of breaker panel. Actual breaker labels may vary according to appliance and equipment options. Breakers are labeled on panel.*

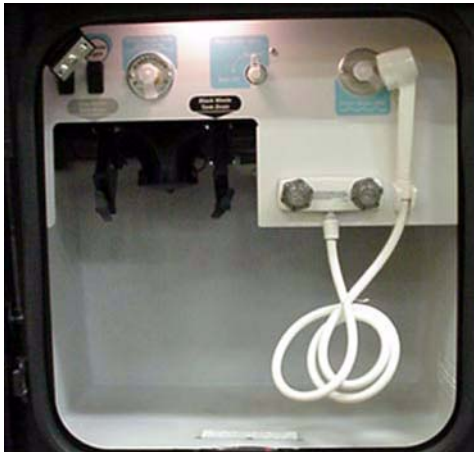


## SECTION 7 PLUMBING

### FRESH WATER SYSTEM

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.”



Water Service Center

### 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.

The tank may be filled either by gravity fill or by pressure filling through the city water connection. A special diverter valve will route the water from the hose either directly to the water lines for city water hookup use, or to the fresh water tank for filling.

#### Gravity Fill (N/A on 38J)

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

The gravity fill tube is located behind a small, lockable door on the left (driver) sidewall toward the back of the coach.

### Pressure Fill from City Water Connection

1. Attach hose to city water connector.



Fresh (City) Water Connection

2. Open the Gravity Fill door to provide adequate air venting and avoid pressure buildup.
3. Turn the Fresh Water Valve inside water service center to Tank Fill position.



4. Turn city water supply on.
5. Tank is full when water flows from tank vent tube beneath coach.
6. Turn off city water supply and disconnect from city water connector.
7. Turn Fresh Water Valve to Normal position to use the water demand pump. The Tank Fill position is only for pressure filling the water tank from the city water hose connection.

### City Water Use

Connect hose to city water connection as described in previous steps. Turn Fresh Water Valve to Normal position and turn demand water pump switches OFF.

*NOTE: Always keep the tank fill valve in Normal position unless you are filling the tank. If this valve is left in the Tank Fill position while using the city water, water will keep flowing into the tank and out the tank vent tube onto the ground and the water pump will run without delivering water to faucets.*

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 storage tank.

*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.

Disconnect the hose from the vehicle and replace the cap on the city water connection.

### UTILITY LIGHT

A lamp is located up on the left sidewall to provide light in the water service center.

The switch is located inside the water service center compartment on the left side of the coach.



Utility Light Switch

Water Pump Switch

### WATER PUMP

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.





Water Pump Access Panel  
(typical)



Water Pump (typical)

## 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 this strainer after each tankful of water during the first few uses of the water pump system. Thereafter, remember to check it at least yearly, such as during winterization procedures.*

Unscrew bowl and remove to clean strainer



Water Pump Strainer

## 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 strainer bowl.*

## Water Pump Switch

Water pump switches are located on the Systems Monitor Panel and in the utility compartment. 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.

---

## WATER PURIFIER SYSTEM

The water purifier system uses a flow-through activated carbon filter that removes chlorine and other impurities, resulting in clean, taste-free and odorless drinking water.



Water Filter Assembly -  
Below Galley Sink

## Replacing the water filter cartridge:

Replace the filter cartridge when water flow from the purifier faucet is too slow for convenience.

- Place a container beneath the filter to catch any remaining water during removal.
- Raise the valve handle near the top of the filter base to block water flow to filter.
- Twist the filter cartridge counterclockwise about a quarter-turn and pull it down and out of the filter head.



- Insert a new water filter cartridge up into the filter head as far as possible and turn it clockwise a quarter turn.
- Lower valve handle to lock filter and restore water flow.

See “Winterizing Procedure”.

---


## DISINFECTING FRESH WATER SYSTEMS ON RVS

**As approved by the U.S. Public Health Service**

### **Models equipped with Gravity Water Fill**

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.

 <b>WARNING</b>
Chlorine is poisonous - recap bottle and clean utensils after use.

**Models not equipped with Gravity Water Fill**

Follow the preceding instructions for disinfecting tanks with gravity fill, with the exception of tank filling described in Step 1.

Models without a gravity water tank fill require temporarily connecting an external cartridge type water filter assembly to add disinfecting solution to the tank. These filters are commonly available at RV supply stores.

Bleach can be placed into the empty filter canister (remove the filter cartridge first) and connected in-line with the city water fill and city water hose.


The bleach will be drawn into the tank when the city water is turned on and the tank fill valve is turned to Tank Fill position.

**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.”

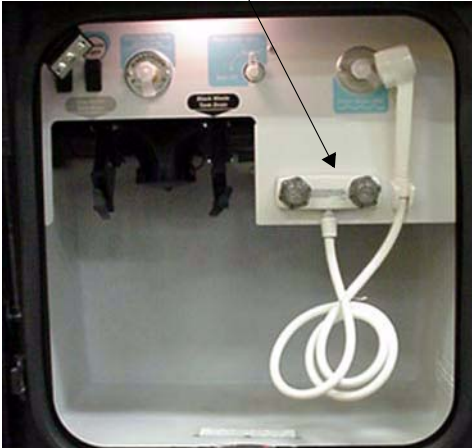
 <b>CAUTION</b>
If items are placed into the shower tub before shower valve vacuum release is complete, they may become wet.

---

## EXTERIOR SHOWER / WASH STATION

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.

Exterior Shower



---

## 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 to prepare the toilet for storage in freezing conditions.

---

## Further Information

Refer to the manufacturer's information provided in your Owner InfoCase.

---

## 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.

The waste drain (sewer) hose has a handle and valve as a sanitary convenience feature. The handle makes the hose easier to carry when placing into a dump site receptacle and when rinsing and storing. The valve end reduces the chance of dripping from the hose.

### Dumping Holding Tanks

1. Remove the dust cap from the drain outlet and connect the sewage drain hose. Twist to lock the hose end hooks onto the pegs on the drain outlet. Be sure it is firmly attached.
2. Open the hose end valve (handle) and place the head of the sewer hose into the disposal opening. Push the handle forward to open the valve inside the hose head





2- Push handle forward to open valve

*NOTE: If the hose end valve (handle) is closed while pulling the hose to the disposal opening, a vacuum lock condition will develop which prevents the hose from extending fully.*

*Do not open the holding tank valves until the hose valve is open. If you open the dump valve before the hose valve, the hose will fill with sewage water and be difficult to move or could cause the hose to clog.*

3. Open the sewage tank valve (black handle) with a quick pull. Move hose gently about to dislodge any waste and to ensure complete drainage. Close the valve as soon as the tank is empty.

*NOTE: DO NOT OPEN BOTH VALVES AT ONCE. Do not open the grey tank valve until the black tank is drained and dump valve closed to avoid sewage back-up into grey tank. Grey water also rinses any black water solids from the drain hose.*



Holding Tank Valves (Typical)

4. Open waste water dump valve (gray handle) with a quick pull. Close valve handle as soon as tank is empty.
5. After both tanks have been drained, flush the black water tank as described in 'Flushing Your Black Water Holding Tank' following this procedure. (If hose is not available, run several gallons of water into the sewage tank through the toilet. Then open sewage dump valve and drain the tank again. Close valve when done.)
6. Close hose valve by pulling handle up until lock snaps into place.
7. Rinse end of sewer hose thoroughly with water and stow.



*NOTE: If the hose will not collapse while storing, open the hose end valve (handle) to release air trapped inside the hose.*

8. It is advisable to add an odor control chemical to the sewage holding tank. These chemicals are available at most R.V. stores.

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

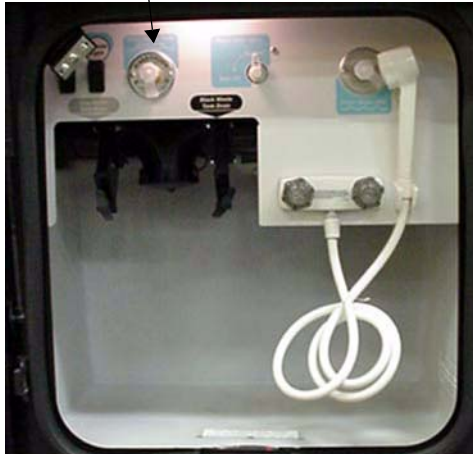
### **Flushing your Black Water Holding Tank**

The black water holding tank is equipped with an internal spray head that allows you to rinse the inside of the tank with a shower of clean water after dumping.

1. Dump your black water holding tank in the usual manner at approved sewage disposal station.

2. Leave black water dump valve open while flushing tank.
3. Attach a garden hose from a city water hydrant to the Flushing System inlet fitting in the water service center. (This inlet is clearly marked separate from the City Water inlet.)

Water Tank Flush Inlet



4. Turn the water on to begin flushing; allow water to run for about three minutes.
5. Disconnect hose from flushing system and close dump valves.

### Using On-Site Sewer Hook-Ups

The drain hose may remain attached to the dump outlet and be routed out the flipdown hatch in the bottom of the compartment while the motor home is parked and connected to an on-site sewage hook-up. The center outlet section may be swiveled downward for better hose alignment and drainage.

