SERENITY / LIBERO MOTORHOME

LEISURE
TRAVEL VANS

OWNER'S MANUAL

Triple E Recreational Vehicles and Leisure Travel Vans are brands and trademarks of Triple E Canada Ltd.

301 Roblin Blvd., Box 1230 Winkler, MB Canada R6W 4C4
Telephone: 204-325-4361 Fax: 204-325-5241

US Address: P.O. Box 68 Walhalla, ND 58282

www.tripleerv.com • info@tripleerv.com • www.leisurevans.com • general@leisurevans.com

Production improvement is a continuing process at Triple E Recreational Vehicles.
We reserve the right to change specifications, operating instructions, standards and options on any and all products without prior notice. The diagrams included were current at the time of printing.

Copyright, Triple E Canada Ltd.

P/N 146-4593 - MAR 2013
Printed in Canada

Table of Contents

Introduction 5
Owner's Manuals 5
Information Kit 5
Options and Equipment 5

Vehicle Certification Labels 6
Reference Number Codes: 6
Serenity Motorhome 8
Libero Motorhome 9
Service Assistance 10
Reporting Safety Defects 10
Coach Specifications 10

Safety 11
General Safety 11
Alarms 12
Combination Carbon Monoxide/Smoke Alarm . . . 13
Smoke Alarm 13
Fire Prevention 14
Fire Safety Tips 14
Fire Extinguisher 14
Emergency Escape 15

Vehicle Operation 16
Vehicle Preparation 16
Keys 16
Vehicle Loading and Weights 16
Towing 17
Auxiliary Vehicle Towing 17
Pre-Trip Inspection 18
Emergency Equipment Checklist 19
Final Checks 19
Maximum Occupancy 19
Seat / Shoulder Belts 20
Driver / Passenger Seat Controls 21
Adjustable Air Springs 22
Travelling 23
Driving Characteristics 23
Driving Safety Tips 23
Travel Tips 24
Severe Weather Information 24
Emergencies While Driving 25
Hazard Warning Lights 25
Flat Tire 25
When the Vehicle is Disabled 26
Overheating 26
Parking 27
Stabilizers 28
Prolonged Occupancy 28
Levelling the Motorhome 28
Refuelling 29
Door Locks 30
Step Override Switch 30
Coach Entrance Door Stay Bar 30
Porch Light Switch 31
Exterior Lights Switch 31
Interior Overhead Light / Dimmer Switch 31
12 Volt DC Power Supply Outlet 31
Awning 32

Appliance and Equipment Operation 34
Refrigerator 34
Stove Top 35
Microwave/Convection Oven 35
LP Gas Furnace 36
Roof Air Conditioner with Heat Pump Cooling . . . 37
Heat Pump 37
Power Roof Vent 38
Manual Roof Vent 39
Shower Cubicle Roof Vent 40
Side Window Vents 40
TV 41
TV Utility Panel 41
TV Antenna 42
Radio Switch 43
HDMI Connection 43
Electric Rear Sofa (Optional) 44
Forward Bed 45

Electrical System Operation 46
Electrical Supply 46
System Monitor 47
Power Converter 120 Volt AC to 12 DC Volt 47
120 Volt AC System 48
120 Volt AC Circuit Breakers 48
12 Volt DC Coach Fuses 48
12 Volt DC Chassis Fuses 48
Ground Fault Circuit Interrupter (GFCI) 49
Auxiliary LP Gas Generator (Optional) 49
Auxiliary Diesel or Standard LP Gas Generator (Optional) 50
Generator Safety 51
Automatic Power Transfer Switch 51
12 Volt DC System 52
Chassis Battery 52
Coach Batteries 12 Volt DC 52
Coach Battery Condition Meter 52
Battery Maintenance 52
Battery Boost Switch 54
Inverter 54
Inverter Remote Control Panel 54
Lighting Maintenance 55

Water / Plumbing System 57
Electrical Supply 57
Fresh Water System 57
External Water Supply 57
Fresh Water Tank Filling 58
Water Pump Switch 59
Water Pump 59
Fresh Water Tank and Water System Drain 59
Water Pump Troubleshooting 60
Disinfection of Water Tank 61
Waste Systems 61
Grey Water - Waste Holding Tank 61
Black Water - Waste Holding Tank 61
Dumping Holding Tanks 62
Black Water Waste Tank Rinse 62
Macerator 63
Do's and Don'ts - Holding Tanks 63
Using On-Site Sewer Hook-Ups 63
Water Heater 64
Water Heater Bypass Valve 65
Water Fixtures 66
Fresh Water Toilet 66

Liquid Propane Gas System 68
LP Valve Gas Control (Utility Center) 68
Safe Use Of LP Gas 68
Selecting Fuel Types 68
How LP Gas Works 69
LP Gas Tank System 69
Air in the LP Gas Tank 70
Travelling with LP Gas 70
LP Gas Tank Regulator 71
LP Gas Leaks 71
Avoiding Asphyxiation 72

Motorhome Maintenance 73
Exterior Care and Maintenance 73
Interior Care 74

Storage and Winterization 76
Storage Checklist 76
Cold Temperature Storage 76
De-Winterizing the Water Systems 79
Spring Startup 79
Cold Temperature Operation 79
Chassis 79
LP Gas 79
Waste System 79

Maintenance and Service 80

2013 NEW VEHICLE LIMITED WARRANTY 81

Introduction

Congratulations on your choice of a Leisure Travel Vans Motorhome for your travelling and touring comfort and enjoyment. Your Motorhome utilizes the latest design features and manufacturing techniques in order to enhance safe, efficient, and trouble-free operation at all times.

Owner's Manuals

This owner's manual covers the operation and limitation of the systems and controls unique to your Motorhome. All operator's/occupants should read, understand, and follow all instructions in this manual, the chassis manual.

Your Motorhome is complex and incorporates components, equipment and appliances manufactured by companies unrelated to Triple E Canada Ltd. Important operating and maintenance manuals for these specific components, equipment and appliances are located in the information kit supplied with the Motorhome, see below for details.

A few minutes spent reading the appropriate manual will pay rich dividends in providing safe, efficient, and trouble-free operation. Keep all manuals with the information kit in the Motorhome for ready reference. Pass this manual and information kit on to any subsequent operator or operator.

For clarification or further details on any of the enclose information, please contact:

Your Leisure Travel Vans Dealer

or

Triple E RV Customer Service at:

Email: info@tripleerv.com
Toll Free: 877-992-9906
Telephone: 204-325-4361
Fax: 204-325-5241

Information Kit

The information kit includes information on the following components, equipment and appliances listed below.

Refrigerator
Stove top
Furnace
Electrical Panel
Toilet
Water Heater
Water Pump
Vent (roof)
Fire Extinguisher
Smoke Detector
Thermostat
CO Detector
Propane Detector
Gas Regulator
TV Antenna
TV/DVD
Chassis
Air Conditioner
Generator
Stabilizers
Rearview Monitor
Inverter
Entertainment System
Safety
Flooring and Countertops
Electric Step

Options and Equipment

Triple E Recreational Vehicles are available in various sizes and floor plan configurations and differing optional equipment. The equipment, accessories and components described in this manual may not apply in all respects to your motor. Read the material and manuals provided in the Information Kit for detailed instructions the equipment specific to your Motorhome.

Vehicle Certification Labels

The vehicle certification labels contain vehicle identification and other important reference information. Never remove or destroy these labels. The labels are located on the driver & passenger door frames. See location details on the following page.

Reference Number Codes:

1. **Manufacture/Conversion Date:**
   The date on which the coach portion of your Motorhome was built.
2. **Gross Vehicle Weight Rating (GVWR):**
   The maximum permissible weight of this fully loaded Motorhome.
3. **Sleeping Capacity Weight Rating (SCWR):**
   The manufacturer's designated number of sleeping positions multiplied by 154 lbs (70 Kgs).
4. **Occupant and Cargo Carrying Capacity (OCCC):**
   The value equal to the GVWR minus UVW and LP. In other words, OCCC is how much weight in occupants, cargo, water and trailer tongue weight that can be added to the Motorhome without exceeding the GVWR.
5. **Designated Sleeping Capacity:**
   The manufacturer's designated number of sleeping positions multiplied by 154 lbs (70 Kgs).
6. **Gross Axle Weight Rating (GAWR):**
   The value specified as the load carrying capacity of a single axle system, as measured at the tire-ground interface.
7. **Tire Specification:**
   Recommended tires specification to meet handling, loading and safety requirements.
   Replacement tires must meet these specifications.
8. **Cold Tire Inflation Pressure:**
   Inflation pressures recommended (while cold) for the tires originally installed on your Motorhome.
   These tire pressure levels must be maintained to ensure proper handling, safety and fuel economy.
9. **Cargo Carrying Capacity (CCC) (Canada):**
   Equal to GVWR minus each of the following: UVW, full fresh (potable) water weight (including water heater), full LP-Gas weight and SCWR.
10. **Unloaded Vehicle Weight (UVW):**
    The weight of this Motorhome as manufactured at the factory with full fuel, engine oil and coolants.
11. **Mass of Waste Water Tanks:**
    Total weight of the black and grey water tanks when filled to capacity.
12. **Vehicle Identification Number (VIN):**
    This number Identifies the chassis on which the Motorhome is built.
13. **Type:**
    States the National Highway Traffic Safety Association (NHTSA) designated usage classification for your Motorhome. MPV signifies a Multi-purpose vehicle.



RECREATIONAL VEHICLE SPECIFICATION NAMEPLATE
PLAQUE SIGNALÉTIQUE POUR VÉHICULE RÉCRÉATIF

DO NOT REMOVE
NE PAS ENLEVER

MANUFACTURER/
FABRICANT:
DATE OF MANUFACTURE/
DATE DU FABRICANT:
SERIAL NUMBER/
NUMÉRO DE SÉRIE:
CERTIFICATION LABEL SERIAL NUMBER/
ÉTIQUETTE DE CERTIFICATION (SN) NUMÉRO:
This Vehicle Requires a Class / Ce véhicule exige une attache de Classe
Which on towing vehicle / sur le véhicule tracteur
Minimum Tire Size & Ply Rating / Dimensions minimales des pneus et nombre de plis:

FACTORY ADDRESS/
ADRESSE DE L'USINE:
MODEL NUMBER/
NUMÉRO DE MODÈLE:
Tongue Load Range /
Capacité de charge de timon:
Gross Vehicle Weight Rating (GVWR) / Poids brut maximal de remorquage (PBR):
Cargo Carrying Capacity /
Capacité de chargement:
Recommended Cold Tire Inflation Pressure / Pression recommandée pour le gonflage des pneus à froid:

FACTORY INSTALLED APPLIANCES / APPAREILS INSTALLÉS À L'USINE

APPLIANCES/ APPAREILS	MAKE/MARQUE	MODEL/MODÈLE	FUEL (gas or electric) COMBUSTIBLE (gaz ou électrique)
Furnace / Fournaise à Air Chaud			
Water Heater / Chauffe - Eau			
Cooking Appliance / Appareils de Cuisson			
Refrigerator / Refrigérateur			
Generator / Génératrice			
Microwave Oven / Micro-Onde			
Air Conditioner / Climatiseur			

ELECTRICAL SYSTEM / INSTALLATION ELECTRIQUE: Volts: Hertz: Amps:
PLUMBING SYSTEM / INSTALLATION DE PLOMBERIE: Pressure system tested at ____ kPa (____ psi) / Installation sous pression éprouvée à ____ kPa (____ psi)

Notes:
1. Any additions or modifications to factory installed systems must be authorized by the appropriate provincial or municipal authorities having jurisdiction. Toute adjonction ou modification aux installations dont le placement est effectué à l'usine doit être approuvée par les autorités provinciales ou municipales compétentes.
2. GVWR Certification only covers the systems noted below only when installed by the vehicle manufacturer. La certification GPV englobe les installations indiquées ci-dessous uniquement si leur placement est effectué par le fabricant du véhicule.
3. (NA) Under the heading "Factory Installed Appliances" indicates that appliances are not factory installed. (NA) Sous l'en tête « Appareils installés à l'usine » indique des appareils non installés à l'usine.
4. This specification plate and the exterior CAV label provide the only evidence of Certification. Cette plaque signalétique ainsi que l'étiquette extérieure CAV constituent les seules preuves de la certification GPV.

WARNING: **AVERTISSEMENT:**

GAS SYSTEM / INSTALLATION DE GAZ:
- To ensure a supply of fresh air to occupants, open ventilators when fuel-burning range and/or lights are in operation.
- This system is designed for use with propane only. DO NOT CONNECT NATURAL GAS TO THIS SYSTEM.

- Pour assurer aux occupants une circulation d'air frais, ouvrir les ventilateurs lorsque fonctionnement la cuisinière ou des lampes à gaz.
- Cette installation est conçue pour le propane seulement. NE PAS L'ALIMENTER EN GAZ NATUREL.

BEFORE TURNING ON PROPANE / AVANT LA MISE EN SERVICE:
- Be certain appliances are certified for propane and are equipped with correct burner orifices.
- Make certain all propane connections are tight by testing with soapy water; all appliance valves are turned off, and any unconnected outlets are capped.

- S'assurer que les appareils sont certifiés pour le propane et munis d'orifices de brûleur appropriés.
- Vérifier l'étanchéité de tous les raccordements au propane, la fermeture de tous les robinets d'appareils et l'obturation de toutes les sorties non raccordées.

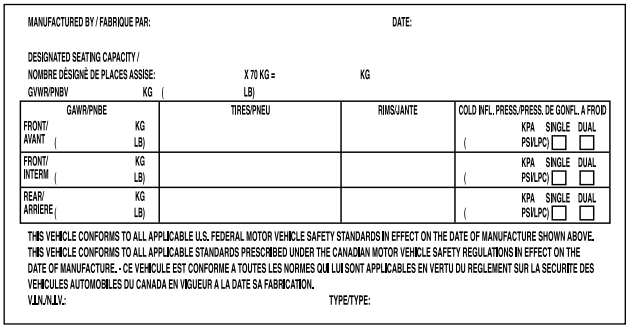
AFTER TURNING ON PROPANE / APRÈS LA MISE EN SERVICE:
- Light all pilots.
- All connections including those at the appliances, regulators, and cylinders should be leak-tested periodically with soapy water by the occupant. NEVER USE A LIGHTED MATCH OR OTHER FLAME WHEN CHECKING FOR LEAKS.
- Do not leave system turned on or containers connected until the system has been proven to be free of any leaks.
- Cooking appliances should not be used for space heating.
- When the containers are disconnected the propane supply line should be capped or plugged.

- Allumer toutes les veilleuses.
- L'occupant doit éprouver périodiquement l'étanchéité de tous les raccordements, y compris ceux aux appareils, aux détendeurs et aux bouteilles. En y appliquant de l'eau savonneuse. NE JAMAIS SE SERVIR D'UNE ALLUMETTE OU AUTRE FLAMME POUR LA DÉTECTION DES FUITES.
- Lorsque les récipients sont déconnectés, l'alimentation de propane doit être obturée ou scellée.
- Les appareils de cuisson ne doivent pas être utilisés pour le chauffage des locaux.
- Ne pas laisser l'alimentation ouverte, ni les récipients raccordés, avant d'avoir complété l'épreuve d'étanchéité au propane de l'installation.

VEHICULAR SYSTEM WARNING / INSTALLATION VÉHICULAIRE AVERTISSEMENT:
It is recommended that highway authorities be consulted or regulations applicable in areas into which this unit may be moved, especially in regard to maximum allowable lengths and widths.
Il est recommandé de consulter les autorités routières ou sujet des règlements applicables dans les régions à l'intérieur desquelles cette unité peut être transportée, particulièrement en ce qui concerne les longueurs maximales admissibles.

Revised / Révisé: April 26, 2012
Serial # / Numéro de série:

Located in wardrobe closet (all models)



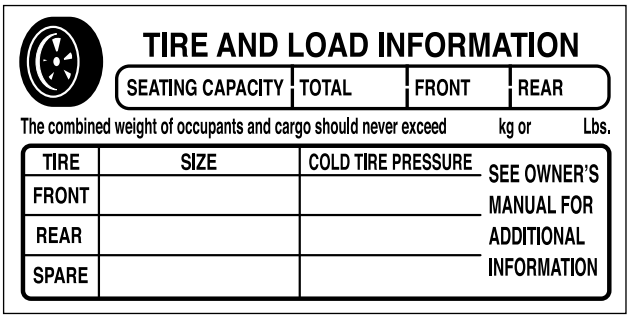
MANUFACTURED BY / FABRIQUÉ PAR: DATE:

DESIGNATED SEATING CAPACITY / NOMBRE DÉSIGNÉ DE PLACES ASSISE: X 70 KG = KG
GVWR/PNBV KG (LB)

GAWR/PNBE		TIRES/PNEU	RIMS/JANTE	COLD INFL. PRESS./PRESS. DE GONFL. A FROID
FRONT/ AVANT	KG (LB)			KPA SINGLE DUAL (PSI/LPC) ☐ ☐
FRONT/ INTERM	KG (LB)			KPA SINGLE DUAL (PSI/LPC) ☐ ☐
REAR/ ARRIERE	KG (LB)			KPA SINGLE DUAL (PSI/LPC) ☐ ☐

THIS VEHICLE CONFORMS TO ALL APPLICABLE U.S. FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE. THIS VEHICLE CONFORMS TO ALL APPLICABLE STANDARDS PRESCRIBED UNDER THE CANADIAN MOTOR VEHICLE SAFETY REGULATIONS IN EFFECT ON THE DATE OF MANUFACTURE. - CE VEHICULE EST CONFORME A TOUTES LES NORMES QUI LUI SONT APPLICABLES EN VERTU DU REGLEMENT SUR LA SECURITE DES VEHICULES AUTOMOBILES DU CANADA EN VIGUEUR A LA DATE SA FABRICATION.
V.I.N./N.I.V.: TYPE/TYPE:

Located on drivers door frame (all models)



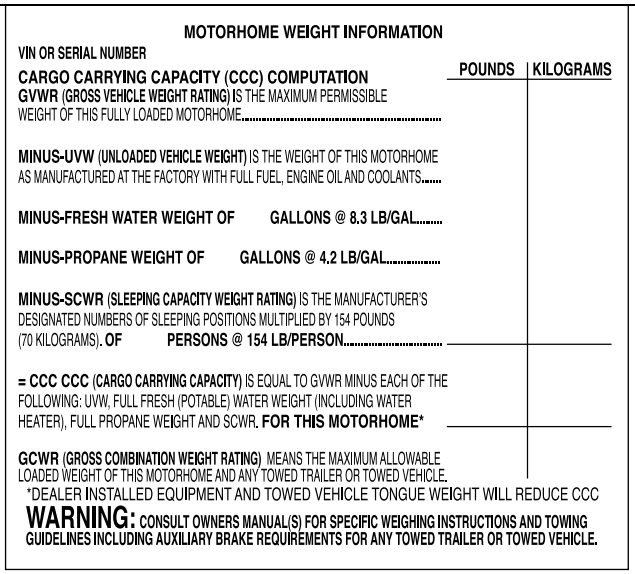
TIRE AND LOAD INFORMATION

SEATING CAPACITY	TOTAL	FRONT	REAR

The combined weight of occupants and cargo should never exceed kg or Lbs.

TIRE	SIZE	COLD TIRE PRESSURE	
FRONT			SEE OWNER'S MANUAL FOR ADDITIONAL INFORMATION
REAR			
SPARE			

Located on drivers door frame (US models only)



MOTORHOME WEIGHT INFORMATION

VIN OR SERIAL NUMBER

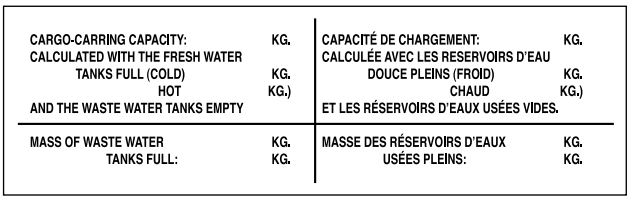
CARGO CARRYING CAPACITY (CCC) COMPUTATION	POUNDS	KILOGRAMS
GVWR (GROSS VEHICLE WEIGHT RATING) IS THE MAXIMUM PERMISSIBLE WEIGHT OF THIS FULLY LOADED MOTORHOME.....		
MINUS-UVW (UNLOADED VEHICLE WEIGHT) IS THE WEIGHT OF THIS MOTORHOME AS MANUFACTURED AT THE FACTORY WITH FULL FUEL, ENGINE OIL AND COOLANTS.....		
MINUS-FRESH WATER WEIGHT OF GALLONS @ 8.3 LB/GAL.....		
MINUS-PROPANE WEIGHT OF GALLONS @ 4.2 LB/GAL.....		
MINUS-SCWR (SLEEPING CAPACITY WEIGHT RATING) IS THE MANUFACTURER'S DESIGNATED NUMBERS OF SLEEPING POSITIONS MULTIPLIED BY 154 POUNDS (70 KILOGRAMS). **OF PERSONS @ 154 LB/PERSON**.....		
= CCC CCC (CARGO CARRYING CAPACITY) IS EQUAL TO GVWR MINUS EACH OF THE FOLLOWING: UVW, FULL FRESH (POTABLE) WATER WEIGHT (INCLUDING WATER HEATER), FULL PROPANE WEIGHT AND SCWR. **FOR THIS MOTORHOME***		

GCWR (GROSS COMBINATION WEIGHT RATING) MEANS THE MAXIMUM ALLOWABLE LOADED WEIGHT OF THIS MOTORHOME AND ANY TOWED TRAILER OR TOWED VEHICLE.

*DEALER INSTALLED EQUIPMENT AND TOWED VEHICLE TONGUE WEIGHT WILL REDUCE CCC

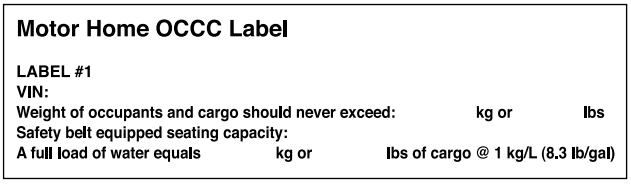
WARNING: CONSULT OWNERS MANUAL(S) FOR SPECIFIC WEIGHING INSTRUCTIONS AND TOWING GUIDELINES INCLUDING AUXILIARY BRAKE REQUIREMENTS FOR ANY TOWED TRAILER OR TOWED VEHICLE.

Located in the back of owners manual and on passenger door frame (US models only)



CARGO-CARRING CAPACITY:	KG.	CAPACITÉ DE CHARGEMENT:	KG.
CALCULATED WITH THE FRESH WATER TANKS FULL (COLD)	KG.	CALCULÉE AVEC LES RESERVOIRS D'EAU DOUCE PLEINS (FROID)	KG.
HOT AND THE WASTE WATER TANKS EMPTY	KG.)	CHAUD ET LES RÉSERVOIRS D'EAUX USÉES VIDES.	KG.)
MASS OF WASTE WATER TANKS FULL:	KG. KG.	MASSE DES RÉSERVOIRS D'EAUX USÉES PLEINS:	KG. KG.

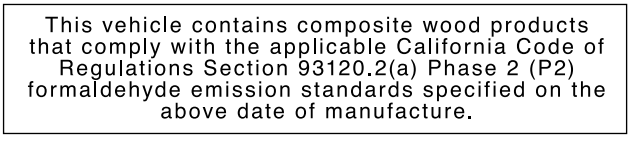
Located on drivers door frame (Canada models only)



Motor Home OCCC Label

LABEL #1
VIN:
Weight of occupants and cargo should never exceed: kg or lbs
Safety belt equipped seating capacity:
A full load of water equals kg or lbs of cargo @ 1 kg/L (8.3 lb/gal)

Located on passenger door frame (US models only)



This vehicle contains composite wood products that comply with the applicable California Code of Regulations Section 93120.2(a) Phase 2 (P2) formaldehyde emission standards specified on the above date of manufacture.

Located in wardrobe closet (all models)



Custom paint colors

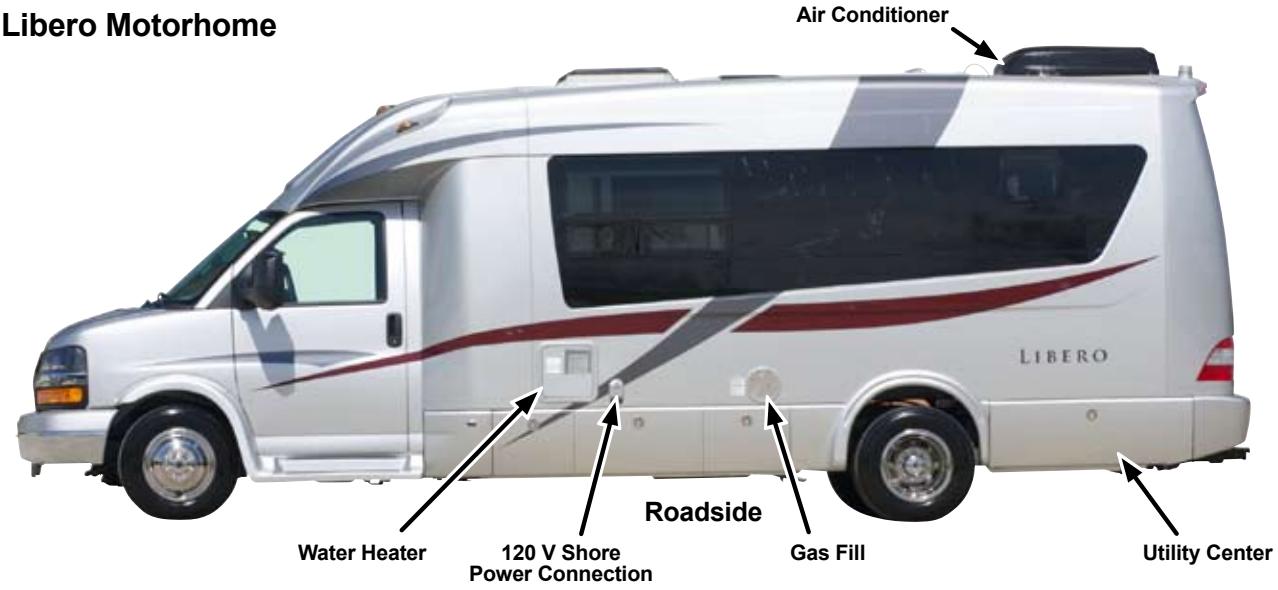
Located in Wardrobe

Certification Label Samples

Serenity Motorhome

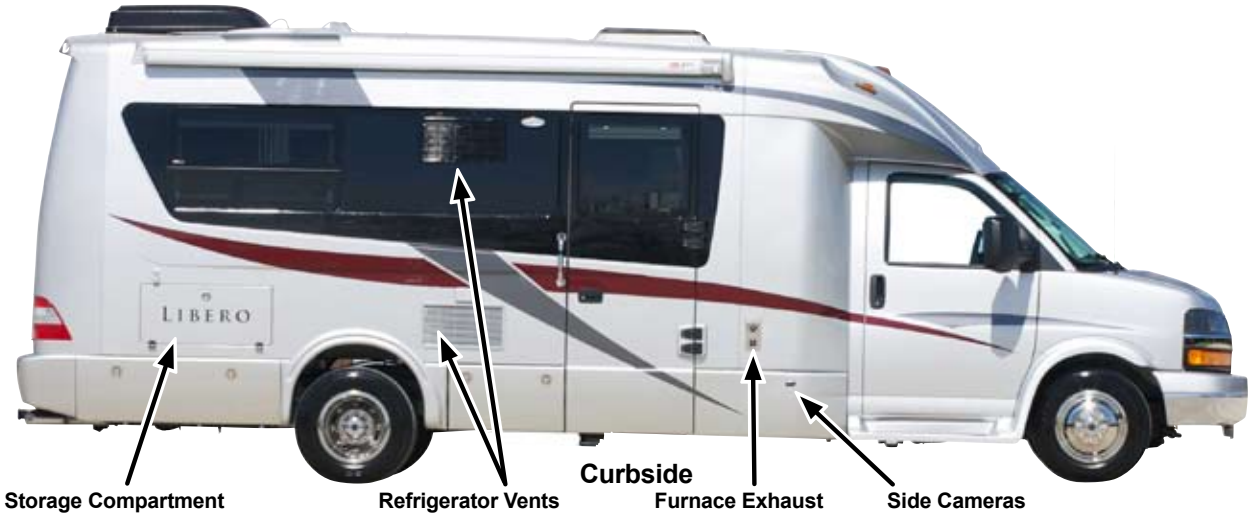


Libero Motorhome









Service Assistance

Your dealer will be glad to provide any additional information you need and to answer any questions you may have about the operation of your Motorhome. When it comes time for service, remember that your dealer knows your Motorhome best and is dedicated to your satisfaction. Your dealer will provide quality maintenance and assistance during the period of your ownership. It is advisable that you follow a regular maintenance schedule to keep your Motorhome functioning at its best.

Should you require warranty assistance while travelling, call:

Triple E RV: 1-877-992-9906

Canada Sprinter Customer Service: 1-800-387-0100 www.thesprinter.ca

US Sprinter Customer Service: 1-877-762-8267 www.mbsprinterusa.com

Canada Chevrolet Customer Service: 1-800-263-3777 www.chevrolet.com

US Chevrolet Customer Service: 1-800-222-1020 www.chevrolet.com

Reporting Safety Defects

If you believe that your Motorhome has a safety defect of any kind that could cause injury, or death, contact Leisure Travel Vans immediately. Also, contact the National Highway Traffic Safety Administration (NHTSA) in the US, or Transport Canada to report your concern.

NHTSA will investigate the concern should there be a number of similar complaints. They have the authority to order a recall and repair campaign depending on the nature and severity of the problem.

NHTSA may be reached by using the Auto Safety Hotline at 1-800-424-9393 (366-0123 in the Washington, DC area) or by writing to: NHTSA, US Department of Transportation, Washington, DC 20590. The Hotline will also provide you with additional information on motor vehicle safety.

In Canada, call 1-613-993-9851 or write to: Transport Canada and Road Safety, 2780 Sheffield Road, Ottawa, Ontario K1B 3V9.

