2023 Owner's Manual



LEISURE
TRAVEL VANS

⚠ WARNING

Operating, servicing and maintaining a passenger vehicle, pickup truck, van, or off-highway motor vehicle can expose you to chemicals including engine exhaust, carbon monoxide, phthalates, and lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. To minimize exposure, avoid breathing exhaust, do not idle the engine except as necessary, service your vehicle in a well-ventilated area and wear gloves or wash your hands frequently when servicing your vehicle.
For more information go to www.P65Warnings.ca.gov/passenger-vehicle

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INTRODUCTION

Congratulations! Thank you for selecting a Leisure Travel Vans Motorhome.

Welcome to the exciting world of motorhome travel and camping, with all the comforts of home with you, while you travel and enjoy the outdoors.

Your motorhome has been designed and manufactured to enhance your travel and camping experience and to provide you with safe, efficient and trouble-free operation.

Before your first drive, become familiar with the operation of the vehicle chassis and all functions and operations of the motorhome. Spend adequate time with your dealer when you take delivery to learn all you can about your new motorhome.

OWNER'S MANUAL

This manual was prepared to aid the operator and occupants in the operation and care of the motorhome. There are many options to Leisure Travel Vans, so ensure that you are familiar with your motorhome's systems and equipment. All operators and occupants of the motorhome should read, understand and follow the instructions in this manual, the vehicle chassis manual & the information contained in the Motorhome Information Kit provided with your new motorhome.

Your motorhome contains a number of systems, components, equipment, and appliances manufactured by vendors that supply components for Triple E RV. These vendors are unrelated to Triple E RV.

Before operating the motorhome for the first time – even if an experienced motorhome operator – read and become familiar with all of the relevant manuals to your motorhome, components, equipment and appliances provided in the Motorhome Information Kit. Your familiarity with the detailed operation of your motorhome will assist in your safe, efficient and trouble-free motorhome operation.

KEEP the Motorhome Information Kit within your motorhome for readily available reference.

PASS this manual, the Chassis Operation Manual and the Motorhome Information Kit to any subsequent operator or owner.

For clarification or further details on any of the enclosed 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

MOTORHOME INFORMATION KIT

The Motorhome Information Kit includes but isn't limited to information on the components, equipment and appliances listed below (based on options selected).

- Refrigerator
- Stove top
- Furnace
- Electrical Panel
- Toilet
- Water Heater
- Water Pump
- Water Filtration
- Vent (roof)
- Fire Extinguisher
- Smoke Detector
- Thermostat
- CO Detector
- Propane Detector
- Gas Regulator
- TV Antenna
- TV/DVD
- Chassis
- Air Conditioner
- Generator
- Stabilizers/Leveling Jacks
- Inverter
- Entertainment System
- Safety
- Flooring and Countertops
- Electric Step
- Solar Panel
- Surge Protector
- Safe
- Awning

OPTIONS AND EQUIPMENT

Leisure Travel Vans are available in various sizes and floor plan configurations and with differing optional equipment. The equipment, accessories and components described in this manual may not apply in all respects to your motorhome. Read the material and manuals provided in the Motorhome Information Kit for detailed instructions regarding the equipment specific to your motorhome.

VEHICLE CERTIFICATION LABELS

The vehicle certification labels affixed to your motorhome 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

MANUFACTURE/CONVERSION DATE
The date on which the coach portion of your motorhome was built.

GROSS VEHICLE WEIGHT RATING (GVWR)
The maximum permissible weight of this fully loaded motorhome.

SLEEPING CAPACITY WEIGHT RATING (SCWR)
The manufacturer's designated number of sleeping positions multiplied by 154 lbs (70 Kgs).

OCCUPANT AND CARGO CARRYING CAPACITY (OCCC)
The value equal to the GVWR minus UVW and full LP Gas weight. In other words, OCCC is the amount of weight in occupants, cargo, water and trailer tongue weight that can be added to the motorhome without exceeding the GVWR.

GROSS COMBINED WEIGHT RATING (GCWR)
The Gross Combined Weights Rating of the motorhome, i.e, combined weight of the Motorhome and any towed vehicle.

DESIGNATED SLEEPING CAPACITY
The manufacturer's designated number of sleeping positions.

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.

TIRE SPECIFICATION
Recommended tires specification to meet handling, loading and safety requirements. Replacement tires must meet these specifications.

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.

CARGO CARRYING CAPACITY(CCC)(CANADA)

Equal to GVWR minus the total of the following: UVW, full fresh (potable) water weight (including water heater), full LP-Gas weight and SCWR.

UNLOADED VEHICLE WEIGHT (UVW)

The weight of this motorhome as manufactured at the factory with full fuel, engine oil and coolants.

MASS OF WASTE WATER TANKS

Total weight of the black and grey water tanks when filled to capacity.

VEHICLE IDENTIFICATION NUMBER (VIN)

This 17 digit number identifies the chassis on which the motorhome is built.

TYPE

The National Highway Traffic Safety Association (NHTSA) designated usage classification for your Motorhome. MPV signifies a Multi-purpose vehicle.

CERTIFICATION LABEL SAMPLES



RECREATIONAL VEHICLE SPECIFICATION NAMEPLATE — DO NOT REMOVE
PLAQUE SIGNALÉTIQUE POUR VÉHICULE RÉCRÉATIF — NE PAS ENLEVER

MANUFACTURER/ FABRICANT:
DATE OF MANUFACTURE/ DATE DU FABRICANT:
SERIAL NUMBER/ NUMÉRO DE SÉRIE:
CERTIFICATION LABEL SERIAL NUMBER/ ÉTIQUETTE DE CERTIFICATION GAI NUMÉRO:
This Vehicle Requires a Class ___ hitch on towing vehicle
Ce véhicule exige une attache de Classe ___ 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 électricité)
Furnace / Fournaise à Air Chaud			
Water Heater / Chauffe – Eau			
Cooking Appliance / Appareils de Cuisson			
Refrigerator / Refrigérateur			
Generator / Génératrice			
Microwave Oven / Micro-Ondes			
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. GAI Certification only covers the systems noted below only when installed by the vehicle manufacturer. La certification GAI 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 GAI label provide the only evidence of Certification. Cette plaque signalétique ainsi que l'étiquette extérieure GAI constituent les seules preuves de la certification GAI.

WARNING:

- 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.
  - Your vehicle is equipped for LP-GAS propane only. DO NOT CONNECT NATURAL GAS TO THIS SYSTEM.
- 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.
- AFTER TURNING ON PROPANE / APRÈS LA MISE EN SERVICE:
  - Light all pilots.
  - All appliances including those of 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 in containers connected until the system has been proven to be free of any leaks.
  - The cooking appliance should not be used for space heating.
  - When the containers are disconnected the propane supply line should be capped or plugged.

AVERTISSEMENT:

- Pour assurer aux occupants une circulation d'air frais, ouvrir les ventilateurs tant que fonctionnement la cuisinière ou des lampes à gaz.
- Votre véhicule est équipé d'un réservoir pour le propane seulement. NE PAS L'ALIMENTER EN GAZ NATUREL.
- 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.
- Allumer toutes les veilleuses.
- Tous les appareils, y compris les appareillement 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 DE 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 bouchée.
- Les appareils de cuisson ne doivent pas être utilisés pour le chauffage des locaux.
- Ne pas laisser l'alimentation ouverte, et les récipients raccordés, avant d'avoir complété l'épreuve d'étanchéité au propane de l'installation.

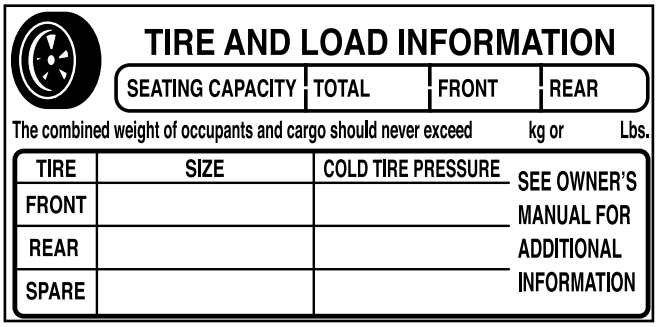
VEHICULAR SYSTEM WARNING / INSTALLATION VÉHICULAIRE AVERTISSEMENT:
It is recommended that highway authorities be consulted on regulations applicable in areas into which this unit may be moved, especially in regard to maximum allowable lengths and widths.
Il est recommandé de consulter les autorités routières au 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 29, 2012
Serial #

LOCATED IN WARDROBE CLOSET (CANADA MODELS ONLY)

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

LOCATED ON DRIVE-SIDE DOOR FRAME (CANADA MODELS)



TIRE AND LOAD INFORMATION

SEATING CAPACITY	TOTAL	FRONT	REAR

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

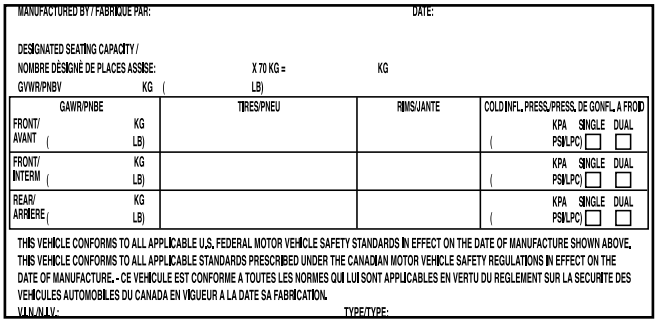
TIRE	SIZE	COLD TIRE PRESSURE	SEE OWNER'S MANUAL FOR ADDITIONAL INFORMATION
FRONT			
REAR			
SPARE			

LOCATED ON DRIVER-SIDE DOOR FRAME (US MODELS)

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-SIDE DOOR FRAME (US MODELS)



MANUFACTURED BY / FABRIQUE 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/ ARRIÈRE	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 DRIVER-SIDE DOOR FRAME (ALL MODELS)

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 ON PASSENGER SIDE CAB PILLAR (ALL MODELS)

SERVICE ASSISTANCE

Your dealer will assist you with any additional information you need and will answer any questions you have about the operation of your motorhome. When it's time to service the vehicle, remember that your dealer knows your motorhome best and is dedicated to your satisfaction. Your dealer will provide quality maintenance and assistance during your period ownership. Triple E RV strongly recommends that you follow a regular maintenance schedule to keep your motorhome functioning at its best.

Call the following numbers if you require warranty assistance while traveling:

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 Ford Customer Service:
1-800-565-3673 www.ford.ca

US Ford Customer Service:
1-800-392-3673 www.ford.com

Emergency Roadside Service* Call:
1-877-219-3831
4287 Beltline Road, Box 198
Addison, Texas 75001

*This Emergency Roadside Service is available to owner of the motorhome during the first two years after purchase.

REPORTING SAFETY DEFECTS

If you suspect your motorhome has a safety defect that could cause injury or death, immediately contact Triple E RV. Also, contact the National Highway Traffic Safety Administration (NHTSA) in the US or Transport Canada to report your concern.

NHTSA will investigate the concern if there are a number of similar complaints. NHTSA has the authority to order a recall and repair campaign depending on the nature and severity of the problem.

You can reach the NHTSA by calling the Auto Safety Hot-line at 1-800-424-9393 (202-366-0123 in the Washington, DC, area) or by writing to NHTSA, US Department of Transportation, Washington, DC 20590. The hot-line also will provide you with additional information on motor vehicle safety.

In Canada, call 1-800-333-0510 or write to Transport Canada and Road Safety, 2780 Sheffield Road, Ottawa, Ontario K1B 3V9.