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.

### Water Line & 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 Drain Tanks and Water Lines:

The water line and tank drain valves are located in compartment to the right of the entrance door. Turn the valves as indicated on the label provided, according to the type of valve installed.



Water Line Drain Valve

- Open both Hot and Cold water line valves.
- Turn water diverter valve to WATER TANK FILL position.

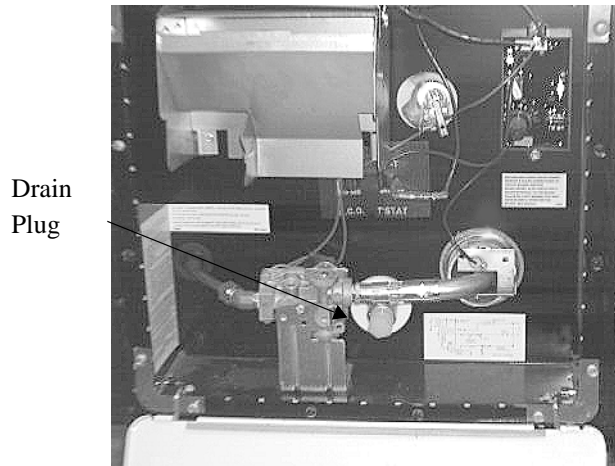


Water Tank Drain Valve- Model 38J  
(pull to drain)

The fresh water tank drain valve is operated by pulling on a T-handle for a cable that is located in the utility compartment.

**Water Heater Drain Plug**

The water heater drain plug is located on the outside of the coach behind the water heater service panel. Use a socket to remove the plug.



Water Heater  
Service Access

**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. Remove the filter cartridge from the water filter assembly below the galley sink.



Water Filter Assembly -  
Below Galley Sink

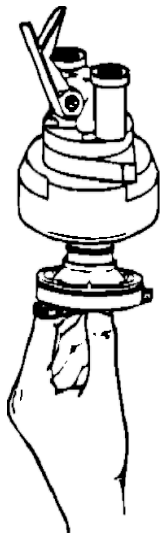
## SECTION 7 PLUMBING



- Raise the valve handle on the filter base.
- Twist the filter cartridge counterclockwise about 90° and pull it down and out of the filter base.



- Place a container beneath the filter base and lower the valve handle to drain any water remaining in the filter lines.
5. Install the antifreeze diverter plug.
    - Raise the valve handle on the filter base.
    - Hold the diverter by the support bar as shown and guide it up into the filter base.

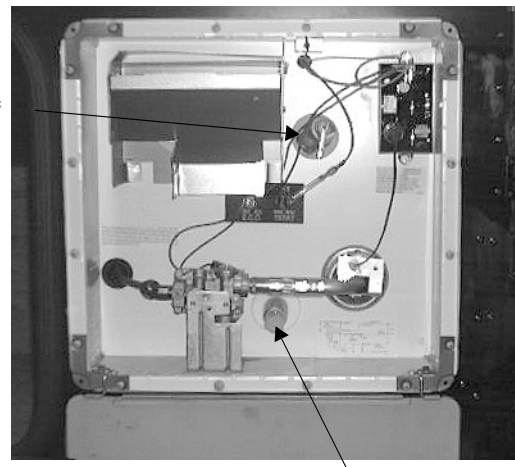


- Push the diverter up into the head as far as possible and turn it clockwise approximately 90° until it stops.
- Lower valve handle to lock the diverter plug in place.

*NOTE: Before using again:*

- Flush out the system with the diverter in place.
  - After the system has been thoroughly flushed, remove the diverter and store for future use. The diverter plug is intended for winterization only.
  - Install a new water filter cartridge.
6. Turn on water pump and open all sink faucets and shower head knobs. Leave open after water stops flowing.
  7. Press the toilet flush pedal and hold until water stops flowing in the toilet. Then turn water pump switch off.
  8. At this time, if your coach is equipped with an optional refrigerator ice maker, dishwasher or washer/dryer, the water lines for these appliances must also be drained. Instructions are included at the end of this section. If not, proceed to the next step.
  9. 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.)

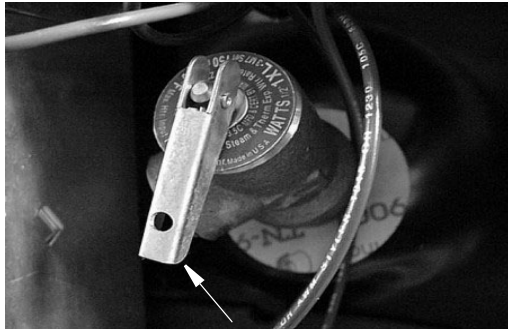
P-T Valve



Water Heater Drain Plug

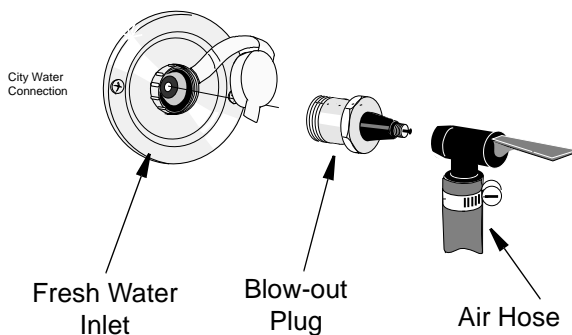
Also open the Pressure-Temperature relief valve at the top right portion of the tank to prevent air locking in the tank while draining.





Lift handle only when water heater is cold

10. 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.)



	CAUTION
<p>Limit air pressure to 30 psi to avoid damage to pump or water lines.</p>	

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

11. Let air flow for five minutes until water is completely drained out of faucets and drain valves. Then close faucets one at a time.
12. Operate and hold toilet flush lever until water is completely drained from toilet.

13. Turn air pressure off and disconnect water purge adapters. Recap the city water connection to avoid contamination by dirt or insects.
14. 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
<p>Leave bypass 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.</p>	

	WARNING
<p>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.</p>	

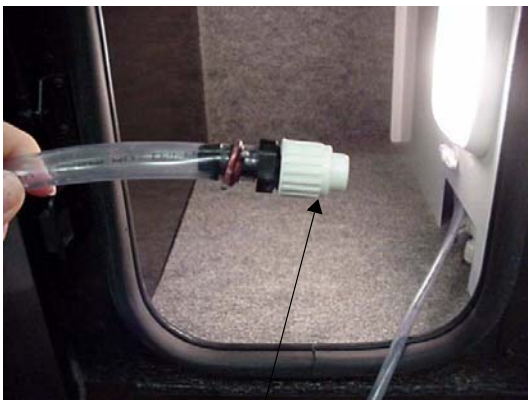
- Turn Winterization Valve 1 to *Water Heater Bypass* position



Winterization  
Valve 2

Winterization  
Valve 1

- Remove and save the protective cap from the end of the antifreeze draw tube. (Winterization Valve 2 in water service center.)
- Insert the end of the draw tube into a pail or other container with 2 to 3 gallons of non-toxic RV antifreeze solution.



RV Antifreeze  
Draw Tube

- Turn the Winterization Valve 2 to 'Winterize' position.
- 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.

**When Done Adding RV Antifreeze:**

- Turn water pump switch off.
- Turn the Winterization Valve 2 to Normal. This will stop the flow from the suction tube and revert the tank line flow to the pump.
- Replace the protective cap onto the end of the suction tube to keep out insects and debris when not in use.

**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.
- Flush the sewage tank using the Black Waste Tank Flush Inlet.
- 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.*

- 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.

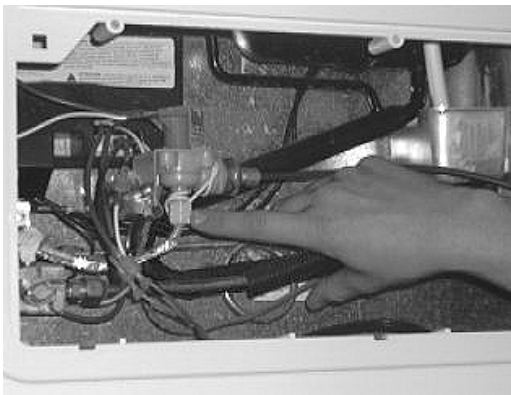
- Empty the water pump strainer filter bowl to avoid water freezing and cracking the filter bowl. Strainer is shown previously in this section.

Your drainage and fresh water systems are now totally winterized.

### Winterizing the Ice Maker

When winterizing, make sure the water line is completely drained by following this procedure.

- Drain coach water lines.
- Unscrew the water supply line from the bottom of the water inlet valve and drain any water left in the line. This connection is located in the refrigerator service compartment on the outside of the coach. (See Refrigerator Service Access Compartment.)



Ice Maker Water Supply Connection

- Let the ice maker run through a cycle, then raise the shut-off arm.
- Be sure water has drained from ice maker supply line, then reconnect to inlet valve.
- Go back to Blow-Out Procedure Step 9.

### Washer/ Dryer Winterizing

#### Draining

Follow these steps to winterize (drain) your washer-dryer for freezing temperatures.