Coach Specifications

	Serenity	Libero
Chassis	Mercedes Benz Sprinter 3500 cab Engine - 3.0L V6 Diesel Transmission - Mercedes 5 speed Auto w/Autostick	Chevrolet 3500 Cutaway Engine - 6.0L Vortex Gas Transmission - 6 speed Auto Trans with OD & Tow Haul Mode
GVWR - lbs (kg)	11030 (5003)	12300 (5579)
Wheelbase - in (mm)	170.3” (4326)	177” (4496)
Length Not incl spare - ft (mm)	24’5” (7467)	25’4” (7722)
Width - ft (mm)	8.0’ (2438)	8.0’ (2438)
Height Incl A/C - ft (mm)	9’7” (2921)	9’10” (2997)
*Fresh Water Capacity - gal (L)	30 (114)	47 (178)
Black Water Holding Capacity - gal (L)	29 (110)	29 (110)
Grey Holding Tank Capacity - gal (L)	37 (140)	30 (113)
Fuel Capacity - gal (L)	26.4 (100)	33 (125)
Propane Capacity - gal (L)	13.2 (50)	13.2 (50)
Exterior Storage Capacity	40 cu. ft.	32 cu. ft.
*Includes 6 gal water heater. All Capacities in US Gallons		

Safety

Safety, comfort and ease of operation are key considerations during the design and manufacture of all Triple E Motorhomes.

It is the responsibility of the owner or operator to read, understand, and follow all instructions in this manual, the chassis manual and any appliance/equipment system manuals located in the information kit and from safety signs on the Motorhome. Specific items, procedures or instructions are identified with the key words **Important, Caution** and **Warning** emphasizing areas of special concern. These key words are defined as:

IMPORTANT

Important is used to highlight or emphasize a specific procedure, information or result for a system or the Motorhome.

⚠ Caution ⚠

Caution is used to highlight or emphasize a specific procedure or information that if not followed can involve your personal safety as well as cause Motorhome damage.

⚠ Warning ⚠

Warning is used to highlight or emphasize a specific procedure or information that if not followed can involve your personal safety as well as cause Motorhome damage.

The safety symbol ⚠ used in conjunction with the Caution and Warning symbols, identifies an area that involves the personal safety of the operator, passengers or a bystander. Always read, understand and follow the instructions and information in the safety sign or manual instruction. Do not take chances with safety. Most accidents can be prevented.

In this section we have compiled a series of items relating to safety that everyone should follow. Although this compilation is thorough, we realize that it does not cover all situations. Each person who operates or occupies the Motorhome or any of its components, devices or subassemblies should be familiarized with this manual and the information kit. Each operator or occupant has the responsibility of following all listed safety items covered in this and other manuals.

General Safety

- The most important safety feature on this Motorhome is a safe and knowledgeable operator. It is the operator's responsibility to read, understand and follow all safety and operating instructions in the vehicle, chassis, appliance and system manuals. Most accidents can be prevented.
- An operator who has not read and understood all operating and safety instructions is not qualified to operate this Motorhome.
- An untrained or uninformed operator or occupant exposes themselves, passengers and other drivers/vehicles/property to possible serious injury or death and property damage.
- Do not modify the Motorhome in any way. Unauthorized modification may impair the function and/or safety and could affect the life of the Motorhome .
- All approved driver and passenger seats are equipped with seatbelts. When occupied while driving, each must be locked in the forward facing direction. Each passenger must occupy only the approved seats and fasten seatbelts when the Motorhome is moving. Do not allow any passengers in the Motorhome unless they have their seatbelt attached while in an approved seat. When the Motorhome is moving, no one should be using the sleeping, cooking, bathroom or living areas. Seats installed by the manufacturer with seatbelts are approved seats.
- Always fasten the seatbelt low on the torso and keep it snug to transmit the force from the belt into the hip/pelvic area of the body. Pregnant women should wear a lap/shoulder belt whenever possible. Wear the belt snug and low throughout the pregnancy.
- Establish a monthly fire extinguisher inspection program to keep the extinguisher in good condition and fully charged. Inspect the extinguisher prior to each time the Motorhome is operated or occupied.

Alarms

All models are equipped with an LP gas and combined carbon monoxide/smoke alarm as standard safety equipment.



IMPORTANT

Recurring alarm(s) indicate the slow accumulation of LP gas, carbon monoxide, smoke, or low battery levels. Have an authorized service center check the system and identify the source. Correct the problem before resuming use of the unit. Keep all alarms in good working order.

For detailed information, refer to alarm manual(s) provided in the information kit.

LP Gas Alarm

The LP gas monitor (1) is mounted on the lower cabinets.

The LP gas monitor sounds whenever there is an unsafe amount of LP gas in the Motorhome.

1. Follow instructions on safety sign next to stove and air out vehicle to silence the alarm.
2. Have a qualified service person find the leak and correct the problem before using the Motorhome again.
3. Refer to “Liquid Propane Gas System” section in this manual and LP Gas Alarm owners manual located in the information kit for further details.

⚠ Warning ⚠

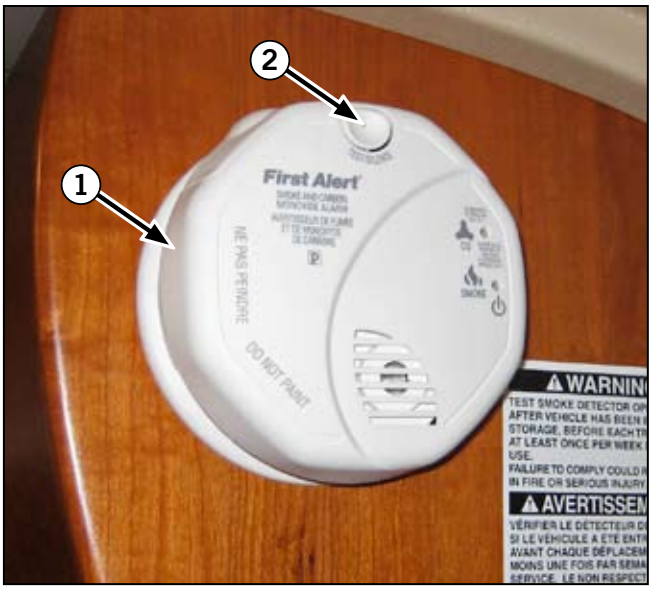
If you smell gas:

1. Extinguish any open flames, pilot lights and all smoking materials.
2. Do not touch electrical switches.
3. Shut off the LP tank valve.
4. Open doors, windows and roof vent after making sure the roof vent fan is “OFF”.
5. Leave the area until odor is gone.
6. Have the system checked for leaks and make the necessary corrections and repairs.

NOTE: The label on the glass stove top cover SHOULD NOT be removed.

Combination Carbon Monoxide/Smoke Alarm

The combination carbon monoxide/smoke alarm (1) is mounted on an upper cabinet.



Carbon Monoxide Alarm

⚠ Warning ⚠

Carbon Monoxide gas is an odorless and colorless gas that is lethal to people.

Do not breathe any exhaust, heating, or cooking fumes to prevent asphyxiation.

The carbon monoxide alarm sounds whenever there is an unsafe amount of carbon monoxide gas in the Motorhome.

1. Open doors, vents and windows to air out Motorhome and silence the alarm.
2. Have a qualified service technician check all burners. Clean, repair or replace any defective burners.
3. Remove all fuel or wood burning devices from inside the Motorhome.
4. Have a qualified service technician check all engine exhaust system components. Repair or replace any defective components.
5. Position the Motorhome so the wind blows exhaust fumes away from the Motorhome.

Smoke Alarm

The smoke alarm sounds whenever there is an unsafe amount of smoke in the Motorhome. Always use the roof vent when cooking.

1. Open doors, vents and windows to air out vehicle and silence the alarm. Correct and eliminate smoke source.
2. Check alarm on a regular basis. Check when removing from storage, before trips and weekly thereafter. Depress the button (2) to test alarm electronics. Test alarm sensor by blowing smoke (from safe, fire-free source) past sensor. If alarm does not sound when testing, determine source of problem and correct or replace alarm.
3. Do not remove battery to silence alarm. When alarm “beeps” every minute, battery is weak and must be replaced. Do not allow battery to go dead. Be sure to replace with recommended battery. Replace the battery at least annually and test after battery is replaced. To replace battery, remove cover, exposing compartment. Remove and replace battery.
4. Make certain wires are properly connected. Position and close cover.
5. Clean and vacuum opening on smoke alarm once a month.
6. Do not try to repair alarm. Replace it.
7. Smoke alarms are not perfect and do not respond in all situations. The best safeguard is fire prevention.

Fire Prevention

Fires can be started in a variety of ways including but not limited to careless smoking, malfunction of appliances or equipment, flammable material on hot surfaces, etc. Fires are best prevented rather than put out. Prevent but anticipate what to do if they occur. Review the following sections with everyone on a regular basis.

Fire Safety Tips

1. Establish and maintain good housekeeping practices. Never allow combustible materials to accumulate. Make sure you store flammable liquids in approved containers in a well-ventilated space.
2. Make sure you have charged fire extinguishers readily accessible.
3. Avoid using flammable products in the Motorhome.
4. Never smoke in bed or when relaxing on the couch.
5. Do not overload electrical outlets.
6. Do not leave cooking food unattended.
7. Keep children away from electrical outlets and LP gas controls.
8. Never use a naked flame to check for LP gas leaks. If there is a fire, get everyone out of the Motorhome. If possible, use your fire extinguisher. If possible close all LP gas valves. Call the fire department and stay a safe distance away from the Motorhome. Do not re-enter the Motorhome until the fire officials declare that it's safe to do so.

Fire Extinguisher

The fire extinguisher is located in the coach entrance.



Operation

1. Stay a safe distance from the fire and near an exit. The chemical from the fire extinguisher will shoot at least 10 feet. Stay close to the floor to avoid heat and fumes.
2. Pull the pin; grasp the fire extinguisher firmly, holding it in an upright position.
3. Push the lever down. Aim at the base of the fire, spraying the entire base area. DO NOT spray at the smoke or flames.
4. After the fire is out, watch for "flashback".
5. Discharge the fire extinguisher entirely and get it recharged or replaced immediately. For detailed information, refer to the fire extinguisher manual provided in the information kit.

Function

1. Fire extinguishers are designed to put out a fire in its initial stages. Once a fire is out of control and you cannot get within 10 feet (3 m), it is probably too big to fight with your extinguisher.
2. Do not discharge your fire extinguisher to test it. Once it is discharged even for a few seconds it will lose pressure and become useless.
3. Check the pressure indicator on your fire extinguisher periodically. If it loses pressure, the dry chemical cannot be discharged effectively.

IMPORTANT

If the pointer on the gauge (1) does not indicate in the green, replace the extinguisher immediately. Record the inspection date on the tag provided.

Emergency Escape

Use the side entry doors or rear emergency window exit as emergency escape routes. Escape routes are easily identified by the exit decals.

To open the rear emergency window exit, lift up the two handles (1) and push the window out.



Vehicle Operation

Vehicle Preparation

Before you even begin to consider taking an extended trip, get to know your Motorhome, its components, features, appliances and limitations. Take some time to read and study this manual and understand the operation of all components.

Preparation is the key to an enjoyable and successful trip. Your Motorhome really gives you the freedom to do what you want, where you want, and when. The time you spend getting to know your Motorhome will go a long way in making you totally satisfied with your purchase.

Keys

It is a good idea to keep a record of all key code numbers and keep them in a safe place - not in your Motorhome. Key codes for the Serenity or Libero models can only be obtained through your local authorized Sprinter or General Motors dealer.

Vehicle Loading and Weights

The components of your vehicle are designed to provide satisfactory service if the Motorhome is not over-loaded in excess of either the gross vehicle weight rating (GVWR) or the maximum front and rear gross axle weight ratings (GAWR's). These ratings are listed on the Canada and U.S. Department of Transport decal located on the driver door post.

The (GVWR) Gross Vehicle Weight Rating is the maximum permissible weight of the fully loaded Motorhome.

The (UVW) Unloaded Vehicle Weight is the weight of this Motorhome as manufactured at the factory with full fuel, engine oil and coolants.

The (CCC) (Canada) Cargo Carrying Capacity is the weight equal to GVWR minus UVW, full fresh (potable) water weight (including water heater), full LP-Gas weight and SCWR.

The (OCCC) Occupant and Cargo Carrying Capacity is equal to the GVWR minus UVW and LP. In other words, OCCC is how much weight in occupants, cargo, water and trailer tongue weight that can be added to the Motorhome without exceeding the GVWR.

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

The (GAWR) Gross Axle Weight Rating is the value specified as the load carrying capacity of a single axle system, as measured at the tire-ground interface.

To check that your Motorhome is properly loaded, drive the fully loaded vehicle to a scale and weigh as follows:

1. Drive only the front wheels onto the scale to obtain the front gross axle weight.
2. Next, place the entire vehicle (both axles) onto the scale to obtain the gross vehicle weight.
3. Drive forward till only the rear wheels are on the scale and obtain the rear gross axle weight.
4. To obtain corner weight for your Motorhome drive each tire individually onto the scale and record the weight.

Compare the gross vehicle weight with the GVWR on the sticker. If the gross vehicle weight exceeds the GVWR on the sticker, check the front and rear gross axle weights against the front and rear GAWR's on the sticker. If either axle weight exceeds the GAWR for that axle, redistribute the load to ensure that loads on front and rear axles are within the required limit.

Heavier items should be loaded as centrally and as low as possible. Lighter items may be stored in cabinets, closets and drawers. Luggage or similar cargo inside your Motorhome should be secured to prevent it from causing damage or injury.

⚠ Caution ⚠

Total vehicle load should NOT exceed the respective maximum GVWR/GAWR/GCWR of the chassis.

Towing

Towing a trailer can affect the handling, durability, performance and economy of your Motorhome. The factory installed certified class 3 towing hitch is rated for:

	Serenity / Libero
Maximum hitch or tongue weight	500 lb (227 kg)
Maximum trailer weight	5000 lb (2270 kg)

The combined weight of the Motorhome and any towed vehicle must not exceed the Gross Combined Weight Rating (GCWR). Also, the combined weight of the Motorhome and any towed vehicle must not exceed the Motorhome's Gross Vehicle Weight Rating (GVWR) or its rear Gross Axle Weight Rating (GAWR) as listed on the vehicle certification label.

(GCWR)
Serenity - 15,250 lb (6917 kg)
Libero - 16,000 lb (7257 kg)

To be sure of the correct balance in weight, you should take your loaded Motorhome to a weighscale to determine actual weight distribution. After you have done this once, you will have a better idea on how to load in the future.

Remember, your Motorhome will handle differently with a trailer in tow. Stopping distances will be longer. Make sure your trailer is equipped and connected to your Motorhome with the proper brake system. When descending a steep or long grade, reduce speed and shift to a lower gear to control speed. Avoid prolonged or frequent application of brakes to prevent overheating and possible failure of the braking system. (See chassis manual for further information.)

Auxiliary Vehicle Towing

If you are planning to tow another vehicle or a trailer with your Motorhome, your dealer will provide you with the necessary information and advice.

⚠ Warning ⚠

For safe towing and vehicle handling, maintain proper Motorhome and trailer weight distribution. The total weight of the Motorhome and the towed vehicle or trailer must not exceed the GCVW rating as stated on the vehicle certification label.

Pre-Trip Inspection

1. Ensure the Motorhome and all of its components, devices, systems and subsystems are serviced and ready for travel.
2. Inspect wheel lugs for tightness. Examine tires for road damage and wear. Ensure that all tires are inflated to proper pressure.
3. Check All Fluids:
   - Engine / Crankcase Oil
   - Power Steering Fluid
   - Radiator Recovery System
   - Reservoir Level
   - Battery Electrolyte Level
   - Windshield Washer Reservoir
   - Transmission Fluid
4. Check oil level in generator power plant (if installed). Refer to generator instruction and maintenance manual located in the information kit for details on pre-use requirements.
5. Consult the chassis manual for a recommended list of pre-trip checks.
6. Verify that all lights are in working order.
7. Check the engine compartment for wildlife. Wildlife and pets like the warmth of the engine compartment and can become entangled in the moving engine components.
8. Sanitize and fill the fresh water tank if required. Turn off the water pump, unless water is needed. The water pump should also be turned off when leaving the unit for any length of time. (See “System Monitor” in “Electrical System” section for details.)
9. Start the refrigerator a day ahead of time so it will be cold for your trip.
10. Fill the LP gas tank to a max of 80% capacity. Be careful not to overfill the LP gas tank. An overfilled LP gas tank will cause the gas regulator to fail, and may result in problems with LP gas components. Turn off the LP gas valve control located in the utility center. Make sure all LP gas controls are turned off (furnace, stove top, refrigerator). Check for LP gas leaks regularly using soapy water.

⚠ Warning ⚠

All appliances must be turned off during refuelling of any Motorhome fuel tanks, propane or LP gas tanks. Do not smoke when refuelling.

11. Check that sewer connections are properly stored and all external compartments and filler openings are closed and/or locked.
12. Check the roof vent to ensure it closes and opens.
13. Be sure all doors are closed, latched, travel locks in place, and all loose objects secured including cabinet and refrigerator contents.
14. Deodorize the waste holding tank. (See details in “Black Water - Waste Holding Tank” in “Water / Plumbing” Section).
15. Check that all blocks and chocks are removed and/or stowed.
16. Check that there are no obstructions in the Motorhome pathway before moving. Be sure there is proper clearance between adjacent and overhead objects to prevent contact.
17. Disconnect and stow the shoreline power cord. (See details in this section).
18. Lock exterior compartment doors.
19. Check that the fire extinguisher is in good condition and fully charged. (See details in Safety section).

Emergency Equipment Checklist

Use this list as a guide to identify the minimum amount of emergency or safety equipment. Take extra provisions as appropriate for your travel or personal needs.

1. First Aid Kit
2. Emergency Flares
3. Toolbox and Tools
4. Plastic Bucket
5. Tow Rope or Chain
6. Wheel Blocks or Jacks
7. Water Hose
8. Electrical Cord Extension (100-150 ft/minimum 3 wire/50 amp)
9. Fire Extinguisher
10. Spare Tire

Final Checks

1. Check that TV antenna is retracted, stowed and secure.
2. Secure all objects in vehicle. Tie, latch or lock all loose objects as appropriate. Unsecured objects can become dangerous projectiles in a sudden maneuver or accident.
3. Securely close and lock all doors to minimize the chance of a door coming open in an accident.
4. Adjust the rearview mirrors to provide the best rearward visibility.
5. Set the driver's seat to provide the desired leg to pedal spacing for your personal comfort.
6. Fasten seatbelts low on the torso and be sure they are snug. All passengers should be in a seat that is equipped with a seatbelt. All pregnant riders should be in a seat equipped with a shoulder strap for maximum safety.
7. Small children should always be strapped into a carseat facing rearward.
8. Do not carry any passengers unless they are in a seat equipped with a seatbelt and the belt is fastened.

Maximum Occupancy

The belted seating positions in your Motorhome may be different than the stated sleeping capacity. In the US this is referred to as the Occupant and Cargo Carrying Capacity (OCCC) or the Cargo Carrying Capacity (CCC) in Canada.

Triple E RV uses belted seating positions to determine the OCCC or CCC. You may use all the belted seating positions available in your Motorhome provided you stay within the GVWR listed on your vehicle certification Label.

⚠ Warning ⚠

All occupants must be in seats equipped with lap or shoulder harness seatbelts and the seatbelt fastened when the Motorhome is in motion. Small children should always be placed in a certified child restraint system and secured with a seatbelt.

Seat / Shoulder Belts

Every occupant must be seated in an approved seat with the belt fastened whenever the Motorhome is in motion. Accident statistics prove the importance of using seatbelts. Vehicle occupants not seated in an approved seat and restrained with a seatbelt are likely to suffer more injuries of a more serious nature than those properly restrained.

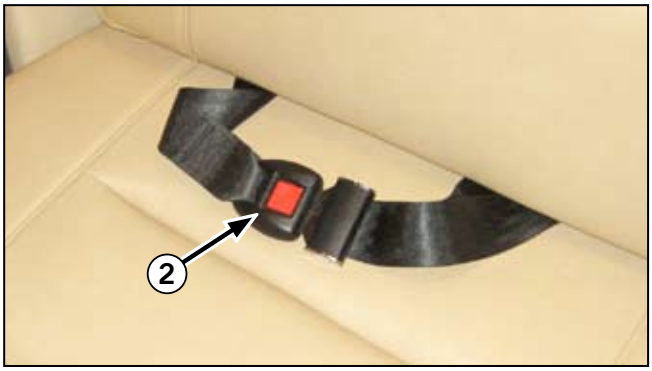
Lap / Shoulder Belts

The driver and passenger seats are equipped with a combination lap and shoulder belt (1) for maximum restraint.



Lap Belts

The dinette is equipped with lap belts (2). Never allow occupants to travel in a seat that is not equipped with a lap or shoulder belt.



IMPORTANT

All seatbelts retractors are equipped with locks that engage when the belt extends too fast. Move the spade end of the seatbelt slowly and steadily across your body when fastening to prevent the lock from engaging. If the belt locks while extending, release the tension and allow it to retract fully. Then pull out again to fasten.

Pregnancy

Pregnant women should wear their lap belts low on their torso and should straps diagonally across their chest. Do not position the strap against the neck. Wearing a seat or shoulder/lap belt properly will protect both the mother and the unborn child.

Child Restraints

Child restraint systems are legally required in many jurisdictions in North America. Statistics prove that children not secured under a certified and appropriate child restraint system experience more severe and more frequent injuries than those properly restrained. National Highway Traffic Safety Administration, and any equivalent Canadian, rules requiring anchors and tethers for child restraint systems mandated in passenger vehicles and SUVs do not apply to your Motorhome. Accordingly, your Motorhome does not employ, and is not equipped with, any anchor or tether restraint system for use in connection with child restraint seats. In evaluating and providing the safest conditions for your young passengers, you must take into account the following considerations:

1. You must familiarize yourself with the laws and regulations of all states and provinces in which you will use the Motorhome which govern transport of children and the use and/or anchoring of child restraint systems and seats in the Motorhome.
2. Your Motorhome, in accordance with applicable law, is not manufactured with any anchor or tether system on any of its forward facing seats.
3. Placing a child or child restraint system in a rear-facing or side- facing seat is not safe under any circumstances.

4. Before allowing any child to travel in your Motorhome you may be required to purchase and use a child restraint that is labeled as certified to comply with all applicable U.S. and Canadian's laws, rules and regulations applicable to child car seat, harness, anchor and/or tethering systems as the same apply to your Motorhome.
5. You must ensure that any child restraint system you employ will attach to structural elements of your Motorhome conveniently and safely and that it will provide safety for a child every time it is used.
6. Your child restraint system must be suitable and adequate for your child's age, weight, and height. You must check your child's restraint system instructions and/or labels to verify that it is suitable and adequate.
7. You must review carefully the labels and instructions supplied with your child restraint system, and you must correctly and appropriately install your child restraint system in accordance with such labels and instructions and all applicable laws and regulations.
8. If anchors or tethers are required for safe or legal use of your child restraint system, and for your child's age, weight, and height, you may have a difficult time safely transporting a child in the Motorhome, because no such devices are installed on your Motorhome as manufactured.

Driver / Passenger Seat Controls

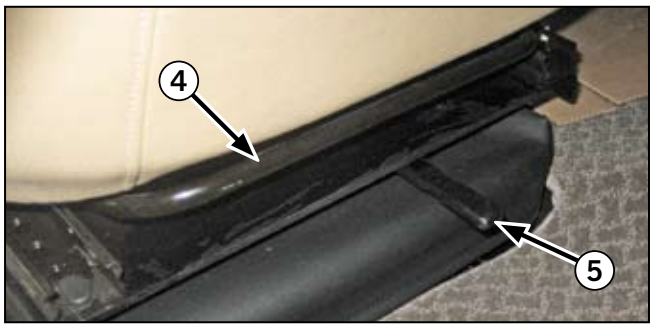
Swivel Function - Serenity

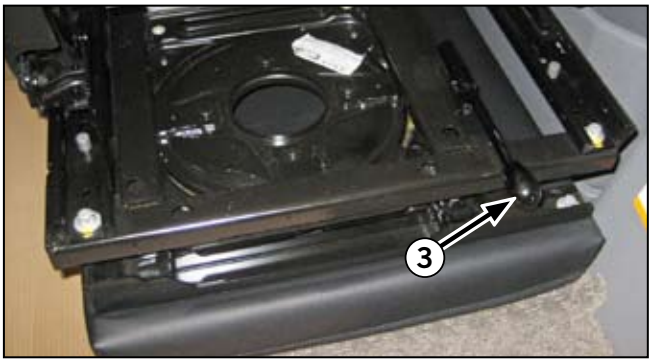
1. Lift the seat slide release bar (1) and slide seat forward. It is essential that the seat is moved forward to prevent damage to the door panel and post when the seat is swivelled.
2. Move armrest (2) into upright position.
3. Pull the swivel lock lever (3), located behind seat, to the left and swivel seat slowly to the rear to prevent damage to the door panel and post.

Swivel Function - Libero

1. Lift the seat slide release bar (4) and slide seat forward. It is essential that the seat is moved forward to prevent damage to the door panel and post when the seat is swivelled.
2. Move armrest into upright position.
3. Pull the swivel lock lever (5) to the left and swivel seat slowlyto the rear to prevent damage to the door panel and post.







IMPORTANT

Do not swivel seat when the Motorhome is in motion and always open door slightly, swivel seat clockwise and return seat to its original position counter clockwise.

Lumbar Support - Serenity

Turn the knob (1) clockwise or counter-clockwise to suit your comfort needs.



Back Rest Adjustment - Serenity

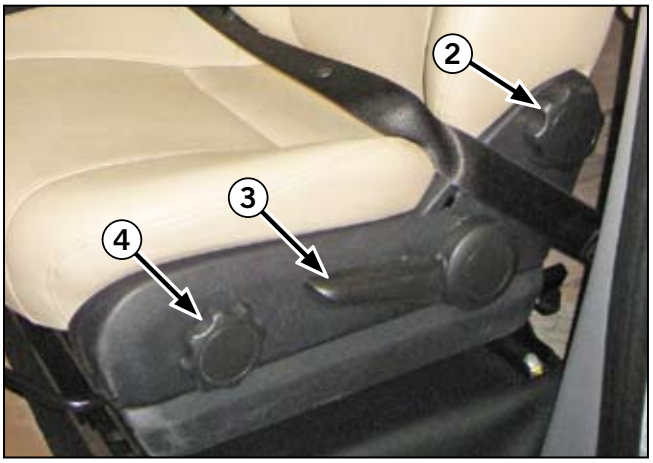
Turn the knob (2) clockwise or counter-clockwise to finely adjust the tilt of the back rest.

Back Rest Tilt - Serenity

Pull the lever (3) up and hold to release the position lock. Gently lean back to push the back rest down. Lean forward to allow the back rest to tilt up. Release the lever to engage the lock and hold the back rest in position.

Seat Cushion Height Adjustment - Serenity

Turn the knob (4) clockwise or counter-clockwise to finely adjust height of the seat cushion.



Back Rest Tilt - Libero

Pull the lever (5) up and hold to release the position lock. Gently lean back to push the back rest down. Lean forward to allow the back rest to tilt up. Release the lever to engage the lock and hold the back rest in position.



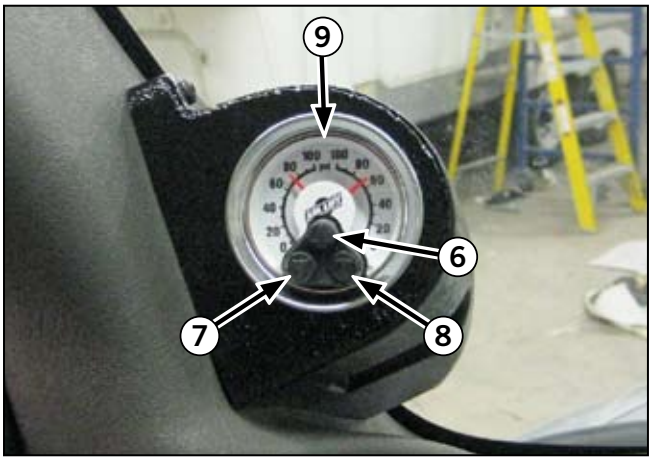
Adjustable Air Springs

Libero Motorhome Only

Libero Motorhomes are equipped with rear adjustable air springs. The air springs can be adjusted to improve ride height, reduce roll and increase Motorhome stability.

The rear left and right air springs are raised together by pressing the center button (6). The ear left and right air springs can be lowered independently by pressing the left (7) and right (8) buttons

The pressure gauge (9) indicates the current air pressure in the left and right air springs.



IMPORTANT

The air spring pressure system should not be operated at less than 20 psi or more than 100 psi. Damage to the air spring system may occur if operated below or above these pressures.

Refer to the air spring manual in the information kit for details.

NOTE: The air spring compressor is located in the forward roadside exterior storage compartment.

Travelling

Refer to the chassis manual for engine starting, operation and stopping instructions.

Driving Characteristics

1. Controls

The Motorhome driver controls are automotive type. Steering and braking controls are power assisted to help make driving as comfortable as possible. However, the Motorhome is much higher, wider, and heavier than a family automobile.

2. General Handling

The Motorhome power-to-weight ratio is lower than that of the average automobile. Therefore it is essential to compensate for slower acceleration when moving into traffic or when passing another vehicle. Allow extra room to corner and to change lanes. When going underneath a bridge or similar overhang you must be aware of your maximum height. (Measurement must include the air conditioner plus 6 inches. Height may vary depending on chassis, make, suspension and air conditioner.)

3. High Wind Handling

High winds, or strong gusting winds may lead to unpredictable handling and control of the Motorhome.

When high winds, or strong gusting are encountered:

- Slow way down so that you can maintain control of your Motorhome.
- Find a safe place to get off the road and take shelter until the high wind subsides.
- Park your Motorhome directly into the wind to minimize high wind buffeting.

4. Mountain Driving

When driving in hilly or mountainous terrain you should employ different driving techniques than those used when driving under normal, flat conditions.

- **Climbing a Hill**

The transmission is designed to down-shift automatically when required during a longer uphill climb. If you find that the transmission shifts up and down frequently, it is a good idea to select a lower gear for the duration of the climb to prevent this repeated shifting. This will prevent unnecessary wear and tear on your transmission.