COACH SPECIFICATIONS

UNITY

Chassis 3500 Sprinter Engine - 3.0L V6 Blue TEC Diesel 188hp / 325 lb-ft Torque Transmission - 7 Speed Automatic Turning Circle - 52.5' Axel Ratio - 3.92:1 Tires - LT215/85R16	U24MB	U24CB	U24TB	U24FX	U24RL	U24MBL
GVWR - lbs (kg)	11,030 (5003)	11,030 (5003)	11,030 (5003)	11,030 (5003)	11,030 (5003)	11,030 (5003)
GCWR - lbs (kg)	15,250 (6917)	15,250 (6917)	15,250 (6917)	15,250 (6917)	15,250 (6917)	15,250 (6917)
GAWR Front- lbs (kg)	4,410 (2000)	4,410 (2000)	4,410 (2000)	4,410 (2000)	4,410 (2000)	4,410 (2000)
GAWR Back - lbs (kg)	7,720 (3502)	7,720 (3502)	7,720 (3502)	7,720 (3502)	7,720 (3502)	7,720 (3502)
Wheelbase - in (mm)	170" (4326)	170" (4326)	170" (4326)	170" (4326)	170" (4326)	170" (4326)
*Length - ft (mm)	25'1" (7645)	25'1" (7645)	25'1" (7645)	25'1" (7645)	25'1" (7645)	25'1" (7645)
**EXT. Width - ft (mm)	7'11" (2416)	7'11" (2416)	7'11" (2416)	7'11" (2416)	7'11" (2416)	7'11" (2416)
INT. Width - ft (mm)	7'5" (2260)	7'5" (2260)	7'5" (2260)	7'5" (2260)	7'5" (2260)	7'5" (2260)
***EXT. Height Incl. A/C- ft (mm)	10' 6"(3200)	10' 6"(3200)	10' 6"(3200)	10' 6"(3200)	10' 6"(3200)	10' 6"(3200)
INT. Height - ft (mm)	6' 5"(1958)	6' 5"(1958)	6' 5"(1958)	6' 5"(1958)	6' 5"(1958)	6' 5"(1958)
Fresh Water Tank Cap. - gal (L)	25.6 (97)	36.5 (138)	36.5 (138)	25.6 (97)	25.6 (97)	25.6 (97)
Black Holding Tank Cap. - gal (L)	30.6 (116)	30.6 (116)	30.6 (116)	30.6 (116)	30.6 (116)	30.6 (116)
Grey Holding Tank Cap. - gal (L)	35 (133)	35 (133)	35 (133)	35 (133)	35 (133)	35 (133)
Fuel Cap. - gal (L)	24.5 (93)	24.5 (93)	24.5 (93)	24.5 (93)	24.5 (93)	24.5 (93)
Propane Cap. - gal (L)	15.8 (59.8)	15.8 (59.8)	15.8 (59.8)	15.8 (59.8)	15.8 (59.8)	15.8 (59.8)
Exterior Storage Capacity	55 cu. ft.	36 cu. ft.	54 cu. ft.	34 cu. ft.	30 cu. ft.	45 cu. ft.

WONDER

Chassis - 350 HD Engine - 3.5L V6 Gas 310 HP / 400 lbs-ft torque Transmission - 10 speed automatic overdrive with selectshift Turning circle 57.1' Axle ratio - 3.73 Tires - 205/75R16C	W24FTB	W24RTB	W24RL	W24MBL
GVWR - lbs (kg)	11,000 (4990)	11,000 (4990)	11,000 (4990)	11,000 (4990)
GCWR - lbs (kg)	15,000 (6804)	15,000 (6804)	15,000 (6804)	15,000 (6804)
GAWR Front- lbs (kg)	4,630 (2100)	4,630 (2100)	4,630 (2100)	4,630 (2100)
GAWR Rear - lbs (kg)	7,275 (3300)	7,275 (3300)	7,275 (3300)	7,275 (3300)
Wheelbase - in (mm)	178" (4521)	178" (4521)	178" (4521)	178" (4521)
*Length - ft (mm)	24' 9"(7544)	24' 9"(7544)	24' 9"(7544)	24' 9"(7544)
**EXT. Width - ft (mm)	7'11" (2416)	7'11" (2416)	7'11" (2416)	7'11" (2416)
INT. Width - ft (mm)	7'5" (2260)	7'5" (2260)	7'5" (2260)	7'5" (2260)
***EXT. Height Incl. A/C - ft (mm)	9'11.5" (3035)	9'11.5" (3035)	9'11.5" (3035)	9'11.5" (3035)
INT. Height - ft (mm)	6' 5" (1958)	6' 5" (1958)	6' 5" (1958)	6' 5" (1958)
****Fresh Water Tank Cap. - gal (L)	33.5 (127)	36.5 (138)	33.5 (127)	33.5 (127)
Black Holding Tank Cap. - gal (L)	26.4 (100)	26.4 (100)	35 (133)	35 (133)
Grey Holding Tank Cap. - gal (L)	35 (133)	26.4 (100)	26.4 (100)	26.4 (100)
Fuel Cap. - gal (L)	25 (95)	25 (95)	25 (95)	25 (95)
Propane Cap. - gal (L)	13.2 (50)	13.2 (50)	13.2 (50)	13.2 (50)
Exterior Storage Capacity	48 cu.ft.	67 cu.ft.	15 cu.ft.	33 cu.ft.

1. The height of the motorhome is measured from the ground to the top of the highest standard component and is based on the UVW of a typically equipped motorhome. The actual height of your motorhome may vary depending on chassis, equipment, build variations or tire pressures. It is important that you know the actual height of your motorhome.
2. The load capacity of your motorhome is designated by weight, not by volume, so you cannot necessarily use all available space when loading your motorhome.
3. Tank capacities are based on measurements prior to tank installation. Slight variations may occur due to tank shrinkage or expansion.
4. Actual filled propane tank capacity is 80% of listed capacity due to overfilling prevention device on tank.
5. Exterior storage capacity is approximate. Total volume may vary.

* Bumper to bumper; add 4" for Ladder Option
** Outside to outside of rear fender skirts
*** Add 3" for Roadtrip Satellite Option

SAFETY

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

It is the responsibility of the owner and operator to read, understand and follow all instructions in this manual, the chassis manual, all appliance/equipment system manuals located in the Motorhome Information Kit, and on safety labels or signs on the motorhome. Specific items, procedures or instructions are identified with the key words Danger, Warning and Caution which emphasize areas of special concern. These key words are defined as follows:

⚠ DANGER

Danger - Indicates a hazardous Situation which, if not avoided, WILL result in death or serious injury.

⚠ WARNING

Warning - Indicates a hazardous situation which, if not avoided, COULD result in death or serious personal injury and/or damage to the motorhome.

⚠ CAUTION

Caution - Indicates a hazardous situation which, if not avoided, COULD result in minor or moderate personal injury/or damage to the motorhome.

⚠ NOTICE

Notice - Identifies hazards not related to personal injury.

The safety symbol, ⚠ used in conjunction with the Danger, Warning and Caution symbols, identifies an area that involves the personal safety of the operator, passengers or bystanders. Read, understand and follow the instructions and information in the safety label or sign or manual. Do not take chances with safety. Most accidents are preventable.

Follow the safety precautions outlined in this section of the manual, but keep in mind that the manual may not cover all situations. Every person who occupies the motorhome or operates any of its components, devices or sub-assemblies must be familiar with this manual and the manuals in the Motorhome Information Kit. Every operator and occupant is responsible for following all safety items covered in this and other manuals.

GENERAL SAFETY

- The most important safety feature on your motorhome is a safe and knowledgeable operator. It is the operator's responsibility to read, understand and follow all the safety and operating instructions in the operator's, chassis, appliance, and system manuals. Most accidents that involve motorhomes are preventable.
- An operator who has not read and understood all operating and safety instructions is not qualified to operate the motorhome.
- Untrained or uninformed operators and occupants expose themselves, passengers and other drivers to possible injury or death, and they subject the motorhome, other vehicles and property to potential damage.
- Do not modify the motorhome in any way. Unauthorized modifications may impair the function and/or safety of the motorhome.
- All driver and passenger seats are equipped with seatbelts. Occupied seats must be locked in the forward facing direction when the motorhome is moving, and passengers may occupy only approved seats with the seatbelt securely fastened. Do not allow any passengers to travel in the motorhome unless they are in an approved seat with the seatbelt secured. Motorhome seats with seatbelts installed by the manufacturer are the only seats approved and safe for travel.
- Always fasten the seatbelt low on the torso and keep it snug to transmit the force from the belt into the hip/pelvic region 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 ensure the extinguisher is fully charged and in proper working condition. Inspect the extinguisher prior to each time you operate or occupy the motorhome.

ALARMS

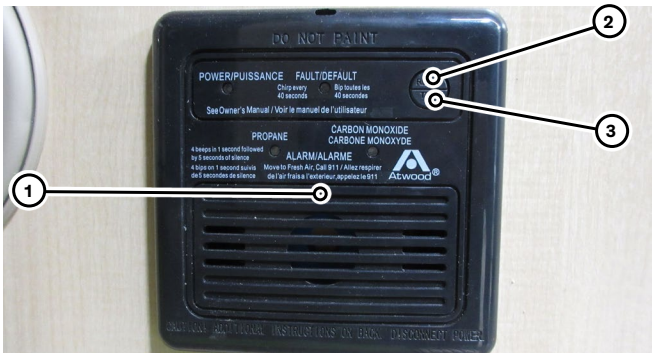
All models are equipped with a combination LP gas, carbon monoxide, and smoke alarm as standard safety equipment.

⚠ CAUTION

Recurring alarms indicate the slow accumulation of LP gas, carbon monoxide or smoke and/or may warn of low battery levels. Have an authorized service center check the system and identify the source of the alarm. Correct the problem before using the motorhome. Keep all alarms in good working order. For detailed information, refer to the alarm manuals provided in the Motorhome Information Kit.

COMBINATION CARBON MONOXIDE / LP GAS ALARM

The Combination Carbon Monoxide/Liquid Propane Alarm ① location can be found on the floorplan for your particular motorhome.



The LP alarm sounds whenever there is an unsafe amount of LP gas in the motorhome. If the LP gas monitor sounds an alarm, follow these steps:

1. Follow instructions on the safety sign next to the stove and air out the vehicle and press the “Reset” button ② to silence the alarm.
2. Have a qualified service center find the leak and correct the problem before using the motorhome.
3. Refer to the “Liquid Propane Gas System” section in this manual and LP Gas Alarm owner’s manual located in the Motorhome Information Kit for further details.
4. Test the CO/LP gas alarm before each trip by depressing the test button ③. Test the CO/LP alarm after removing the motorhome from storage, before each trip and weekly thereafter.

⚠ WARNING

If you smell gas, immediately follow these steps:

1. **Extinguish open flames, pilot lights and all smoking materials.**
2. **Do not touch any electrical switches.**
3. **Shut off the LP gas tank valve.**
4. **Open doors, windows and roof vents after making sure the roof vent fans are “OFF”.**
5. **Leave the motorhome and its immediate vicinity until odor is gone.**
6. **Have a qualified service technician check the system for leaks and make any necessary corrections and repairs before turning gas back on.**

NOTE: Do NOT remove the label from the glass stove top cover.

⚠ DANGER

Carbone Monoxide is a colorless and odorless gas that is lethal to humans and pets.

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

VISUAL AND AUDIBLE ALARM SIGNALS

This Atwood™ CO/Propane Gas Alarm is designed to be easy to operate. The alarm has four indicator lights that display a specific color for each monitored condition. There is also a distinct sound pattern for each alarm condition.

CO ALARM

The Red CO LED will flash and the alarm will sound 4 “beeps” then will become silent for 5 seconds. These signals indicate that the CO is at a dangerously high level. Immediate action is required. See procedure and warning information at start of “Combination Carbon Monoxide/LP Gas Alarm” section for procedures in the event of an alarm. This alarm cycle will continue until the Reset button on the front of the alarm is pressed. Ventilate the RV. The RED light will stay ON until the CO has cleared, or the alarm will reactivate in

approximately 6 minutes if the CO is still present. Do not re-enter the RV. This alarm will cease and return to normal operation after the RV is properly ventilated.