- With the machine power OFF, pour ½ quart of RV-type antifreeze into the washer drum
- Close the door. Advance the Program Selector knob to a SPIN position
- Press ON/OFF Button (IN). Wait 1-2 minutes
- Press ON/OFF Button (OUT). Unplug the washer-dryer from the electrical outlet (or disconnect power)
- Turn the water supply faucets OFF. Disconnect the inlet hoses from the faucets. Drain any remaining water from the hoses. Finished!
- Go back to step 9 of ‘Blow-Out Procedure’.

#### Optional RV Antifreeze Winterization:

If you’re currently pumping RV antifreeze through the fresh water system, follow these steps to winterize:

- With the machine power OFF, turn the WASH TEMP knob to HOT
- Advance the Program Selector knob to REGULAR in Cotton Heavy Duty
- Press the ON/OFF button (IN) and let the machine fill until antifreeze is in the drum
- Advance Program Selector to a RESET. Wait 5 seconds (Status/Door Lock LED will blink)
- Advance Program Selector to a SPIN position. Let the antifreeze drain from the drum
- Advance Program Selector to RESET. Wait 5 seconds (Status/Door Lock LED will blink)
- Turn the WASH TEMP knob to COLD
- Advance the Program Selector knob to REGULAR in Cotton Heavy Duty
- Let the machine fill until you see antifreeze in the drum
- Advance the Program Selector knob to RESET. Wait 5 seconds (Status/Door Lock LED will blink)
- Advance the Program Selector knob to SPIN. Let the antifreeze drain from the drum

## SECTION 7 PLUMBING



12. Press the ON/OFF button (OUT). Finished!
13. Go back to step 9 of 'Blow-Out Procedure'.

### To use again:

#### Flush the water pipes, then

1. Reconnect the water inlet hoses to the corresponding HOT/COLD faucets. Turn the faucets ON. (NOTE: Check the water inlet hoses and pump periodically. Refer to the "Use & Care Guide" that came with the machine)
2. Plug the washer-dryer into an appropriate electrical outlet (or reconnect power supply)
3. With the ON/OFF button in the off (OUT) position, pour 1/2 TBSP. of powder detergent (or liquid equiv.) into the 'Detergent' compartment inside the Dispenser Drawer
4. Advance the Program Selector knob to an EXPRESS cycle
5. Press the ON/OFF button (IN) and allow the machine to run through the complete cycle to clean out any remaining antifreeze. Finished!

WATER SYSTEM DRAIN VALVE LOCATIONS	
SYSTEM	DRAIN VALVE LOCATIONS
Water Lines:	<p>Valves in the utility compartment on the passenger side of the coach, behind the main entrance door.</p> <p>Open exterior shower faucet and lay shower head on ground.</p> <p>Also, to drain any water left in the city water line, place the tip of your finger inside the city water connection and gently press the backflow valve (small "button" in center of connector).</p>
Water Tank:	One (1) valve near the water tank in the utility compartment on the passenger side of the coach.
Water Heater:	Drain plug on outside of coach, behind service door. Use socket to remove drain plug.
Water Heater Bypass Valve:	Bypass valve is located in the utility compartment on the passenger side of the coach.
Winterization (Antifreeze) Valve:	Valve with clear vinyl siphon tube is located in the utility compartment on the passenger side of the coach.



## SECTION 8 ENTERTAINMENT



### VIDEO CONTROL CENTER

The video control center 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. Also, two people can watch different programs on the two TV's while taping a third program on the VCR.

### Video Control Center Settings

#### To Watch Broadcast TV (Antenna)

- Press TV ANT button on MAIN TV section of Video Selector Panel.

#### To Watch Cable TV

- Press CABLE TV button on MAIN TV section of Video Selector Panel.

#### To Watch Satellite TV (Dish)

- Press SAT button on MAIN TV section of Video Selector Panel.

#### To Listen to Dash Radio/CD through Surround Sound Speakers

- Press Speaker Switch to RADIO position.
- While driving - press Radio Power switch to 'Engine' position.

- While parked (with key off) - press Radio Power switch to 'House' position.
- Turn Radio On and adjust volume

### 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.

### TELEVISION WITH DVD/ VCR COMBO PLAYER AND THEATER SURROUND SOUND

#### To Watch TV or Video with Surround Sound:

- Provide 110VAC Power for TV and Video unit (plug Shoreline into a utility power supply - or start the GenSet - or switch the Inverter ON).
- Press Aux Battery switch ON.
- Press Speaker Source Select switch to TV position to activate Surround Sound speakers.



- Turn TV on.
- Press TV/Video button on remote or front of video player to select "Video1" input shown on channel display area of TV screen.



- Turn DVD/VCR power ON.
- Then press one of the SELECT buttons... DVD to watch DVD - or VIDEO to watch TV or VCR.
- See “Video Selector Panel Settings”
- Select channels on TV through the video player channel selector.
- Surround sound volume is controlled using the TV remote.

*NOTE: You can also play a CD in the DVD player to listen to music in Surround Sound.*

### **Further Information**

For detailed Information on TV and Home Theater System, see Manufacturer’s Information provided in your Owner InfoCase.

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## **COMPACT DISC CHANGER**

### **- Optional**

The remote CD changer is located out of sight in the driver side overhead front cabinet. The changer cartridge holds up to 10 compact discs for hours of listening enjoyment. The CD changer operates through the dash radio.

See the Compact Disc Changer System operating guide in your Owner InfoCase for complete operating instructions and basic troubleshooting.

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## **DC-AC INVERTER - 600 WATT**

### **- Optional**

The inverter changes 12 Volt DC current into 110 Volt AC current to operate your TV and DVD/VCR while traveling or when shoreline hookup is not available. It is also connected to the 110 Volt AC outlet for the bedroom TV and in the cab area.



- The inverter must be switched on to operate.
- Turn the inverter off when not in use to avoid draining the coach.

### **Further Information**

See Manufacturer’s Information provided in your Owner InfoCase for more information.

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## **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.

The signal amplifier is housed inside the antenna with the circuit board connected directly to the antenna elements. Power to operate the amplifier (12-volt DC) is supplied through the download cable which also carries the TV signals to the TV set. The power supply separates the 12-volt DC from the TV signals and provides a place for attaching the TV set and the 12-volt power source.

## Operation

### Raising Antenna

Turn elevating crank clockwise in “UP” direction until some resistance to turning is noted. Antenna is now in operating position. Turn amplifier power switch “ON” to receive TV signal.



**! WARNING**

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

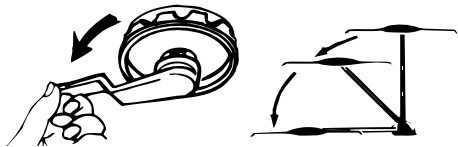
### Rotating Antenna

Make sure antenna is in the “UP” position. Pull down on directional handle until it disengages ceiling plate and rotate for best picture and sound on TV set.



### Lowering Antenna to Travel Position

Rotate antenna until pointer on directional handle aligns with pointer on ceiling plate.



Turn elevating crank (counterclockwise) in “DOWN” direction until resistance is noted. Antenna is now locked in travel position. Turn amplifier power switch “OFF”.

**! CAUTION**

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

### TV Signal Amplifier

The amplifier power switch is located on the video selection system panel in the video center cabinet above the driver and passenger seats or entertainment center cabinet.

To operate the amplifier, turn on the power switch. A red indicator light will glow while the signal amplifier is in use.



### Checking Performance

The TV signals available to an RV are entirely dependent on its location in relation to the transmitter. Signals may vary from strong to no usable signal at all. We recommend that the TV system be checked out in an area known to have good TV reception.

To check the antenna amplifier, raise the antenna, select a TV channel and rotate the antenna for best picture. Then turn off the amplifier power switch. If the antenna amplifier is working properly, the TV picture will now be degraded (snowy). When you turn the switch back on, the picture should again be sharp.

### Antenna Check Light

The antenna check light will come on for 20 seconds when the ignition switch is turned on to remind you to be sure the TV antenna and/or satellite dish are lowered completely into the roof cradle for travel storage.



“Check Antenna”  
Light

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## CABLE TV, SATELLITE AND PHONE HOOK-UPS (INPUT)

The cable television, portable satellite dish and telephone input connectors are located in the utility compartment.

The input lines can be routed through the hatch in the bottom of the compartment so the door can remain shut while connected.



Exterior Connection for Satellite Dishes  
and Cable TV  
(In Utility Compartment)

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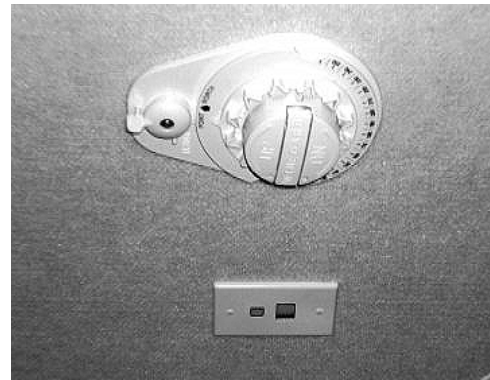
## DIGITAL SATELLITE TELEVISION SYSTEM

### - 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.

Press the SAT switch to connect the TV to the Satellite system. The satellite system is hooked through the SAT input of the video control center.