- **Descending a Hill**

It is a good idea to select a lower gear on your transmission when descending a hill to avoid prolonged application of the brakes. Extended application of the brakes can cause unnecessary wear and tear and overheating. Under extreme conditions this could cause you to lose control of the Motorhome.

IMPORTANT

A STANDARD RULE OF THUMB - Use the same lower gear position when descending a hill as you used while climbing the hill.

⚠ Caution ⚠

Observe the engine temperature carefully, especially during long climbs. If you notice over-heating, pull off the road and allow the engine to cool fully before continuing. Top up the radiator with coolant as instructed in the chassis manual if necessary.

Driving Safety Tips

1. When backing the Motorhome, have a person stand to the rear on the driver's side to guide you.
2. Before departing on the trip, check your routes for height restrictions. Remember, some tunnels prohibit Motorhomes with LP gas systems.

3. While travelling, make sure all occupants correctly use their seatbelts.
4. While travelling, make sure all doors are closed and that cabinets, drawers, and loose objects are secure.
5. Instruct your family on what to do in case of fire, and hold fire drills periodically.
6. Maintain proper charge in the fire extinguisher.
7. LP Gas and smoke detectors should not be obstructed and should be in working order at all times.
8. Keep a well stocked first aid kit handy.
9. Check tires often while travelling. Make it a habit to check tire pressures before each trip, and each time you refuel.
10. If you have a cellular phone, carry it with you for emergencies. Do not make or answer calls, or text, while driving.

Travel Tips

As you travel with your Motorhome you will learn much from your own experiences. Share with other Motorhome owners and learn from them. Read RV, outdoor and camping magazines for camping and travel tips. Here are a few basic suggestions to make your travel and your camping easier and more enjoyable:

1. Make sure all compartment doors, refrigerator doors, and freezer doors are closed securely. Open these doors carefully after travelling. The contents may have shifted while travelling and may fall when doors are opened.
2. Know the height and width of your Motorhome. Make adequate allowance for clearance.
3. While driving, use your mirrors to determine whether you are crowding the center line or the outside edge of the highway. Remember, you are driving a vehicle that requires a driving style quite different from driving the family car.
4. When towing a vehicle or trailer make sure the combined weight of the towed vehicle or trailer does not exceed the GCWR as stated on the vehicle certification label, located on the passenger door frame (US models only).
5. Some jurisdictions restrict vehicles with LP gas containers driving through highway tunnels. Check your route carefully as you travel.
6. Always fill your water tank with clean, fresh, potable water. Do not use a new hose to fill the tank. It may leave a taste of rubber or vinyl.
7. Conserve water especially when showering. The holding tanks have a limited capacity.
8. Dump sewage only at approved dumping sites.
9. Store all liquids in plastic containers with tight seals.
10. Watch the levels in your holding tanks. Dump regularly to avoid unnecessary build-up and potential odor. After dumping, make sure to add water to the black water tank to prevent solids from settling in the tank. Without adequate liquid in the black water tank, dumping can be difficult, if not impossible.
11. Be careful not to leave odor-causing food or materials in your Motorhome for extended periods of time. Make sure wet clothing and towels are dry before storing.
12. Make sure your fire extinguisher is ready for use and that you know how to operate it.

Severe Weather Information

As a Motorhome traveller you will find the desire to explore new and out-of-the-way places irresistible. These recreational areas can be vulnerable to unusual and severe weather conditions that could endanger your safety. A few suggestions and safety precautions may help in case you ever find yourself in this situation.

IMPORTANT

All Motorhome occupants should be familiar with these safety precautions and should be alert to changes in the weather.

1. Be alert! Thunderstorms and heavy rains can occur suddenly and unexpectedly. Listen frequently to weather reports for the area in which you are camping or travelling so that you will not be caught unaware a sudden change in the weather.
2. Remember these terms:
   - **Weather Watch** - Severe weather may develop in your area. Be prepared for an emergency.
   - **Weather Warning** - Severe weather is occurring or is imminent. Find a safe location immediately.
3. When camping near a stream or any body of water leave plenty of space and elevation between your Motorhome and the stream.
4. Avoid canyons or dry washes during threatening weather. Prepare with an alternate exit. Move to higher ground as soon as it starts raining.
5. Should you get caught in a flash flood, do not attempt to move your vehicle. Abandon it and return to it only after the water has gone down. Never attempt to drive through any flooded area.
6. Heed the warnings and instructions of local authorities.
7. Have on hand enough survival supplies for several days. This should include food, water, first aid supplies and necessary medications.
8. When you leave home, inform someone of your destination and your schedule. Notify the same people if and when your plans change.

Emergencies While Driving

Your Motorhome is designed with features that allow the driver/occupants to resolve emergencies or failures when travelling. Review this section to be familiar with the recommended procedure to resolve these conditions or situations. Review this section with all new drivers and before each trip.

Hazard Warning Lights

The Motorhome is equipped with a hazard warning light system. Both the front and rear turn signals flash in unison when the system is turn on. Refer to the chassis manual for details and location of this switch.

Hazard warning lights must be activated whenever the Motorhome is stopped on the side of a roadway or near moving traffic. The lights alert other motorists to a potential hazard and to take extra care. The system is designed to continue to flash when the switch is on even though the ignition key is turned off and or removed and you have left the vehicle.

Flat Tire

If you have a flat tire while operating your Motorhome, slow gradually to prevent loss of control and pull to the shoulder - side of the road. Stop on a level paved surface and engage the parking brake. Follow these steps unless conditions dictate to the contrary:

1. Turn on the hazard warning lights.
2. Place chocks in front and back of tire which is on the opposite side and at the other end of the Motorhome from the flat tire.
3. Remember, your Motorhome is not equipped with a spare tire, so immediately contact a qualified roadside repair service.
4. If a roadside service is unavailable, inspect the flat tire to determine whether you can service or repair it.
5. If you can service or repair the flat tire, you must jack the vehicle.
6. Consult the chassis manual to locate the jack and to properly employ jacking lift points on the chassis.
7. If the ground is soft or unstable, carefully move the Motorhome to a safe jacking location.
8. Use a jacking board for stability on loose or soft ground.
9. Jack the Motorhome according to the jacking instructions in the chassis manual.

10. Never allow any portion of anyone's body or extremities to be under the Motorhome at any time during jacking or while jacked.
11. Before resuming travel with a new or repaired tire, ensure the lug nuts are tightened in the proper sequence and to the specified torque as set out in the chassis manual. A torque wrench must be used to establish the specified torque. Recheck and re-torque the wheel lug nuts after 25 and 100 miles (40 and 160 km) of operation after loosening or removing any lug nuts.

When the Vehicle is Disabled

1. Emergency Starting

Do not push or tow the Motorhome in an attempt to start it. The powertrain is not designed to transmit torque to turn the engine over for starting.

2. Jump Starting

See chassis owner's manual for instructions.

3. Break Down

If the Motorhome breaks down, it should be towed to a qualified repair facility for repair by an experienced and approved towing service. If the Motorhome breaks down on the roadway, pull off the road and stop. Engage the parking brake and turn on the hazard warning lights. Place chocks by the wheels if the Motorhome is not on level or stable ground.

Call an approved towing service to the Motorhome. Be sure to tell the towing service what kind of vehicle it is and its weight, length, width and height. The towing company will then dispatch a proper sized tow truck for your Motorhome.

⚠ Warning ⚠

BATTERY BOOST WARNING - Always consult the chassis manual for proper procedures for jump starting a Motorhome with a dead battery.

Overheating

If the engine overheats while driving:

1. Pull to the side of the road and stop immediately.
2. Shut engine off.
3. Check for proper coolant level in the recovery tank. The coolant level should be between the "full" and "add" marks on the tank.
4. If the coolant level is low:
   - Check for leaks at hose connections, from the radiator or at the water pump. Make sure the belts are tight and that the cooling fan is turning.
   - Add coolant to the recovery tank as soon as possible.
   - If coolant is being lost due to leaks; if the fan belt is broken or too loose; if the red warning light stays on - stop the engine until the problem is corrected.
4. Once the temperature gauge returns to normal, resume driving, keeping an eye on the gauge. Do not resume driving until the problem has been corrected and the temperature is normal.

⚠ Warning ⚠

Never remove the radiator cap when the engine is hot. Scalding fluid and pressurized steam can blow out and cause severe burns.

Parking

1. **Parking**
   The Motorhome can be stopped and parked just like an automobile. However always remember that the unit is longer, wider and higher than a typical automobile and more room and clearance must be provided.
2. **Backing Up**
   - **Mirrors**

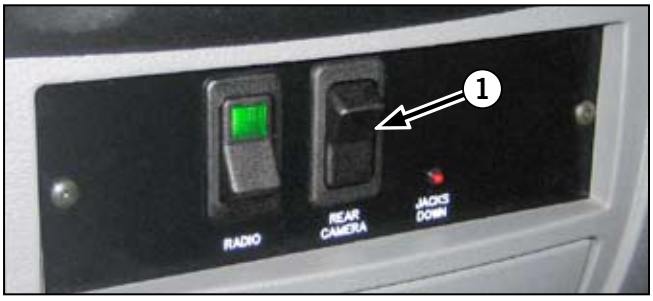
   Large mirrors are mounted on both sides of the Motorhome to provide rearward visibility for the driver. However, they do not provide visibility directly behind or on top (clearance) of the unit.

   - **Spotters**

   Best results are obtained in backing when another person helps guide the driver. The driver and spotter should agree to the meaning of hand signals before starting the backing process. The spotter should always be in a position that is visible to the driver while backing.

   - **Back-up Monitoring System**

   Your Motorhome may be equipped with a camera monitoring system. To view camera images, depress the camera button (1) located in the lower center cab console and turn on the entertainment system radio function (2). The standard rear camera (3) view will be displayed in the entertainment display when the transmission is shifted into reverse. Optional left and right side turn camera (4) views will be displaying when the turn signal indicator stalk is switched to left or right. See detailed operating instructions in the information kit for further information. To display a rear view when driving, depress and hold the rear camera button (1) for 5 seconds.

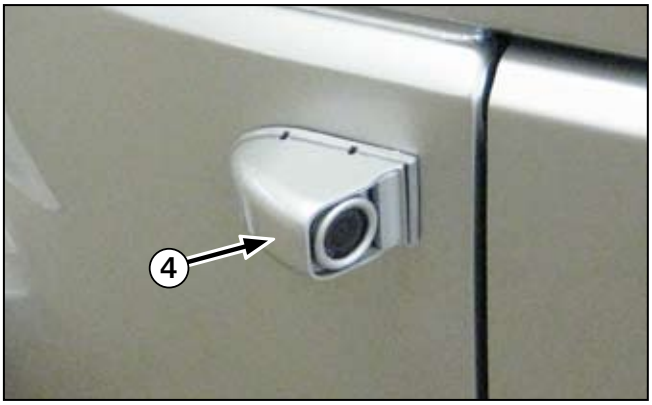


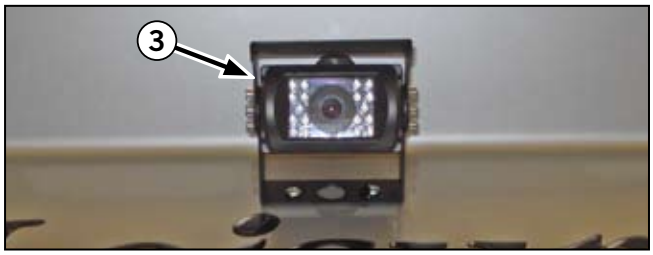
Serenity





Libero





IMPORTANT

Always set the parking brake and place chocks in front of and behind the wheels to prevent unintended movement.

Prolonged Occupancy

Your Motorhomes is designed for recreational and short term occupancy. In case of extended occupancy there are a few things to keep in mind regarding humidity and condensation. Excessive moisture released inside the Motorhome can cause water stains and mildew on the upholstery, the wall materials and the woodwork. Moisture condensing on the windows is a sure sign that the humidity inside your Motorhome is too high. To reduce moisture inside your Motorhome we suggest the following:

1. Open windows and vents. This will allow fresh air to flow through and reduce the moisture content.
2. Reduce moisture released inside the Motorhome. Run the bathroom fan when using the bathroom and turn on the range hood fan while cooking. This will remove unnecessary moisture from your Motorhome. Do not hang wet towels and swimwear inside the Motorhome to dry.

Levelling the Motorhome

If you want to use any of the appliances when occupying the Motorhome, it will be necessary to level the Motorhome frame. The refrigerator is particularly sensitive and must be close to level to function properly. A little time and planning prior to levelling the Motorhome will insure maximum enjoyment of your Motorhome.

1. Inspect the area where the Motorhome will be parked. Select an area that has a firm prepared surface. Most campgrounds provide this type of parking area for Motorhomes.
2. Select an area that is level or as near to level as possible.
3. Use a carpenter's level on the floor to determine where to place blocks to level the frame.
4. Level from side to side first, then from front to back. Place planks in front the low side tire and drive the Motorhome forward until the tires are resting on the planks.

⚠ Warning ⚠

Always exercise care and caution when parking and leveling your Motorhome. Make sure everyone, especially children, is well clear of the Motorhome until levelling is complete and the Motorhome has been stabilized.

Stabilizers

Your Motorhome may be equipped with electric stabilizers. The stabilizer control panel (1) is located in the locker above the coach entrance doorway. See detailed operating instructions in the information kit before operating.

IMPORTANT

Always verify that stabilizers are completely retracted before moving motor home.

NOTE: See "Maintenance" section for details on manual operation of the stabilizers.



⚠ Warning ⚠

Stabilizers should only be used to stabilize the Motorhome. Stabilizers must not be used for the purpose of levelling.

Refuelling

⚠ Warning ⚠

Make sure all LP gas tanks and appliances are shut off before refuelling.

Modern fuel systems may cause pressure to build up in the fuel tank during hot weather. Under certain conditions, small amounts of fuel may spray from the fuel filler tube when the fuel cap is removed suddenly, causing a possible hazard.

Do not smoke when refuelling. Keep flames, sparks and smoking material away from fuel or flammable fumes.

Removing The Fuel Cap

Serenity Motorhome - The fuel tank filler cap (1) is locate behind a flap adjacent to the drivers door opening. Rotate the fuel cap slowly and just enough for the pressure to be released i.e., until any “hissing” sound stops. Then remove the cap.

Libero Motorhome - The fuel tank filler cap is locate behind a lockable flap (2) on the drivers side of the coach. Rotate the fuel cap slowly and just enough for the pressure to be released i.e., until any “hissing” sound stops. Then remove the cap.

Filling The Tank

Do not overfill the fuel tank. Fill only until the automatic shut-off valve stops the flow of fuel. This allows for expansion of the fuel and vapor space as the fuel warms and expands in the fuel tank.

Fuel Tank Capacity

Refer to the chassis manual for details.

Fuel Types

Serenity - Use ultra-low sulphur diesel fuel only. Refer to the chassis manual for details.

Libero - Use regular unleaded gas fuel only. Refer to the chassis manual for details.

NOTE: Auxiliary generators may draw their fuel from the main engine gasoline tank. The fuel pick-up tube is shorter than the engine pick-up tube. This prevents the vehicle fuel tank from being completely and accidentally drained by the generator.

IMPORTANT

Be sure to use the proper fuel. Errors in the fuel type can be hazardous and can cause significant damage requiring costly repairs.



Serenity



Libero

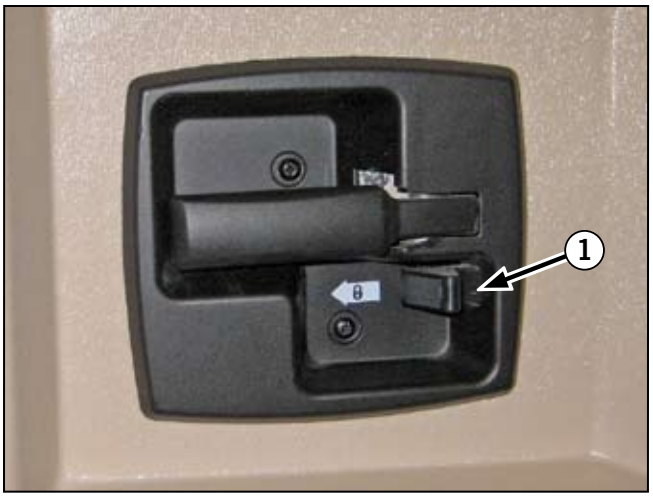
⚠ Caution ⚠

Overfilling the fuel tank may cause damage to the fuel evaporative emission system.

Door Locks

Separate keys are required for the chassis and coach door locks.

The coach entrance door is equipped with a single interior lock (1).



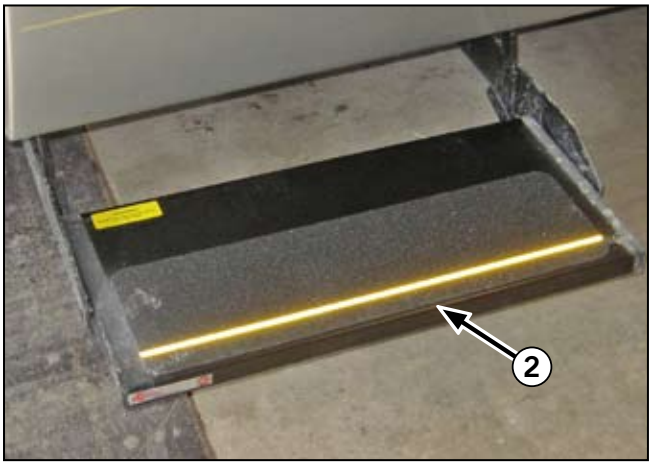
Entry Door Steps

The entry door steps (2) automatically extend and underside step light will illuminate when the coach door is opened.

NOTE: The step light will stay illuminated for five minutes when the steps are extended.

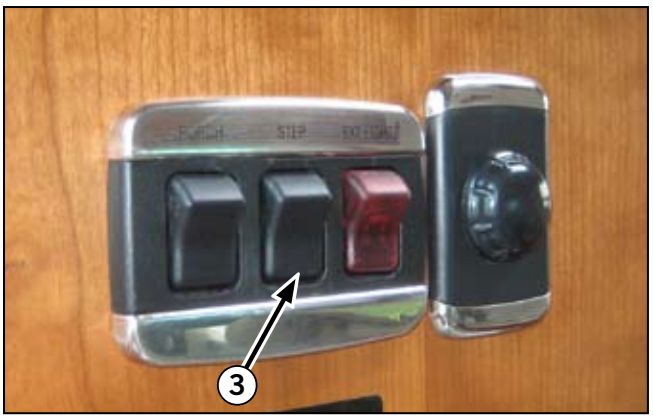
IMPORTANT

The entry door steps will automatically retract and the step light extinguish when the vehicle ignition switch is turned "ON."



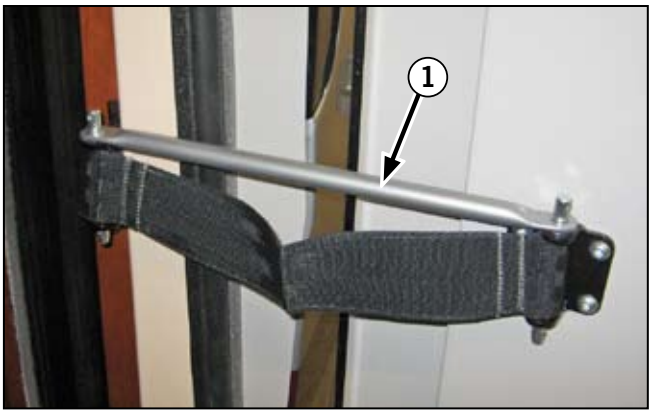
Step Override Switch

Depress the top of step override switch (3), located on the left side of the coach entrance to prevent the steps from retracting when the coach door is closed (ignition "OFF".)



Coach Entrance Door Stay Bar

A entrance stay bar (1), located next to the fire extinguisher, can be fitted across the door strap pins to keep the coach door open.

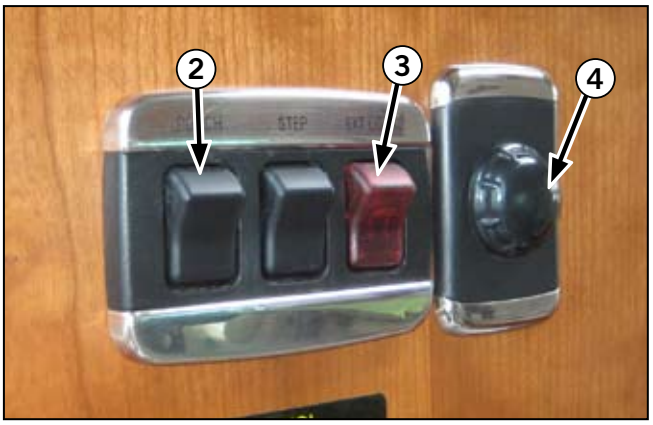


Porch Light Switch

Depress the top of switch (2) to turn on the exterior porch light.

Exterior Lights Switch

Depress the top of switch (3) to turn on the exterior lights.



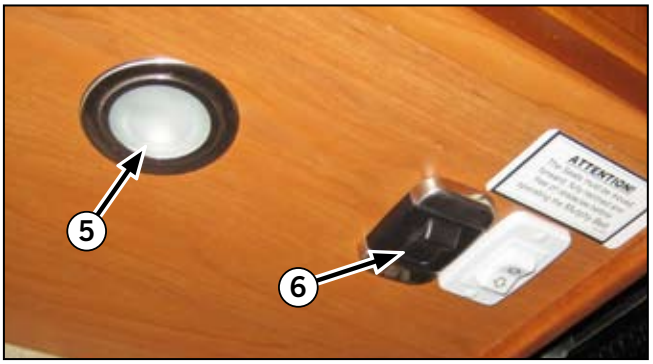
Interior Overhead Light / Dimmer Switch

Depress and switch (4) to turn “ON” the interior overhead lights. Rotate the switch to control the interior light level. Press the switch again to turn the lights “OFF.”

Under cabinet lights (5) are controlled by adjacent switches (6) or integral light switches (7).

IMPORTANT

The battery disconnect switch must be switched to internal 12 volt DC power for the interior roof lights to operate. See “Electrical System Operation” for battery disconnect switch details.



12 Volt DC Power Supply Outlet

A 12 volt DC power supply outlet (8) is located in the front roadside overhead cabinet.

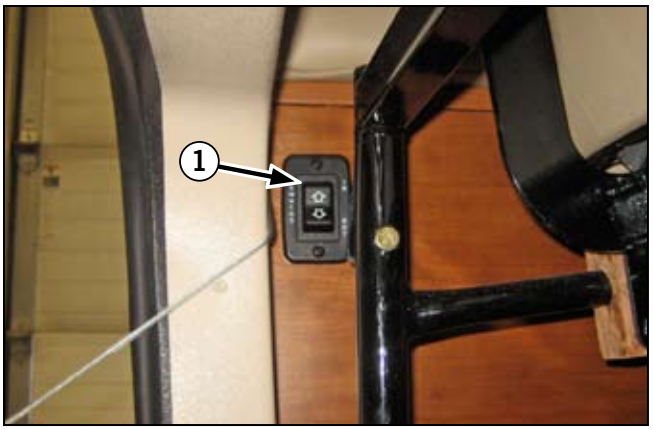




Awning

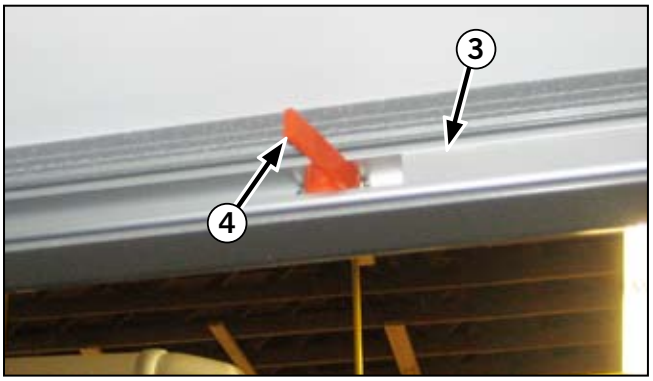
Extending the Awning

1. Depress and hold the awning switch (1), located in upper/rear curbside exterior storage compartment, in the “OUT” (extend) position until the awning has extended far enough to reach the lead rail (2).

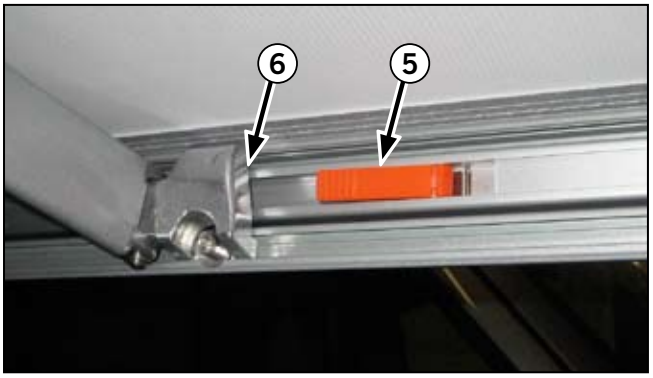




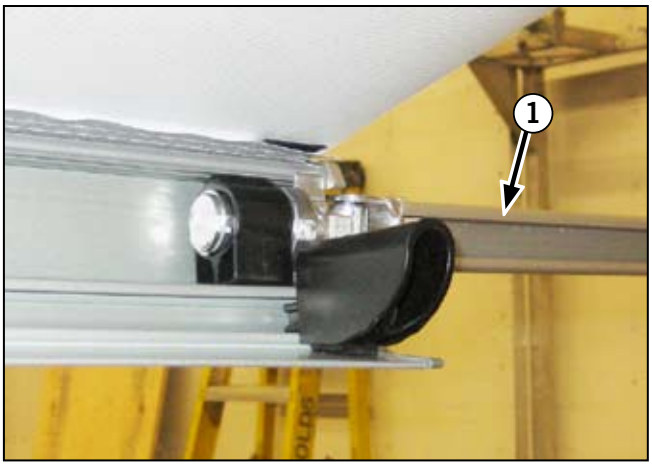
2. Unlock the right support leg (3) by lifting the latch (4). Slide the support leg (3) fully out until it reaches the endcap stop.



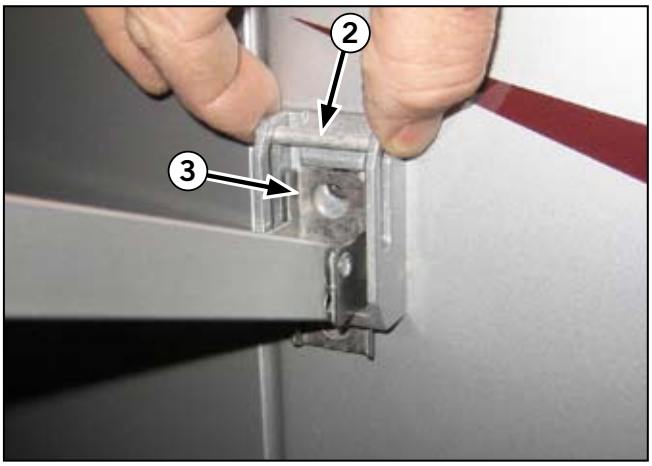
NOTE: It will be necessary to partially close the latch (5) to clear the support hinge (6).



3. Rotate the support leg (1) 90 degrees and swivel the support leg down.

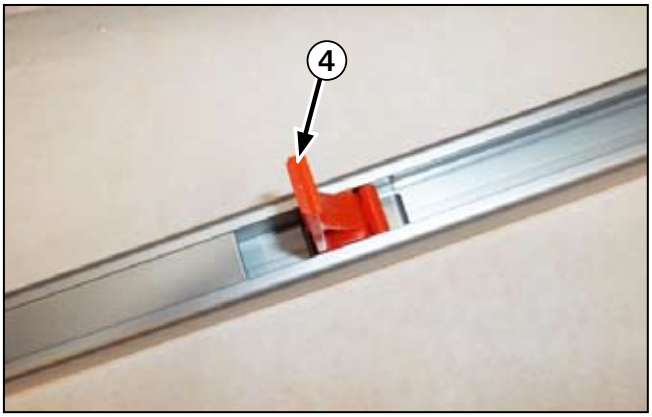


4. Lift the retaining pin (2) on the coach awning support bracket and insert the support let foot plate (3). Allow the retaining pin (2) to drop down to lock the foot plate in place.
5. Repeat steps #2 , 3, 4 to install the left support leg.
6. Ensure that the latches (4) in the left & right support legs are unlocked (raised).
7. Fully extended the awning by depressing and holding awning switch in the “OUT” (extend) position.



8. Lift the lead rail of the awning to the desired height and lock the left & right latches in turn (4).

   NOTE: It is suggested that the side of the awning furthest away from the coach door is set lower to enable rainwater to run off.



Retracting the Awning

1. Release and stow the legs in reverse order to steps described to extend the awning.
2. Retract the awning by depressing and holding the awning switch in the “IN” (retract) position until the awning is completely retracted.

Refer to the owner instructions in the information kit for further details.

Appliance and Equipment Operation

Appliance and equipment may vary according to the particular model of Motorhome, specifications and floorplan. Consult the information kit for operation and maintenance details for the specific appliances and equipment fitted to your Motorhome.

Refrigerator

The refrigerator in your Motorhome can be operated in any of the following modes:

1. 120 volt AC electric
2. LP gas with 12 volt DC ignition
3. 12 volt DC

IMPORTANT

It is very important that the Motorhome is leveled correctly when parked for the refrigerator to operate safely and properly.

⚠ Caution ⚠

If the Motorhome is parked off-level by more than a few degrees for more than an hour, permanent damage could be done to the refrigerator.

When you park the Motorhome, normal levelling for comfortable living will usually place it within satisfactory level limits. Use a level to make sure.

When the refrigerator is not being used extended periods of time, it should be emptied, switched off/defrosted, cleaned, and the door left ajar. Use the travel latch to lock the door in that position. **NOTE: The door should be opened slightly to allow for air circulation and to prevent odor or mold build-up.**

Operation

See the refrigerator owner's manual in the information kit for detailed operating instructions for your specific to your unit.

NOTE: The refrigerator is self-starting in all operation modes.

⚠ Caution ⚠

DO NOT store explosive substances in the refrigerator, such as lighter fluid, petrol, ether, or the like.