PROPANE GAS ALARM

The Red Gas LED will Flash and the alarm will sound 6 “beeps” then will become silent for 5 seconds whenever a dangerous level of propane gas is detected. Immediate action is required. See procedure and warning information at start of “Combination Carbon Monoxide/LP Gas Alarm” section for procedures in the event of an alarm. The detector will continue to alarm until the Test/Mute button on the front of the alarm is pressed. Ventilate the RV. The RED Gas LED will continue to flash until the gas has cleared, or the gas alarm will reactivate in approximately 6 minutes if the gas is still present. Do not re-enter the RV. This alarm will cease and return to normal operation after the RV is properly ventilated. Do not turn on the gas until serviced by a qualified technician.

MALFUNCTION/SERVICE SIGNAL

If any malfunction is detected,the LP or CO lights will flash depending on which alarm is malfunctioning and the alarm will sound (refer to the table for the corresponding audible signal.) Press the Test/Mute button. If the Test/Mute button does not clear the alarm, check the coach battery voltage. If the battery voltage is not low and the unit will not return to normal operation, immediately remove the alarm and return for service or warranty replacement. See the warranty section in this manual.

⚠ WARNING

Do not use the motorhome without a working CO/LP Gas detector installed.

OPERATION	AUDIBLE SIGNAL	VISUAL SIGNAL
Normal	None	Steady Green
C.O. Alarm	4 beeps 5 seconds off	Steady red C.O light
Propane Alarm	6 beeps 5 seconds off	Steady red LP Light
Alarm Malfunction	Beep every 40 seconds	Flashing LP or C.O. light
End of Life	Beep every 20-30 seconds	Steady LP and CO light
Warm-Up Cycle	No sound	Flashing green

⚠ WARNING

Test this alarms operation after each storage period, before each trip and at least once per week during use.

FUEL AND PROPANE SAFETY

⚠ DANGER

Turn off all pilot lights, appliances, and appliance igniters before refueling motorhome diesel, gasoline, or propane tanks. Failure to comply could result in death or serious injury.

⚠ DANGER

Never use a flame to check for LP gas leaks.

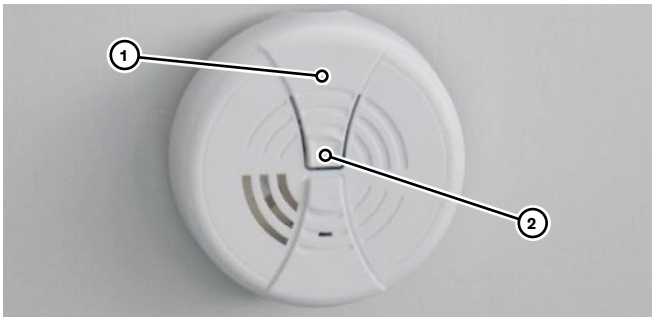
⚠ WARNING

Do NOT place or store gasoline, propane or any other flammable liquids on board the motorhome, because fire or explosion may result. Failure to comply could result in serious injury or death.

Propane containers are equipped with safety valves that relieve excess pressure by discharging explosive gas into the atmosphere.

SMOKE ALARM

The smoke alarm ① sounds whenever there is an unsafe amount of smoke in the motorhome. Always open the roof vent before cooking.



- Open doors, windows and roof vents to air out motorhome and silence the alarm. Identify and eliminate the source of the smoke.
- Replace the battery at least once per year, and test the battery after replacement. Remove the cover to replace the battery.
- Clean and vacuum opening on smoke alarm once a month.

⚠ WARNING

Do not remove the battery to silence the alarm. If the alarm "beeps" every minute, the battery is weak and requires replacement. Do not allow the battery to go dead. Use only recommended replacement batteries (see Smoke Detector operator's manual in Motorhome Information Kit for detailed instructions).

- Test the smoke alarm before each trip by depressing the test button ②. Test the smoke alarm after removing the motorhome from storage, before each trip and weekly thereafter. Test the smoke alarm sensor by blowing smoke (from a safe, fire-free source) past the sensor. If the alarm does not sound, identify and correct the source of the problem or replace the smoke alarm.
- Make sure the wires are properly connected to the device battery. Position and close cover.
- If you suspect the smoke alarm is not functioning properly, replace the alarm - do NOT attempt to repair it.
- Replace the smoke detector before expiry date listed on label.

⚠ NOTICE

Smoke alarms are not perfect and do not respond in all situations. The best safeguard is fire prevention.

FIRE PREVENTION

Fires can start in a variety of ways including, but not limited to, smoking, malfunctioning appliances or equipment, placing flammable materials on hot surfaces, etc. It is best to prevent fires, but be prepared to extinguish a fire if necessary. Review the following sections with all operators and occupants on a regular basis.

⚠ CAUTION

Any exterior heat source (BBQs, space heaters, etc.) must be positioned away from the sidewall and directed away from the motorhome.

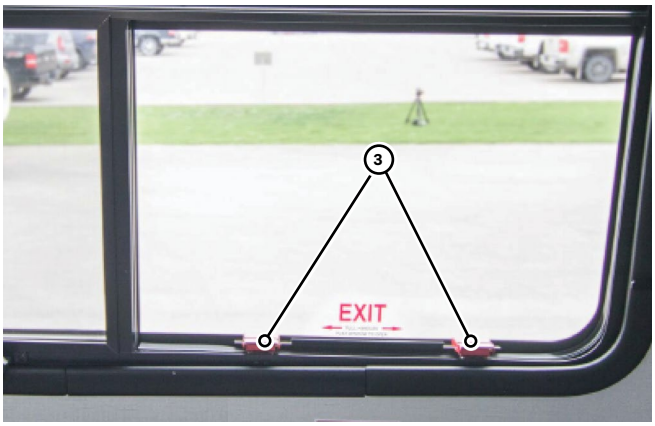
FIRE SAFETY TIPS

- Establish and maintain good housekeeping practices. Never allow combustible materials to accumulate in or around the motorhome.
- Store flammable liquids in approved containers in a well-ventilated space.
- Have fully charged fire extinguishers readily available.
- Avoid using flammable products in the motorhome.
- Never smoke in bed or when relaxing on the couch.
- Do not overload electrical outlets.
- Do not leave food unattended while cooking.
- Keep children away from electrical outlets and LP gas controls.
- If there is a fire, evacuate everyone from the motorhome. Use your fire extinguisher if safe to do so, and close all LP gas valves if possible. 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.

EMERGENCY ESCAPE - EGRESS WINDOW

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

To open the rear emergency egress window exit, pull up the two handles ③, and push out the window.



⚠ NOTICE

Emergency egress windows are to be used in emergency situations only, and not for ventilation. Window pane may detach from hinge if opened too far.

FIRE EXTINGUISHER

The fire extinguisher is located at the motorhome entrance. In case of fire, use the following PASS method to extinguish the flames:

1. **Pull**
2. **Aim**
3. **Squeeze**
4. **Sweep**



⚠ WARNING

Stay a safe distance from the fire and near an exit. Stay close to the floor to avoid heat and fumes. The chemical from the fire extinguisher will shoot at least 10 feet (3 m).

OPERATION

1. Pull the safety pin and grasp the fire extinguisher firmly while holding it in an upright position.
2. Aim the fire extinguisher nozzle at the base of the fire. Do NOT spray at the smoke or flames.
3. Squeeze the handle to release the extinguishing agent.
4. Sweep the fire extinguisher from side to side until the fire appears to be out.

⚠ WARNING

After the fire is out, beware of flashback. Flashback occurs when flammable vapors from combustible liquids spread back to the ignition source and reignite the fire.

5. Once the fire is completely extinguished, discharge the fire extinguisher entirely and get it recharged or replaced immediately. For detailed information, refer to the fire extinguisher manual provided in the Motorhome Information Kit.

⚠ WARNING

Use of motorhome is not recommended without a working fire extinguisher installed.

FUNCTION

Fire extinguishers are designed to put out a fire in its initial stages. Once you cannot get within 10 feet (3 m) of the fire, it is out of control and too big to fight with your extinguisher.

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.

Check the pressure gauge ① on your fire extinguisher monthly. If it loses pressure, the dry chemical will not effectively discharge. Do not operate or occupy the motorhome without a fully charged fire extinguisher.



⚠ NOTICE

If the pointer on the pressure gauge ① is not in the operating range (pointer in the green portion of the gauge), immediately replace the extinguisher. Record the inspection date on the tag provided.

WEIGHING YOUR LOADED VEHICLE

When traveling on public roads you must ensure that at all times, your vehicle is below the gross axle weight ratings (Front GAWR and Rear GAWR), the Gross vehicle weight rating (GVWR) and if towing a trailer or car within the gross combined weight rating (GCWR) of the chassis.

⚠ CAUTION

Traveling at weights higher than these ratings is dangerous and illegal.

DEFINITIONS

Term	Definition	Where to find
Gross Axle Weight Ratings (Front and Rear)	This is the maximum weight that your loaded motorhome can place either the front or rear axles measured independently.	On the chassis manufacturer provided decal, black and white sticker on the driver's door frame
Gross Vehicle Weight Rating (GVWR)	This is the maximum weight of both axles added together (Please note that adding together the front and rear GAWRs does not equal the GVWR).	On the chassis manufacturer provided decal, black and white sticker on the driver's door frame

To check the weight of your fully loaded motorhome, locate a commercial weighing scale that can weigh large trucks. Certified scales such as CAT are preferable as they have a system in place to ensure their measurement accuracy. In rural areas, most grain storage elevators have scales available but accuracy for lighter loads may not be as high as it is with guaranteed highway scales. Most scales will charge a nominal fee for weighing a vehicle.

LOADING BEFORE WEIGHING

Load your vehicle completely as if you were going on a long trip with everything you would carry, including food, clothing, bedding, lawn chairs, bikes, tools, etc., a full fuel tank, full propane tank, and a full tank of fresh water (if you typically travel with your water full) and holding tanks empty (if that is how you typically travel). Also have the driver and passengers sitting in the vehicle in the belted positions when the weights are taken.

WEIGHING (MOTORHOME ONLY)

The basic procedure is to take three separate weights - front axle, whole vehicle, and rear axle.

You will first drive only your front wheels onto the scale pad and measure, then drive ahead so that the whole vehicle is on the scale and record the weights, then finally pull off until only the rear wheels are on the scale and measure.

You will receive a ticket with these 3 weights which you can use to compare to the chassis specifications in the chassis owner's manual and on the sticker on the driver's door sill. If the scale cannot record the weight of the entire unit, simply add the front and rear measured axle weights together to get the loaded vehicle weight

CALCULATING YOUR WEIGHTS VS CAPACITIES

The total loaded weight of the motorhome (front and rear axle measurements added together) must not exceed the Gross Vehicle Weight Rating (GVWR) specified on the Vehicle Certification Label. The front or rear axle weight should not exceed the corresponding Gross Axle Weight Ratings (GAWRs) specified on the vehicle certification label found on the driver's door frame (white decal with black printing).

NOTE: If you tow a vehicle or trailer or have other loads on the hitch receiver, these must also be counted against the Rear GAWR and subtracted from the rear axle cargo capacity. See next section for more detail.

How you load your vehicle affects the front and rear

axle weight and side to side weight distribution which can influence vehicle handling. By repositioning the cargo you travel with, you may be able to shift weight to a more lightly loaded axle or even out your side to side weight distribution.

For safe operation you must never exceed the GVWR, front GAWR, or rear GAWR.

Refer to your chassis owner's manual for more information on weighing your vehicle and allowable loading.

EXAMPLE:

You take your Leisure Travel Unity motorhome to a certified scale and weigh each axle individually. The vehicle is loaded as you would normally travel with your typical number of passengers in the belted seats. Your fuel level is full, and your LP tank and water tank are full, your waste tanks are empty.

Question: How would I determine how much more cargo I can carry in my motorhome?