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



Digital Satellite Dish Control  
located on ceiling



We recommend that you read the satellite dish manual thoroughly to understand the system completely before attempting any setups or adjustments.

### Satellite System Ready

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





Interior Connection for Satellite Dishes  
(in front video center cabinet)

## EXTERIOR ENTERTAINMENT CENTER

The exterior entertainment center contains a stereo radio/CD player and convenient TV hook-ups for your outside listening or viewing pleasure.

*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.*



Entertainment Center

### Further Information

See Manufacturer's Information provided in your Owner InfoCase for more information.

## 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 Owner InfoCase for details on charging and using the radios.





## SECTION 9 FURNITURE & SOFTGOODS

### SWIVEL ROCKER LOUNGE CHAIR

This chair is not equipped with a seat belt and is not intended for seating while the coach is in motion. The chair has a glide-lock mechanism to prevent chair movement while the coach is moving. The glide lock is located behind the seat skirt on the rear side of the seat base mechanism.

#### Chair Base

The hoop base of the lounge chair is mounted to the floor with a clamp as shown.



The clamp knob can be unscrewed and removed to allow you to position the chair as you desire in the living area of the coach.



 CAUTION

The chair must be clamped back into place and the glide mechanism locked before driving the coach.

### TABLE AND CHAIRS

#### Dinette Chairs

The dinette chairs are free-standing to allow greater freedom of movement than typical booth style dinettes or pedestal seats. Folding dinette chairs are also provided for additional seating when needed. The folding chairs are typically stored in the bedroom wardrobe or under the bed.

**Free-standing chairs are not intended for occupancy while the vehicle is in motion.**

Before driving, always stow folding chairs beneath bed and secure dinette chairs with retainer strap provided as shown.



Remove 'bumpers' from seat frame when converting to bed to allow seat to lie flat. Replace when returning to dinette seating.



**WARNING**

Be sure all loose items are secured or stored properly while the vehicle is in motion. 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.



**SLEEPING FACILITIES**



**WARNING**

Do not use sleeping facilities while vehicle is moving.

2. Release the catch on the table leg brace and fold the leg up against the bottom of the table.

**DINETTE/ BED CONVERSION**

**Dinette to Bed:**

1. Lift the seats and remove the seat support 'bumpers' to allow the seats to lie flush for use as a bed. Do not lose bumpers because you must refit them when reverting back to dinette seat configuration.



3. 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.

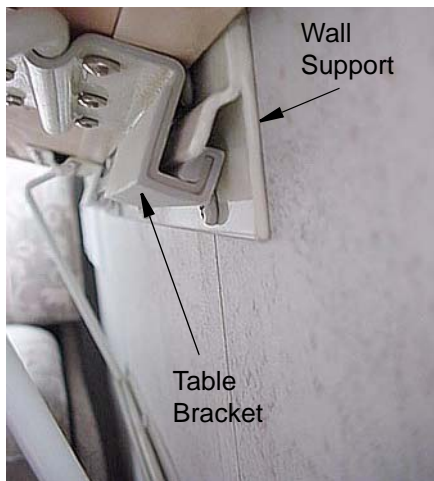


4. Arrange dinette cushions to cover bed area.



**Bed to Dinette:**

1. Reattach the table onto the wall support and lower the table leg.



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



3. Refit the seat support 'bumpers' onto the seat frame.

**COUCH BED CONVERSION  
(with Dual Footrests and  
Removable Armrests)**

**Couch to Bed:**

Remove the armrests from both ends of the couch by lifting upward and sliding the blade out of the bracket as shown.



Remove armrest by pulling upward

## SECTION 9 FURNITURE & SOFTGOODS



Armrest blade fits in bracket between cushion and side of couch

Pull the front edge of the couch seat upward and 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.

### Footrests:

The footrest release latches are located on the ends of the seat cushions. Pull the paddle outward to extend footrest.



To lower the footrest, press the crossbrace downward while pressing downward on the footrest pad.



## REST EASY MULTI-POSITION LOUNGE

### - Optional



### ⚠ CAUTION

Do not recline the lounge completely flat unless the footrest section is extended.

### To Recline:

Press the switch on the front of the armrest. Press 'down' to recline; 'up' to return upright.



**To Extend Pull-Out Footrest Section:**

Squeeze latch behind opening at top of lounge face panel and pull footrest trundle section out until it locks in the fully extended position.



Lift footrest up and away from lounge until it is raised into position.



The gap between the footrest and seat provides ample room to enter and exit the lounge. If desired, however, the footrest can be unlatched and pushed against the lounge seat. The footrest 'drawer' will latch when pulled out completely and must be unlatched to push back in when stowing the footrest.



**Tip for "power users":**

If you have the footrest section unlatched and positioned against the seat cushion, it will move out with the lounge when you press the recline switch. When you return to upright position, you can hook your heels over the front edge of the footrest section and pull it back with you. Then, when you want to get up, simply push the footrest section forward with your feet to provide a gap for you to exit.

**Couch to Bed**

Extend footrest section and push together with lounge seat cushion, then press recline button until entire lounge lies flat. Reverse steps to return to lounge seating.



 **CAUTION**

Do not recline the lounge completely flat unless the footrest trundle section is extended. Do not occupy the lounge when elevating the seatback from the flat bed position to upright lounge position. If house battery voltage is low, the mechanism may require assistance by lifting the seatback while returning upright from flat bed position.

 **WARNING**

To avoid injury to young children, do not allow them to operate the sofa, or to play within the sofa or near the operating mechanism.

## Sun Shade

The lower section is a translucent white shade that can be lowered for privacy without darkening the inside of the coach. It can also filter out harsh direct sunlight to help keep the inside of the coach cool in summer or to disperse light for houseplants.

## Room Darkening/Privacy Shade

The upper section is an opaque, darkening shade for nighttime privacy and daytime room darkening purposes. Pull both sections down together or separately.

## 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.

## SLEEP NUMBER<sup>®</sup> BED by Select Comfort<sup>™</sup> - Optional

*NOTE: The Sleep Number bed operates on 110-volt AC household current only, so you must have the shoreline plugged in or the generator running to adjust the air pressure settings in this bed.*

### Further Information

For further information and operating cautions, see the Sleep Number bed operating instructions included in your Owner InfoCase.

## DAY/ NIGHTER PLEATED BLINDS

Your coach may feature two-stage pleated window blinds that can be used for daytime or nighttime privacy.



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## 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.





## SECTION 10 SLIDEOUT / LEVELING

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### GENERAL SLIDEOUT / LEVELING WARNINGS

- Do not use the coach leveling system as a lift for changing tires or working under the vehicle.
- 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.
- When extending the rear stabilizers, do not lift the wheels beyond ground contact. This overrides the braking effect of both the transmission's park and the parking brake. Without this braking, it is possible for the vehicle to roll unexpectedly forward (or backward) off the jacks. This could cause severe injury or death.
- Holding a control switch in the "extend" or "retract" position for a time period longer than necessary to fully extend or retract the hydraulic cylinders, can cause overheating and damage to the pump motor as well as the electrical components.
- Do not use the leveler as an emergency brake. They are not designed for any type of vehicle braking purpose.
- Do not use the levelers on icy or slick surfaces on which the foot pads may slip.

#### **In The Event Of Accidental Extension**

1. Bring the vehicle to a safe and complete stop as soon as possible.
2. Turn the leveling systems power switch on and press the all up switch.
3. Visually inspect the vehicle undercarriage for any problems.

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### SLIDEOUT ROOM OPERATION

Your coach is equipped with a galley/living room slideout extension to enlarge your living area at the push of a button. The slideout room extends and retracts by hydraulic mechanisms with an electronic control system.

The lounge slideout switch is located on the dash bezel.

***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.***

#### **Travel Strap (Front Slideout Room)**

The Travel Strap **must be released before extending the room** or damage to the coach will result.

The travel strap is intended only to restrict movement of the slideout room while the vehicle is in motion. They are not designed to withstand the force exerted by the extension mechanism and will not prevent extension of the room.

The travel strap is located on the floor near the front 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 from the brackets on the floor and wall edge. Store strap in location of your choice. (Under the couch is one choice.)



**To Fasten**

- Hook the strap end 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, adjust tension as needed.

 **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.

 **CAUTION**

Check to be sure the exterior storage compartment doors below the slideout room extension are closed before extending or retracting the room to avoid possible damage to the doors.

**Travel Locks for Slideout Rooms-38T Only**

The slideout rooms are equipped with electric powered travel locks to restrict movement of the slideout room while the vehicle is in motion. The slideout rooms will not extend until the travel locks are released. The travel lock switches are located near the slideout control switches.

*Note: Be sure locks are fully released. The room will not extend or retract if the locks are protruding more than 1/4”, and you will hear the slideout hydraulic pump running in idle/bypass mode when attempting to extend or retract room.*

**To Release:**

- Press and hold the ‘unlock’ side of the Slideout Lock switch for about 5 seconds until you hear the lock motor sound stop.