Operating Tips

1. The refrigerator should be cold before placing items in it.
2. Do not put warm or hot items in the refrigerator. Allow them to cool off first.
3. Do not pack the refrigerator too full. To operate efficiently, the refrigerator needs air to circulate.
4. Use smaller containers to store items, i.e. - 1 liter rather than 4 liter.
5. Use containers that seal tightly.
6. Use crumpled paper between containers to prevent rattling while driving.

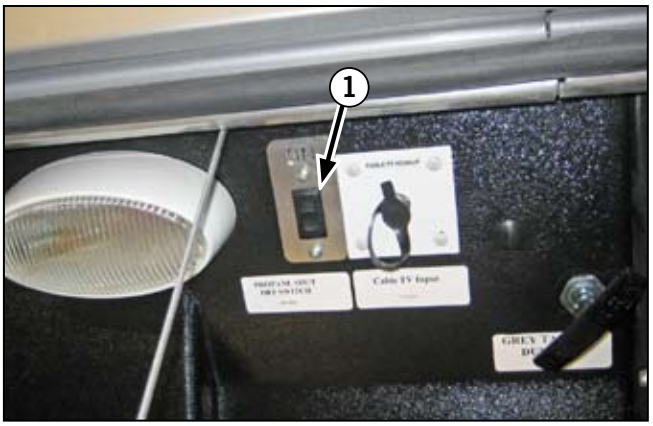


Exterior refrigerator compartment

This exterior refrigerator compartment, accessible by an exterior door (1) allows access to the refrigerator for cleaning, inspection, maintenance and service. This compartment should be kept clean and free of debris in order to maintain efficient operation of the refrigerator.

Stove Top

The stove top operates on LP gas. It must be lit manually using the integrated igniter. Make sure that the LP gas valve switch (1) located in the rear utility center is turned "ON." See section entitled "Liquid Propane Gas System" for details.



Lighting Burners

1. Turn the burner control knobs (2) as required to "ON."
2. Depress and hold the igniter switch (3) until the burner lights.

   NOTE: If the igniter fails to operate, check the 1 amp igniter fuse, located in the cupboard below the range.
3. Do not operate the stove top or the igniter while travelling or while refuelling your Motorhome. The burners may ignite gasoline fumes.
4. Do not leave the top burners on without a utensil for any length of time. Overheating the burner grates may cause damage.
5. Any time the stove top is in operation, the roof vent should be turned on, in conjunction with opening a window to ensure proper ventilation.
6. Do not remove the warning label on the stove top lid.



⚠ Warning ⚠

Never use the stove top burners to heat the interior of your Motorhome. Heed the warning labels in the cooking area. Always make sure you have adequate ventilation when the burners are operating.

Light immediately after turning the burner on to prevent a gas build-up. Excess gas can cause a flare-up when lit.

Microwave/Convection Oven

Operation

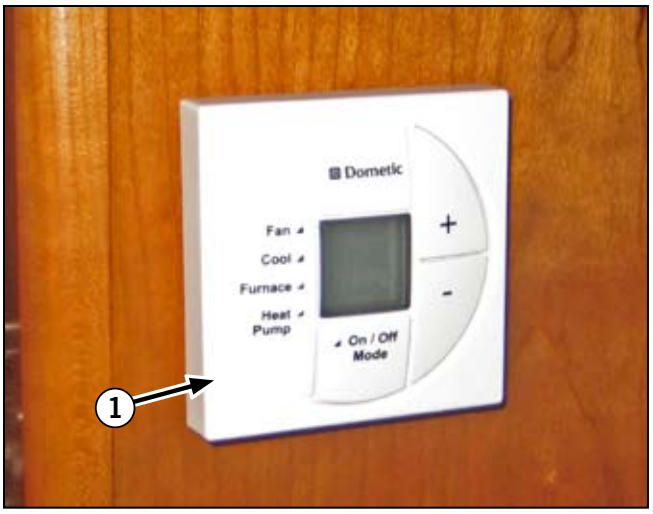
See the microwave/convection oven manual in the information kit for detailed operating and safety instructions specific to your unit.



Operating Tips

1. Do not attempt to operate the oven with the door open as this may result in harmful exposure to microwave energy.
2. Do not defeat or tamper with the safety interlocks.
3. Do not place any object between the oven front face and the door or allow cleaner residue to accumulate on sealing surfaces.
4. Do not operate the oven if it is damaged. Do not operate if the oven door does not close properly (bent), or if there is damage to the hinges or latches (broken or loosened), the door seals, or sealing surfaces.
5. The oven door should not be adjusted or repaired by anyone except properly qualified service personnel.
6. Do not operate the oven empty.

LP Gas Furnace



Operation

The LP gas furnace is controlled by the single zone thermostat (1) located in the coach living area.

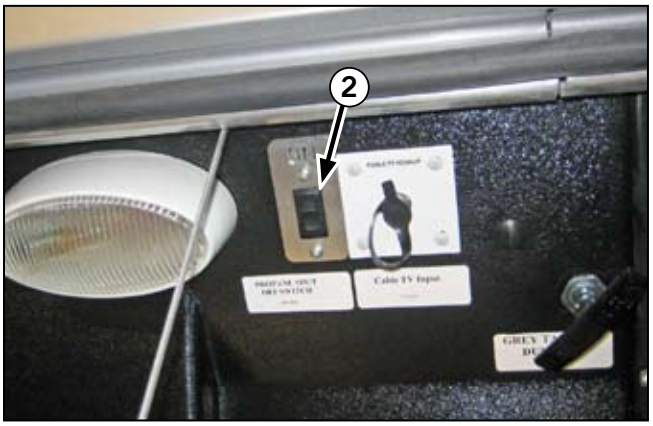
⚠ Caution ⚠

Before operating the thermostat, carefully read and follow the operating instruction in the LP gas furnace manual located in the information kit.

Operating Tips

IMPORTANT

The furnace should not be operated when the vehicle is moving.



1. Make sure the LP gas valve switch (2) located in the rear utility center is turned “ON.” See section entitled “Liquid Propane Gas System” for details.
2. The furnace has no pilot light but is ignited by a direct spark ignition system. No manual lighting is required.
3. DO NOT attempt to light the burner manually.
4. If the thermostat is set 4 degrees above the current room temperature, the blower will come on.
5. If the burner fails to light, check the propane level at the system monitor panel to ensure there is propane in your tank. See section entitled “Liquid Propane Gas System” for details.
6. If there is propane in the tank and the burner fails to ignite, verify that the LP gas valve switch is in the “ON” position.
7. If the furnace still fails to light, turn the thermostat to the off position, turn the LP gas valve switch “OFF” and contact your dealer or a local RV service center.

IMPORTANT

After the initial start up, the furnace will automatically cycle on and off as it delivers the required heat.

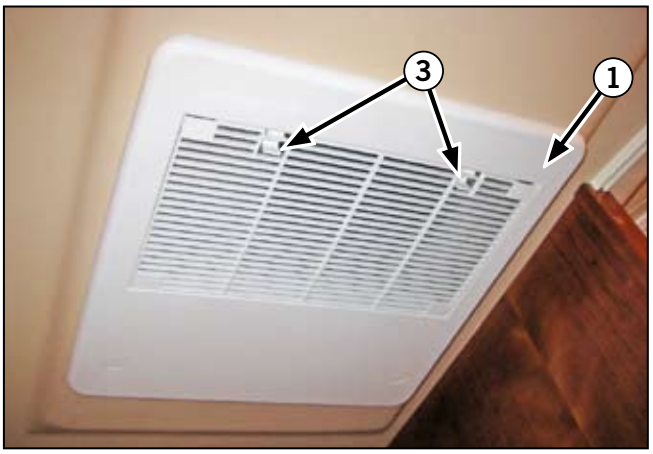
⚠ Warning ⚠

Always set the thermostat fan to “AUTO” mode before turning on heat.

Roof Air Conditioner with Heat Pump Cooling

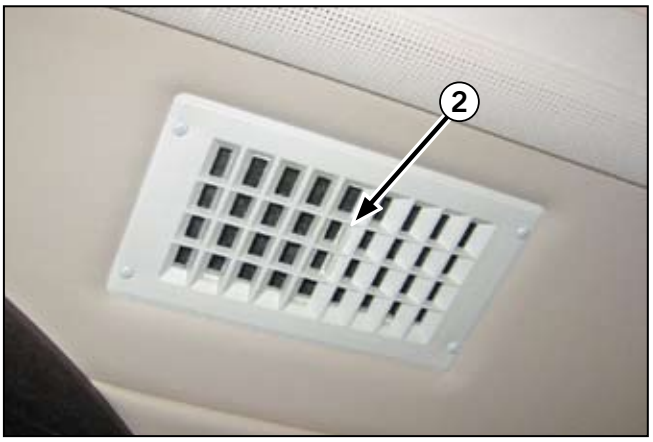
The roof air conditioner (1) is controlled by the same coach thermostat which controls heating (see previous page for details). When the thermostat is switched to the “cool” position and the temperature is set below the current room temperature, the air conditioner will automatically turn on.

Air flow into the coach cabin can be controlled by adjusting the roof vents (2)



⚠ Caution ⚠

Before operating the thermostat, carefully read and follow the operating instruction in the manual located in the information kit.



Heat Pump

The air conditioner has a built in heat pump designed to take the chill out of the air. To turn on the heat pump, turn the thermostat to the “Heat Pump” mode and set the temperature 3 to 4 degrees above room temperature.

IMPORTANT

The air conditioner / heat pump can only operate on 120 volt AC shoreline or generator power.

Maintenance

We recommend the air conditioner filter be cleaned or changed at least every two weeks when the air conditioner is in operation. Do not operate the air conditioner without the filter installed.



Cleaning and/or Changing Filter

1. Release the filter cover depressing both retainer clips (3).
2. Remove the filter (4) and wash in warm, soapy water. Dry the filter thoroughly before installation. If the filter is excessively dirty, replace with a new filter.

See the air conditioner manual in the information kit for detailed operating instructions.

Power Roof Vent

The power roof vent is utilized to provide a controlled air flow throughout the coach cabin. Use the vent fan in conjunction with an open window to provide a flow of fresh air.

Operation Controls

ON/OFF Fan Speed (Thermostatic Controlled)

The 12 volt DC fan provides for proper ventilation, comfortable temperature control and just good all-around desirable air flow. It is also used with the shower and toilet. Open a window to allow for maximum air flow. Windows farthest away from the fan provide the best air exchange. Windows should be open sufficiently to allow proper circulation of air.

A 4 position rotary switch (1) controls the power to the fan and the fan speed. Turn the switch to its most counterclockwise position to turn the fan off. Turn the switch to its first, second or third clockwise detent (Positions 1, 2 and 3 respectively) to set the fan speeds at low, medium or high.

NOTE: The roof vent must be open at least 3 inches or the internal safety switch will prevent the fan from coming on.

Fan Operation

The 2 position switch (2) is operated to turn the fan “OFF and “ON.”

Thermostat Operation

A rotary thermostat (3) controls coach cabin temperature or comfort level. Providing the roof vent is open, the fan motor will start and stop automatically as interior temperature of coach exceeds or drops below selected level.

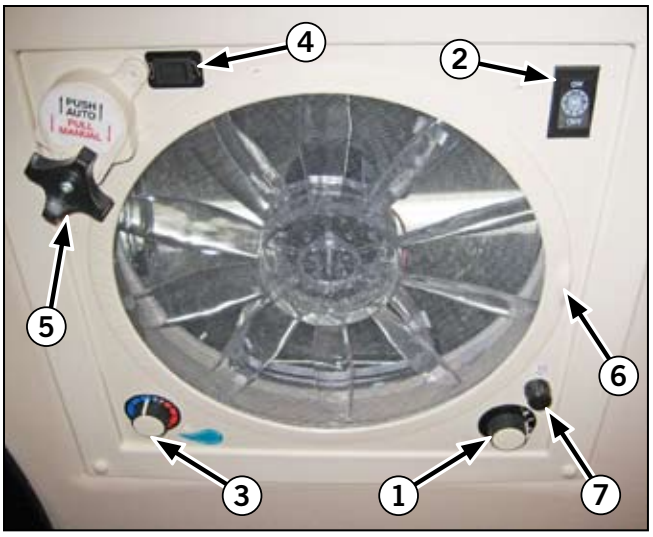
Vent Hood Height Control - Automatic Operation

The 2 position switch (4) is operated to open and close the vent hood automatically.

Vent Hood adjustment / Emergency Close Knob

To stop the vent hood partially open; apply opposite force to the slowly rotating knob (5) (Automatic Operation), as dome is **OPENING ONLY!!**

To adjust vent hood, allow it to travel all the way up automatically. Now pull knob (5) down to **“MANUAL”** position. Turn knob clockwise to lower the vent hood to desired height, then immediately push the knob (5) up into the **“AUTO”** position.



NOTE: at 1/3 open, fan blade exhaust efficiency is reduced to 90%. After adjusting, always push the knob (5) up to ensure it is locked into the “AUTO” position.

Rain Sensor

The vent hood is equipped with a rain sensor. When the vent hood is open and moisture contacts the sensor, the vent hood automatically closes and turns the fan off if it is running. When the rain sensor dries, the vent hood will re-open and the fan will start running at the original setting.

Cleaning Instructions

1. Turn the fan motor off.
2. Locate the thumb tab on the Pop ‘N Lock Screen (6) and pull down to unsnap the screen.
3. Wash the Pop ‘N Lock Screen and fan blade with a light non-abrasive soap, rinse and dry.
4. Re-install the Pop ‘N Lock Screen by gently snapping back in place.

Cleaning Tip

Once screen and blade are washed and dried, you may wipe or spray 303 protector (use only a water based protector; do not use a petroleum based protector) on the screen and blade. Buff to a high gloss. This will minimize the amount of dust and dirt build up.

IMPORTANT

The power roof vent is protected by a 4 amp fuse (7). If the fan fails to operate verify that the fuse is intact. Replace if necessary.

See the air conditioner owner’s manual in the information kit for detailed operating instructions for the coach power roof vent and the optional vent with rain sensor

Manual Roof Vent

The manually operated roof vent (1) is use in conjunction with the power roof vent to provide a controlled air flow throughout the coach cabin.

The roof vent is equipped with a blind (2) which can be drawn across the aperture.

The roof vent is equipped with a decorative light which is controlled by the ON/OFF switch (3).

To open the roof vent, press the latch release buttons (4) on the left and right handles (5) and turn 90 degrees. The roof vent will open automatically and rise approximately 45 degrees with the assistance of the gas struts (6).

To close, pull the roof vent down using the handle bar (7) and latch with the left and right handles (5).

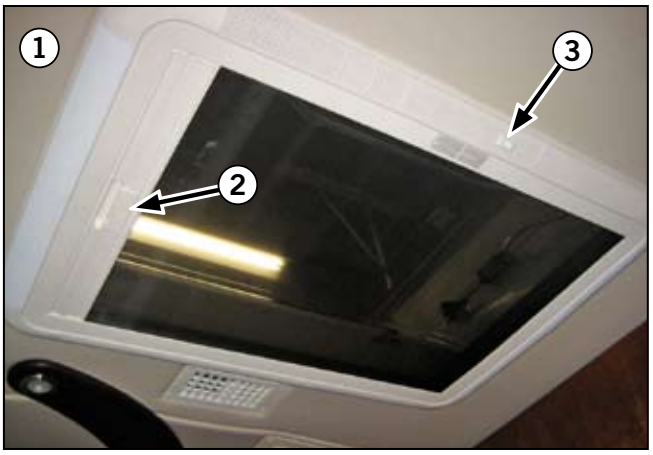
Lock in Partially Open Position

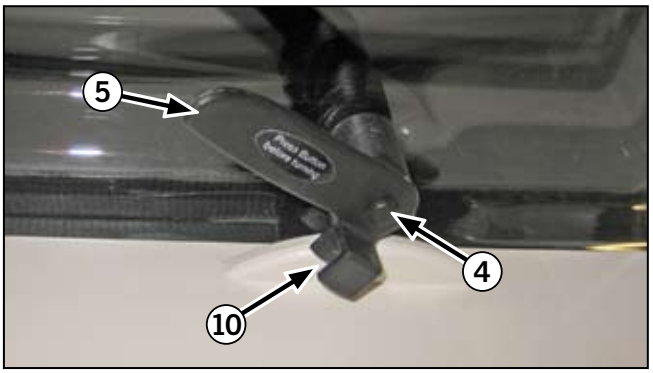
Position 1 - Pull the roof vent down using the handle bar (7) and insert the handle bar into the left and right seats (8) and secure in position with the left and right tabs (9).

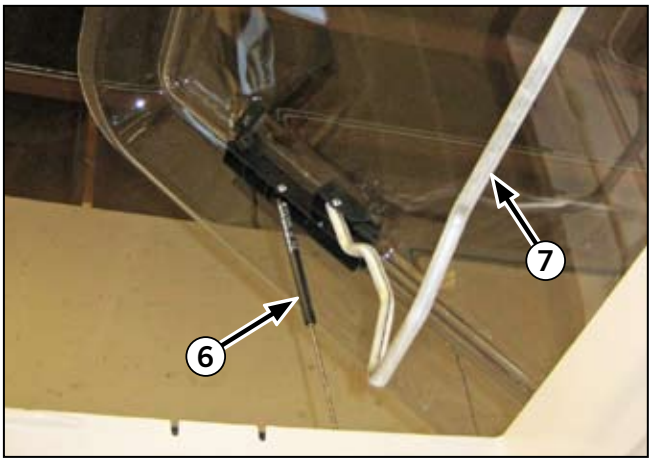
Position 2 - Pull the roof vent down using the handle bar (7) and latch on the lower latch points of the left and right handles (10).

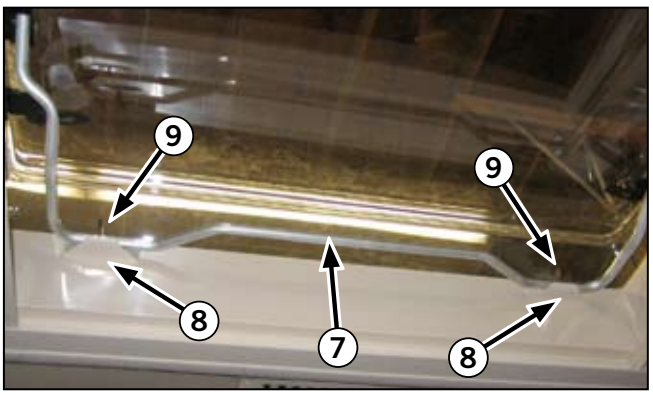
IMPORTANT

When leaving the Motorhome for extended periods, ensure the roof vent is fully closed to prevent rain entering the coach interior.

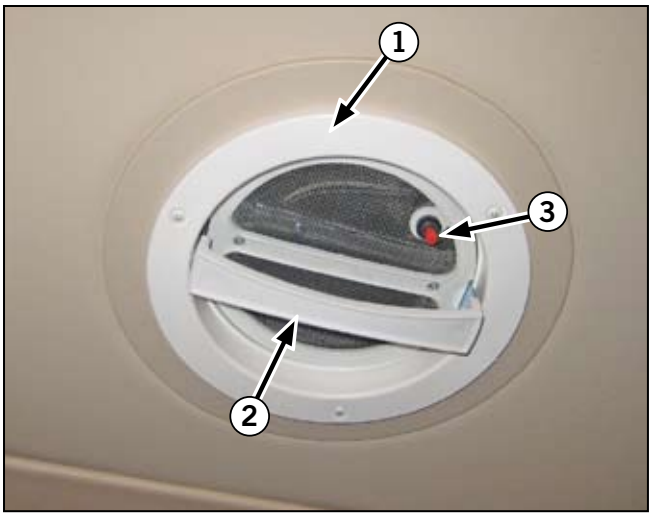








Shower Cubicle Roof Vent



The shower cubicle roof vent (1) is utilized to provide air flow and venting when the shower is being used.

Operation Controls

Vent Hood Open/Close

The open the vent hood, push the handle (2) up. To close the vent hood, pull the handle down.

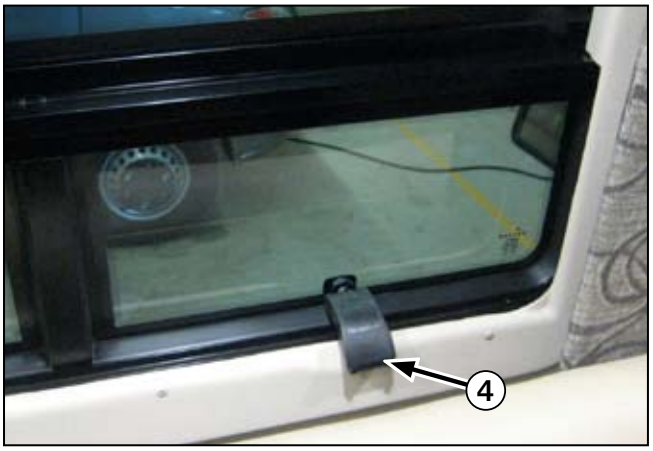
Fan ON/OFF Switch

The fan provides for proper ventilation of the shower cubicle.

The switch (3) is used to turn the fan on and off.

NOTE: When the roof hood vent is closed, the fan will automatically stop.

Side Window Vents



Lift and push the latch (4) out to open the window vent. Pull the latch in and push down to close the window vent.

TV

The TV is located in the bedroom area and is locked in position when travelling. To unlock the TV, pull the latch release knob (1) down and reposition the TV.

NOTE: It is possible to position the TV so that it can be viewed from the forward coach living area.

To store the TV, fold the TV back against the dividing wall and secure with the latch.

NOTE: When travelling, ensure the TV is latched in the stored position.



TV Operation

See the TV operator's manual in the information kit for detailed operating instructions.

DVD Operation

All Unity Motorhomes are equipped with an in-dash entertainment system (2) which controls the viewing of DVD's through the TV. See the entertainment system operator's manual in the information kit for detailed operating instructions.

NOTE: When parked for extended periods, the entertainment system should be switched "OFF" to prevent possible battery drain.

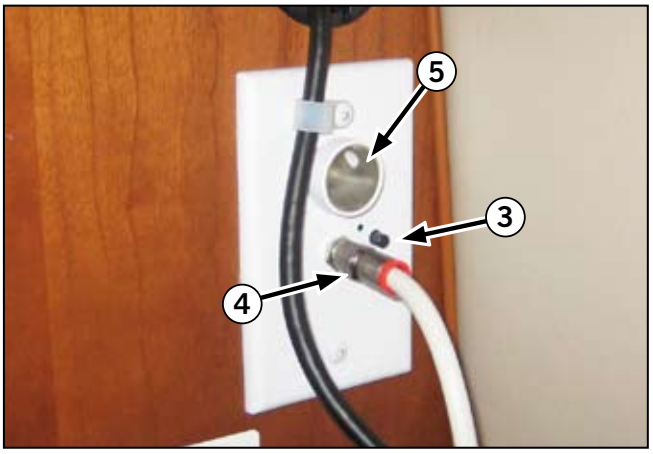


TV Utility Panel

The TV utility panel, located in the coach living area, is equipped with a TV antenna booster switch (3), an AV input connector (4) and a 12 volt DC power supply outlet (5).

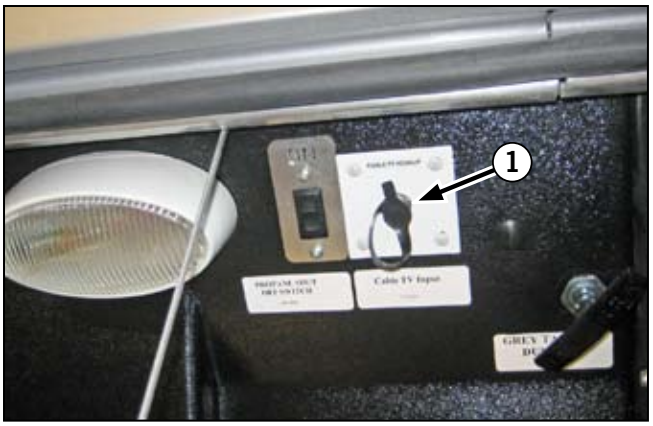
IMPORTANT

The TV antenna booster switch must be turned on to view cable TV. Press the black button (3) to turn "ON" the antenna booster.



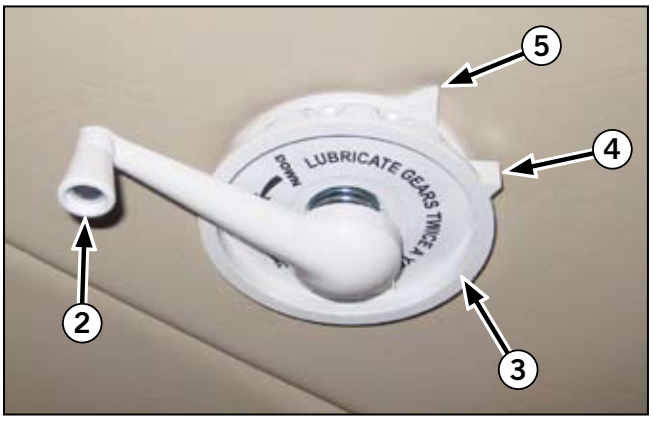
Cable TV Connection

Your Motorhome is equipped with a cable TV hookup connector (1) located in the rear utility center.



TV Antenna

The Motorhome is equipped with a TV antenna mounted on the coach roof. It is easily raised, rotated through 360 degrees and lowered from inside the Motorhome by the hand operated control located on the coach ceiling.



Operation

1. Raise the antenna by turning the elevating crank (2) in the “UP” direction (clockwise) until resistance is noticed.

IMPORTANT

Before rotating the antenna, make sure the antenna is fully raised, “UP” position.

2. Pull down and rotate the spring loaded ceiling plate (3) until the best quality picture is obtained on the TV. Release the ceiling plate to lock antenna in position.
3. Before lowering the antenna, pull down and rotate the ceiling plate until the pointer on plate (4) aligns with the pointer on the mounting plate (5).

IMPORTANT

The antenna must be aligned before lowering to enable correct stowage of the antenna.

4. Lower the antenna by turning the elevating crank (2) in the “DOWN” direction (counterclockwise) until resistance is noticed. The antenna is now locked in travel position.

IMPORTANT

The antenna must be fully lowered before travel. Failure to do so will cause damage to the antenna.

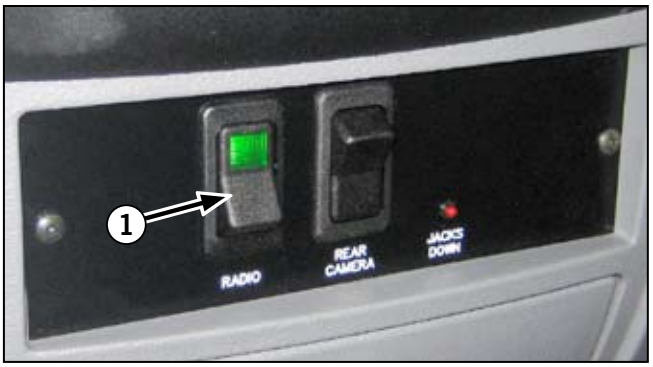
The elevating mechanism of the antenna must be periodically lubricated. See “Maintenance” section in this manual for details.

Radio Switch

Depress the top of the dash radio switch (1) to provide power to the entertainment system.

IMPORTANT

Turn "OFF" the radio switch whenever possible. If the radio button is left "ON" the chassis battery will drain even if the entertainment system is turned off.



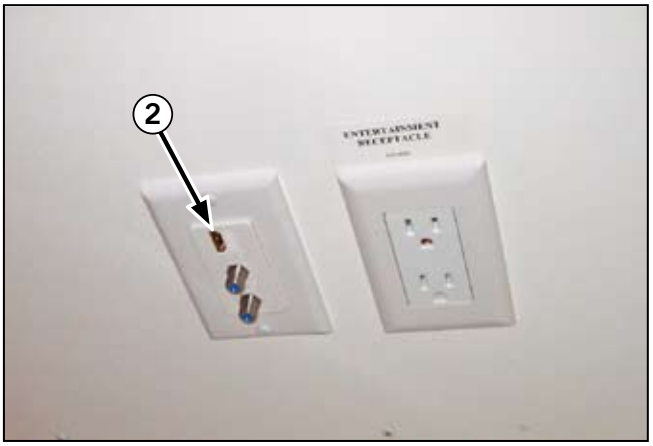
Serenity



Libero

HDMI Connection

A HDMI input connection (2) is provided for the connection of HDMI equipment (located in upper coach cabinet).



Electric Rear Sofa (Optional)

⚠ Warning ⚠

The electric sofa bed should only be operated by an adult. The bed should not be operated while persons are seated on it

The optional electric sofa bed (1) provides three additional seating positions.

Converting to a Bed

1. Depress the bottom of the switch (2) to fold out the main cushion (3).
2. Depress the bottom of the switch (4) to fold out the lower cushion (5).

Manual Operation

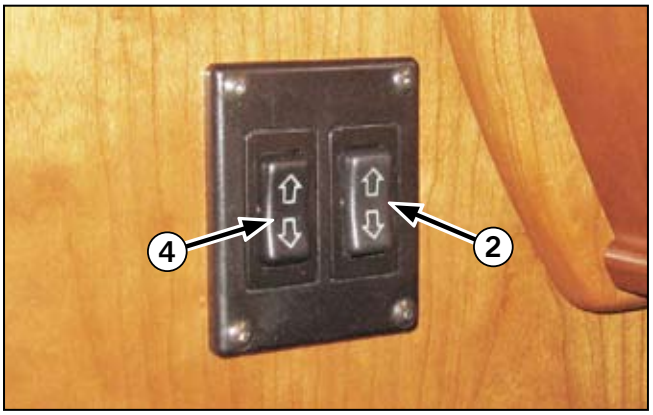
If the electric fold out function fails to operate, the sofa can be converted to manually by following the procedure below.

1. Open the rear curbside access door (6).
2. Locate and remove the left and right cotter pins (7).
3. Remove the left and right drive cable nuts (8).
4. From inside the coach, fold out the sofa.