Answer: On the driver's door, the vehicle identification decal has the following information

- Front Gross Axle Weight Rating (FGAWR) – 4410 Lbs
- Rear Gross Axle Weight Rating (RGAWR) – 7720 lbs
- Gross Vehicle Weight Rating (GVWR) – 11,030 lbs

From weighing you unit at the scale your weight ticket says:

- Front axle weight 3900 lbs
- Rear axle is 6800 lbs.

The total of these two numbers is your loaded traveling weight of 10,700 lbs.

The maximum amount of extra cargo you can carry determined by calculating:

GVWR minus the loaded traveling Weight

11,030 lbs – 10,700 lbs = 330 lbs

But where the weight is located on your unit may affect your gross axle weight ratings. The amount of extra cargo that can be carried on each axle is:

Front FGAWR – Weight measured on front axle.

4410 lbs - 3900 lbs = 510 lbs

Rear RGAWR minus Weight measured on rear axle.

7720 lbs - 6800 lbs = 920 lbs

It is important to understand that the front and rear gross axle ratings do not add up to the gross vehicle weight rating. Even though both of your axle loads might be within limits does not mean that the entire coach is within the GVWR specification.

Conclusion: There is enough carrying capacity on either axle to be able to carry the additional 330 lb. You could increase the amount of cargo carried by traveling with less water if you are near maximum weight limits. You could also relocate some of your cargo to shift weight to a lighter loaded axle.

CAR OR TRAILER TOWING

The factory installed towing hitch on your motorhome has a maximum capacity as shown on the decal on your hitch. The maximum allowable trailer weight, and gross combined weight rating are published in your chassis owner's manual.

DEFINITIONS

Term	Definition	Where to find
Gross Combined Weight Rating (GCWR)	The maximum weight of the loaded motorhome (including passengers) and what you tow added together	Chassis owner's manual
Hitch Capacity – Gross Trailer Weight	The maximum trailer weight	Decal affixed to the hitch
Hitch Capacity – Tongue Weight	The maximum vertical weight your trailer can place on the ball of an 8" hitch extension.	Decal affixed to the hitch
Maximum Trailer Weight Rating	The maximum towed trailer or car weight that the chassis manufacturer has determined is safe to tow.	Chassis owner's manual

⚠ WARNING

Regardless of the hitch ratings, the maximum amount you can tow will be limited by either your GVWR, GAWR's, GCWR, or maximum trailer weight rating as stated by the chassis manufacturer.

You may not be able to tow the maximum trailer weight as stated in your manual depending on the options chosen on your unit, how you load your unit and how many passengers you have on board when you travel.

When towing a trailer or vehicle, never exceed either the GVWR, the rear axle GAWR, the chassis GCWR, the hitch ratings or the maximum trailer weight rating.

The maximum trailer weight is GCWR (from the manufacturer) minus loaded vehicle weight (including passengers) as measured at a scale provided that this number is less than the horizontal tow rating of the hitch. This maximum can change depending on number of passengers, level of water, sewer or cargo on board. In general, if you want to tow more carry less.

The maximum trailer hitch vertical pin weight will usually be limited by how much weight the hitch transfers to the rear axle (RGAWR) of the motorhome but could be limited by the GVWR or vertical pin rating of the hitch. A general rule of thumb is that for each pound added to a hitch (8" maximum extension from the face of the receiver), approximately 1.6 lbs is added to the rear axle due to the cantilever effect.

The only way to confirm you are within legal limits, is by weighing your "loaded and ready to travel" vehicle including your trailer at certified scales. Calculations are an excellent tool, but real measured weights are proof you are traveling legally.

Be aware that hitch load can affect handling characteristics. The more weight on the hitch, the lighter the front end will feel at the steering wheel. Additionally, the farther the load is away from the face of the hitch receiver, the more load will be transferred to the rear axle.

When towing a vehicle behind your motorhome, the tow bar should be level or pointing slightly upward towards the tow vehicle. When coupling the vehicle tow bar to the Factory Receiver Hitch using a "drop receiver" or a conventional "ball mount" (commonly referred to as a "stinger" or a "draw bar"), do not exceed a 4" drop, nor one that the centerline of the hitch pin to the centerline of the ball exceeds 8".

Always provide lights on the towed vehicle by connecting to the 7-pin plug on the rear of the motorhome. This plug will provide power to the lights for brakes, flashers, turn signals and running lights.



EXAMPLE:

Question: How much trailer weight can I tow with the unit in the example in the towing section of this manual?

There are four important considerations to this question,

- The total weight of the loaded motorhome and the trailer or car added together compared to the gross combined weight rating.
- The tongue weight of the trailer on the vehicle and its affect on GVWR and rear GAWR
- The total weight of the trailer being towed compared to the chassis maximum trailer weight specifications.
- The maximum gross trailer weight and tongue weight ratings of the hitch installed on your unit.

All of these specifications are related and the maximum trailer weight is the lessor of any of these 4 variables.

Weight of the trailer – In the chassis manufacturer's owner's manual they state that the Gross Combined Weight Rating (GCWR) of your chassis is 15,250 lbs. Simply subtract loaded traveling vehicle weight from the GCWR and you have the maximum trailer weight.

Be advised that as you add more cargo or accessories to your unit, the maximum trailer weight will decrease.

In our example

GCWR minus Motorhome Traveling Weight = Maximum Trailer weight

15250 lbs – 10,700 lbs = 4550 lbs

Maximum Trailer Weight Rating: In the chassis owners manual it states that the maximum trailer weight is 5000 lbs.

Comparing these numbers, 4550 lbs is the lightest weight.

Tongue Weight – Since the hitch receiver is behind the rear axle, any pound of hitch tongue weight added increases the rear axle weight by 1.6x due to the cantilever effect. To calculate maximum trailer weight, we need the gross combined weight rating (GCWR) from the chassis owner's manual which is the maximum amount your loaded motorhome and your trailer/car can weigh together. We know that there is 920 lbs of capacity left on the rear axle from the calculation above, but we can only add 330 lbs of extra cargo to the whole vehicle based on the maximum GVWR which was calculated above. Therefore, the maximum tongue weight would be 330 lbs divided by 1.6 for the cantilever effect, or 206 lbs.

Rating of the hitch – Different models may have different hitch ratings which is dependant on body configuration. If either the tongue load or maximum trailer weight exceed the hitch specifications, the hitch specifications would be the maximum allowed. For this example, lets say the hitch has a maximum rating of 600 lb tongue load and 6000 lb trailer weight.

Answer: The maximum you could tow would be 206 lb tongue weight (limited by your GVWR) and 4550 trailer weight (limited by your chassis GCWR).

Assume your hitch decal says your hitch has a rating of 200 lb tongue weight and 2500 lb trailer weight, the maximum you could tow is 200 lb tongue and 2500 lb trailers weight, both limited by the hitch specifications.

SUMMARY

Many factors must be considered when determining cargo capacity and maximum trailer tow weight. How much cargo you carry with you when you travel is an important factor in both calculations. Just because your owner's manual or the hitch decal says you can tow a certain weight trailer, it does not mean you can do so legally.

⚠ NOTICE

It is the owner's responsibility to ensure that all axle and gross vehicle weight, and trailer weights are always within the chassis and hitch specifications of your motorhome.

MOTORHOME OPERATION

MOTORHOME PREPARATION

Before beginning an extended trip, ensure you are thoroughly familiar with your motorhome's condition, components, features, appliances and limitations. Take ample time to read the operator's manual and the material in the Motor Information Kit, and ensure you understand the operation of all the components.

Adequate preparation is essential for an enjoyable and successful trip. Your motorhome provides the freedom to do what you want, where you want and when you want. The time you spend getting to know your motorhome will enhance your enjoyment, maximize your experience and contribute to a more successful trip.

AUXILIARY VEHICLE TOWING

If you are planning to tow another vehicle or a trailer with your motorhome, contact your local department of transportation for towing information.

⚠ CAUTION

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

It is the responsibility of the operator to ensure that motorhome loading specifications and limits are not exceeded. Always weigh and reload if required. Keep all frame members level or the tow hitch angled slightly upward for the best results. Be familiar with and comply with all applicable laws and regulations.

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 signs of damage and wear. Ensure that all tires are properly inflated.
   - Check All Fluids:
   - Engine/crankcase oil
   - Power steering/transmission fluid
   - Radiator recovery system
   - Battery electrolyte level
   - Windshield washer reservoir
   - Diesel exhaust fluid (DEF)
3. Check the oil level in the generator power plant (if installed). Refer to the generator instruction and maintenance manual located in the Motorhome Information Kit for details on pre-use requirements.
4. Consult the chassis manual in the Motorhome Information Kit for a list of pre-trip inspection requirements.
5. Verify that all lights are in working order.
6. Check the engine compartment for wildlife.

⚠ NOTICE

Wildlife and pets like the warmth of the engine compartment and can become entangled in the moving engine components.

7. Sanitize and fill the fresh water tank if required. Turn off the water pump unless using water. Turn off the water pump if leaving the unit unattended for an extended period of time. (Refer to the "System Monitor" section in the "Electrical System Operation" chapter for details.)
8. Start the refrigerator a day ahead of time so it will be cold for your trip.
9. Fill the LP gas tank to a maximum of 80% of its 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 and refrigerator). Check for LP gas leaks regularly using soapy water.

⚠ DANGER

Turn off all appliances while refueling any motorhome or LP gas tanks. Do NOT smoke while refueling.

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

EMERGENCY EQUIPMENT CHECKLIST

The following list describes the minimum amount of emergency equipment required, but additional items may be appropriate for your specific 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
9. Fire extinguisher
10. High visibility vest

FINAL CHECKS

1. Secure all objects in the motorhome. Tie, latch or lock all loose objects as appropriate.

⚠ CAUTION

Unsecured objects can become dangerous projectiles in a sudden maneuver or accident.

2. Securely close and lock all doors to minimize the chance of a door coming open in an accident.
3. Adjust all rear-view mirrors to provide the best rearward visibility.
4. Set the driver's seat to provide the desired leg to pedal spacing for your personal comfort.
5. Fasten seatbelts, position low on the torso, and ensure they are snug. All passengers must 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.
6. Do NOT carry any passengers unless they are in a seat that is equipped with a seatbelt and the seatbelt is properly fastened.

MAXIMUM OCCUPANCY

The belted seating positions in your motorhome may be different than the stated sleeping capacity.

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 and GAWR listed on your vehicle certification label.

⚠ WARNING

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

⚠ WARNING

All seatbelts retractors are equipped with locks that engage when the belt extends too quickly. 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 to fasten.

SEAT/SHOULDER BELTS

Every occupant must be seated in an approved seat with the seatbelt properly 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 serious injuries than those who are 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 may be equipped with lap belts ② (not available on all models). Never allow occupants to travel in a seat that is not equipped with a lap or shoulder belt.



PREGNANCY

Pregnant occupants of the motorhome should wear the lap belts low on their torso and should position the shoulder strap diagonally across their chest. Do not position the shoulder 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 with a certified and appropriately sized child restraint system experience more severe injuries than those who are properly restrained. The National Highway Traffic Safety Administration (and Canadian equivalent), mandates anchors and tethers for child restraint systems in passenger vehicles, but these NHTSA rules do NOT apply to your motorhome. Therefore, your motorhome is not equipped with any anchor or tether restraint system for use with child restraint seats. In evaluating and providing the safest conditions for your young passengers, you must take into account the following considerations:

1. Familiarize yourself with the laws and regulations of all states and provinces in which you will use the motorhome. Laws governing the transport of children and the use of child restraint and anchor systems vary in different jurisdictions.

⚠ CAUTION

Placing a child or child restraint system in a rear-facing or side-facing seat is not safe under any circumstances.