**To Lock:**

- Press and hold the ‘lock’ side of the Slideout Lock switch for about 5 seconds until you hear the lock motor sound stop.

**Extending Procedure**

**Before Extending the Slideout Room:**

1. Level the coach and set the Parking Brake.
2. If your coach has a luggage compartment beneath the slideout room, make sure that the luggage 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. Unfasten 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.

CAUTION

Release slideout room travel strap before attempting to extend slide-out room.  
Fasten travel strap before driving vehicle.

### To Extend Slideout Room:

See “Before Extending the Slideout Room” before proceeding.

- Start the coach engine so the alternator can provide maximum power for proper operation of slideout mechanisms.
- Level the coach and set the Parking Brake. An interlock relay system will then provide power to the travel lock and slideout control switches. The front slideout lock and control switches are located on a panel at the lower right dash.
- Release Travel Strap or press the ‘unlock’ side of the Slideout Lock switch and hold for about 5 seconds until the lock is released (you will hear the lock motor sound stop).
- Press the Slideout Room switch ‘OUT’ or ‘EXTEND’ and hold until the room is fully extended, then release the switch.

*Note: If the room will not extend, check to be sure the travel locks are fully unlocked. Press the ‘unlock’ side of the switch for a few seconds, then try extending again.*

CAUTION

Holding a control switch in the “extend” or “retract” position for a time period longer than necessary to fully extend or retract the hydraulic cylinders, can cause overheating and damage to the pump motor as well as the electrical components.



Slideout Lock



Rear Slideout Switch

(on wall in rear of couch - varies by model)

- To stop the room during operation, release the button.

### Retracting Procedure

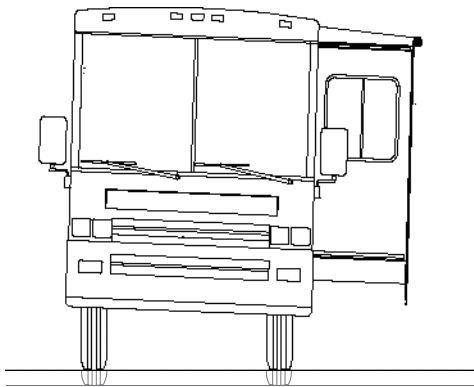
#### Before Retracting the Slideout Room:

1. Be sure the coach is level and the Parking Brake is set.
2. Check the outside of the coach to make sure there are no people, pets or obstructions near the slideout room.
3. Make sure that there are no people who could be harmed or obstacles that could cause damage due to room retraction.
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.

 **CAUTION**

Although there is an awning over the roof of the slideout room, there is a possibility of debris getting onto the roof. Because the slideout roof is drawn into the interior of the coach when retracted, be sure there is no debris, such as excessive dirt, tree seeds, twigs, leaves, etc. on the roof before retracting.

If it has rained recently before you retract the slideout room, we recommend using the hydraulic leveling system to lean the coach and drain off any excess water possibly remaining on the roof before retracting. Lean the coach slightly to the left (driver's side) as shown by raising both right side jacks to let excess water flow away from the rooftop weatherseal and toward the outside of the slide-out roof.



**To Retract the Slideout Room**

See "Before Retracting the Slideout Room" before proceeding.

- Start the coach engine so the alternator can provide maximum power for proper operation of slideout mechanisms.
- Press Slideout Room switch 'IN' or 'RETRACT' and hold until room is fully retracted, then release the switch.

*Note: If the room will not retract, check to be sure the travel locks are fully unlocked. Press the 'unlock' side of the switch for a few seconds, then try retracting again.*

- To stop the room during operation, release the button.
- After the room has been retracted, refasten the safety travel straps or press the 'lock' side of the Slideout Lock switch and hold for about 5 seconds until the lock is secured (you will hear the lock motor sound stop).

*Note: Visually confirm that the slideout lock has engaged by looking at the room from outside the coach and observing that the top of the room is being held tightly against the sidewall of the coach.*

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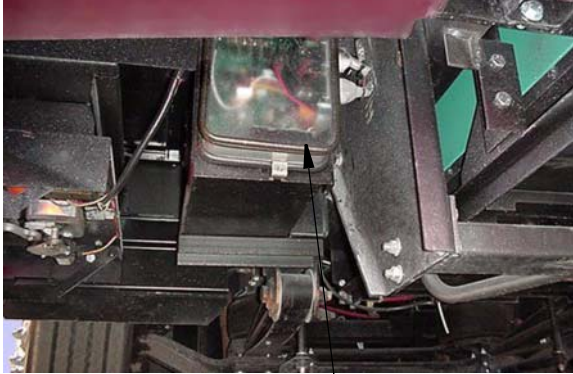
**SLIDEOUT ROOM**  
**TROUBLESHOOTING**

**If Slideout Room Will Not Operate**

- The chassis battery may be low on charge. The engine should be running while extending or retracting slideout rooms so the engine alternator can provide maximum power to properly operate the slideout mechanisms. If battery charge is sufficient, go to next step.
- One of the fuses may be blown in the hydraulic system control box on the pump beneath the right front of the coach.

 **WARNING**

Stop engine, place transmission in neutral position and apply parking brake before lying beneath vehicle for this procedure.



Hydraulic System Control Box  
viewed beneath right front of vehicle

See the Leveling System/Room Extension Operator's Manual in your InfoCase for control box fuse information.

If no fuses are blown, go to the next step.

- If the batteries and fuses are okay, there may be a failure in the hydraulic control system or electrical system which requires service. Retract the room using the following emergency retract procedures and contact your dealer for service.

## FRONT SLIDEOUT EMERGENCY RETRACTION

### Step 1 - Relieve Hydraulic Line Pressure

- Open the hydraulic pump slideout solenoid valves to release hydraulic line pressure and let fluid bypass into the fluid reservoir. The hydraulic pump is located behind the driver's side front wheel. To access the pump, open the storage compartment door directly behind the front tire.



Hydraulic Pump Access - open storage compartment door behind driver's side front tire.

## WARNING

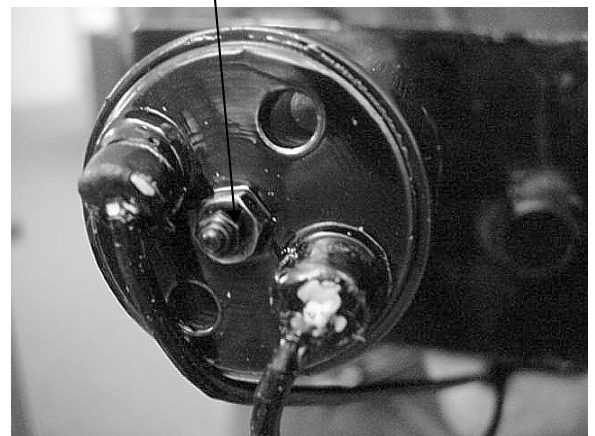
Stop engine, place transmission in park position and apply parking brake before lying beneath vehicle for this procedure.

*NOTE: The hydraulic pump is equipped with two types of hydraulic solenoid valves shown. The **leveling jack** solenoids have a **T-handle** on the valve shaft that can be turned by hand. The **slideout room** solenoid has a small 1/4" **nut** at the end of the valve shaft that requires you to use a 1/4" nut driver built into the shaft of the oil reservoir breather/fill cap. See photo at the end of this section.*

*See the slideout operator's manual included in your Owner InfoCase for specific instructions on which valves to open for front or rear slideout rooms and what additional precautions to follow.*

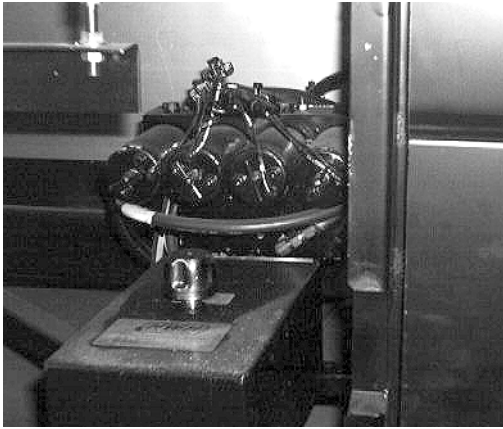
- Open the two slideout solenoid valves (with 1/4" nuts on the ends) on the motor end of the pump to relieve hydraulic line pressure. (See following photos.) **DO NOT LOOSEN NUTS MORE THAN 4 FULL TURNS.**

Use provided 1/4" nut driver to turn nut counterclockwise 4 turns only.



Slideout Room Solenoid Valve

- Do not open any of the four large T-handled valves on the opposite end of the pump. These regulate the coach leveling jacks.



Leveling Jack Valves - Do Not Open

**Step 2 - Crank the Room Inward**

- A wrench is used to crank the room inward. You may use the ratchet wrench supplied with the coach (in one of the storage compartments) or any type of lug wrench of the same nut size.
- Crank-in bolts are located on the outboard mounting plates of the slideout room as shown. These plates are located at both ends of the room inside the StoreMore™ compartment doors.
- Loosen the locking screws at the crank-in bolt shafts as shown before trying to turn the bolts.