IMPORTANT

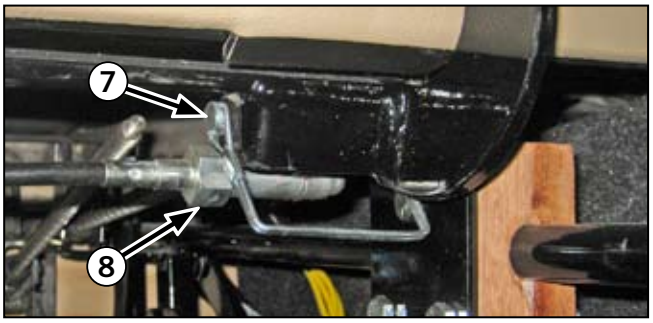
If the sofa is to be used as a seat while driving, the sofa must be converted back to the seating position by reinstalling the cotter pins (7) and reconnecting the drive cable nuts (8).







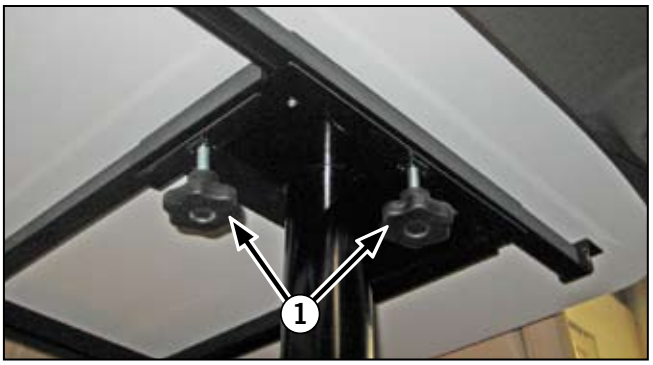


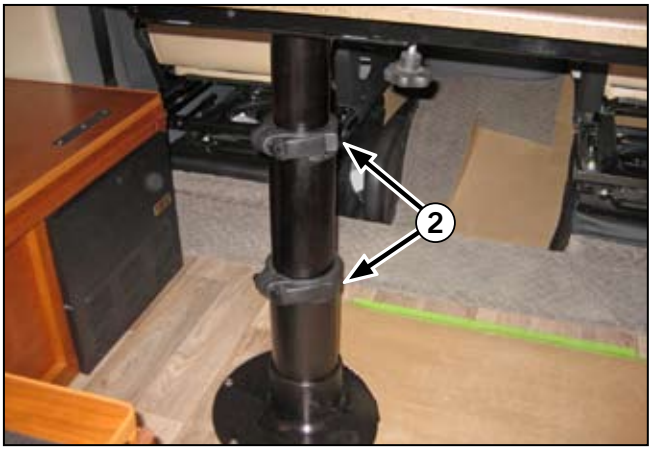


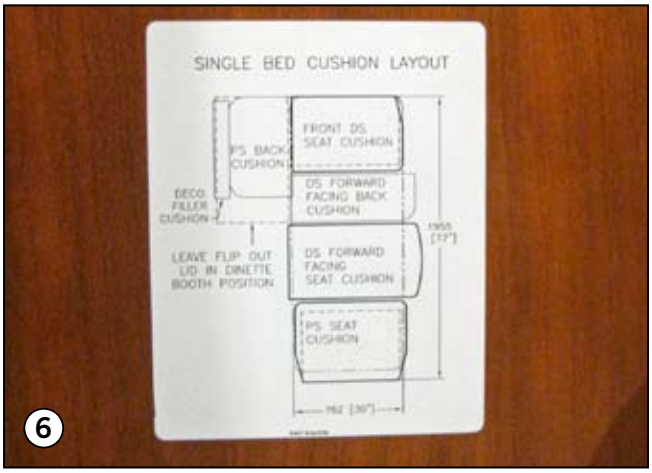
Forward Bed

The forward coach seating and table can be converted into a double bed by following the procedure below.

1. Remove the cushions from the forward sofa and chair.
2. Release the two clamps (1) below the table top.
1. Release the table support clamps (2), rotate, slide and push the table top down, positioning the table top correctly on the seat supports (3). Lock in position with the table support clamps (2) and two clamps (1).
2. Pull out the support bar (4) from the curbside forward chair frame and fold out the cushion support (5) from the roadside forward sofa frame.
3. Arrange the seat cushions as indicated on the seat frame label (6) to form a double bed.

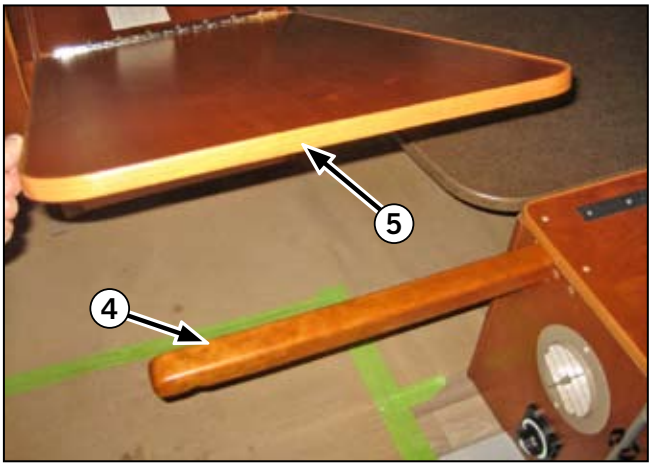












Electrical System Operation

Electrical Supply

This Motorhome is equipped to operate with two electrical systems operating on separate voltages. An internal 12 volt DC system (coach batteries) and an external 120 volt AC system (shore power.)

The 12 volt DC System draws its power from either the engine's battery and charging system while driving or from the coach batteries when parked. An isolator separates the two battery systems to prevent the engine battery from being drawn down when parked and the coach system is in use.

The 12 volt DC System operates from the coach batteries, from shore power through the converter or from the generator through the convertor. The coach batteries are automatically charged when the unit is connected to shore power, when the engine is running, or when the generator is running.

The 120 volt AC System operates either from the optional 120 volt AC generator installed in your Motorhome or from the outside shore power connection.

⚠ Warning ⚠

Do not connect the external power cord until you have checked with the owner/ attendant of the campground as to proper polarity and grounding. Improper grounding or reverse polarity can cause component failure, injury, or death.

Shore Power

To operate on shore power, connect the 120 volt AC power supply cable (stored in the driver's side rear exterior storage compartment) to the external receptacle located on the curbside of the coach.

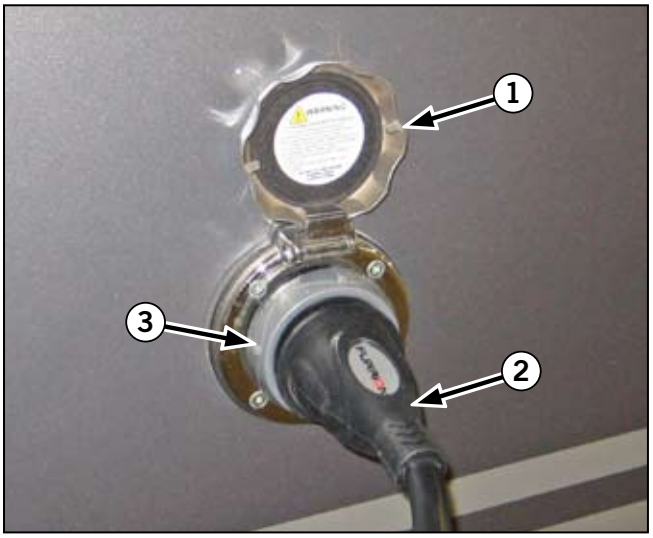
To connect the 30 amp power supply cable, rotate the cover (1) counter-clockwise and lift up. Insert the power cable (2) into the socket by aligning the locking tab on the connector pin with the slot in the socket. Turn the socket clockwise to lock in place. A locking ring (3) can be used to prevent accidental disconnection.

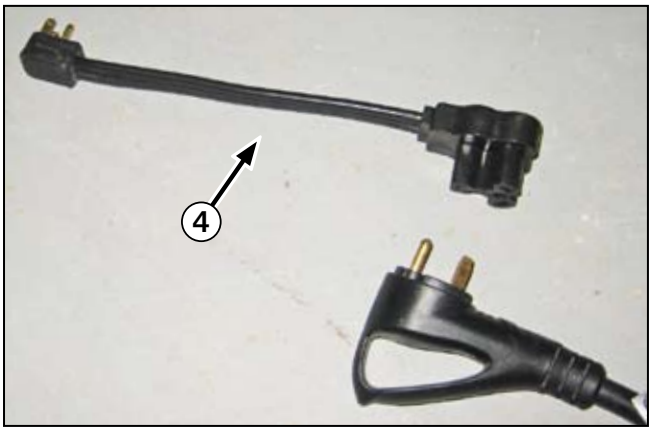
To connect the 30 amp power supply cable to a standard 15 amp socket, utilize the 15 amp connector cable (4) (located in a kitchen drawer.)

Battery Disconnect Switch

Electrical supply is controlled by the battery disconnect switch located in the coach doorway. To switch to 120 volt AC shore power, rotate the switch so the arrow points to the 3 o'clock position (5).

To switch to internal 12 volt DC power, rotate the switch so the arrow points to the 12 o'clock position (6).







120 Volt AC System



12 Volt DC System

System Monitor

The system monitor panel, located in the locker above the coach entrance doorway, monitors the following systems:

Water Heater Switch (1)

This switch controls the power to the water heater. Press the top of the switch to turn the water heater “ON” and bottom to switch “OFF.” The switch light will illuminate when the switch is in the ON position.

IMPORTANT

The water heater switch light (2) will illuminate if the LP gas switch is turned ON and the water heater fails to ignite.

Water Pump Switch (3)

This switch controls the power to the water pump. Press the top of the switch to turn the water pump “ON” and bottom to switch “OFF”.” The switch light will illuminate when the switch is in the “ON” position.

Test Switches

These switches control the power to the monitor the following test functions. Depress and hold each of the following switches to show the relevant system level percentage in the LED display (4):

Battery Condition (5) - Displays the battery power level.

Fresh Water Tank (6) - Displays the fresh water tank level.

Grey Water Holding Tank (7) - Displays the grey water tank level.

Black Water Holding Tank (8) - Displays the black water tank level.

LP Gas Tank (9) - Displays the LP gas remaining in tank.

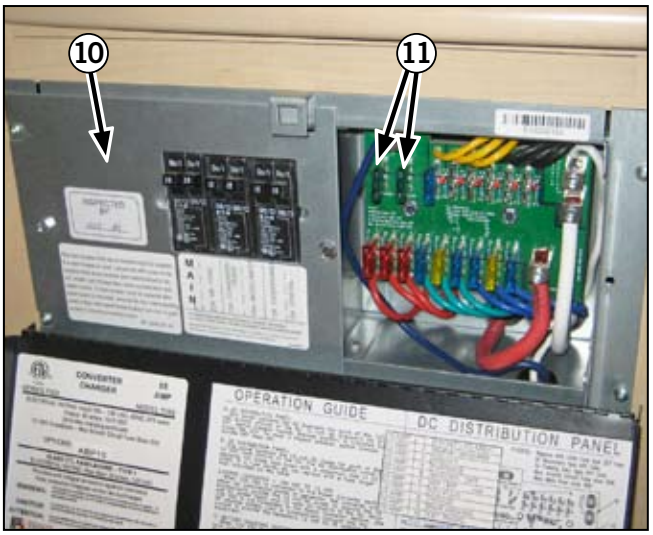
See detailed operating instructions in the information kit for further information.

Power Converter 120 Volt AC to 12 DC Volt

The power converter (10), located in a lower coach cabinet facia, converts power from 120 volt AC to 12 volt DC for 12 volt features, and charges the coach batteries.

The converter requires no servicing or adjustment and contains a number of safety devices:





1. Fluctuations of temperature or power usage are automatically monitored.
2. A sensor eliminates damage to the converter if the terminals are “short circuited.”

IMPORTANT

If the coach batteries cables are connected backwards, the two 30 amp fuses (11), located behind the electrical panel will blow. If this occurs, connect the battery correctly before replacing the fuses.

If your appliances fail to function, check these fuses located behind the panel door.

The converter turns on when 120 volt AC power is available. If 120 volt AC power is not available, the normal 12 volt DC power requirements will run down the coach batteries.

120 Volt AC System

When connected to 120 volt AC (shore power) such as that provided by most campgrounds or when running your 120 volt generator, the converter charges the coach battery which provides 12 volt power. All equipment normally powered by the battery 12 volt DC power is then powered through the converter, preventing drain on the coach battery.

Some equipment, however, depends entirely on 120 volts AC or from the optional 120 volt generator.

This equipment includes:

1. Roof Air Conditioner
2. Refrigerator (when set to 120 volt AC)
3. Microwave Oven
4. All 120 Volt Electrical Outlets
5. TV(s)

120 Volt AC Circuit Breakers

The left side of the breaker panel contains six 120 volt AC system circuit breaker switches (1). See the identification label (2) for breaker function. The right side houses 12 volt DC fuses (3). See the fuse identification label (4) for fuse function.

The breaker panel protects all 120 volt AC equipment and components in the Motorhome from overload, from a short in the wiring, or a short in the component itself. The breaker cuts off the flow of electricity in the system and prevents damage or fire.

If a breaker “trips,” allow a brief “cool down” period and then reset the breaker by turning it “OFF” and then “ON.” If a breaker “trips” repeatedly, there may be a short in the wiring or in the equipment and both should be checked and serviced. Refer to Converter and Control Panel Manuals in the information kit for further details.

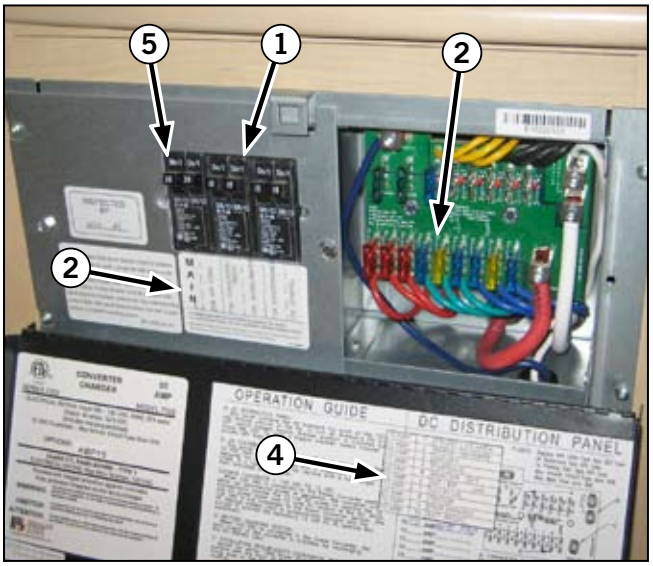
There is a single 30 amp main breaker (5) which protects the entire electrical system. This breaker should be checked first if the entire electrical system will not function on shore power.

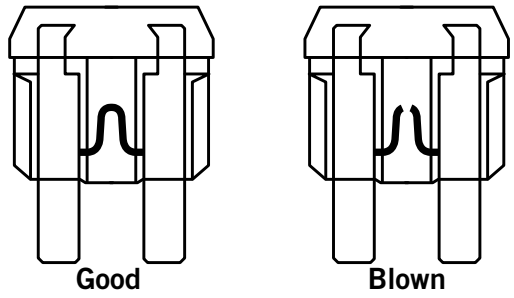
12 Volt DC Coach Fuses

Each 12 volt circuit is protected by a fuse. When a fuse blows, shut off all appliances or lights on the affected circuit and replace the fuse with a new one of the same amperage.

12 Volt DC Chassis Fuses

See Chassis Operator’s Manual for chassis fuse function and location.

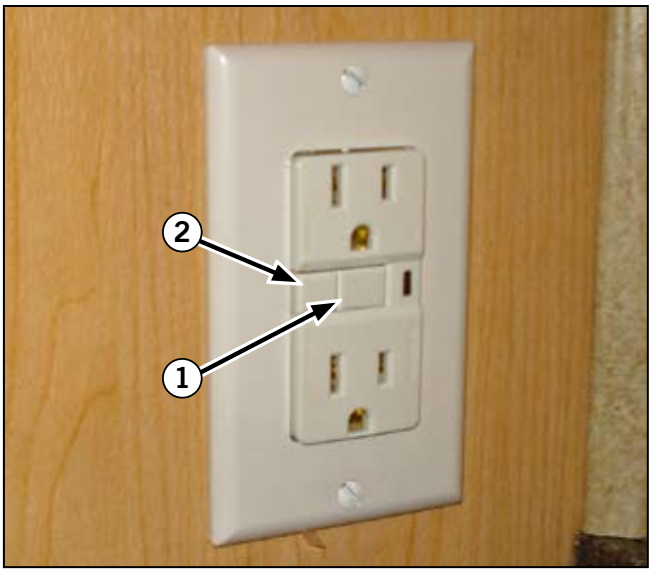




Fuse Condition

Fuse Rating	Color
10 Amp	Red
15 Amp	Blue
20 Amp	Yellow
30 Amp	Green

Ground Fault Circuit Interrupter (GFCI)



Various outlets in the Motorhome, particularly those near sinks and water supplies, are connected to a GFCI which is a very sensitive circuit breaker that will protect you from electrical shock if a ground fault develops. If and when this breaker trips, unplug all appliances on that circuit and press the reset button (1) on the outlet. To test the operation of the breaker, press the test button (2).

If the GFCI trips repeatedly, have the problem investigated and repaired by a qualified technician before using it again.

Depending on the floor plan of your vehicle, you will find a GFCI outlet in the bathroom, galley, and outside receptacle.

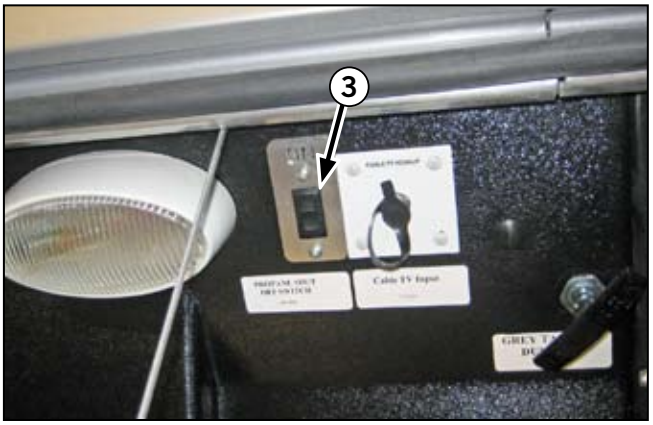
Please note that on some models the GFCI circuit in the bathroom will trip when a fault occurs at an exterior or galley outlet. Both outlets are GFCI protected through the bathroom circuit. If the exterior or galley outlet does not work, check the bathroom GFCI receptacle.

⚠ Warning ⚠

The GFCI will not eliminate completely all electric shock. Small children or persons with a heart condition should be extra cautious and could still be injured even though protected by a Ground Fault Interrupter.

Auxiliary LP Gas Generator (Optional)

The auxiliary LP gas generator is located in an exterior compartment (location varies with floor plan).



IMPORTANT

Before operating the generator, refer to the LP Gas Generator Owner/Operator's Manual located in the information kit.

Operation

Turn on the LP gas valve by depressing the top of the propane shut off switch (3) located in the utility center, rear roadside exterior compartment.

IMPORTANT

The generator starter draws current from the coach batteries so the ignition does not have to be on.

The LP gas generator control panel (1) is located on the overhead cabinet above the entrance door.

Generator Starting

1. Depress and hold the top of the button (2) until generator engine starts running, then release the button.
2. Allow the engine on the generator to settle and run smoothly before operating electrical appliances.
3. Become familiar with the output capacity and capability of your generator.
4. Be careful not to overload the generator. Refer to the generator manual in the information kit for further details.

Stopping

1. Depress and hold the bottom of the button (3) until generator engine has completely stopped.

Auxiliary Diesel or Standard LP Gas Generator (Optional)

The auxiliary diesel generator (Serenity) or gas generator (Libero) is located in an exterior compartment (location varies with floor plan).

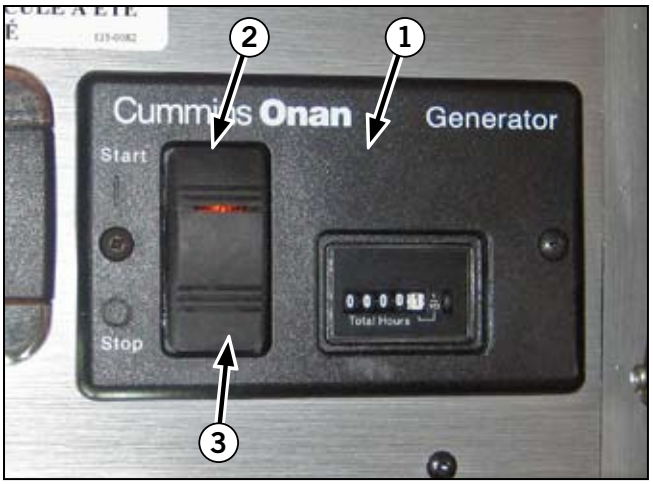
IMPORTANT

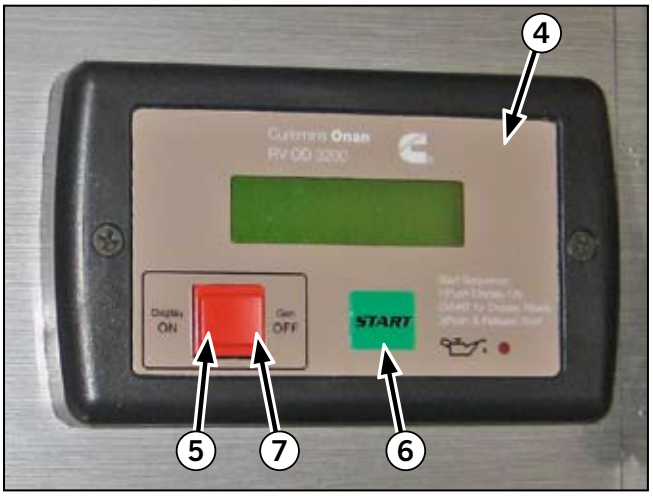
Before operating the generator, refer to the Owner/ Operator's Manual located in the information kit.

The gas or diesel generator control panel (4) is located on the overhead cabinet above the coach entrance door.

Starting the Generator

1. Depress left side of the red button (5).
2. Depress and hold the start button (6) until generator engine starts running, then release the button.
3. Allow the engine on the generator to settle and run smoothly before operating electrical appliances.





4. Become familiar with the output capacity and capability of your generator.
5. Be careful not to overload the generator. Refer to the generator manual located in the information kit for further details.

Stopping the Generator

1. Depress right side of the red button (7).

⚠ Caution ⚠

Overloading the generator for long periods of time can cause high temperatures that could result in damage to the generator windings. Keep electrical loads within the wattage ratings.

⚠ Warning ⚠

Do not smoke when refuelling. Keep flames, sparks, and smoking material away from fuel or flammable fumes.

Generator Safety

Electrical

⚠ Warning ⚠

Extreme care and caution should be exercised when handling the generator and its components. Carelessness can be dangerous and even fatal.

Never touch any electrical leads, equipment or appliances when your hands are wet or when you are standing on wet ground or in water.

Any repair of the generator should be done by an authorized service center only.

Never attempt to repair the generator yourself.

Never check generator oil level while the generator engine is running.

Asphyxiation

⚠ Warning ⚠

All internal combustion engines produce carbon monoxide (CO) gas fumes when running. This gas is poisonous, colorless, odorless, tasteless and lighter than air.

These gases can readily be drawn into your Motorhome. Take the following precautions when running any engines.

1. Do not run the generator and a ventilator fan at the same time. This could draw gases into the Motorhome.
2. Do not open windows or ventilators on the side where the generator exhaust pipes are located.
3. Park so that winds will carry exhaust gases away from the Motorhome. Be aware of potential gas fumes from other nearby vehicles.
4. Do not operate the generator if there is any obstruction such as vegetation, snow, buildings, etc., which could deflect gas fumes under or into the Motorhome.

Automatic Power Transfer Switch

Automatic Switch Over

Switch to generator power from 120 volt AC shore power to generator, simply by starting the generator.

Built-in Delay

A 20 to 30 second (nominal) delay prevents starting generator under load. This delay allows necessary generator warm-up before transfer of power.

This switch automatically transfers power when switching between 120 volt shore power and generated power. This switch prevents damage to any circuitry should the shore power and generator be used simultaneously.

⚠ Caution ⚠

In normal usage it is never advisable to start the generator under load. To prolong the life of the air conditioner, microwave, etc (and this power switch), follow this rule: **Always verify that appliances are turned "OFF" before starting or stopping the generator.**

12 Volt DC System

The 12 volt DC power voltage system in your Motorhome consists of two separate but connected battery systems:

Chassis battery

Libero - located on the left side of the engine compartment (1).

Serenity - located under drivers side cab floor (not shown).

Coach batteries - (2) located in the rear roadside external storage compartment.

IMPORTANT

A 15 Amp fuse, located in position #10 of the fuse panel under the driver's seat, protects the 12 volt DC charging system. See the chassis operator's manual for further details.

Chassis Battery

The chassis battery operates the starter, the vehicle accessories, and all the controls found on the vehicle chassis instrument console, such as the auto heater fans, exterior lights, the horn, speed control, windshield wipers, etc.

It is recommended that the chassis battery cables be disconnected when parking the Motorhome for an extended period of time. See the chassis manual for chassis battery quick disconnect location.

IMPORTANT

Disconnecting battery cables from the chassis battery can clear the engine/transmission logic modules. These modules will re-calibrate themselves once the vehicle is reconnected and the engine started.

Coach Batteries 12 Volt DC

The coach batteries supply power to all the 12 volt DC lights and equipment in the living area of your Motorhome, including the roof vent, refrigerator (when operating in 12 volt DC mode,) 120 volt AC generator starter, water pump, furnace fan, interior lights, holding tank, water level gauges, etc.

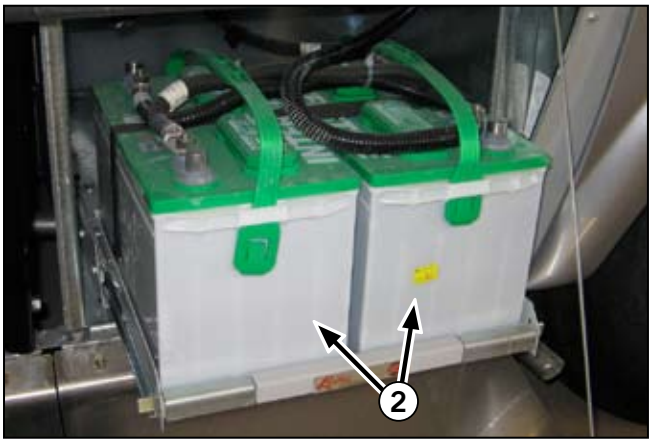
Coach Battery Condition Meter

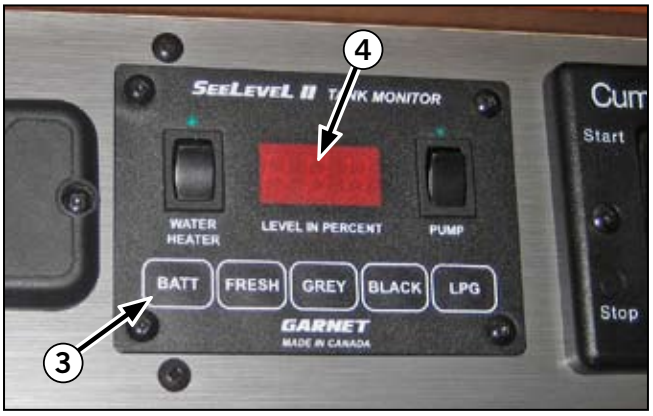
Depress the switch (3) and hold to show the battery voltage level in the system monitor LED display (4)

Battery Maintenance

Automotive batteries are reservoirs of 12 volt DC electrical energy. Whenever energy is removed from the battery it has to be replaced in order for the battery to continue functioning.







This energy is restored by the engine alternator whenever the engine is running or by the RV converter.

Problems

Two conditions can destroy the function of a battery. One is called sulphating in which a layer of sulphate crystals collect on the lead plates inside the battery. This can happen when a battery is not used for a long period of time (30 days or more) especially during warm weather. This situation requires replacement of the battery. The second is freezing. A battery must be kept at almost full charge to prevent the liquid electrolyte inside the battery from freezing.

Prevention

1. Disconnect the battery cables during long periods of storage.
2. Hook up a battery charger at least once a month during long periods of storage, or connect the 120 volt AC shore line to a suitable power source. When using shore power to charge the coach batteries, the battery disconnect switch must be on.

Long Term Storage

If you do not intend to use your Motorhome for a longer period of time it might be a good idea to remove the batteries from the Motorhome and store them in a cool dry location on a wood or rubber pad. DO NOT store batteries on a moist concrete floor.

Additional Maintenance Suggestions

1. Check the external condition of the battery monthly. Look for cracks in the cover and case.
2. Make sure batteries are always securely fastened down.
3. Make sure battery clamps are tight and free of corrosion.

⚠ Warning ⚠

Do not allow battery electrolyte to contact skin, eyes, fabrics, or painted surfaces. The electrolyte is a sulfuric acid solution which could cause serious personal injury or property damage. Wear eye protection when working.

4. Keep the battery and terminals clean. Accumulations of acid film and dirt may permit current to flow between the terminals and discharge the battery.
5. To clean the battery, wash it with a diluted solution of baking soda and water to neutralize any acid present, then flush with clean water. Foaming around terminals or on top of the battery is normal acid neutralization.

IMPORTANT

Make sure you don't allow any baking soda solution to get into the battery. This can neutralize the battery acid.

6. Dry the cables and terminals before reinstalling them, and don't use grease on the bare metal inside the cable terminals to prevent corrosion. Grease is an insulator. Electricity will not flow through it. A plastic ignition spray will protect the terminals after you have cleaned and reinstalled them.
7. Whenever batteries are removed and replaced make sure the positive and negative cables are attached to the correct terminals. (Positive to positive and negative to negative.) The same is true when using a "booster battery" or a charger. If you use a "fast charger," disconnect the cables from your battery. Do not attempt to recharge a frozen battery.

IMPORTANT

Never try to start the engine with the aid of a Battery Quick Charge unit.

8. If you do not have maintenance-free batteries, check the battery fluid level and fill with distilled water if necessary. Do not overfill.
9. Have the specific gravity of the battery fluid checked when you have your Motorhome serviced.