2. In accordance with applicable law, your motorhome is not equipped with any anchor or tether system on any of its forward facing seats.
3. Obtain a child restraint that is labeled as certified to comply with all applicable U.S. and Canadian laws, rules and regulations applicable to child car seat, harness, anchor and/or tethering systems before allowing any child to travel in your motorhome.
4. Ensure that any child restraint system you use conveniently and safely attaches to the structural elements of your motorhome and provides safety for a child every time it is used.
5. Ensure that your child restraint system is suitable and adequate for your child's age, weight and height. Check your child's restraint system instructions and labels to verify that it is suitable and adequate.
6. Carefully review the labels and instructions supplied with your child restraint system and correctly and appropriately install your child restraint system in accordance with the labels and instructions and all applicable laws and regulations.
7. If anchors or tethers are required for the safe or legal use of your child restraint system or for your child's age, weight and height, you may have a difficult time safely transporting a child in the motorhome, because no anchors or tethers are installed on your motorhome as manufactured.

DRIVER/PASSENGER SEAT CONTROLS

MERCEDES

SWIVEL FUNCTION

1. To activate the swivel function of a seat, push the door control seat switch ① forward to slide the seat forward. It is essential that the seat is moved forward to prevent damage to the door panel and post when swiveling the seat.



2. Move armrest ② into upright position.



3. Pull the swivel lock lever ③ (located near the base of the seat) to the left, and swivel the seat slowly toward the center line of the motorhome to prevent damage to the seat, door panel and post.

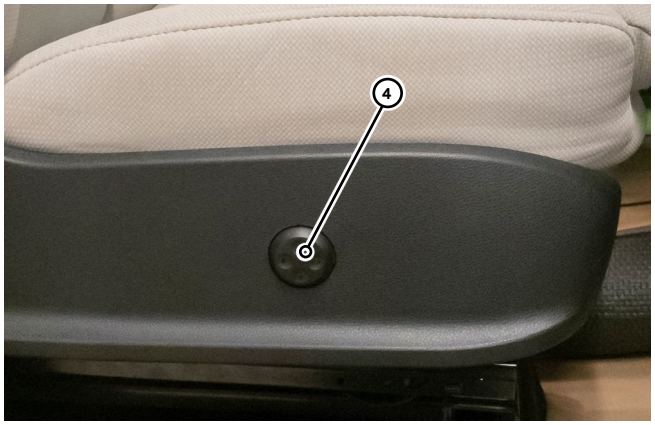


⚠ CAUTION

Swivel must be locked in the forward facing position when vehicle is in motion. Always open door slightly, and swivel driver's seat clockwise, or swivel passenger's seat counterclockwise.

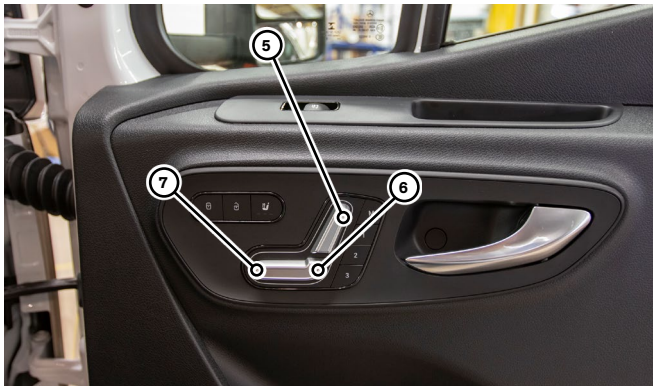
LUMBAR SUPPORT

Use the lumbar support controls ④ to adjust the support to suit your comfort needs.



BACK REST ADJUSTMENT

Slide the back rest adjustment button ⑤ forward or backward to adjust the angle of the seat back.



SEAT HEIGHT ADJUSTMENT

To raise the seat height, push the button ⑥ upwards until the desired height is reached. To lower the seat height, push the button ⑥ downwards until the desired height is reached.

SEAT CUSHION HEIGHT ADJUSTMENT

To raise only the seat cushion without raising the entire seat, push the seat cushion height adjustment button ⑦ up or down to adjust the height of the seat cushion.

FORD

SWIVEL FUNCTION

1. To activate the swivel function of a seat, lift the slide release bar ② and slide the seat so it is centered in the pedestal. It is essential that the seat is centered to prevent damage to the trim or seat when swiveling.

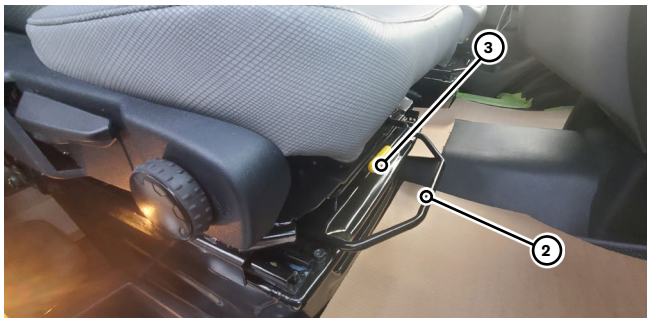
⚠ NOTICE

Swivel must be locked in the forward facing position when motorhome is in motion. Always open the passenger door slightly, and swivel passenger seat counterclockwise.

⚠ CAUTION

Swivel must be locked in the forward facing position when motorhome is in motion.

2. Pull lever ③ up and hold.



3. Rotate the seat slowly toward the center line of the motorhome until it faces the rear of the motorhome.
4. To return the seat to the forward facing position, pull lever ③ and hold.
5. Rotate the seat clockwise until it is facing forward and locks in to place.
6. Motorhome is now ready to move.

LUMBAR SUPPORT (DRIVER'S SEAT ONLY)
Turn the lumbar support knob ① clockwise or counterclockwise to suit your comfort needs.



BACK REST TILT
Twist the knob in order to raise and lower the back rest on both passenger and driver side seats.



TRAVELING

Refer to the chassis manual in the Motorhome Information Kit for engine starting, operation and stopping instructions.

DRIVING CHARACTERISTICS

CONTROLS

Your motorhome driver controls are similar to those of an automobile. Steering and braking controls are power assisted to help make driving as comfortable as possible. Your motorhome is much higher, wider and heavier than any automobile so the operator must anticipate and account for the differences.

GENERAL HANDLING

The motorhome power-to-weight ratio is lower than that of the average automobile. 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 in. (152 mm). Height may vary depending on chassis, make, suspension, tire pressure, roof loads and air conditioner.)

HIGH WIND HANDLING

High winds or strong wind gusts may lead to unpredictable handling and motorhome control. When encountering high winds or strong wind gusts, proceed as follows:

- Slow down significantly so you can maintain control of your motorhome.
- Find a safe place to pull off the road and take shelter.
- Park your motorhome facing directly into the wind to minimize high wind buffeting.

MOUNTAIN DRIVING

When driving in hilly or mountainous terrain, exercise safe driving techniques that match terrain conditions.

CLIMBING A HILL

The transmission of your motorhome is designed to automatically down-shift when required during long, uphill climbs. If the transmission frequently shifts up and down, select a lower gear for the duration of the climb to prevent repeated shifting. This will prevent unnecessary wear and tear on the transmission. Refer to your chassis owners manual for more information.

DESCENDING A HILL

Select a lower transmission gear when descending a hill to avoid prolonged brake applications. Under extreme conditions, prolonged brake applications could lead to excessive brake wear, overheating and failure causing you to lose control of the motorhome. Refer to your chassis owners manual for more information.

⚠ CAUTION

Extended brake applications can cause excessive wear, overheating and under extreme conditions, brake failure that could cause you to lose control of the motorhome.

⚠ NOTICE

A safe driving practice is to use the same lower gear position when descending a hill that you used while climbing the hill.

⚠ NOTICE

Carefully observe the engine temperature, especially during long climbs. If you notice overheating, pull off the road and allow the engine to fully cool before continuing. Refer to the chassis manual in the Motorhome Information Kit for instructions on filling the engine cooling system of your motorhome.

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 a trip, check your routes for height restrictions. Remember, some tunnels prohibit motorhomes with LP Gas systems.
3. While traveling, make sure all occupants correctly use their seatbelts.
4. While traveling, make sure all doors are closed and that cabinets, drawers and loose objects are secure.
5. Instruct your family about what to do in case of fire and periodically hold fire drills.
6. Maintain a properly charged fire extinguisher.
7. Ensure LP Gas and smoke detectors are unobstructed and in proper working order at all times.
8. Keep a well-stocked first aid kit on board the motorhome.
9. Check tires often while traveling. Make it a habit to check tire pressures before each trip and visually inspect each time you refuel.
10. If you have a cellular phone, carry it with you for emergencies. Do not text or use the phone while driving.
    - Do not drink and drive. Do not allow others to do so.
    - Do not text and drive.
    - Do not use a cell phone while driving. Always use a hands-free system while driving.

TRAVEL TIPS

As you travel with your motorhome, you will learn a great deal from your own experiences. Share your experience with other motorhome owners and learn from them as well. Read RV, outdoor and camping magazines for camping and travel tips. The following basic suggestions also may make your travel and camping easier and more enjoyable:

1. Freezer doors are closed securely. Carefully open these doors after traveling. Contents may have shifted while traveling and may fall when you open the door.
2. Know the height and width of your motorhome, and allow for adequate clearance.
3. Use your mirrors while driving to determine whether you are crowding the center line or the outside edge of the highway. Remember, your motorhome requires a much different driving style than your family car.
4. When towing a vehicle, make sure the combined weight of the towed vehicle does not exceed the GCWR, GVWR, or GAWR as stated on the vehicle certification label located on the passenger door frame (US models only).
5. Check your route carefully before you travel. Some jurisdictions prohibit vehicles with LP Gas containers to drive through highway tunnels.
6. Fill your water tank with clean, fresh potable water only. Do not use a new hose to fill the tank–it may leave a taste of rubber or vinyl. ONly use hoses rated for potable drinking water.
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 buildup and potential odor. After dumping, 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 or 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 fully dried 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 traveler, you may want to explore new and out-of-the-way places. These recreational areas can be vulnerable to unusual and severe weather conditions. The following suggestions and safety precautions may help you in case you find yourself in severe weather situations.

⚠ NOTICE

All motorhome occupants must be familiar with these safety precautions and should be alert to changing weather.

1. Be alert. Thunderstorms and heavy rains can occur suddenly and unexpectedly. Frequently check weather reports for the area in which you are camping or traveling so you will not be caught unaware of sudden weather changes.
2. Remember the following terms:
3. Weather Watch - Severe weather may develop in your area. Be prepared for an emergency.
4. Weather Warning - Severe weather is occurring or is imminent. Immediately find a safe location.
5. When camping near a body of water, leave plenty of space and elevation between your motorhome and the water.
6. Avoid canyons or dry washes during threatening weather. Prepare an alternate exit, and move to higher ground as soon as it starts raining.
7. If you get caught in a flash flood, do not attempt to move your vehicle. Abandon it, and return only after the water level has subsided. Never attempt to drive through any flooded area.
8. Comply with all warnings and instructions provided by local authorities.
9. Stock enough survival supplies for several days. This should include food, water, first aid supplies and necessary medications.
10. When you leave home, inform someone of your destination and your schedule. Notify the same person if your plans change.

EMERGENCIES WHILE DRIVING

Your motorhome is designed with features that allow the driver and occupants to resolve some emergencies or failures while traveling. Review this section to become familiar with the recommended procedures to resolve these conditions or situations. Review this section with all new drivers and before each trip.

HAZARD WARNING LIGHTS

Your motorhome is equipped with a hazard warning light system. Both the front and rear turn signals flash in unison when the system is turned on. Refer to the chassis manual in the Motorhome Information Kit for additional details and location of the hazard warning lights.

Activate the hazard warning lights whenever the motorhome is stopped on the side of a roadway or near moving traffic. The hazard warning lights alert other motorists of a potential hazard and to take extra care. The system is designed so the lights continue flashing when the switch is on, even if the key is in the off position or removed from the ignition.