Retract Bolt                      Lock Screw




- After loosening the lock screws, fit the ratchet wrench onto the bolt head and begin cranking clockwise slowly a few turns, then alternate to the other side for a few turns. With an assistant using an additional wrench, crank both sides evenly together to speed this process.



- Crank the wrench(es) clockwise slowly, until the room is fully retracted. Allow about 10 minutes to crank room in fully.

*NOTE: Attempting to crank the room in too quickly will raise pressure in the hydraulic fluid lines and make cranking more difficult.*

 <b>CAUTION</b>
The Retract Bolts must be 'backed out' to their original positions immediately after the crank-in procedure to avoid damaging the retract bolts and slideout mechanism the next time the room is extended.

**Step 3 - Secure Travel Locks/ Straps and Close Hydraulic Line Valves**

- Latch Travel Straps or activate the slideout room travel locks.
- Close the slideout solenoid valves completely.

*NOTE: Close the valves snugly, but do not overtighten. Overtightening may cause internal damage to the valves.*

- See your dealer for service of the room extension system before using again.

**BEDROOM SLIDEOUT  
EMERGENCY RETRACTION**

In the unlikely event that your bedroom slideout fails to retract using the power switch, check for obvious causes first, such as low charge



on the house batteries, or a burned out fuse on the chassis fuse block. (See “Troubleshooting” elsewhere in this section.)

*NOTE: Check fuses #16 Step Alarm and #24 Radio/Acc. There is also a fuse on the back of the leveling system control pad, which must be unfastened from the driver door to inspect.*

### Emergency ‘Push-In’ Procedure

- Open the “slideout” hydraulic line valves on the pump to relieve hydraulic line pressure. (See photos on previous page.)
- **DO NOT OPEN THE JACK VALVES ON THE RESERVOIR SIDE OF THE PUMP.** *These regulate the coach leveling jacks.*
- Apply a steady inward pressure of approximately 150 lbs. to the exterior sidewall of the slideout room to push the room in toward the coach until it is snug against the main coach sidewall.
- *NOTE: Use some type of rigid, padded material to protect the sidewall from punctures, dents or other damage to the finish from any device or equipment used to press the sidewall in.*
- Pressure must be applied evenly to avoid binding of the hydraulic mechanism. It may take about 10 minutes to press the room extension inward completely.
- When the room is snug against the coach wall, close the solenoid valves to prevent “creep out” during transit.

**See an Authorized Winnebago Industries Dealer** for service of the slideout system before using again.

*NOTE: When the system has been corrected, check hydraulic fluid level and refill reservoir as necessary. Press the Retract switch for 15 to 20 seconds before attempting to extend the room. Then run the room out and in several times to purge any air from the hydraulic system. Finally, recheck fluid level and fill as necessary.*

### Further Information

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

## CHECKING HYDRAULIC OIL LEVEL

See your Manufacturer’s Operators Manual for complete maintenance instructions and information.

All maintenance should be done as part of the normal servicing of the coach.

The oil level should be checked when the vehicle is first purchased and then once every two years. Check more often if there is an oil leak in the system.

### Jacks and Slideout Positions:

To get an accurate indication of oil level, all leveling Jacks must be UP and slideout rooms must be in.

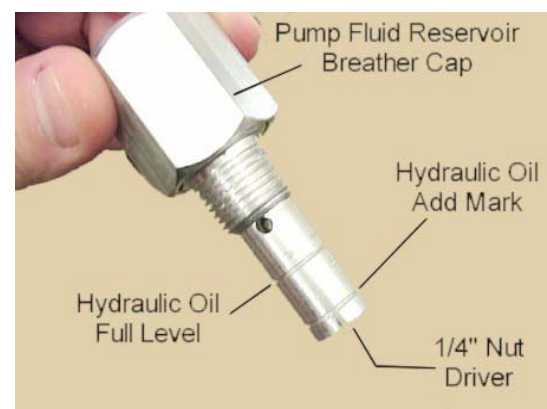
### Checking Dipstick:

The oil reservoir is part of the pump/manifold assembly.

The oil level is checked and filled through the breather cap.

Clear any dirt and debris away from the breather/filler cap before removing. The oil level should be between the two marks on the breather cap dipstick shown in the following illustration.

*NOTE: The breather cap is located on the top side of the power unit reservoir.*





**IMPORTANT:** Prior to removing the breather cap, either to check the oil level or to use the 1/4" nut driver, clean any debris from the top of the reservoir before returning the breather cap to the reservoir. Remove any paint chips or other debris from the dipstick including debris inside the 1/4" nut driver.

*NOTE: Overfilling the tank can cause leakage of oil through the breather cap.*

### Hydraulic Fluid Recommendation

Universal multipurpose hydraulic oil is recommended. In an emergency Dexron automatic transmission fluid can be used.

**DO NOT USE** brake fluid or hydraulic jack fluid. Use of these can damage seals.

*NOTE: Dexron automatic transmission fluid contains red dye and can cause staining should a leak occur.*

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### 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.
- Be sure there are no items at the end of the bed or behind the driver seat or protruding from compartments which could be crushed or cause damage to floor covering or cabinets when the room is retracted.

See your authorized dealer for regular maintenance and service of the mechanism.

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### HYDRAULIC COACH LEVELING SYSTEM

Your coach is equipped with a 4-point hydraulic leveling system.

This leveling system is designed to diminish problems in selecting a parking site, making "set up" easier and faster for you.


The leveling system control panel is located on the lower left dash panel.



Leveling System Control Panel



*NOTE: When parking at an uneven site, always park the front of the motor home to the downhill side. This allows you to level by raising the front end rather than the rear. Since only the rear wheels are locked while in PARK, raising either one or both of the rear wheels off the ground could allow the vehicle to roll off the jacks.*

 **WARNING**

Keep all people clear of the coach while the leveling system is operating.  
Do not use leveling jacks to support vehicle for service or tire changing.

### Jacks Down Light

The 'Jacks Down' indicator is intended to warn you to retract your leveling jacks before moving the vehicle. The light will come on and a chime will sound when the ignition key is turned to the On or Run positions if the jacks are down.



### Further Information

See the Operator Manual supplied in your Owner InfoCase. It contains detailed instructions, precautions and technical information. It also contains troubleshooting instructions for operating system if any functions fail.

*NOTE: If one of the leveling jacks should fail to retract, it can be normally retracted by opening a T-handle valve on the reservoir side of the hydraulic pump. The jacks are spring loaded to retract when hydraulic line pressure is relieved. See the Leveling System Operator's Manual included in your InfoCase for specific instructions on which valve to open and what precautions to follow. The hydraulic pump is located in the compartment behind the driver's side front tire. Valves will be in same relative positions.*



Leveling/ Slideout System Hydraulic Pump  
(Note valve positions in relation to fluid reservoir)

Turn T-handle out about six turns until fully open.



Leveling Jack Solenoid Valve





## SECTION 11 MAINTENANCE/STORAGE

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### 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.

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, 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. See illustration at the end of this section.
- 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.

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### 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. 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.

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### 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 proper condition, clearance and routing of hydraulic hoses and wire harnesses to avoid kinks or leaks and pinched wires, etc.*



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## 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.



### CAUTION

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

## 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 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.

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## FRONT END MASKS AND PAINT DAMAGE

If you choose to install an aftermarket protective front end mask, please follow these preventive guidelines:

- The front end mask must be removed if the vehicle sits longer than 5 days without being driven.
- The front end mask must be thoroughly dry before storing away or reinstalling on the front of the coach.
- When reinstalling the mask, be sure both the mask and the painted surface are free of debris to avoid damage by abrasion.


- Failure to follow recommendations will void any paint warranty.

*NOTE: This information is to make you aware of a potential paint failure that could occur when moisture is trapped between front end masks and painted surfaces.*

### 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.


CAUTION

**DO NOT use citrus based cleaners on polycarbonate finishes.**  
Citric compounds will damage the high-gloss surface causing it to appear dull or 'flat'.  
Always test a cleaning product on a hidden area to be sure it will not cause damage to the appearance of the part.

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<sup>®</sup>, Formula 409<sup>®</sup>, 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

### HOOD COWL PANEL CLEANING

The black polycarbonate cowl panel requires care when cleaning to maintain the high-gloss finish. This panel is below the windshield as shown in the following photo.



Cowl Panel  
Use care when cleaning to maintain high-gloss finish.

### HEADLIGHTS AND EXTERIOR LIGHTS

#### Exterior Light Lenses

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

## SECTION 11 MAINTENANCE/STORAGE



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 bicarbonate 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.

### Headlight Moisture

Your coach is equipped with composite headlights which contain replaceable halogen ‘bulb’ elements, common to most current automobiles. This type of lamp assembly is not sealed from the atmosphere and is designed with a moisture venting system.

Because they are not sealed, under ‘dew point’ conditions the headlights may exhibit signs of humidity condensation on the reflector surface and lens, such as small droplets of water or ‘fogging over’.

If this happens, drive with the headlights on so the moisture can evaporate and expel through the venting system designed into the headlamp assembly.

soils and stains of vinyl fabrics. It is also tougher than real calfskin and has superior resistance to punctures, snags and tears.