⚠ Warning ⚠

Remove rings, metal watchbands, and other metal jewelry before working around a battery. Use caution when using metal tools. If the tool contacts the battery terminals or metal connected to them, a short circuit could occur.

Battery Boost Switch

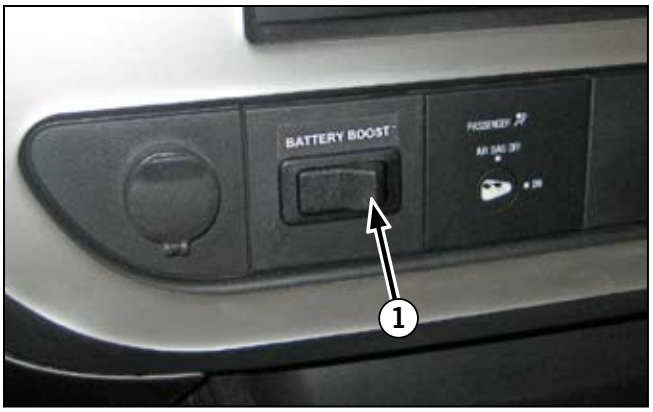
Libero Motorhome Only

In the event your Motorhome will not start due to a low chassis battery, a battery boost switch (1) can be used to momentarily connect the chassis battery to the coach batteries.

To operate, depress and hold the switch (1) while starting the engine. Repeat as necessary.

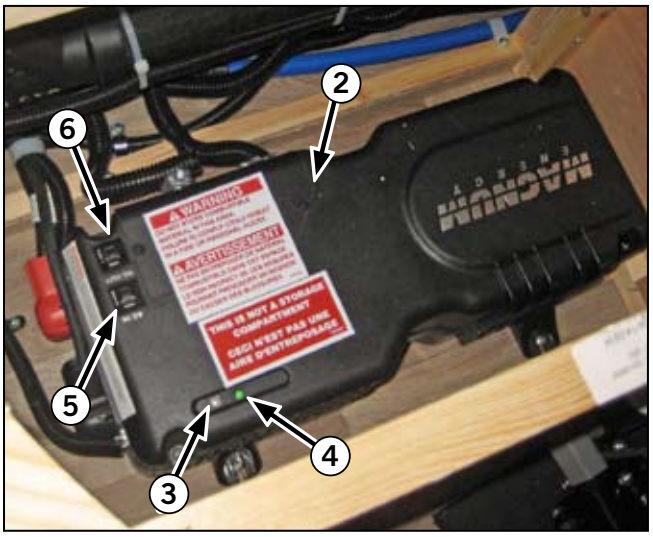
IMPORTANT

If the engine fails to start, call a service technician.



Inverter

Your Motorhome is equipped with an inverter (2). The inverter, located in a coach cabinet (location varies according to coach floorplan) takes 12 volt DC power from the coach batteries and inverts it to 120 volt AC power. It is designed to accommodate smaller loads such as TV's and entertainment systems. When you are not connected to shore power and the inverter is switched on, these components will be energized. **NOTE: The inverter is not equipped with an internal 12 volt DC charger.**



The inverter is equipped with:

Power switch (3)

Status light (4)

Input circuit breaker (5) - this circuit breaker protects the unit's internal wiring and pass-thru relay.

Output circuit breaker (6) - this circuit breaker provides another layer of overload protection. This is not a branch-circuit rated breaker. Separate AC output breakers are required on the output.

Refer to the inverter manual located in the information kit for operating instructions.



Inverter Remote Control Panel

The inverter remote control panel (7) is located in the locker above the coach entrance doorway. The inverter remote control panel is equipped with an ON/OFF switch (8), which duplicates the power switch on the inverter unit and LED system status display. See MM-R Remote Control Owner's Manual for the automotive battery quick disconnect location.

IMPORTANT

The inverter is not intended for appliances using more than the wattage specified. This could result in damage to the appliance or the inverter. Extended use of the inverted receptacles will drain your batteries.

Lighting Maintenance

The following procedures detail replacement of the coach interior and exterior light bulb/light fittings.

⚠ Caution ⚠

Disconnect the chassis and coach batteries before carrying out maintenance on the lighting system.

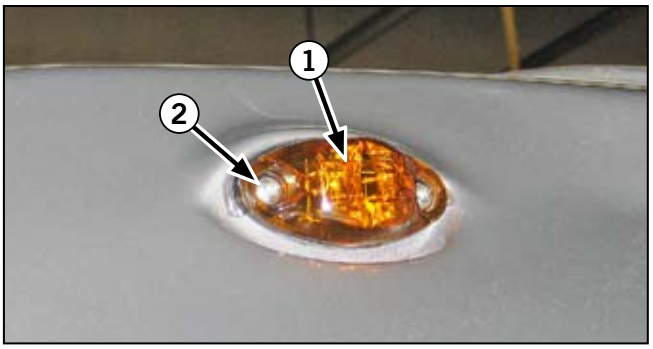
Exterior Lighting

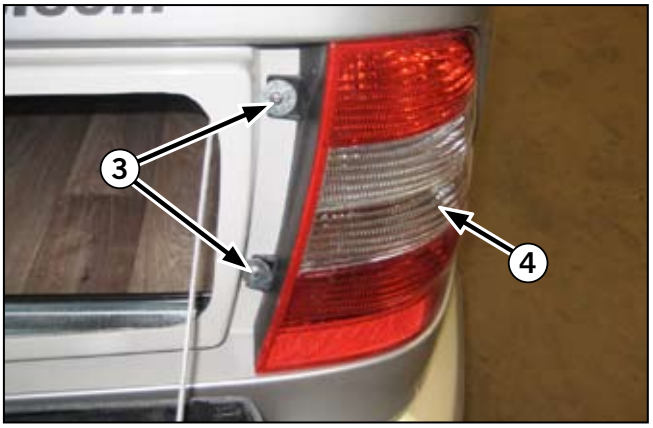
Upper Running Lights (1) - This is a sealed LED unit and must be replaced as complete unit.

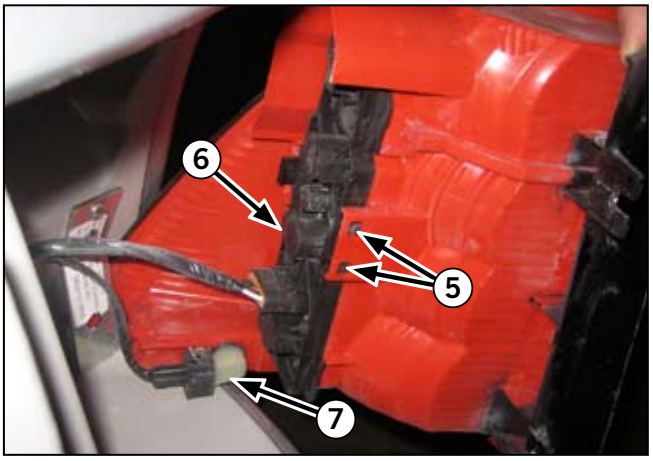
Remove the two screws (2) and pull the light fitting out of the bodywork to gain access to the fitting connectors. Disconnect the old and reconnect the new light fitting. Insert the new light fitting into the bodywork and secure with the two screws.

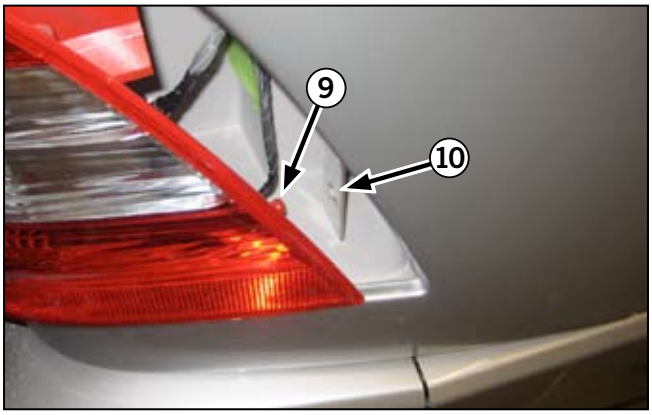
Rear Light Cluster (3) - To access individual bulbs, remove the rear light cluster as follows.

1. Open the rear storage compartment door.
2. Remove the two screws (4) and pull the rear light cluster (3) rearward, out of the bodywork.
3. Release the tabs (5) and separate the bulb holder (6) from the lens assembly.
4. To access the marker light bulb, rotate the fitting (7) counterclockwise and remove from the lens assembly.
5. Replace the bulbs (8) as required.
6. Reinstall the bulb holder (6) into the lens assembly.
7. Install the light cluster into the bodywork, ensuring the pin (9) engages with the location hole (10).
8. Reinstall the two screws (3).











Exterior Flood Light (1) - Unclip the top cover (2) and replace the bulb. Reinstall the cover.

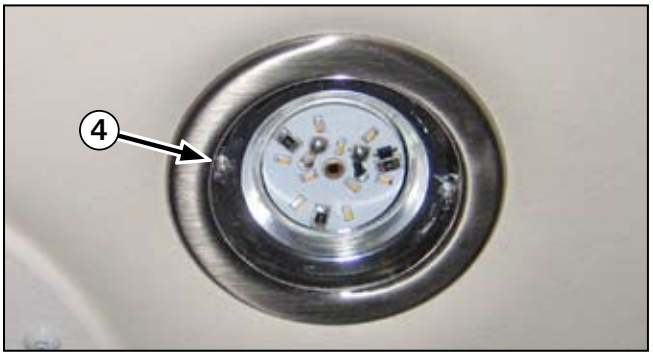


Interior Lighting

Cabin lights Lights (2) - NOTE: This is a sealed LED unit and must be replaced as complete unit.

Unclip the lens cover (3), remove the two screws (4) and pull the light fitting out of the bodywork to gain access to the fitting connectors. Disconnect the old and reconnect the new light fitting. Insert the new light fitting into the bodywork and secure with the two screws. Reinstall the lens cover.

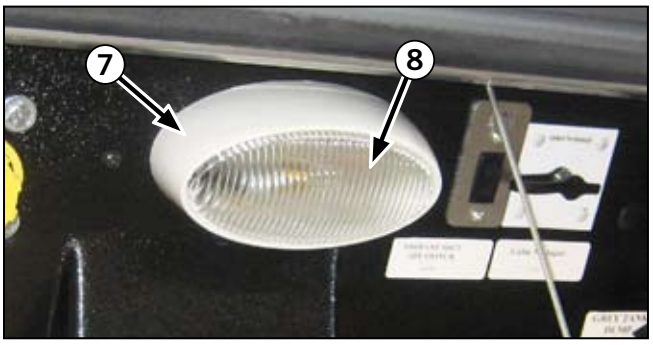




Interior Shower Light (5) - Unclip the cover (6) and replace the bulb. Reinstall the cover.



Exterior Shower Light (7) - Unclip the cover (8) and replace the bulb. Reinstall the cover.



Water / Plumbing System

Electrical Supply

Your Motorhome is designed with fresh water, grey water and black water systems, and associated plumbing to handle all of the water and waste requirements. Review this section carefully to understand each system and how they function together.

Fresh Water System

There are two sources for fresh water in your Motorhome:

- A water tank located within your Motorhome.
- By connecting to “city water” by means of a water hose.

Both sources supply water to the sink, shower, bathroom toilet, and water heater.

The water system built into your Motorhome provides full service similar to the system used in your home. A 12 volt DC self-priming pump draws water from the fresh water storage tank to all cold faucets and the water heater. An automatic pressure switch, located in the water pump maintains a positive line pressure.

The city water connection (1) and water fill selector valve (2) are located in driver’s side/rear exterior compartment.

The water fill selector valve (2) has two positions:

(A) Water tank fill - handle vertical

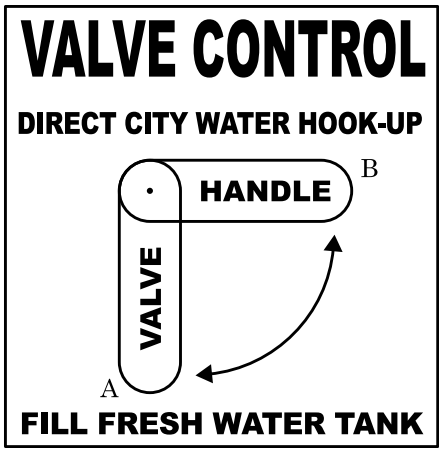
(B) City water - handle horizontal

External Water Supply

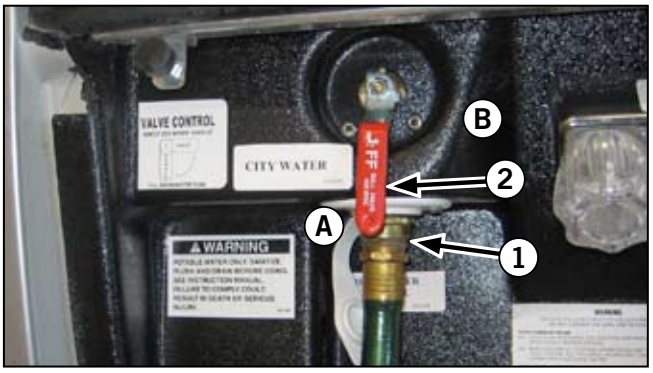
The external water source will supply your Motorhome water system with water at city pressure when the water pump is switched off.

Connecting

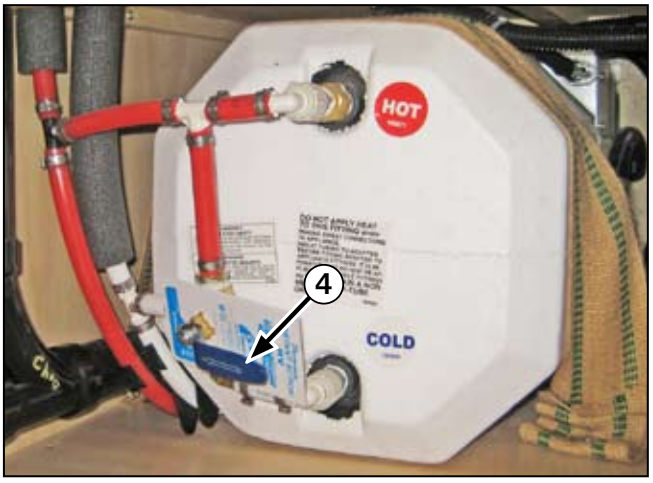
1. Turn the water pump switch (3) to “OFF” on the system monitor panel.
2. Attach a garden hose to city water connection (1). Turn the water fill selector valve to city water (position B).
3. Turn “ON” the city water supply.



Water Fill Selector Valve Label







IMPORTANT

After connecting to the external water supply, open the faucets in your Motorhome slowly and cautiously. Air trapped in the line can cause the water to splash into the sink. You may want to drape a washcloth over the faucet to prevent excessive splashing.

4. Turn the water heater bypass valve (4), located on the water heater to “NORMAL FLOW” to ensure water enters the heater and hot water is available for Motorhome use. The water heater is located in a coach compartment (location varies according to coach floorplan). Refer to the water heater owner’s manual located in the information kit for further information.

Disconnecting

1. Turn “OFF” the city water supply.
2. Relieve water pressure in the line by opening a faucet in the Motorhome.
3. Disconnect the hose from the city water connection (1).
4. Replace the protective plug back over the city water connection.

Fresh Water Tank Filling

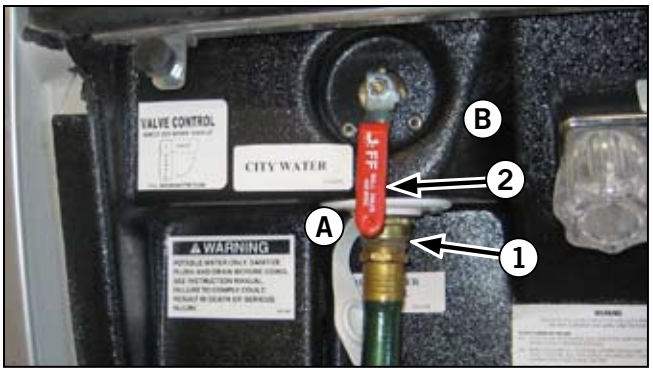
City Water

1. Connect water hose to the city water inlet connection (1).
2. Turn the water fill selector valve (2) to water tank fill - handle vertical.
3. Turn “ON” the city water supply.
4. Depress and hold the fresh water tank level switch (3) to show the level percentage in the LED display (4). Once the fresh water level reads full on the monitor panel, turn off the city water supply.
5. Turn the water pump switch (5) on the system monitor panel to the “ON” position.
6. Slowly open the cold water tap until the water runs smoothly. Repeat with the hot water taps.

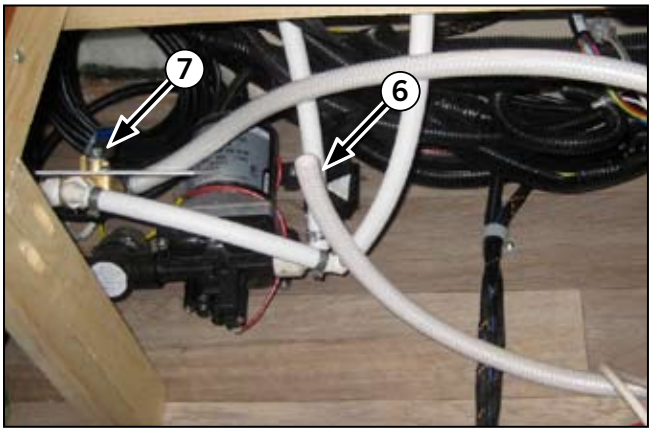
Potable Water

When a city water supply connection is not available, the fresh water tank can be filled using the following procedure.

1. Fill a suitable water container with potable water.
2. Place the suction hose (6) attached to the winterize by-pass valve into potable water container.







NOTE: The winterize by-pass valve is located in seating, bed cabinet or road side exterior compartment.

3. Turn the by-pass valve (7) to “WINTERIZE.”
4. Turn the water pump switch (5) on the system monitor panel to the “ON” position.
5. Depress and hold the fresh water tank level switch (3) to show the level percentage in the LED display (4). Once the fresh water level reads full on the monitor panel, turn water pump “OFF.”
6. Turn the by-pass valve (7) to “NORMAL FLOW.”

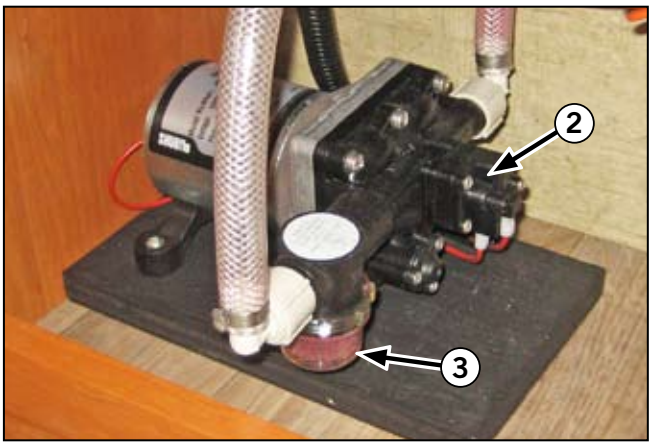
Water Pump Switch

When the water pump switch (1) is in the “ON” position, the water pump will automatically activate when any faucet, shower, or toilet is being used. It is recommended that the pump switch be turned off whenever leaving the Motorhome for any period of time or while driving. A slow leak in a faucet or connection could drain both the water tank and the battery.



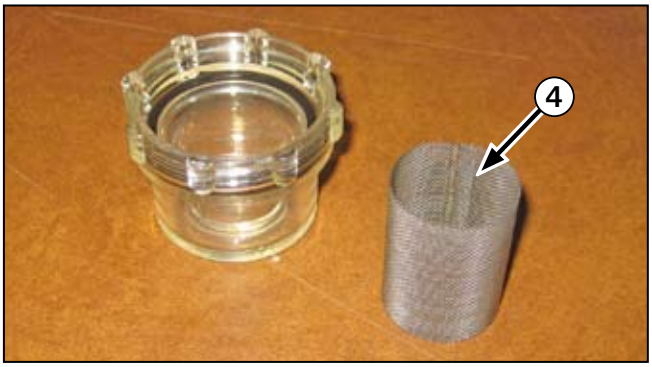
Water Pump

The water pump (2), located in a coach compartment (location varies according to coach floorplan) is designed to supply water from the fresh water tank to the various areas of your Motorhome on demand. When a faucet is opened, the pump comes on automatically and pressurizes the various water lines.



IMPORTANT

Check the screen on the intake side of water pump periodically and clean or replace it at least annually to ensure proper water pressure. To access the screen, unscrew the filter bowl (3), remove the screen (4) and clean with fresh water. Replace in reverse order, ensuring the filter bowl is securely tightened. Refer to the water pump owner’s manual located in the information kit for further information.

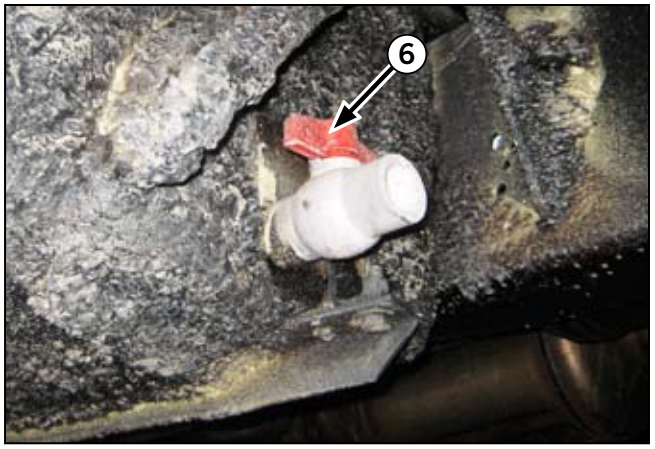


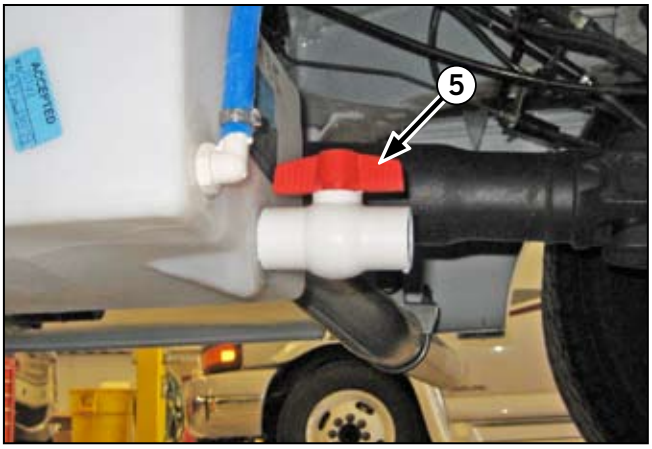
Fresh Water Tank and Water System Drain

To drain the fresh water tank, open the fresh water tank drain valve located on the underside of the coach in the following positions:

Serenity - Road side in front of rear axle (5)

Libero - Curb side forward (6)





To drain the hot and cold water systems

1. Disconnect the city water supply if connected.
2. Turn water pump switch (1) “OFF.”
3. Open all coach faucets.
4. Open the exterior shower faucets (2). This is the lowest drain.

Water Pump Initial Startup

1. Make sure all drain valves are closed.
2. Turn the water pump switch (1) “OFF.”
3. Fill the water tank.
4. Open the faucets, both hot and cold.
5. Turn the water pump switch (1) “ON.”
6. Close each faucet (cold and hot) as soon as water flows steadily through the faucet.
7. Verify that the water pump stops after all faucets are closed.
8. The water pump is now ready for automatic operation.





Water Pump Troubleshooting

If the pump will not prime

1. Make sure there is water in the tank.
2. Make sure the chassis battery is not run down.
3. Make sure there are no kinks or obstructions in the inlet hose.
4. Make sure all inlet fittings and connections are air tight.
5. Make sure water selector valve in the utility compartment is set to “NORMAL.”
6. Check for clogged lines.

If water pressure drops

1. Check faucets and connections for leaks.
2. Make sure faucet aerators and filter are clean.
3. Make sure there is water in the tank.
4. Make sure the chassis battery is not run down.
5. Make sure the water pump screen is not blocked. See this section above for details.

If pump runs when there is no apparent demand for water

1. Make sure all faucets and fixtures are shut off and are not leaking.
2. Check all lines for leaks.
3. Make sure there is water in the tank.
4. Make sure no air is trapped in the system.
5. Make sure the tank fill water selector valve is set to “NORMAL.”

Disinfection of Water Tank

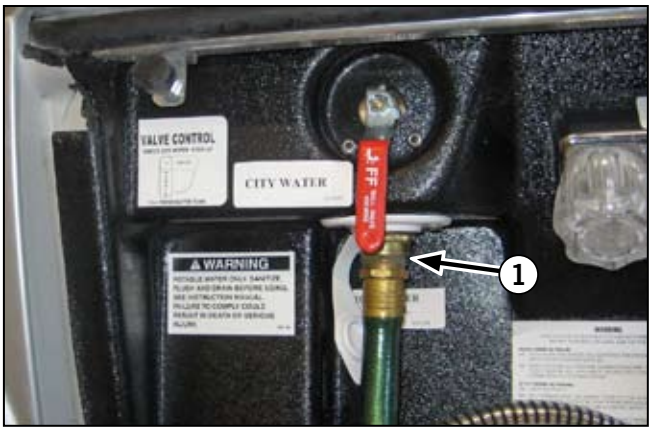
It is recommended that fresh water systems be periodically disinfected.

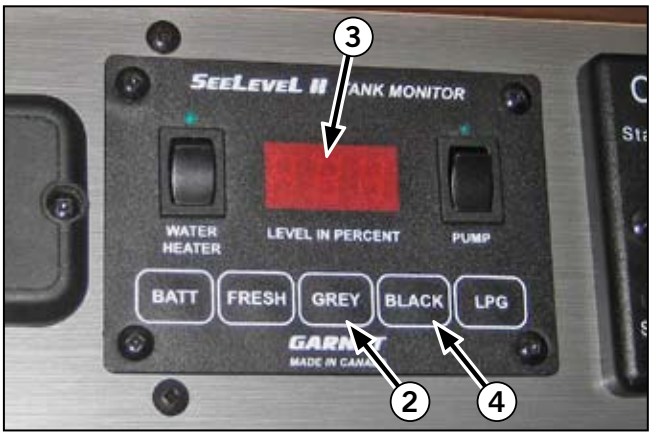
Disinfection is required if:

- When the system is new and has not been used before.
- When vehicle has been in storage for a long period of time.

Disinfection Instructions

1. Prepare a solution of 1/4 cup household bleach to 1 gallon of water.
2. Connect one end of an empty garden hose to a city water connection (1). Pour the prepared solution into the opposite end of the empty hose and connect the hose to the city water supply (add 1 gallon of solution for every 15 gallons of tank capacity.)
3. Fill the tank with fresh water. Run water from each faucet, hot and cold, until you detect a chlorine odor.
4. Leave this solution in the system for at least 4 hours. If you wish to accelerate this procedure to just 1 hour, double the concentration of household bleach in your solution.
5. After the required time has elapsed, drain and flush the system with fresh water.





Waste Systems

Grey Water - Waste Holding Tank

The drainage from the kitchen sink and shower pan is collected in a separate grey water holding tank. This tank has its own dump valve which ties into the same termination valve outlet as the waste holding tank.

To display the grey water holding tank level, depress and hold the grey water tank level switch (2) to show the level percentage in the LED display (3).

IMPORTANT

If grey water holding tank is allowed to overfill, the overflow may back up through the shower drain.

Black Water - Waste Holding Tank

The black water holding tank collects all the waste from the toilet and bathroom sink. Before using your waste holding tank, deodorize it by adding one gallon of water and a commercial holding tank deodorizer through the toilet.

To display the black water holding tank level, depress and hold the black water tank level switch (4) to show the level percentage in the LED display (3).

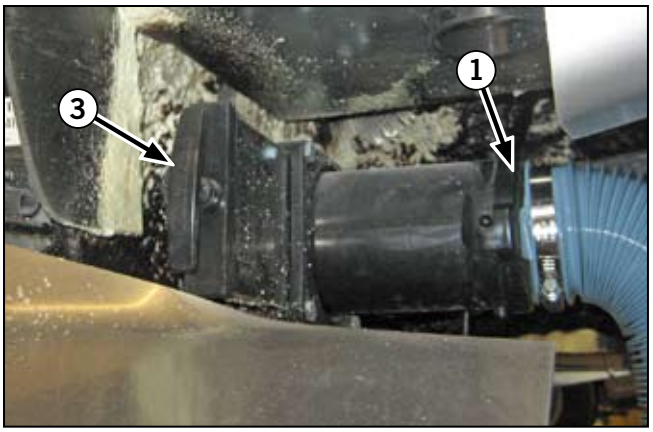
IMPORTANT

If black holding tank is allowed to overfill, the overflow may back up through the toilet.

Dumping Holding Tanks

To dump the holding tanks

1. Connect the sewer hose (1) to the tank outlet located on the rear driver's side underbody. The sewer hose is stored in driver's side rear exterior compartment (2).
2. Pull out the black tank (3) and grey water tank (4) dump valve handles in turn. When dumping is complete, push the handles in.



Black Water Waste Tank Rinse

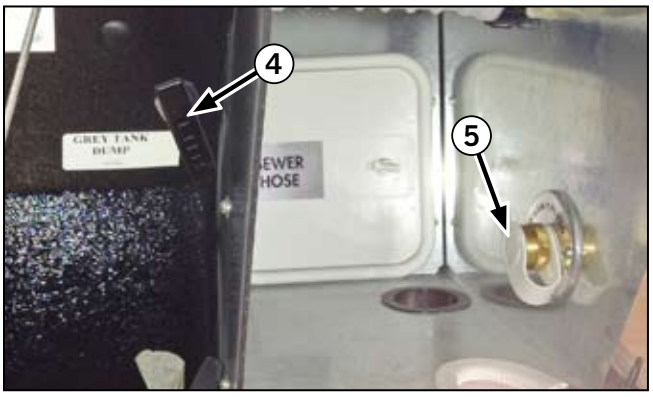
The Motorhome is equipped with a black water waste tank flushing system to aid in draining the tank and to remove build-up of odor. To flush the tank:

1. Remove the protective cap and connect the city water supply hose to the connector (5) located in driver's side rear utility compartment.
2. Open the black water tank dump valve (3).
3. Turn on the city water supply, flushing the system thoroughly.
4. Turn off the city water supply, disconnect the city water supply hose and install the protective cap.
5. Close the black water tank dump valve.