FLAT TIRE

If you have a flat tire while operating your motorhome, slow down gradually to prevent loss of control and pull to the shoulder or the side of the road. Stop on a level paved surface and engage the parking brake. Refer to the following steps to change the flat tire:

1. Turn on the hazard warning lights.
2. Place wheel chocks in front and rear of tire located on the opposite side of the flat tire.
3. Immediately contact a qualified roadside repair service, because your motorhome is not equipped with a spare tire.
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 raise the motorhome using the jack.
6. Consult the chassis manual in the Motorhome Information Kit to locate the jack and to determine the proper jack placement locations on the chassis.
7. If the ground is soft or unstable, carefully move the

motorhome to a safe location before attempting to lift with the jack.
8. Use a jacking board for stability on loose or soft ground.
9. Raise the motorhome with the jack according to the instructions in the chassis manual.
10. Never allow any portion of anyone's body to be under the vehicle at any time while raising or supporting the motorhome with the jack.
11. Before resuming travel with a new or repaired tire, ensure the lug nuts are tightened in the proper sequence and to the torque specified in the chassis manual. Use a torque wrench to ensure the specified torque is achieved. Recheck and re-torque the wheel lug nuts after 25 and 100 miles (40 and 160 km) of operation.

WHEN THE VEHICLE IS DISABLED

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.

⚠ NOTICE

Attempting to pull or tow the motorhome to start may result in major drivetrain component failure or damage.

JUMP STARTING/BOOSTING

Refer to the chassis manual for instructions.

BREAK DOWN

If the motorhome breaks down on the roadway, pull off the road and stop, engage the parking brake, turn on the hazard warning lights and chock the wheels if you are on uneven or unstable ground. Call an approved towing service and provide it with the vehicle make, weight, length, width and height to ensure they dispatch an appropriately sized truck to tow your motorhome to a qualified repair facility.

OVERHEATING

If the engine overheats while driving, follow these steps:

1. Pull to the side of the road and stop immediately.
2. Shut off the engine.

⚠ WARNING

To avoid burns or other injury, allow coolant to cool before removing any cap from a radiator or coolant recovery tank.

3. Check coolant level in the coolant recovery tank. The coolant level should be between the "full" and "add" marks on the tank.
4. If the coolant level is low, proceed as follows:
   - Check for visible leaks from the hose connections, radiator and water pump.
   - Make sure the serpentine or separate water pump belt is tight and the cooling fan is turning.
   - If coolant level is low, add coolant to the recovery tank as soon as possible.
   - If the coolant is leaking, the serpentine or separate water pump belt is loose or broken, or the red warning light stays on, do NOT start the engine until the problem is corrected.
5. Once the temperature gauge returns to normal, resume driving and keep an eye on the gauge. Do NOT resume driving until the problem has been corrected and the temperature has returned to normal.

PARKING

PARKING

You can stop and park your motorhome much like an automobile; however, always remember that the unit is longer, wider and higher than a typical automobile and requires more room and clearance.

⚠ NOTICE

Always set the parking brake and place wheel chocks in front and rear of wheels to prevent unexpected movement.

BACKING UP

USING MIRRORS

Large mirrors are mounted on both sides of your motorhome to provide rearward visibility for the driver. They do not provide visibility directly behind or on top (clearance) of the unit, however.

USING SPOTTERS

For best results, have another person help guide the driver while backing. 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.

⚠ CAUTION

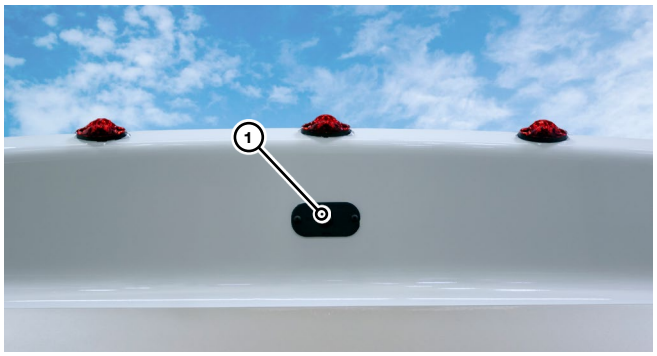
The rear view camera is only an aid. It cannot replace your own awareness of the immediate surroundings. You are responsible for safe parking. When parking and pulling away, make sure that there are no persons, animals or objects in the maneuvering area.

BACK-UP MONITORING SYSTEM

Your motorhome is equipped with a rear camera monitoring system. The rear camera ① view will automatically display on the in-dash entertainment system display ② when you shift the vehicle into reverse. For complete operating instructions, refer to the chassis manual in your Motorhome Information Kit.

⚠ CAUTION

Do NOT take your eyes off the road for extended periods of time or a crash causing injury or death could result. Do NOT give extended attention to the in-dash entertainment system while driving.





EXTENDED OCCUPANCY

Your motorhome 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, wall materials and woodwork. Moisture condensing on the windows is an indication that the humidity inside your motorhome is too high. The following procedures will help to reduce the moisture level inside your motorhome:

1. Open windows and vents. This will allow fresh air to flow through your motorhome and reduce moisture levels.
2. Reduce the amount of moisture released inside the motorhome. Run the bathroom fan when using the bathroom and turn on the roof vent fan while cooking to help remove excessive moisture from your motorhome. Do not hang wet towels or swimwear inside the motorhome to dry.

LEVELING THE MOTORHOME

Level the motorhome frame before using any of the appliances. The refrigerator is especially sensitive and must be level to function properly. Spend the necessary time to level your motorhome to ensure maximum enjoyment and reliability of your appliances. Select the area to park your vehicle as follows:

1. Inspect the area you want to park your motorhome. 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 close to level, as possible.
3. Use a level on the floor to determine the locations where it is necessary to place planks under tires in order to level the motorhome.
4. Level from side to side first, then from front to back. To raise one side of the motorhome, place planks in front of the low side tire, and drive the motorhome forward until the tires are resting on top of the planks.

⚠ CAUTION

Exercise care and caution when parking and leveling your motorhome. Make sure all pets and people, especially children, are clear of the motorhome until leveling is complete and the motorhome is stable.

LEVELING JACKS

Your motorhome may be equipped with an optional automatic leveling jack system. The leveling jack control panel (5) is located in the cabinet above the coach entrance doorway. Refer to the detailed operating instructions in the Motorhome Information Kit before operating.



AUTO-LEVEL OPERATION

1. **Power On**: Make sure your parking brake is engaged and the ignition key is in the OFF position. Press and release the POWER button (6) to engage power. All LED's on the panel will come on then most will go out. The LED (10) next to the POWER button should be lit RED when power is on. If you attempt Auto-Level or manual extend you will hear a "deny" tone if the key or park brake is in the improper position.

2. **AUTO-LEVEL:** Press the AUTO-LEVEL button (11) and release. The system will send out a continuous series of beeps, the 'OPERATING' LED (9) will be on RED to let you know AUTO-LEVEL is operating and will automatically level the coach. When completed, the keypad will signal a successful level with a dual-level tone. Press and release the

POWER button ⑥.

NOTE: The keypad may be left on once level has been achieved. The keypad will enter "sleep mode" after five minutes of inactivity.

NOTE: The jacks down LED lights must be off for Auto-Level to function. If needed, press the ALL RETRACT button ⑧ to clear and then Auto-Level should function.

3. **Retracting the Jacks:** To retract all jacks simultaneously, press and release the All RETRACT button ⑧. All jacks will automatically retract and return to stowed position. The pump will run in retract mode until all of the jacks are fully stowed (plus an additional 5 seconds) up to a maximum of 60 or 90 seconds). This is the proper method for retracting the jacks prior to travel. You may stop the ALL RETRACT by pressing any button on the keypad. Jacks may be retracted in pairs by using the UP button for each end or side for leveling purposes however the ALL RETRACT ⑧ must be used to fully stow the jacks prior to travel. The jacks down LED's will turn off, indicating the jacks are in the "stowed" position.

4. **Power OFF:** Press and Release the Power Keypad Button ⑥

SETTING THE LEVEL POSITION OR NULL

The Null or "level position" has been preset from the factory. However, if the coach is not level following an attempt to AUTO-LEVEL, the Null is easy to reprogram. To set the Null, push and release the POWER keypad button ⑥ to engage power. The LED ⑩ next to the POWER button should be lit RED when power is on. Level the coach by deploying jacks manually (using the DOWN keypad buttons, extend jacks until the coach is level), or by simply parking the coach on a level site. You do not need to have jacks deployed to set the Null. Use a bubble level on a flat surface in the center of the coach as a reference. Once the coach is level, turn the POWER off at the panel. Depress and hold the AUTO-LEVEL keypad button ⑦. Continue to hold the AUTO-LEVEL button and press then release the POWER button⑥, and listen for a series of beeps. After the panel has beeped 5 to 6 times, release the AUTO-LEVEL button (the keypad will continue to beep as long as the AUTO-LEVEL button is held). The new Null has been set and the system will maintain this setting. Press and release the ALL RETRACT button ⑧ to retract the jacks to the stowed position.

MANUAL OPERATION

1. **Power On:** Make sure your parking brake is engaged and the ignition key is in the OFF position. Press and release the POWER keypad button ⑥ to engage power. All LED's will come on then most will go out. The LED ⑨ next to the POWER button should be lit RED when power is on. If you attempt to extend jacks by pressing the DOWN keypad buttons or all jacks with the AUTO-LEVEL button, you will hear a "deny" tone from the keypad if the ignition key and or park brake is in the improper position.
2. **Planting the Jacks:** The jacks will be extended in pairs Fronts or Rears or Left or Right Using the DOWN (extend) keypad buttons, extend the jacks until they contact the ground (this is referred to as "planting" the jacks). As you extend each pair of jacks the corresponding LED jack status lights will come on to indicate jack(s) are out of the "stowed" position. Jacks will be operated in pairs. **Extend and plant the front jacks first. Then extend and plant the rear jacks.** Only after planting the fronts and then the rears, should side to side corrections (leveling) be attempted. This process will stabilize all four corners and minimize twist prior to the leveling process. Do not manually over extend jacks. This may cause unwanted stress on the coach or the jacks.
3. **Leveling the Coach:** Use a bubble level on a flat surface in the center of the coach as a reference. Level the vehicle by using DOWN (extend) or UP (retract) keypad buttons until the vehicle is level. Front to rear then side to side. Jacks will be operated in pairs. Do not attempt to lift the vehicle tires off of the ground. Only lift (extend) enough to level and stabilize the unit. Once level, press and release the POWER button ⑥ to turn off the keypad.

NOTE: The keypad may be left on once level has been achieved. The keypad will enter "sleep mode" after five minutes of inactivity.

4. **Retracting the Jacks:** To retract all jacks

simultaneously, press and release the ALL RETRACT button ⑧. All jacks will automatically retract and return to stowed position. The pump will run in retract mode until all of the jacks are fully stowed (plus an additional 5 seconds- up to a maximum of 60 or 90 seconds). This is the proper method for retracting the jacks prior to travel. You may stop the ALL RETRACT by pressing any button on the keypad. Jacks may be retracted in pairs by using the UP button for each end or side for leveling purposes. However, the ALL RETRACT must be used to fully stow the jacks prior to travel. The jacks down status LED lights will turn off, indicating the jacks are in the stowed position.

5. **Power OFF:** Press and release the POWER keypad button ⑥.

⚠ NOTICE

Always verify that the jacks are fully retracted and safe for travel before attempting to move the motorhome.

⚠ NOTICE

Always use the ALL RETRACT button ⑧ to properly stow the leveling jacks.

⚠ CAUTION

Do not use the 4 point leveling system to change tires.

REFUELING THE VEHICLE CHASSIS

⚠ WARNING

Make sure all LP Gas tanks and appliances are shut off before refueling.

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

⚠ CAUTION

Modern fuel systems may allow 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 quickly, creating a potential hazard.

FUEL TANK CAPACITY

Refer to the chassis manual in the Motorhome Information Kit for fuel tank capacities.

FUEL TYPES

Use only ultra-low sulfur diesel fuel on all Mercedes chassis products (Unity), or a minimum 87 octane fuel for Ford chassis products (Wonder). Refer to the chassis manual in the Motorhome Information Kit for details.

⚠ NOTICE

Use the correct fuel type for the motorhome. Using incorrect fuel can be hazardous and can cause significant and costly damage.