For most soils and stains, the fabric manufacturer recommends spot treatment with a solution of water and Tide™ brand laundry detergent or equivalent. More stubborn stains may be treated with a water-based multipurpose cleaner/degreaser such as Simple Green™ or equivalent. Solvent cleaners such as nail polish remover or other aromatic solvents are not recommended.

### Care Instructions

- Spot clean with mild soap and water.
- Air dry or, if desired, dry quickly using a hair dryer on warm setting - not hot.
- For stubborn stains, use cleaner-degreaser.

Type of Stain	Detergent /Water	Cleaner/ Degreaser
Coffee, Tea	◆	
Red Wine, Liquor	◆	
Coke, Soft Drinks	◆	
Milk	◆	
Ketchup	◆	
Steak Sauce, Soy Sauce	◆	
Mayonnaise, Butter	◆	◆
Salad Oil	◆	◆
Chocolate	◆	◆
Cosmetic Foundation	◆	◆
Lipstick	◆	◆
Face Cream	◆	◆
Suntan Oil/Lotion	◆	◆
Shoe Polish	◆	◆
Urine	◆	◆
Machine Oil		◆

- Cleaning and touch-up kits are specifically formulated for leather upholstery are available from most furniture dealers.

## INTERIOR SOFT GOODS

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.

### Ultraleather HP™ - Leather-Like Upholstery - Optional


The optional leather-like seating is upholstered with Ultraleather HP™ synthetic leather fabric material. This new material has the luxurious look and feel of the finest European calfskin, with the durability and resistance to



## Fabric Upholstery

Some fabrics used in this motor home may contain fire retardant and lightfastness 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.*


WARNING

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

## 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.

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## CABINETY

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.*

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## 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.

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## 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.

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## 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.*

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**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 Owner InfoCase.

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**BATHROOM**

The tub and shower walls in the bathroom should be cleaned with a mild soap and water solution. Do not use an abrasive cleaner on the shower walls and tub.

The lavatory sink is made of the same composite material as the galley sink. Do not use abrasive cleaners, harsh detergents or solvents. Refer to the Galley Sink - Care and Cleaning Instructions.

For instructions on the care of your toilet, refer to the information in your Owner InfoCase.

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**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.

---

**DAY/ NIGHETER PLEATED BLINDS**

**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 the 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 the 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.

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**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 LP 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".*

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.

## SECTION 11 MAINTENANCE/STORAGE



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.

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### REMOVAL FROM STORAGE

1. Completely air out the motor home.
2. Have the entire LP 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 turn on the water pump to check for leaks especially at fittings.
7. Open all faucets in turn to release trapped air and check to be sure faucet washers have not hardened during storage.
8. Sanitize the water system as outlined under “Disinfecting the Fresh Water System” in the Plumbing Section.
9. After disinfecting and flushing the water lines thoroughly with fresh water, remove the water filter diverter plug and install a new water filter cartridge. Store the diverter for future use. The diverter plug is intended for winterization only.
10. Check the toilet for proper operation.
11. Add water to the holding tank using the toilet flush pedal and galley sink faucet. Check to be sure dump valves seal tightly.
12. Check around all appliances for obstructions and ensure that all vent openings are clear.
13. Start refrigerator and check for proper cooling.

14. Clean paneling and counter surfaces.
15. Replace batteries if necessary and check out electrical system to make sure all lights and electrical components operate.
16. Check tires for proper cold inflation pressure. See Vehicle Certification Label.
17. 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. See “Sealants” at the beginning of this section.

Re-sealing is quite simple and the material is quickly and easily applied. Appropriate compounds are available from your dealer. See “Sealants Callout Sheet” at the end of this section.

Also inspect weather seals around doors, etc., and if necessary, have a dealer replace immediately.

### Ice Maker Start-Up

1. Close all drain valves.
2. Turn the water supply on.
3. Be sure the ice bin is in place and the automatic shutoff arm is down.
4. Let the refrigerator cool down to ice making temperature. Remember, this can take up to 24 hours.

Let the ice maker cycle and dump the first batch of ice.



## 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.	Before Each Use	Weekly	Monthly	Every 3 Months	Every 6 Months	Every Year	As Necessary
<b>LP System</b>							
Have LP system checked for leaks.						◆	◆
Pressure regulator - inspect and adjust if needed						◆	
Check LP tank condition, mounting and fittings						◆	
<b>Electrical System</b>							
Check Battery Condition Meter	◆						
Check battery fluid level & connections			◆				
Check 12V fuses & 120V breakers							◆
Check GFCI Receptacles			◆				
<b>Generator</b>							
Visually inspect Generator and Compartment	◆						
See generator manufacturer's maintenance guide							◆
<b>Plumbing System</b>							
Sanitize plumbing system							◆
Winterize plumbing system							◆
Clean water pump strainer filter						◆	◆
<b>Slide-Out &amp; Leveling System</b>							
Check Hydraulic Oil Level			◆				◆
Check Hydraulic Lines (routing, leaks, etc.)						◆	
Check & inspect room seals (bulb seals)					◆		◆
<b>Exterior</b>							
Clean roof				◆			◆
Clean sidewalls			◆				◆
Clean windows							◆
Flush underside of vehicle				◆			◆

**SECTION 11  
MAINTENANCE/STORAGE**



**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.	Before Each Use	Weekly	Monthly	Every 3 Months	Every 6 Months	Every Year	As Necessary
<b>Safety Equipment</b>							
Check operation of the following items							
Headlights, Taillights and Marker Lights	◆		◆				
Turn Signals	◆		◆				
Horn	◆		◆				
Hazard Warning Flashers	◆		◆				
Windshield Wipers & Washers	◆		◆				
Fire Extinguisher - check charge indicator	◆		◆				
Smoke Alarm - test operation *	◆		◆				
Carbon Monoxide Alarm - test operation *	◆		◆				
LP Gas Leak Detector - test operation	◆		◆				
(*replace battery if needed)							
<b>Appliances</b>							
<b>Water Heater</b>							
See water heater manufacturer's maintenance guide							◆
Inspect & clean exterior vent	◆						◆
<b>Refrigerator</b>							
Refrigerator maintenance guide							◆
Inspect and clean exterior vent & drip tray drain tube	◆						◆
<b>Furnace</b>							
See furnace manufacturer's maintenance guide							◆
Inspect & clean exterior vent	◆						◆
<b>Air Conditioner</b>							
See A/C manufacturer's maintenance guide							◆
Inspect for exterior damage				◆			◆
Check/Replace Filter			◆				
<b>Range Top</b>							
See range manufacturer's maintenance guide							◆
Inspect & clean/replace range hood grease filter							◆