IMPORTANT

Always open the black water tank dump valve before turning on the water supply.



NOTE: The black water tank flush line incorporates a non-return valve which prevents black water contamination of the city water supply hose. If city water does not flow when connected as above, the non-return valve may be defective and require replacement. The non-return valve (6) is located behind the soap tray in the shower cubicle.



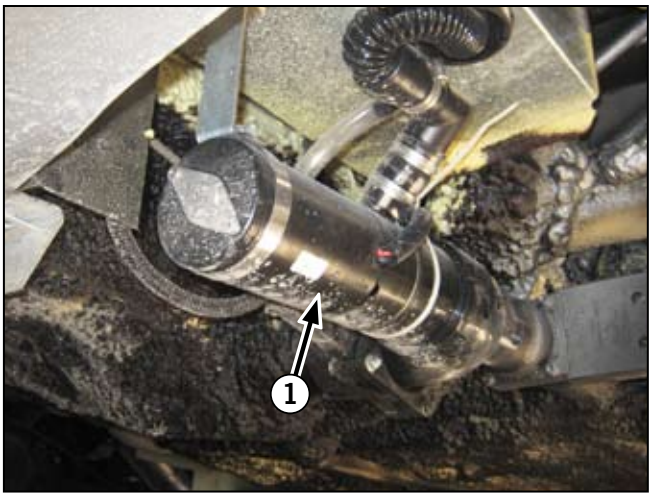
Macerator

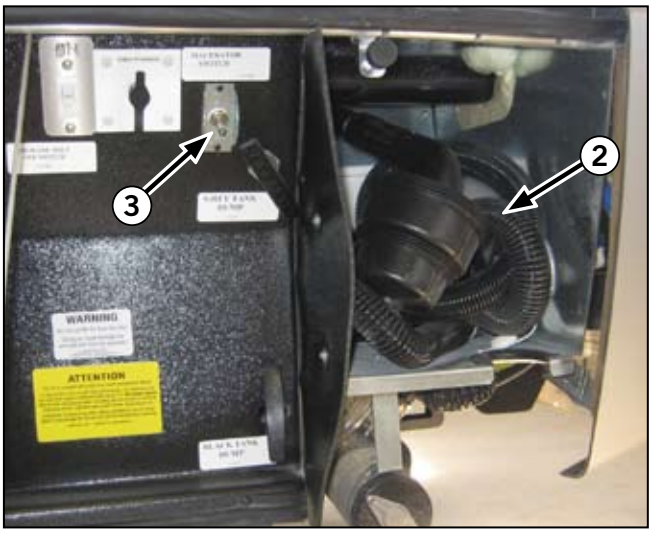
Your Motorhome may be equipped with a macerator (1). The macerator breaks down the black water holding tank solid.

To operate the macerator:

1. Extend the macerator waste hose (2) stored in the driver's side rear exterior compartment and connect to a sewer hook-up.
2. Open the black tank dump valve.
3. Turn macerator pump switch (3) "ON."
4. Turn macerator pump switch (3) "OFF" when the tank is empty.

Refer to the macerator manual located in the information kit for further information.





Do's and Don'ts - Holding Tanks

DO keep your holding tank clean using any cleaner approved for recreational vehicle sanitation systems.

DO add a special deodorizer or chemical additive approved for recreational vehicle systems to sanitize and improve the tank action.

DO keep your tank both dump valves closed, permitting the tanks to fill before emptying.

DO keep both tank dump valves closed and the drain cap tightly in place when travelling to permit use of the system when on the road.

DO use soft, single-ply, non-dyed, biodegradable toilet tissue.

DO open the shower room vent to keep the air fresh.

DON'T put facial tissues, paper, permanent (automotive) antifreeze, sanitary napkins, or household toilet cleansers in your holding tank.

DON'T put anything solid in your holding tank which can scratch or damage its plastic components.

Using On-Site Sewer Hook-Ups

When staying at a campsite for any period of time where sewer hook-ups are available, the sewer hose may be attached and left in place for the duration of the stay.

However, the dump valves should be left closed. They should be opened only when the tanks are full or when you are ready to leave the campsite. This will keep solid wastes in suspension allowing them to drain with the liquids when the valves are opened. If the valves are left open, the liquid wastes will drain, leaving the solids to collect on the floor of the black water holding tank.

Should this happen, close the valves, fill the tank with water and drive a few miles. A 1/4 cup of dish detergent added to the tank will help to clean it. The motion of the vehicle and the water will dislodge the wastes and allow the tank to be drained in the normal manner.

Water Heater

Operation

The water heater is designed to operate using LP gas or 120 volt AC power. The water heater is accessible from both the outside and the inside of the coach.

To operate on 120 volt AC power

1. Remove the water heater exterior cover (1) by releasing the latch (2).
2. Turn the exterior water heater switch (3) to “ON.”

To operate on LP Gas

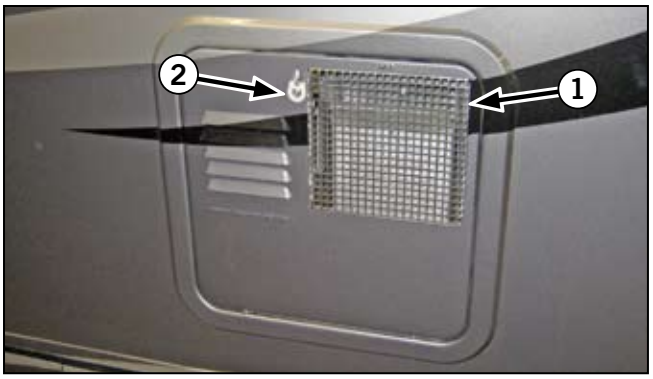
3. Turn the exterior water heater switch (3) to “OFF.”
4. Turn the propane shut off switch (4) to “ON” and turn the heater switch (5) on the system monitor panel to “ON.” The water heater will automatically light.

⚠ Caution ⚠

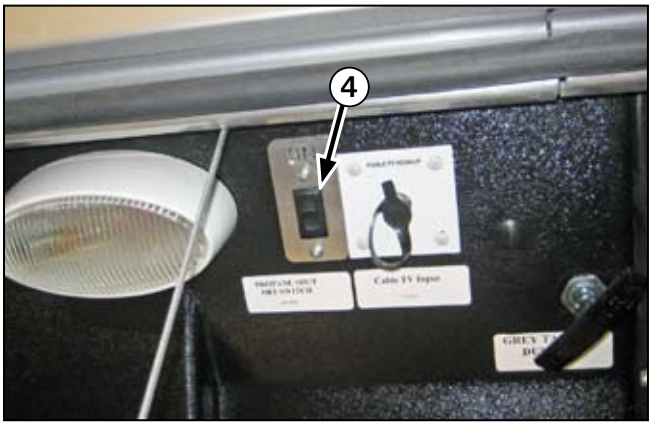
Be sure there is water in the hot water tank to prevent burning out the heating element when the power is turned on.

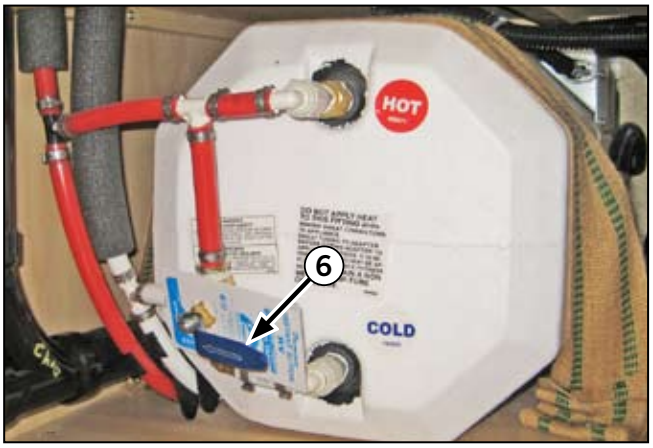
Operating Features

1. To fill the water heater, make sure there is a water supply from the city water or fresh water tank. Turn the bypass valve (6) on the water heater to “NORMAL FLOW.” Turn the hot water tap on at the kitchen faucet. It will take a few minutes for the water heater to fill up. Once water flows steadily at the faucet, the water heater is full.











2. The water heater is equipped with a preset water temperature control. The burner will bring the water temperature up to the desired level and then automatically shut off. The burner automatically re-ignites when necessary to maintain the preset water temperature.



⚠ Caution ⚠

Do not touch the water heater canister or the burner exhaust vent. These components are extremely hot and contact can cause serious burns.

3. The water heater is also equipped with a temperature cut-off device in case the water temperature exceeds the preset limit. The breaker will trip and shut down the burner. Before the burner will restart, the breaker will have to be reset by simultaneously pressing the reset buttons (1). If the breaker continues to trip, have the unit checked and serviced. Refer to water heater manual located in the information kit for further details.



Water Heater Bypass Valve

The water heater valve (2) controls the water heater plumbing circuit setting for normal or winterize operation. Turning the valve to point to “NORMAL FLOW” diverts the flow of water into the water heater, while turning the valve to point to “WINTERIZE” allows the water to bypass the heater.

Refer to water heater operating instructions located in the information kit for further winterizing procedure details.

Water Fixtures

Fresh Water Toilet

The toilet in your Motorhome is very much like the one in your home except that it uses a much smaller amount of water for flushing.

Operation

When the foot valve (1) is pushed down for flushing, a high velocity stream of water produces a swirl effect that should effectively cleanse the toilet. If you wish, a deodorizing agent may be used to eliminate any odors from the toilet.

Refer to the toilet operating manual located in the information kit for further details.

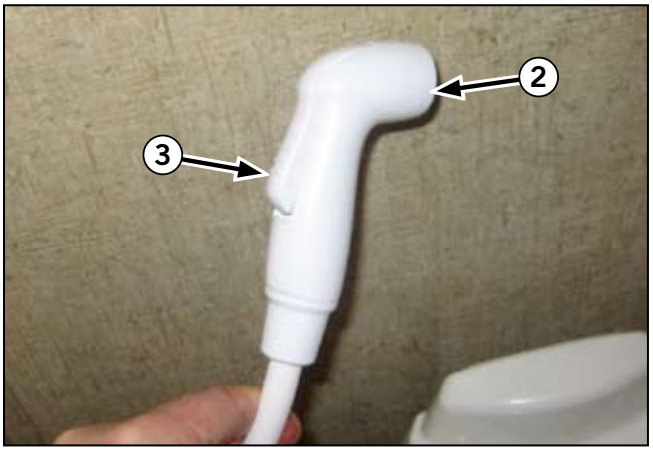


Spray Nozzle

The manual flush toilet is equipped with a hand held spray nozzle (2).

To activate the spray nozzle, press the lever (3).

Refer to toilet operating instructions located in the information kit for further details.



Cleaning the Toilet

The toilet should be cleaned regularly for sanitation and efficient operation.

1. Clean the toilet using a mild bathroom cleaner. Do not use caustic or abrasive cleansers. Do not allow cleaners to remain in the toilet bowl for any length of time. Plastic surfaces and seals could be damaged.
2. Dump and rinse the holding tank after cleaning and flushing the toilet.
3. Add a bit of odor control chemical every few days to eliminate any possibility of odor in the bathroom.
4. If the operation of the manual flush valve is diminished or becomes stiff, the toilet plunger may need to be lubricated. Keep the toilet plunger lubricated by leaving a small amount of water in the toilet or turning off the water pump, draining all the water from the toilet bowl, and lubricating plunger O-ring inside the toilet. Operate the valve several times to make sure it is operating freely.

Refer to toilet operating manual located in the information kit for details on preparing the toilet for cold weather storage. Also refer to the Storage and Winterizing section of this manual for further details.

Interior Shower (1)

Your Motorhome is equipped with a full shower unit. Lock the shower doors while in transit.



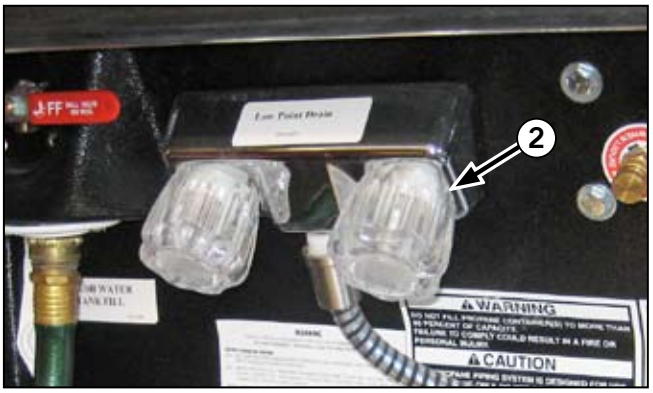
Exterior Shower (2)

Your Motorhome is equipped with an exterior shower unit, located in the utility center on the driver's side rear compartment.

Hot Water - This standard water tap controls the flow of hot water to the shower head. Turn clockwise to turn off and counterclockwise to turn on.

Cold Water - This standard water tap controls the flow of cold water to the shower head. Turn clockwise to turn off and counterclockwise to turn on.

Shower Head - This standard flexible hose shower system is mounted in the compartment. Turn the handle and lift the head to use it.



Liquid Propane Gas System

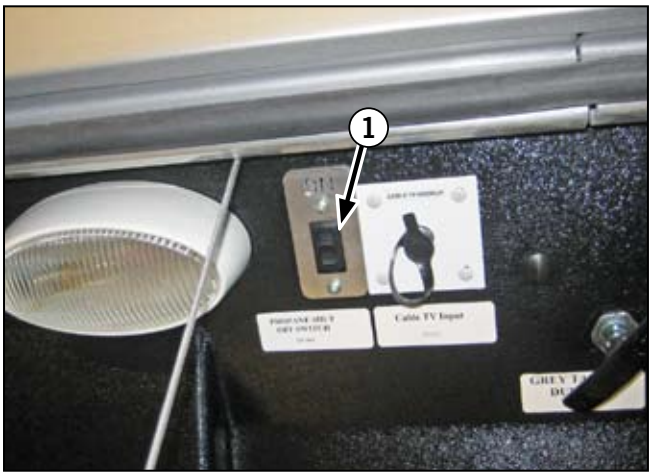
LP (Liquified Petroleum) gas is a colorless gas compressed into liquid form for easy transportation and storage. It is the energy source for your range, oven, furnace, water heater, and an alternate energy source for your refrigerator. LP gas is an excellent fuel source and both safe and economical when used properly.

⚠ Caution ⚠

These instructions are provided as a general guideline only and may not be complete. To ensure proper service and safety, always take your Motorhome to an authorized Leisure Travel Vans Dealer service center.

LP Valve Gas Control (Utility Center)

The switch (1) opens and closes the LP gas valve. If there is no 12 volt DC power available in the Motorhome, the LP gas valve will automatically close.



Safe Use Of LP Gas

The LP gas system is designed and built to adhere to federal government and industry regulation requirements.

Many safety devices and backup systems have been installed in your Motorhome to improve safety and reliability. These devices and systems include: tank overflow valves, LP gas detector, and carbon monoxide (CO) detectors. LP gas also contains an odor additive so that it can be more easily detected.

Observe the following precautions for the safe use of LP gas.

1. Familiarize yourself with the odor of LP gas. If you suspect a leak, turn off the LP gas supply immediately and determine the source of the leak with the help of qualified service personnel.
2. Do not tamper with any part of the LP gas system, piping or regulator. Service and maintenance should be performed only by qualified personnel.
3. **Do not use natural gas in an LP gas system**.
4. Check the entire system for leaks every time the tank is filled. Take time to regularly inspect the system for leaks.
5. Turn off the LP gas supply valve when the LP gas system is not used.
6. The LP gas tank should never be filled above the 80% level. LP gas requires room to expand within the tank.
7. Make sure all appliance vents are open and free of obstruction when using the LP gas system.
8. When drilling holes in walls or attaching objects, be careful not to damage gas lines or electrical wiring.

Selecting Fuel Types

Butane burns at a much higher temperature than propane but will not change from a liquid to a gas at temperatures below 32 °F - 0 °C. Propane, on the other hand, burns at a lower temperature and will continue to convert from a liquid to a gas at temperatures as low as -40 °F or -40 °C.

LP gas dealers will normally handle only the type of gas commonly used and suited to the climate in their area. If you travel from a warmer part of the country to a colder area you may want to verify that you have the right type of LP gas.

How LP Gas Works

There are two types of LP (Liquified Petroleum) gas - propane and butane. Both are compressed into a liquid for easier transportation and storage. Common names used are tank gas, bottle gas, or simply LP.

In the tank, LP gas is in the form of a liquid under very high pressure. As it is released, it changes to a vapor or gas and expands to a much greater volume.

Caution should be exercised when temperatures fall below -40 °C (-40 degrees °F). You could be without propane at these lower temperatures.

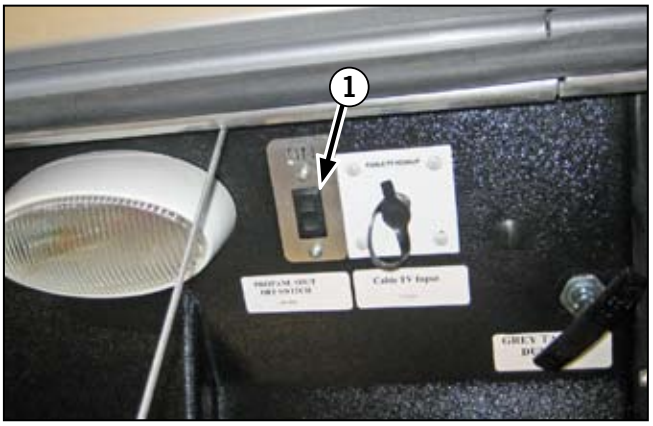
LP Gas Tank System

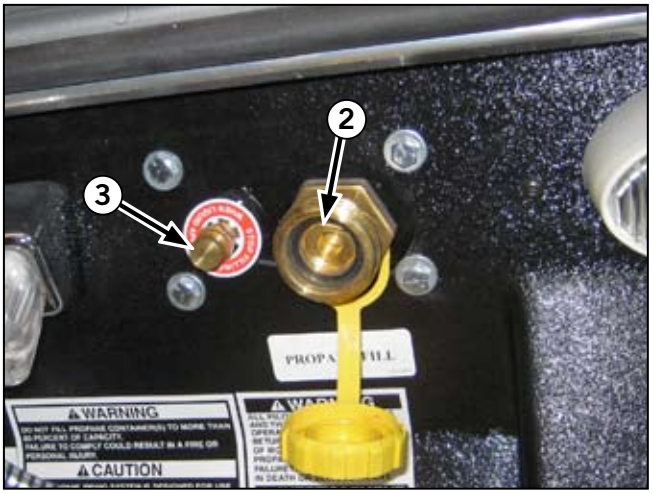
The LP gas storage tank is mounted underneath the Motorhome attached to the vehicle floor. It is accessible only from outside the vehicle. The tank valve is located near the top center of the tank next to the regulator. Before opening the supply valve, make sure all controls for the various appliances are in the “OFF” position. This is to prevent any LP gas from leaking into the Motorhome. The supply valve is operated by the LP gas switch on the monitor panel. The valve is held open using 12 volt DC power. If the battery is dead or the battery disconnect is switched off the valve will automatically close. **NOTE: The LP gas storage tank is also equipped with a manually operated shut-off valve. See the maintenance section of this manual for details.**

Refilling the LP Gas Tank

To fill the LP gas tank:

1. Shut off the LP gas control valve on the utility center panel via the rocker switch (1) when filling the tank and during travel. Always refill an empty LP gas tank as soon as possible.
2. Connect the LP gas supply to fill connector (2).
3. Do not overfill your LP gas tank. Stop filling when liquid appears at the overflow valve (3) (often called a 10% valve) which contacts the liquid level at 80% of container capacity allowing 20% for expansion.
4. Check after each filling by opening the overflow valve and bleed gas in well-ventilated area until white liquid stops. Overfilling may cause damage to the regulator and cause malfunction of LP gas appliances.





IMPORTANT

The LP gas tank has an automatic 80% stop-fill device to prevent over filling of the tank. To ensure against over filling, it may be advisable to have the tank filled only by an authorized filling station.

The tank is permanently mounted to the Motorhome. Therefore the Motorhome must be taken to a fueling station to be filled. When the liquid LP gas appears at the overflow valve (3) the tank is full.

LP gas stations are found in all parts of the country. Check the yellow pages in your telephone book if you have trouble finding a station. Look under “Gas - Liquified Petroleum - Bottled and Bulk” or “Propane.”

⚠ Warning ⚠

Do not smoke when refuelling. Keep flames, sparks and smoking material away from fuel or flammable fumes.

⚠ Warning ⚠

- Never overfill the LP gas tank. Make sure your Motorhome is level when filling the tank.
- Make sure all pilot lights are “OFF” before refueling any of the gas tanks on your Motorhome.
- Do not smoke or have any open flame in the area where refueling is taking place.
- When testing for leaks in the LP gas system use a soap and water solution. Never use an open flame to test for leaks.
- Never fill the LP gas tank when either the engine or the generator is running.
- Keep all protective covers and caps in place.

⚠ Warning ⚠

Remind the service attendant to use the 80% overflow valve when refueling. Space must be left in the tank for vaporization and expansion.

Never carry LP or any other flammable liquid containers inside the living or driving areas of your Motorhome. Gases may inadvertently be discharged into the confined space which could result in fire or explosion.

After the LP gas tank has been filled

1. Check all container and line connections periodically to be sure they are tight. When testing for leaks, use soapy water (never a match). LP gas has a distinct garlic odor.
2. If gasoline or LP gas fumes are noticed at any time, the cause should be determined and corrected without delay.
3. Before opening the control valve via the rocker switch on the monitor panel, check that controls for all gas appliances are in the “OFF” position. If this is not done, LP gas could accumulate inside the Motorhome creating a fire or explosion hazard.
4. LP gas is potentially lethal if inhaled.

Air in the LP Gas Tank

If your LP gas appliances burn poorly or do not stay lit even though you are sure you have plenty of fuel, you may have air trapped in the LP gas tank. The air will eventually escape along with the LP gas but it may be necessary to you have your LP gas tank purged of air by ypur LP gas dealer.

Travelling with LP Gas

In some jurisdictions it is illegal to transport LP gas on certain roads or through tunnels. Check state or provincial regulations to make sure your trip will not be halted or impeded unexpectedly as a result.

LP Gas Tank Regulator

The LP gas tank regulator has a plastic cover to protect it from the weather. This should never be removed except by qualified service personnel.

The pressure regulator has a vent hole on the underneath side. Make sure this vent hole is open and not obstructed in any way.

During freezing weather an LP gas regulator may freeze. This may result from a small amount of moisture in the fuel, even though most gas dealers take precautions to prevent his from happening. To help avoid freezing, keep the control valve closed when not in use, even when the LP gas tank is empty. This helps prevent condensation from forming. Hold a light bulb near the regulator to thaw it.

If moisture in the LP gas tank is a recurring problem, you may ask your LP gas dealer to inject a small amount of dry methyl alcohol into the tank to absorb the moisture.

LP gas vaporizes quickly and easily at warmer temperatures. Under cold conditions this process slows down dramatically. When large amounts of fuel are required when using the furnace, for example, the fuel may not vaporize rapidly enough to keep all the appliances going at a high level. In this case you may have to reduce the consumption of fuel by lowering the temperature setting on the furnace, reducing the consumption of hot water, turning down the temperature setting on your refrigerator or switching from LP gas to electric power where possible.

The LP gas regulator pressure is preset. Do not attempt to adjust it. Adjustment should only be done by an authorized service outlet. The regulator must not be exposed to the elements.

If the LP gas regulator fails the LP gas tank may be overfilled, or there may be impurities in the propane. Regulator failure could cause LP gas components to malfunction.

⚠ Warning ⚠

Do not use an open flame or a heat lamp to thaw out regulator.

LP Gas Leaks

Notice the label placed near the range area. **(Do not remove this label.)** If you ever smell LP gas in the vehicle or the detector alarm sounds, follow the instructions carefully.

Road vibration can loosen propane fittings. It is important to check the propane system for leaks at least every 5,000 miles and whenever the tank is filled. The entire propane system should also be checked annually by a qualified propane service representative, irrespective of miles driven.

1. Read, understand, and follow safety labels, signs and directions in the Motorhome.

⚠ Warning ⚠

IF YOU SMELL GAS

1. Extinguish any open flame, pilot lights and all smoking material.
2. Do not touch electrical switches.
3. Shut off the LP gas tank valve.
4. Open doors, windows and roof vents after making sure the power vent is switched off.
5. Leave the area until the odor is gone.
6. Have the system checked for leaks and make all necessary corrections and repairs.

2. Use soapy water to check for leaks and watch for bubbles. Do not use an open flame.
3. Correct or repair leak(s) before using appliances or vehicle again.

⚠ Warning ⚠

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

Do not use materials that contain AMMONIA or CHLORINE to check for leakage.

Avoiding Asphyxiation

1. Do not use portable fuel-burning equipment, such as wood and charcoal grills, heater or stoves in the Motorhome. The use of this equipment can generate deadly carbon monoxide gas or cause fires.
2. Provide proper ventilation when using the gas range to prevent asphyxiation. Do not use the range to heat the vehicle. Long term use of these appliances for space heating increases the chance of asphyxiation. Before using the range:
   - Open overhead vent
   - Open window
3. Avoid breathing the exhaust fumes from a gas or diesel engine and LP gas burner. Such exhaust fumes may be generated from operating the Motorhome or generator engine or stove, oven, refrigerator, furnace or water heater. Position the Motorhome so the wind blows exhaust fumes away. Provide ventilation to the inside of the Motorhome for adequate air exchange when appliances or furnaces are being used to prevent a build up of carbon monoxide. Be sure all alarms are in proper working condition.
4. Do not run Motorhome or generator engine in a confined area such as a garage unless you are just moving it out of such conined area.
5. Use vent or air conditioning fan to force fresh air into the interior when vehicle is in an open area with the engine running for more than just a short time.
6. Maintain engine and generator exhaust system components in top condition to prevent fumes from entering the Motorhome. Check when changing oil, when exhaust sound changes or when the underbody of the Motorhome comes in contact with an object or is damaged.
7. Close rear windows when driving to prevent drawing exhaust fumes into vehicle.

When the Motorhome is new, some of the appliances will burn off paint or residue which has accumulated during production. You may also note some odors from cleaners which will dissipate with ventilation.

Motorhome Maintenance

Exterior Care and Maintenance

Roof

The roof is made of a bowed aluminium frame and constructed in a laminated ‘sandwich’ method. It is strong enough to support the weight of an average adult should it become necessary to repair the roof or any of the roof mounted components. It is not recommended to carry large heavy objects on the roof. The additional strain of the weight along with the movement of the vehicle could cause damage to the roof. Check the roof regularly, especially the sealant around vents, air conditioners, body-to-roof seams, etc., for possible leaks. Any suspected leaks should be repaired immediately. Any leakage could result in damage to the interior of the Motorhome.

Underbody

Mud and dirt along with corrosive materials used to control dust or ice on the roads can accumulate underneath your Motorhome and cause premature deterioration and rusting. In addition, any build up will add unnecessary weight to the Motorhome. It is recommended that the undercarriage and the entire underbody be rinsed and flushed every time the Motorhome is washed.

Washing, Waxing and Polishing

Damaging salts, calcium chloride, road tar, tree sap, insects and other foreign material have a way of accumulating on the body of your motorhome. To reduce the harmful effects of these agents it is recommended that the motorhome be washed frequently and thoroughly using a mild soap and warm water. Do not wash the exterior in direct sunlight and never use hot water. Pressure washers are not a good idea as they can loosen decals and sealants. Waxing your RV is strongly recommended to counter the effect of UV exposure on the exterior fiberglass parts.

Carefully inspect all caulking around windows, doors, and vents as well as all other joints. Re-caulk if necessary using the correct caulking material from your Leisure Travel Vans dealer. If you notice that water failing to bead on the surface of your Motorhome it is probably time to polish and wax it. This will not only improve the appearance of your Motorhome, but will protect the painted surfaces from oxidation and corrosion and make it easier to wash.

⚠ Caution ⚠

These instructions are provided as a general guideline only and may not be complete. To ensure proper service and safety, always take your Motorhome to an authorized Leisure Travel Vans Dealer service center.

Stripes and Decals

A few hints and precautions on care and maintenance of stripes and decals on your Motorhome.

- Wash with plain soap and warm water. Rinse thoroughly.
- Never wash with high-pressure washer at close range. The force of the water can lift the edges of decals.
- Do not use solvents. They can smear the colors and damage the adhesive.
- Never use lacquer thinner or paint on decals.
- Avoid splashing gasoline or diesel fuel on decals and stripes. Rinse immediately if it happens.

Exterior Lighting

Before each trip, inspect all clearance lights, identification lights, marker lights, stop lights, turn signal lights and backup lights. Replace burned out bulbs immediately. Keep all light lenses clean with soap and water.

Interior Care

Accumulations of dirt and dust not only detract from the appearance of the interior of your Motorhome but will shorten the life of the carpets and fabrics. Weekly cleaning and vacuuming is recommended.

Carpets

See manufacturer's carpet care guide on how to clean soil, dirt and stains from the carpet.

Upholstery

Care should be taken when cleaning upholstery materials in your Motorhome. Do not use just any cleaner or spot remover. Regular vacuuming and wiping with clear water will take care of most stains. Any major cleaning problems should be undertaken by professional cleaners.

IMPORTANT

Direct sunlight will cause fading of upholstery and fabrics. To minimize the effect, close drapes, blinds and shades whenever possible.

Spots and Stains

Most spots and stains can be removed by using clear warm water. To keep the stain from spreading, start from the outside of the stain and work toward the center.

Stains such as lipstick, grease, ink or mustard are very hard to remove and will probably require some professional advice or help.

Vinyl Fabrics

Vinyl should be cleaned with a soft, damp cloth using a mild detergent. Never use solvents of any kind on vinyl surfaces.

Vinyl Manufacturer's Recommendations: To clean most common household stains use warm, soapy water and a clear water rinse. For more stubborn stains, Fantastik™ or Mr. Clean™ diluted 3:1 with water are recommended.