FILLING THE TANK

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

⚠ NOTICE

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

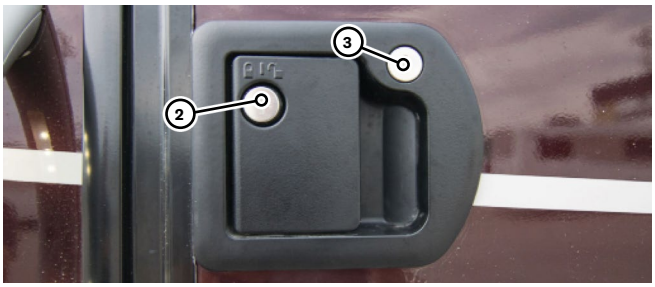
⚠ NOTICE

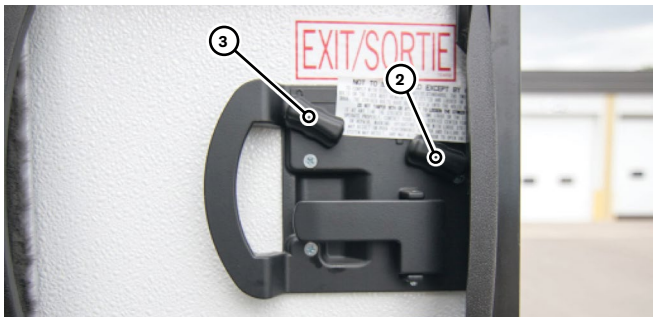
Travel vans for the U.S. market are designed with a fuel line intake for the auxiliary generator that will drain 75% of the fuel from the tank. For the Canadian market, the lines will completely empty the tank meaning there will be no reserve available to get the motorhome to a refueling facility. Take care in running the generator not to use all the fuel in the motorhome.

DOOR LOCKS

Separate keys are required for the ignition switch installed in the chassis and motorhome door locks.

The coach entrance door is equipped with two interior locks. The first lock ② secures the exterior and interior door handles, and the other lock is a door dead bolt lock ③.

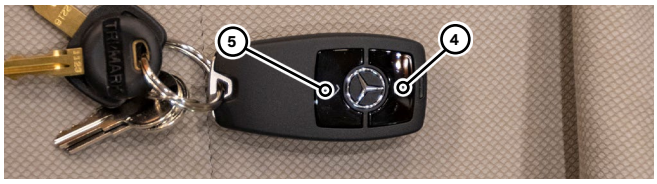




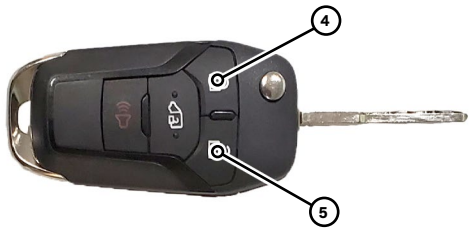
LOCKING AND UNLOCKING PROCEDURES

KEY FOB

Although the chassis ignition switch and the motorhome door locks may require the use of different keys, the motorhome entrance doors can be locked/unlocked with the Mercedes Sprinter key fob. Using the key fob press the lock button ④ to lock all the entrance doors. Press the unlock button ⑤ to unlock the driver's side door. Pressing unlock button ⑤ twice within 2 seconds will unlock all doors (including the coach entrance door if equipped with the optional key fob entry feature.)



UNITY MODELS



WONDER MODELS

INSIDE THE MOTORHOME

Your motorhome can be locked/unlocked from the inside using the buttons ⑥ located on the driver and passenger side doors. Press the button to unlock all entrance doors; press the same button to lock all the entrance doors.



Note: When the paddle lock is in the locked position on the side entrance door, it can only be opened once the paddle lock is manually unlocked with the key.

KEYS

Keep a record of all key code numbers and keep them in a safe place. Do NOT keep them in your motorhome. Key codes for the chassis can be obtained only through your local authorized Mercedes Sprinter dealer.

The following keys are provided with your motorhome: Mercedes Sprinter chassis or Ford Transit chassis key ⑦, standard lock keys dead bolt ⑧, door handle lock ⑨, and baggage door key ⑩.



ENTRY DOOR STEP

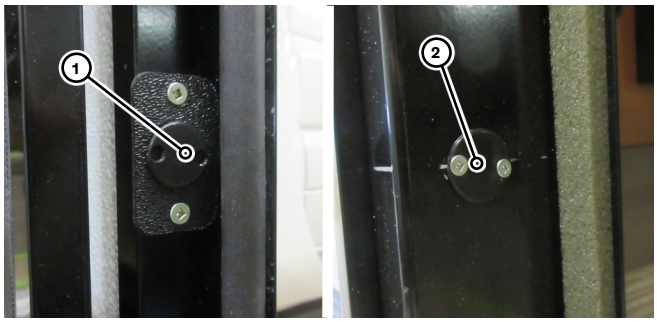
The entry system is equipped with a magnetic interlock system that activates the lowering and raising of the Entry Door Step when the magnetic field is broken or created between the door ① and chassis ②. When the door is opened, the field is broken and the step is lowered. When the door is closed, the field is completed and the step raises.

In addition, the light on the underside of the step automatically illuminates when you open the coach door.

⚠ WARNING

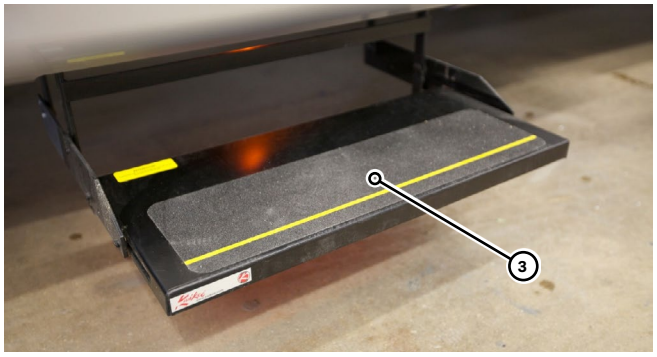
Ensure the entry door step has fully extended before stepping out of the motorhome.

Note: The step light will remain illuminated for five minutes after extending the steps.



⚠ NOTICE

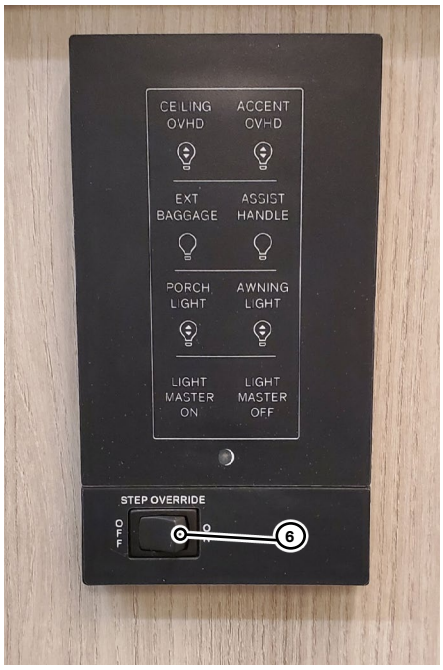
The entry door step ③ automatically retracts and the step light switches off when you close the coach entrance door and turn the vehicle ignition switch to the "ON" position.



STEP OVERRIDE SWITCH

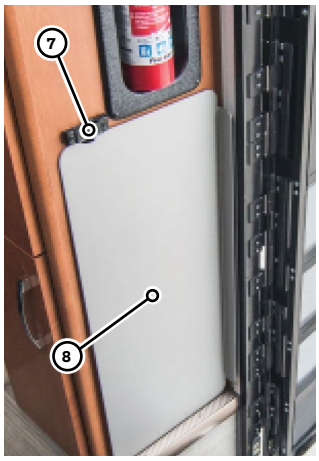
Depress the step override switch, located on the main lighting panel at the entrance of the coach (6), to prevent the steps from retracting when the coach door is closed.

NOTE: The vehicle ignition switch must be in the "OFF" position for the step override switch to work

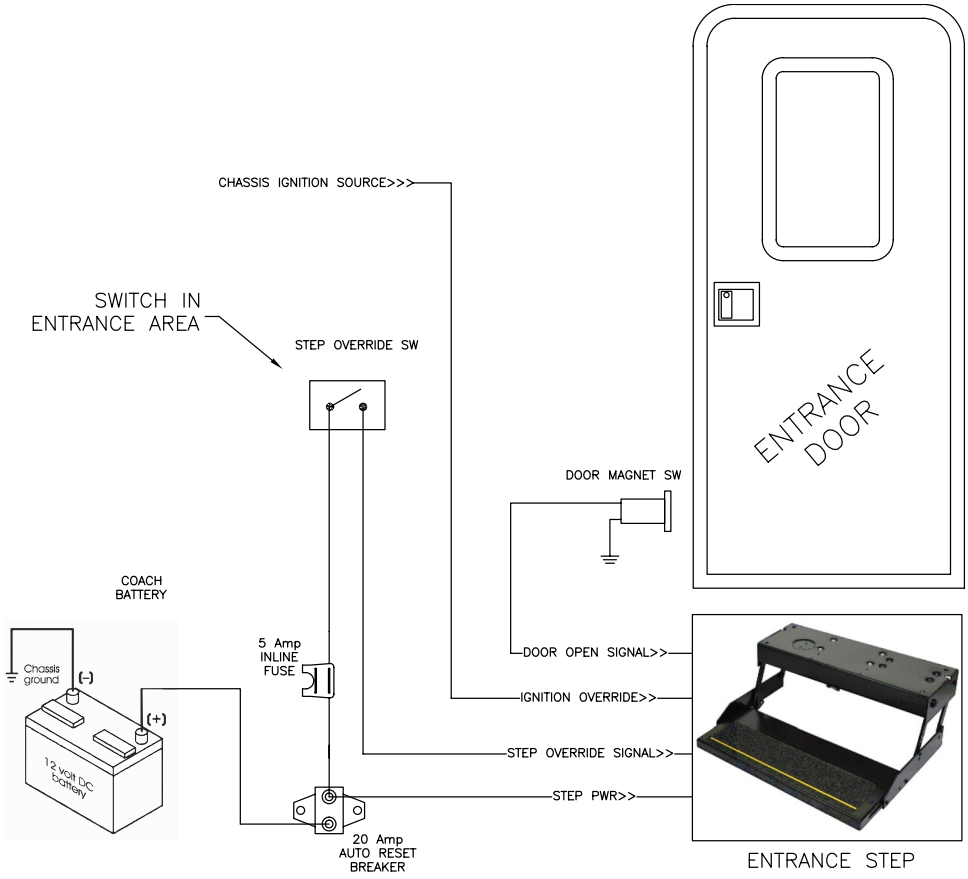


STEP COVER (ON SPECIFIC MODELS)

When the coach door is closed, you can lower hinged plate (7) by releasing the latch (8).This plate covers the steps, providing a safe and level floor area (available on select models only).

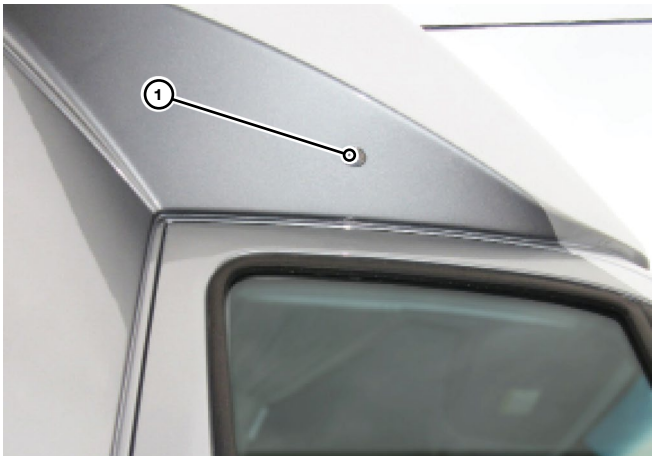


ENTRY STEP ELECTRICAL DIAGRAM



EXTERIOR LIGHTING

A light ① is located above each cab door and comes on when the door is opened. It lights up the seat and cab area to facilitate entry. When the door is opened, light comes on. When the door is closed, the light goes out. The light is powered by the Mercedes Sprinter chassis system.