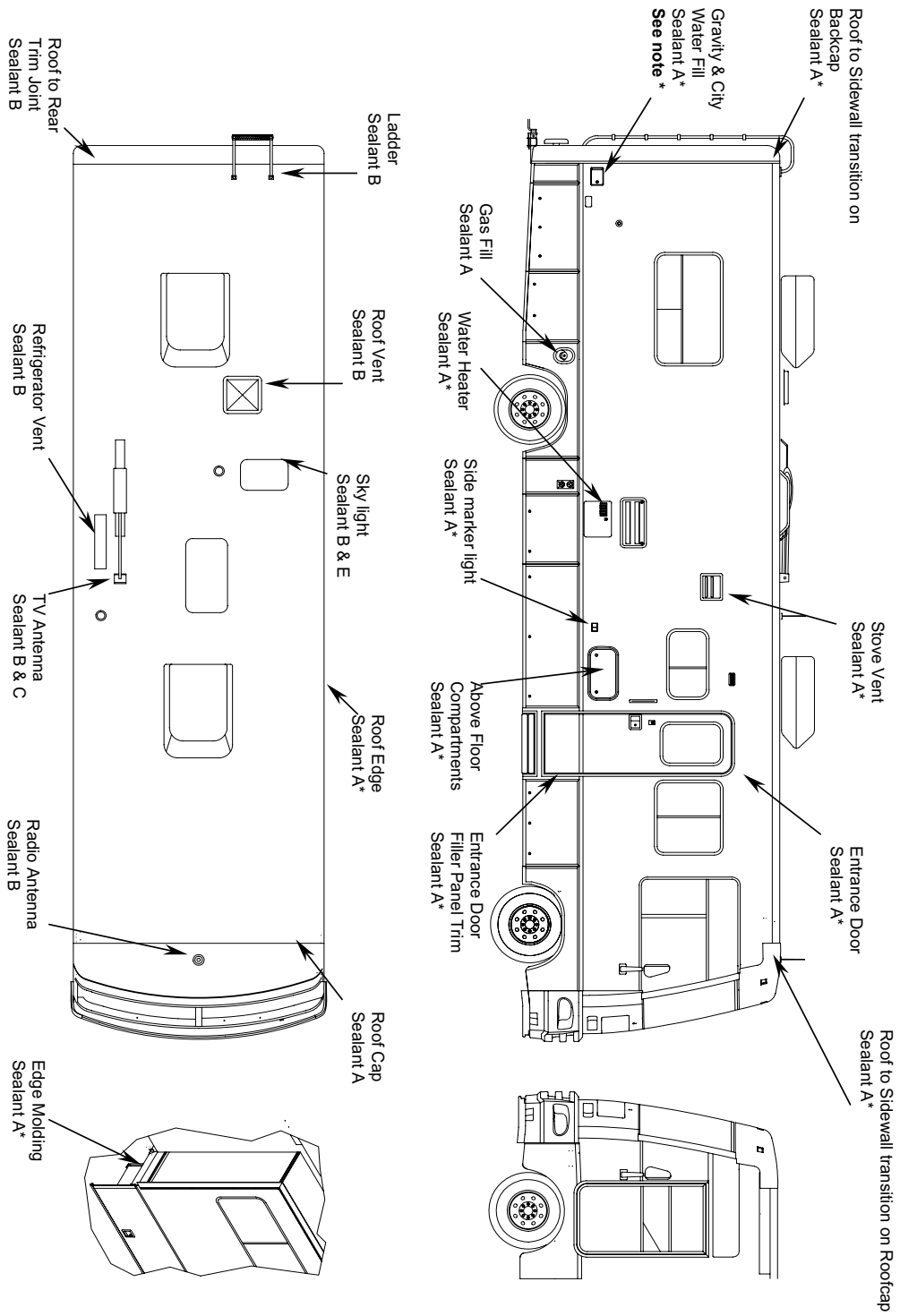


## COACH MAINTENANCE CHART

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.	Before Each Use	Weekly	Monthly	Every 3 Months	Every 6 Months	Every Year	As Necessary
<b>Sealants</b>							
Inspect.					◆		◆
Replace							◆
<b>Frame &amp; Chassis</b>							
Follow Chassis manufacturer's maintenance guide (Refer to Chassis Operating Guide)							◆
Inspect Hitch Receiver (if towing)	◆						
<b>Tires</b>							
Check & adjust air pressure	◆						◆
Check tread wear	◆						◆
Check front end alignment and adjust if needed							◆
<b>Miscellaneous</b>							
Lubricate locks, hinges, latches						◆	◆

**RECOMMENDED SEALANT APPLICATION**



Sealants may be purchased from your Winnebago or Itasca Dealer

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

\*If any component falls into a painted area, the sealant changes to **094401-04-000**.  
Rev-A

Sealant	Winnebago Part #
A	072889-10-000
B	131264-03-01A
C	131264-01-02A
E	131264-04-01A





## Index

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110-Volt AC System.....	6-1	Dinette/ Bed Conversion.....	9-2
110-Volt Circuit Breakers.....	6-3	Disinfecting Fresh Water Systems on RVs...	7-4
110-Volt Receptacles (Outlets).....	6-4	Dome Light Switch.....	3-7
12-Volt DC System.....	6-5	Doors and Windows.....	11-6
12-Volt House Circuit Breakers .....	6-8	Driving .....	2-1
2006 New Vehicle Limited Warranty.....	1-7	Effects of Prolonged Occupancy .....	2-6
About This Manual .....	1-1	Electric Entrance Step.....	4-13
Auto Air Conditioner/Heater .....	3-8	Electrical Cautions.....	6-1
Automatic Pull-Button Parking Brakes .....	3-6	Electronic Compass and Outside Thermometer .....	3-5
Automotive 12-Volt Fuses and Circuit Breakers.....	3-12	Emergency Exits .....	2-4
Auxiliary 110-Volt Generator.....	6-4	Emergency Information .....	1-6
Auxiliary Battery (AUX BATT) Switch .....	6-6	Energy Management System (EMS) .....	4-5
Bathroom .....	11-6	Engine Access.....	3-10
Battery Access .....	6-6	Engine Cooling System .....	3-11
Battery Boost Switch .....	3-7	Engine Overheat .....	2-6
Battery Care .....	6-6	Exterior Entertainment Center .....	8-5
Body and Chassis Specifications .....	1-4	Exterior Finish .....	11-2
Brake-Shift Interlock .....	3-5	Exterior Shower / Wash Station.....	7-6
Cabinetry.....	11-5	External Power Cord (Shoreline).....	6-1
Cable TV, Satellite and Phone Hook-Ups (Input) .....	8-4	Fire Extinguisher.....	2-3
Car or Trailer Towing.....	3-15	Foot-Pedal Parking Brakes .....	3-6
Carbon Monoxide Alarm .....	2-2	Formaldehyde Information .....	2-1
Carbon Monoxide Warning .....	2-2	Fresh Water System .....	7-1
Care of Decals.....	11-2	Front Axle Tire Alignment .....	1-2
CB Radio.....	3-9	Front End Masks and Paint Damage.....	11-2
Central Air Conditioner .....	4-7	Front TV Ignition Switch Interlock .....	8-1
Central Heat/Air Conditioning System.....	4-8	Fuel Pump Shut-Off Switch.....	3-7
Chassis Operating Guide .....	1-2	Galley Sink .....	11-5
Checking Hydraulic Oil Level.....	10-7	Gas/ Electric Water Heater .....	4-10
Child Restraints.....	3-3	General Slideout / Leveling Warnings.....	10-1
Coach Maintenance Chart.....	11-9	General Slideout Care .....	10-8
Compact Disc Changer .....	8-2	General Warnings .....	2-1
Couch Bed Conversion .....	9-3	Grade Brake .....	3-6
Day/ Nighter Pleated Blinds .....	11-6	Ground Fault Circuit Interrupter.....	6-4
Day/ Nighter Pleated Blinds .....	9-6	Headlights and Exterior Lights .....	11-3
DC-AC Inverter - 600 Watt .....	8-2	Heat Pump.....	4-7
Digital Satellite Television System.....	8-4	Hood Cowl Panel Cleaning.....	11-3
		Hydraulic Coach Leveling System .....	10-8

---

---

In-Dash Radio .....	3-8	Seat Belts .....	3-2
Interior Soft Goods .....	11-4	Seats .....	3-1
Jump Starting .....	2-5	Service and Assistance.....	1-2
Key One Lock System .....	3-4	Shower Hose Vacuum Breaker.....	7-5
Lights .....	3-12	Sleep Number® Bed.....	9-6
Loading The Vehicle.....	3-13	Sleeping Facilities.....	9-2
LP Gas Furnace.....	4-6	Slideout Room Operation .....	10-1
LP Gas Leak Detector.....	2-1	Slideout Room Troubleshooting.....	10-4
LP Gas Supply .....	5-1	Smoke Alarm .....	2-3
LP Gas Warnings and Precautions.....	5-3	Solar Charger Panel .....	4-5
Microwave Oven/ Range Hood .....	4-3	Storage Compartment Doors .....	3-18
Motor Aid Water Heater.....	4-13	Suspension Alignment And Tire Balance... 3-12	
Mountain Driving .....	3-17	Swivel Rocker Lounge Chair.....	9-1
Over-Drive Switch.....	3-7	Systems Monitor Panel .....	4-3
Owner InfoCase .....	1-2	Table and Chairs .....	9-1
Owner Information.....	1-6	Tables and Countertops .....	11-5
Plastic Parts - Cleaning .....	11-3	Tank Capacities.....	1-5
Power Awning .....	3-19	Television with DVD/ VCR Combo Player and Theater Surround Sound.....	8-1
Power Center.....	6-3	Thermostat Operation .....	4-10
Power Electric Mirrors.....	3-4	Tires .....	3-12
Power Roof Vents.....	4-15	Toilet.....	7-6
Power Sunvisors .....	3-5	Tools & Ladder Storage.....	3-18
Pre-Delivery Inspection .....	1-2	Towing Guidelines.....	3-16
Preparing Vehicle For Storage.....	11-7	Trailer Wiring Connector.....	3-16
Pressure Regulator .....	5-4	TV Antenna.....	8-2
Pressure- Temperature Relief Valve.....	4-11	Two-Way Radios .....	8-5
Quartz Wall Clock .....	9-6	Underbody .....	11-1
Range and Oven.....	4-2	Utility Light .....	7-2
Range and Refrigerator .....	11-6	Vehicle Certification Label.....	1-3
Rearview Monitor System .....	3-5	Video Control Center.....	8-1
Recommended Sealant Application.....	11-12	Vinyl Wallboard .....	11-5
Refrigerator Service Access Compartment... 4-2		Washer/ Dryer.....	4-5
Refrigerator.....	4-1	Waste Water System.....	7-6
Removal From Storage .....	11-8	Water Heater Bypass Valve.....	4-12
Reporting Safety Defects .....	1-2	Water Pump .....	7-2
Rest Easy Multi-Position Lounge .....	9-4	Water Purifier System.....	7-4
Roadside Emergency .....	2-4	Water System Drain Valve Locations .....	7-14
Roof Loading .....	3-13	Weighing Your Loaded Vehicle .....	3-13
Roof .....	11-1	Windows .....	4-14
Safe Use of the LP Gas System .....	5-2	Winterizing Procedure .....	7-9
Safety Messages Used In This Manual.....	1-1	Wood Furniture and Cabinetry .....	9-7
Sealants .....	11-1		

---