Draperies, Curtains and Bedspreads

These are made from a variety of fabrics and will require the help of professional cleaners. It should be noted that most materials will probably shrink by about five percent even when cleaned professionally.

Cabinetry

Only the finest wood products have been used in the construction of your Motorhome. To clean, use a soft cloth and a high quality wood finish cleaning product available from your RV center.

The beauty of the wood is in the natural variations in grain and density causing some differences in color and shading.

Walls

As a rule, walls can be cleaned easily using warm water and a mild soap. For easier cleaning of accumulated grime, a small quantity of rubbing alcohol may be added to the water. Never use solvents or abrasives.

Tables and Countertops

The plastic laminate on work surfaces will resist solvents, stains and abrasions. A coat of furniture wax will help preserve the beauty of laminates and make cleaning easier.

Sinks

The sinks can be cleaned with warm water and soap. Wipe dry to avoid streaks. For stubborn stains, a mild abrasive may be necessary. Always work in the direction of the polish lines.

Refrigerator

The cabinet interior should be cleaned regularly. Remove shelves and wash the lining with lukewarm water to which a mild soap may be added. Dry thoroughly, especially around door frame and door gasket. Warm water only should be used to wash the cooling evaporator, ice trays, and shelves. Never use strong chemicals or abrasive cleaning materials on any part of the cabinet. See the refrigerator manual in the information kit.

⚠ Caution ⚠

Use of water-based and detergent-based solvent cleaners may cause excessive shrinking of fabrics. Water stains may become permanent and unable to be removed with solvent cleaning agents.

Stove Top - General

Regular cleaning with a warm detergent solution and soft cloth will keep your stove top looking bright and new. This should be done as soon as stove top cools.

Top Burners

Stove top burners (caps and grates) may be cleaned with a detergent solution. If any burner port should become clogged, clean with a toothpick. Never use pins or other metal objects to clean the ports, as they may enlarged the ports.

If a cap or grate is washed in a sink, dry it immediately by shaking off all excess water, reinstalling on the stove top and lighting the burner until all water has evaporated.

Microwave/Convention Oven

Keep the door and inside of your microwave/convection oven clean. No grease, soil or spatter should be allowed to build up. A build up of soil will absorb microwave energy just the same as the food you are cooking and may increase the cooking time.

- When food spatters or spilled liquids adhere to walls, wipe with a damp cloth. Mild detergents may be used if the oven gets very dirty. The use of harsh detergents or abrasives is not recommended.
- The outside oven surface should be cleaned with soap and water, rinsed and dried with a soft cloth. To prevent damage to the operating parts inside the oven, water should not be allowed to seep into the ventilation openings.
- If the control panel becomes wet, clean it with a soft, dry cloth. Do not use harsh detergents or abrasives on the control panel. When cleaning the control panel, leave the oven door open to prevent the oven from accidentally turning on. After cleaning, touch the cancel pad to clear the display window.
- It is necessary to remove the glass tray for cleaning. Wash the tray in warm sudsy water or in a dishwasher.
- Refer to the microwave/convection oven manual in the information kit for further details.

Bathroom - General

As a general rule, use warm water and mild soap to clean walls and surfaces in your bathroom. On mirrors a good quality glass cleaner may be used. Harsh cleaners, detergents, or abrasives should never be used.

Toilet

For instructions on the care of the toilet, refer to the toilet manual in the information kit.

Doors and Windows

Door locks and hinges should be lubricated periodically with powdered graphite to keep them operating easily and to protect against freeze-up. Windows should be cleaned using a good glass cleaner. When cleaning ice from windows always use a plastic scraper and avoid damaging the seals and sealant along the edge of the windows.

Storage and Winterization

All systems, components and appliances should be inspected and repaired prior to storage.

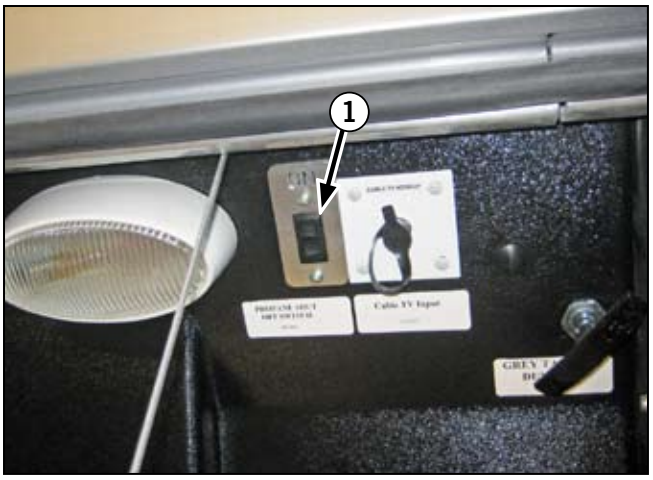
Storage Checklist

1. Fill the Motorhome fuel tank to reduce excessive build up of moisture in the fuel tank.
2. Check coolant level and add antifreeze if required, to protect to the lowest expected temperature during storage.
3. Change the engine oil to the recommended viscosity to aid cold weather starting.
4. Park the Motorhome as level as possible.
5. Ensure the battery has a full charge, then disconnect both the chassis and coach batteries via the battery disconnect switch. Charge monthly.
6. Wash the Motorhome. If exposed to road salts, the exterior and underside should be thoroughly washed and flushed.
7. Remove all perishables and anything which may freeze (canned goods, medicine, etc). Leave the refrigerator door open. Ensure all controls are turned off.
8. Ventilate the living area, open drawers, cabinets, closets, etc.
9. Drain the grey and black water holding tanks, toilet and living area water system. Deodorize and allow to dry. Turn off the water heater. Drain the fresh water tank and water heater. Winterize (to store) the water system as detailed in Water System Winterization below.
10. Turn “OFF” the LP gas tank valve switch (1).

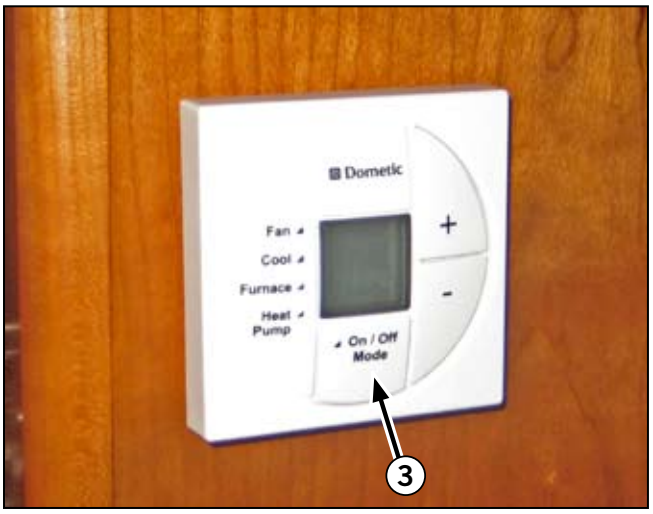
IMPORTANT

Make sure the hot water tank 120 volt lockout switch (2) and coach thermostat (3) are set at “OFF” and the stove top burners and refrigerator are set to “OFF.”

11. Check the engine, transmission and auxiliary generator (if equipped) for evidence of oil leaks.
12. Before moving the Motorhome, run the engine for at least two minutes with the transmission selector in park position to circulate lubricant in the transmission.







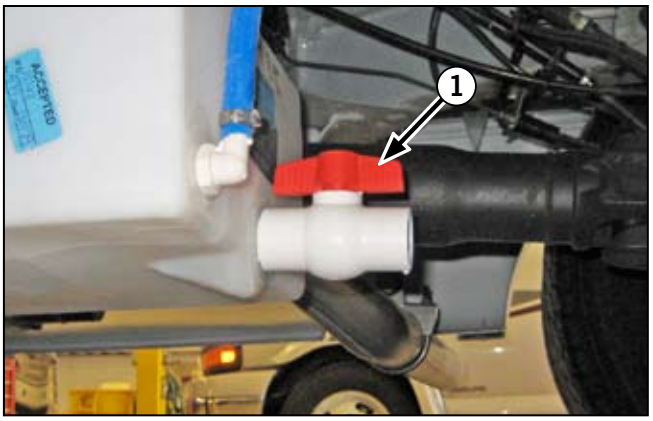
Cold Temperature Storage

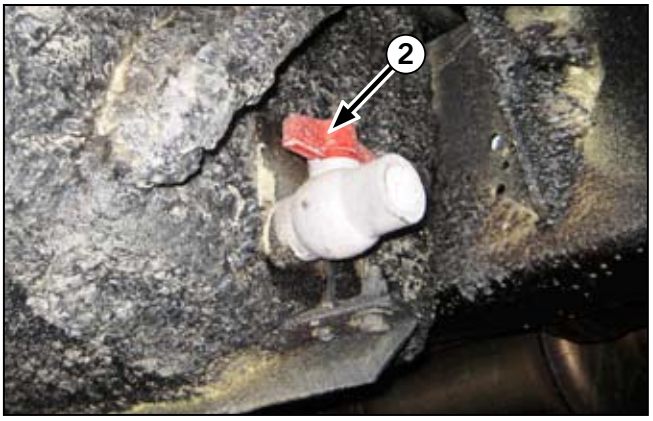
Water system winterization - Draining

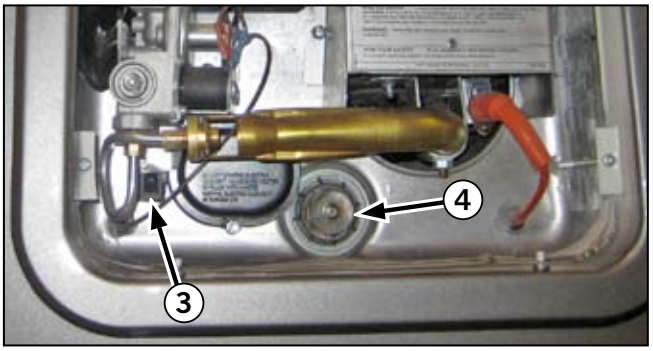
1. Drain the fresh water tank by opening the fresh water tank drain valve located on the underside of the coach in the following positions:

   Serenity - Road side in front of rear axle (1)
   Libero - Curb side forward (2)
2. When the fresh water tank is completely empty, run the water pump for 1 minute to drain out any water remaining in the pump.
3. Make sure the hot water tank 120 volt lockout switch (3) is “OFF.”
4. Drain the water heater by relieving the pressure at the pressure relief valve and remove the anode rod / drain plug (4).
5. Turn hot water tank bypass valve (5) to the “BYPASS” position.
6. Attach the blow out plug to the city water hookup in the utility console.
7. Connect a compressed air line to the blow out plug.
8. Open all hot and cold water faucets including the exterior shower and blow out all water. U24TB and U24CB models equipped with electric macerator toilet should be also be flushed at this time. **DO NOT FLUSH NON-MACERATOR TOILETS AT THIS TIME**.
9. For Unity U24TB and U24CB only - With the compressed air line removed, deplete all air pressure from the water system by opening a faucet. Then depress the toilet flush lever while an assistant applies compressed air into the blow out plug.

   NOTE: There is a possibility of damage to the toilet flush valve if the flush pedal is depressed while there is air pressure in the system.
10. Disconnect the air line and remove the blow out plug. Release air pressure by opening all faucets.
11. Remove the water filter canister and empty any remaining water. Refit the filter canister with a new filter cartridge.
12. Drain the black and grey waste holding tanks.
13. Add approximately 1 cup of non-toxic plumbing antifreeze to the kitchen, bathroom, shower drain and toilet bowl.
14. With the termination valves closed, run the macerator (if equipped) for 10 seconds or until the tank is completely empty.









Winterization with Plumbing Non-toxic Antifreeze

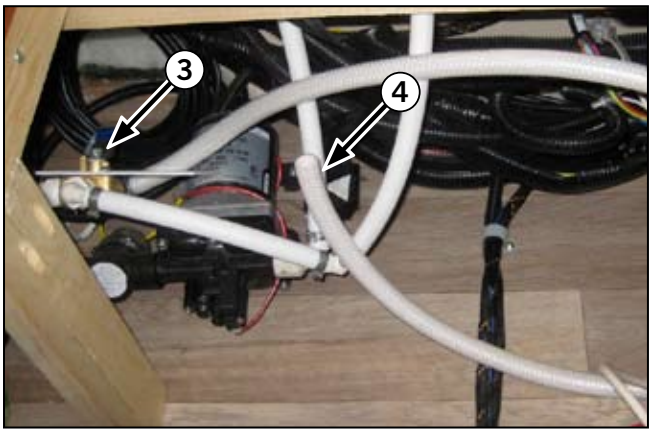
1. Make sure the water tank heater LP gas switch (1) is switched “OFF.”
2. Turn the hot water tank by-pass valve (2) to “BY-PASS.”
3. Turn the winterize valve (3) to “WINTERIZE.”
4. Place the suction hose (4) attached to the winterize by-pass valve into a container filled with non-toxic plumbing antifreeze.
5. Turn the water pump switch (5) “ON” and pump antifreeze through the kitchen faucet, vanity faucet, shower, exterior faucet, toilet and toilet spray (if equipped).
6. Add approximately 1 cup of antifreeze to each drain outlet.
7. Drain and flush the hot water tank. Drain the black and grey waste holding tanks.
8. Empty the water filter canister of antifreeze.
9. Open all faucets to release air pressure.
10. Remove the screen from the city water fill connection and depress center stem until no more water drains out.

⚠ Warning ⚠

Do not use automotive coolant antifreeze. It is toxic and will contaminate the water system.







De-Winterizing the Water Systems

NOTE: Flush entire water system before filling the hot water tank.

1. Refill the water tank with fresh city water.
2. Turn the bypass valve, located in the utility center to the “NORMAL FLOW” position.
3. Turn the bypass valve, located in the water heater to the “NORMAL FLOW” position.
4. Turn on the water pump switch located on the system monitor panel.
5. Open the water faucet furthest away from the water tank. Run the water until clear water appears. Shut off the faucet, and do this to all faucets and shower head in turn.
6. Open the hot water line until clear water appears.

Spring Startup

Following a storage period, reactivate your Motorhome by hooking up the water pump. Pressurize the water system and make sure it is not leaking. A visual check is all that is needed. (Monitor the water system for 15 minutes.)

Clean all your appliances and have the propane line purged by a reputable dealer. Make certain everything in the Motorhome works correctly. Consult the chassis manual for any chassis maintenance recommendations. Now you are ready to hit the road.

Cold Temperature Operation

Although your Motorhome is designed to withstand colder temperatures, we cannot guarantee the vehicle not to freeze. Certain precautions should be taken in preparing for sub-zero temperature travelling.

Do not use the fresh water system in cold weather temperatures. Use only a carry-on water supply in these conditions.

Chassis

Check engine coolant level and add antifreeze, if required, to protect against lowest expected temperature. Change engine oil to the recommended viscosity to aid cold weather starting. See the chassis manual in the information kit for further recommendations.

LP Gas

When travelling in winter, propane is recommended, as it will vaporize in extreme cold (above -42 °C). Butane is not recommended due to its high vaporization temperature (0 °C). Use of butane in cold temperatures may block the system and cause components to malfunction. Add approximately .25 liters of methyl alcohol to your LP gas container to prevent freeze-up.

Waste System

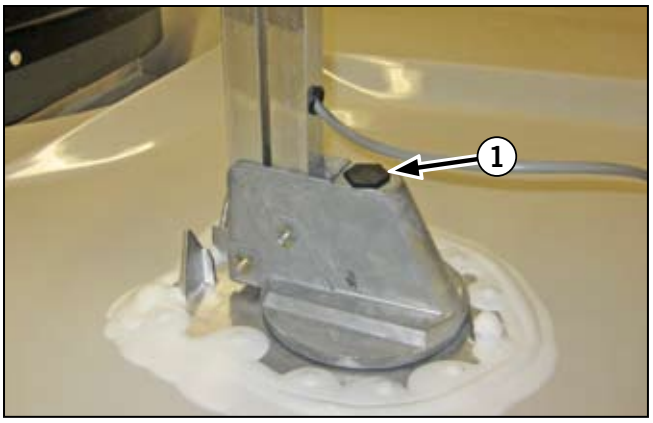
To prevent winter freeze-up, add regular RV antifreeze through the toilet and kitchen drains, directly into the holding tanks. Be sure to add sufficient amounts in order to protect the total volume of the holding tanks.

NOTE: Do not use alcohol-based antifreeze or other petroleum products.

Maintenance and Service

TV Antenna

The elevating mechanism of the TV antenna must be periodically lubricated by removing the plastic plug (1). Refer to the antenna manual in the information kit for details.

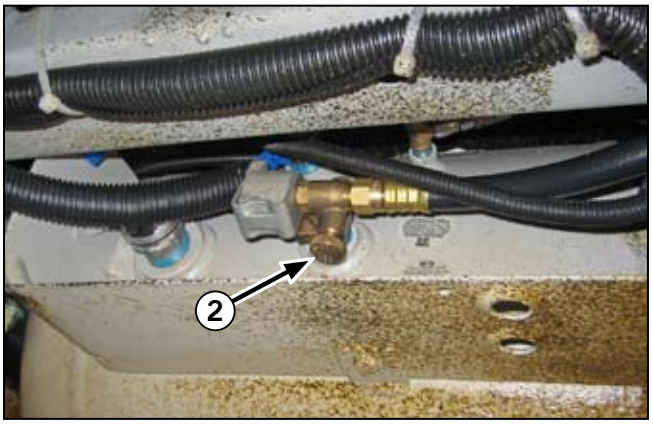


LP Gas Tank Valve

If the electrically operated LP gas valve fails to operate the LP gas tank, mounted underneath the Motorhome, can be manually shut-off by turning the valve (2) clockwise.

Stabilizers

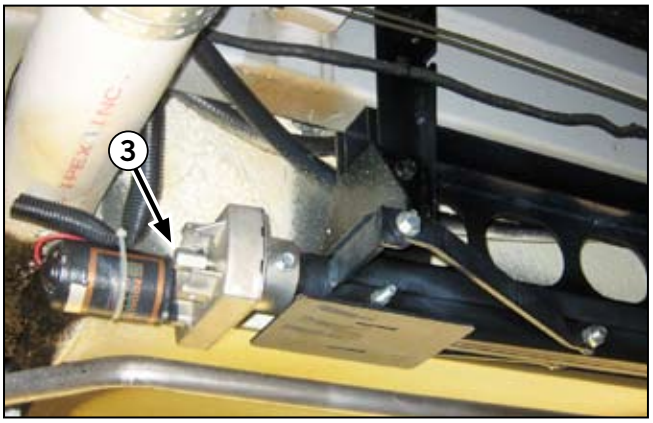
If the electrically operated stabilizers fail to operate, a manually override facility enables them to be raising and lowering using the override coupler (3) on each stabilizer unit.



⚠ Caution ⚠

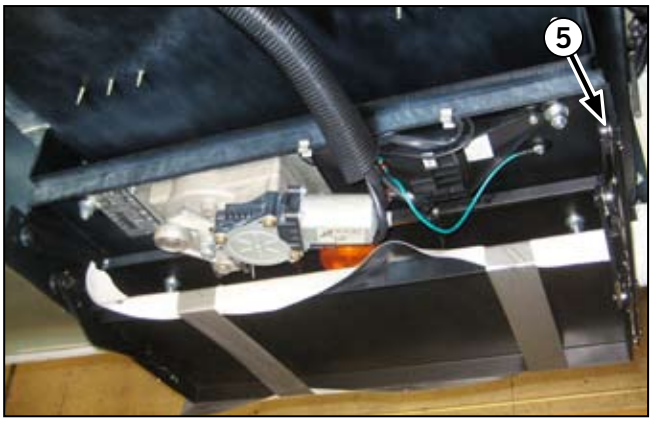
See detailed operating and safety instructions in the information kit before carrying out the stabilizer override procedure.

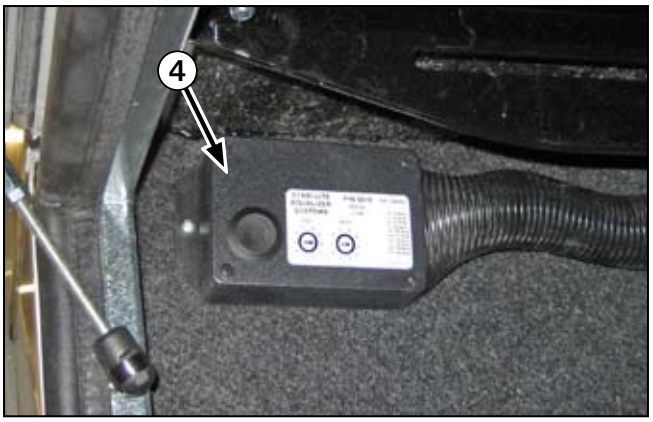
Stabilizer force can be adjusted via the stabilizer control module (4) located in a rear exterior storage compartment. Refer to stabilizer installation guide located in the information kit for further details on adjustment and maintenance.



Electric Steps

The electric steps mechanism (5) requires periodic lubrication. Refer to the steps manual in the information kit for details.





2013 NEW VEHICLE LIMITED WARRANTY

TRIPLE E CANADA LTD. (Revised Feb. 2013)

This New Vehicle Limited Warranty is the sole and only warranty applicable to your new Motorhome. This Warranty is issued by Triple E Canada Ltd., only, which is the manufacturer of your Motorhome. Triple E Canada Ltd., uses a variety of trade and/or division names in marketing or advertising its motorhomes. Triple E Canada Ltd., is referred to throughout this Warranty as "Triple E RV."

1. Basic Coverage.

Triple E RV warrants to the first retail purchaser of the Motorhome that all parts and components of the Motorhome manufactured by Triple E RV will be free from defects in materials and workmanship for a period of twenty-four months or 24,000 miles (40,000 kilometers), whichever occurs first, after the date of purchase by the first retail purchaser of the Motorhome from an authorized Triple E RV dealer. Defective parts shall be repaired or replaced at the election of Triple E RV upon return of the Motorhome to an authorized Triple E RV service center or dealer. In addition, Triple E RV will cover the cost of labor by an authorized Triple E RV service center or dealer to remove, repair and/or replace such defective parts covered by this Warranty.

2. Structural Coverage.

Triple E RV warrants to the first retail purchaser of the Motorhome that all structural components of the Motorhome manufactured by Triple E RV will be free of defects in materials and workmanship for a period of thirty-six months or 36,000 miles (60,000 kilometers), whichever occurs first, after the date of purchase by the first retail purchaser from an authorized Triple E RV dealer. All such defective structural parts shall be repaired or replaced at the election of Triple E RV upon return to an authorized Triple E RV service center or dealer. In addition, Triple E RV will cover the cost of labor by an authorized Triple E RV service center or dealer to remove, repair and/or replace such defective structural parts. For purposes of structural warranty coverage, structural components shall include only the main steel frame of the coach and all steel members welded to it, studs and framing in the walls of the coach, roof rafters and delamination of the fiberglass body parts of the coach. All other items are covered solely by and are limited by the Basic Coverage of this Warranty. On Motorhomes where the chassis and coach is designed and built by another separate manufacturer, Triple E RV makes no structural coverage warranty whatsoever, and the sole and only structural warranty coverage is provided by the manufacturer of the chassis or coach.

3. Additional Warranty Terms.

In the event a Motorhome is used for commercial or rental fleet purposes, the Basic Coverage and Structural Coverage Warranties specified above shall be limited to a period of twelve months or 12,000 miles (20,000 kilometers), whichever occurs first, from the date of original purchase. All mileage warranty limitations set forth in this Warranty will be increased by that number of miles or kilometers equal to the miles or kilometers that the Motorhome was driven from its place of original manufacture to its original selling Triple E RV dealership.

Although the Warranty is extended only to the first retail purchaser of the Motorhome, the Warranty is transferable to the second owner of the Motorhome upon written request to Triple E RV received within thirty (30) days after sale and transfer of title to the Motorhome from its first retail purchaser to its second owner, accompanied by satisfactory proof of sale and transfer. Warranties for any Motorhome used in an RV rental or lease fleet or for a commercial use are not transferable to any subsequent dealer, owner, fleet operator or retail or consumer purchaser.

4. Component Warranties.

Triple E RV obtains many items of equipment, appliances, components, sub-assemblies and/or the chassis of the Motorhome (referred to in this Warranty as a "Component") from other manufacturers. Each of these manufacturers offers its own separate warranty (and in some cases warranty extension programs) covering its respective Component(s). Triple E RV assigns to the first purchaser of the Motorhome each and every such separate warranty with respect to a Component as the sole, exclusive and only warranty in respect of such Component. Triple E RV provides no separate or independent warranty coverage for any such Component(s). The rights of a purchaser or owner of a Triple E RV Motorhome in respect of such separate Component(s) or the warranties covering such Component(s) may be conditioned upon or limited by the specific terms and conditions of such separate warranties. Information on separate Component warranties and registration for such warranties from Component manufacturers may be found in the Information Kit.

5. Chassis.

The Motorhome chassis and all components, assemblies, equipment or parts supplied or affixed to the chassis as received by Triple E RV from its supplier or manufacturer are Components and are covered only under separate warranties issued by the original chassis or Component manufacturer. Even if Triple E RV modifies the chassis in order to assemble the Motorhome, the sole warranty in respect of the chassis is provided by the manufacturer of the chassis. Please contact us for details about our responsibilities for chassis modifications before beginning any repairs.

6. Exclusions from Warranty.

The foregoing Warranty does not apply to any Motorhome which has been altered outside of the Triple E RV factory in a way which in our judgment affects its stability, operation or reliability or which has been subject to misuse, negligence or accident. The foregoing Warranty does not cover any Motorhome that has been shipped to a location outside of the United States or Canada. The foregoing Warranty excludes and does not cover or provide any remedy for damage, defects or loss resulting from abuse or misuse of the Motorhome or its equipment, appliances, components, sub-assemblies and/or chassis, failure to properly winterize the Motorhome, failure to provide regular maintenance and/or service, adjustments, tune ups, alignments, road service or failure to protect the Motorhome from further damage if any initial indication of damage has occurred. The Warranty excludes failure caused by overheating (regardless of cause), contamination of lubricants, coolants, failure of hoses, fittings, connections or lines and failure to operate and maintain the Motorhome as recommended or required in the Owner's Manual.

Your Warranty may be lost, restricted or limited if your Motorhome is not properly maintained in accordance with regularly-scheduled maintenance recommendations of both Triple E RV and any manufacturers of Components, and/or the chassis of your Motorhome. Your Warranty does not cover loss, defects or failures resulting from exposure to extreme conditions, including extremely cold weather.

Your Warranty does not cover defects or repairs required because of improper loading, load distribution, accident, collision, vandalism, abuse, misuse, neglect, fire, flood, normal wear or improper or inadequate maintenance, rust or corrosion, exposure to elements or costs incurred in towing, transporting or presenting your Motorhome for repair under the Warranty. This Warranty does not cover any Component not manufactured by Triple E RV, nor does it cover sealant, trims, fabrics, floor coverings, upholstery, draperies, blinds, paint, gel coat or decals which have experienced normal pigmentation or color changes as the result of use, age, exposure to the sun or weather.

This Warranty excludes and does not provide coverage for consequential or incidental damages, such as the loss of your Motorhome, loss of time, inconvenience, expenses, transportation to and from the dealer or manufacturing plant location, bus, taxi or air fares, telephone, travel, rental vehicle, overnight accommodations, loss or damage to your personal property, commercial loss, loss of income, loss of use or other incidental or consequential damages or expenses.

The express warranties stated herein are the sole and only warranties issued by Triple E RV in respect of your Motorhome, and Triple E RV hereby expressly disclaims all other warranties, including implied warranties of merchantability or warranties of fitness for any particular purpose. Neither your dealer nor any other person is authorized to create or imply any other warranty on behalf of Triple E RV beyond those expressed herein. Your warranty expressly excludes liability for incidental or consequential damages.

7. Obtaining Warranty Repairs.

To obtain warranty repairs, you must at your own cost present your Motorhome to an authorized service center or dealer during normal business hours and provide a written list of claimed defects or items to be repaired. If requested, you may be required to provide records showing that the Motorhome has been maintained as required or recommended by the Owner's Manual. As the owner, you are solely responsible for maintenance of the Motorhome as required or recommended by the Owner's Manual and associated costs of that maintenance. Repairs necessitated by failure to maintain the Motorhome as required or recommended are not covered by this Warranty.

If an authorized service center or dealer is unwilling or unable to make a warranty repair, Triple E RV may request the opportunity to cause those repairs to be made at another authorized service center or dealer. Refusal to grant a request to transport the Motorhome to another authorized service center or dealer at Triple E RV's cost and expense for mileage for such travel may void Warranty coverage for the requested repairs.

8. Questions about Warranty Services.

You may contact the Triple E RV Warranty Department at its toll free number (1-877-992-9906) if you have a question about this Warranty or need assistance in locating an authorized service center or dealer or if you are dissatisfied with Warranty repairs. You should also contact the Triple E RV Warranty Department at this toll free number in the event it is necessary to have Warranty repairs performed at a site other than an authorized Triple E RV service center or dealer. All such repairs performed at a site other than an authorized Triple E RV service center or dealer must be authorized by the Triple E RV Warranty Department before Warranty work can be done. Prior authorization is necessary to ensure the availability of Warranty coverage and to determine that the facility is qualified to perform such repair work.

9. Time Limitation for Initiating Claims.

Any claim for breach of this Warranty or any applicable implied or statutory warranty must be initiated within one year after the date on which the breach allegedly occurs.

10. Sole and Exclusive Remedy.

Your sole and exclusive remedy for breach of this Warranty is monetary damages in an amount equal to the actual cost of material and/or labor necessary to repair or replace defective parts that were not repaired or replaced under this Warranty. Incidental and consequential damages are not recoverable. Some states or provinces may not allow for the exclusion or limitation of incidental or consequential damages, and in such states, the above limitation or exclusion may be limited or may not apply at all.

Product improvement is an ongoing process at Triple E RV. We reserve the right to change specifications, operating instructions, standards and options on any and all products without prior notice and without imposing any additional obligation on Triple E RV to install the same upon its products which were manufactured prior to such changes.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state and/or by province.

Notes

Notes

Notes

Notes