SLIDE OUT ROOM

Your motorhome may be equipped with an expandable slide out room ⑩, which provides extra living area for the occupants.



BEFORE OPERATING THE SLIDE OUT ROOM

1. Ensure that the motorhome is properly leveled and supported with the stabilizing jacks if so equipped.
2. Level the motorhome as described in the “Leveling the Motorhome” section.

⚠ NOTICE

If the motorhome is not properly leveled before extending the slide out room ⑩, the slide out mechanism could bind causing damage.

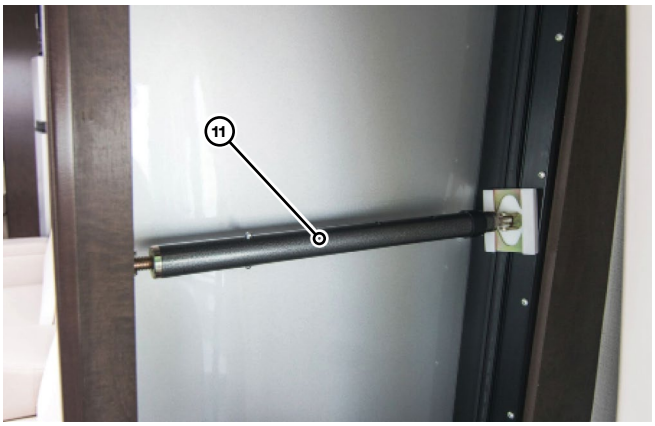
3. Make sure there is adequate space beside your motorhome for the slide out room to fully extend.
4. The slide out room is powered by two 12 volt DC motors. Ensure the batteries are fully charged when operating the slide out room controls.
5. Before operating the slide out room, review the instructions that you received from your dealer at the time of delivery.
6. Check the interior of the slide out room to make sure there are no obstructions on the floor or leaning against the walls or nothing has fallen behind the slide trim.
7. Close all cabinet doors.
8. Check the exterior of the unit to ensure all baggage doors are closed and there are no obstructions.
9. Make sure all bystanders are clear of the area before operating the slide out room controls.

⚠ DANGER

Do NOT drive your motorhome with the slide out room extended. This is dangerous and violates North American traffic laws.

⚠ WARNING

Make sure all bystanders are clear of the area before operating the slide out room controls. Ensure that travel locks (11) are removed before extending the slide out room, and ensure travel locks are installed before moving the motorhome.



EXTENDING THE SLIDE OUT ROOM

The slide out control switch (1) is located in the cabinet above the coach entrance doorway.

Depress and hold the bottom of the slide out control switch (1) until the slide out room is fully extended,then release the switch. Fully extend the slide out room to ensure the all-weather seals are in correct alignment.



RETRACTING THE SLIDE OUT ROOM

Depress and hold the top of the slide out control switch (1) until the slide out room is fully retracted, then release the switch. Fully retract the slide out room to ensure the all-weather seals are in correct alignment.

SERVICING ALL-WEATHER SEALS

Cracked or worn all-weather seals around the slide out room may allow dirt and moisture to enter your motorhome which could lead to premature interior wear. Inspect the all-weather seals in the spring and fall, and have them replaced if necessary.

Extensive travel and use in severe weather conditions may cause more rapid deterioration of some components, especially all-weather seals.

Have professional service personnel, adjust, maintain and replace the all-weather seals to extend the life and comfort of your slide out room.

SLIDE OUT ROOM EMERGENCY OPERATION

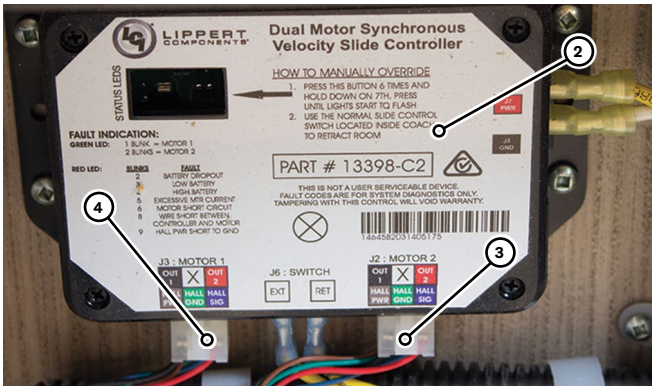
If the slide out room fails to extend or retract electrically, you can manually operate the slide out mechanism. Manual operation of the slide out is not recommended unless the slide out needs to be retracted in order to move the motorhome.

⚠ NOTICE

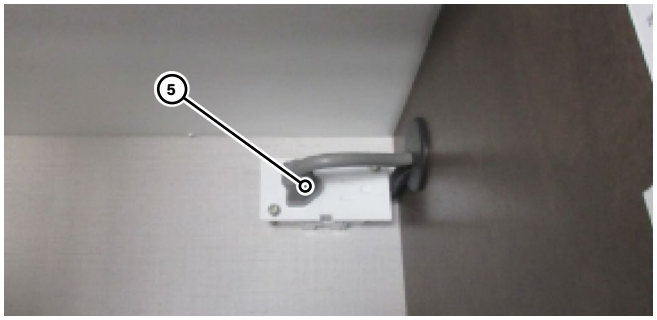
The slide out electrical function is protected by a fuse located on the power distribution panel. Check that the fuse is intact before resorting to manual slide out operation.

ACCESSING THE MOTOR MOUNTING SCREW WHEN SLIDE OUT IS IN (U24CB AND U24FX)

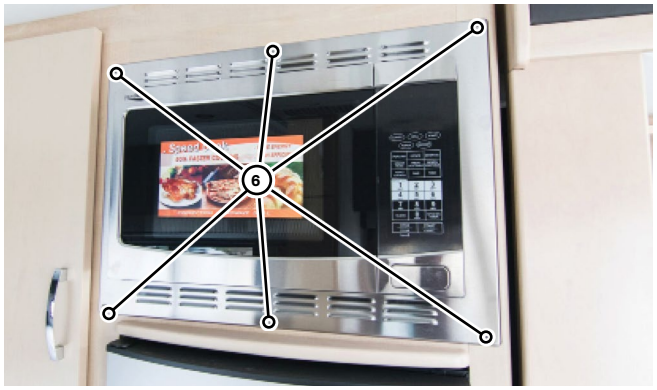
1. Turn the battery disconnect switch to the “OFF” position, and disconnect the shore power. Refer to the “Battery Disconnect Switch” section in the “Electrical System Operation” section.
2. Locate the control module ② (installed in lower galley.)



3. Unplug both motor electrical connectors (③ & ④) from the control module ②.
4. Unplug the microwave cord ⑤ in the cabinet adjacent to microwave.

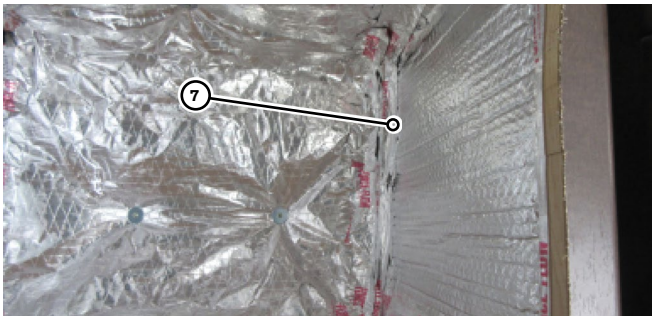


5. Remove the six screws ⑥ holding the microwave in place.



6. Remove the microwave.

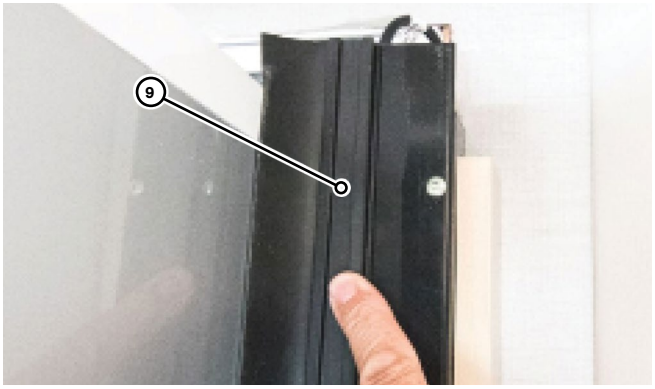
7. Remove foil ⑦ covering the access panel on the right side.



8. Remove the access panel ⑧ by removing the staples first.



9. Remove the mounting screws ⑨



10. Locate the mounting screw on the ride side of the slide out and remove the screw.

11. Peel back the exterior sweep gasket ⑩ from the top corners of the slide out, and lift the slide out motor approximately ½" to release.



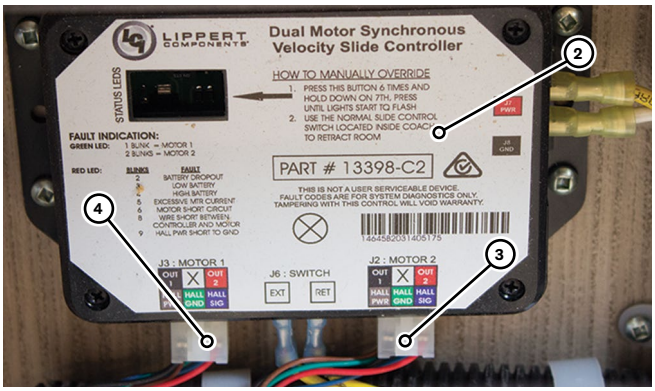
12. Push in the slide out room until fully retracted, keeping both sides of the slide out level with the coach while retracting.

NOTE: Manual movement of the slide out requires significant effort and may require the assistance of several people.

13. Peel back the exterior sweep gasket ⑩ from the top corners of the slide out, and reengage the slide out motor.
14. Replace the motor mounting screw ⑨ on each side of the slide out, and replace the microwave.
15. Reconnect both electrical connectors (③ & ④) to the control module ②.
16. Install the travel lock before moving the motorhome.
17. Have the slide out serviced by a qulified technician as soon as possible.

ACCESSING THE MOTOR WHEN SLIDE OUT IS OUT

1. Turn the battery disconnect switch to the “OFF” position, and disconnect the shore power. Refer to the “Battery Disconnect Switch” section in the “Electrical System Operation” section.
2. Locate the control module ② (installed in lower galley.)

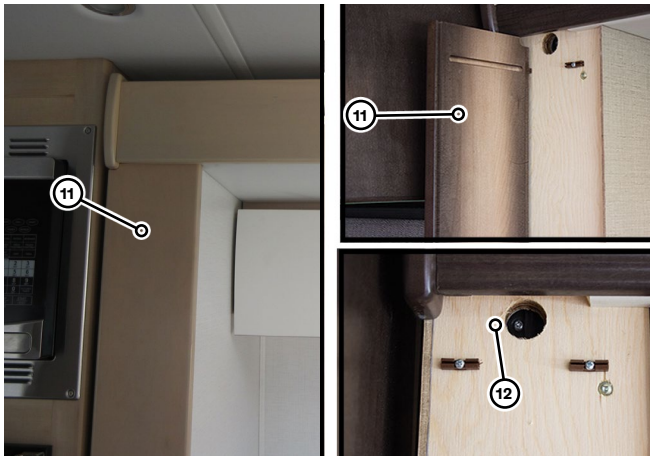


3. Unplug both motor electrical connectors (③ & ④) from the control module ②.

⚠ CAUTION

If you have unplugged the motor electrical connectors (③ & ④) from the control module ②, do NOT move the motorhome unless the slide out room and the slide out room motors electrical connectors (③ & ④) are reconnected to the control module ②. Reconnecting the motor electrical connectors to the control module applies a brake to the slide out room motors, keeping the slide out room locked in position.

4. Remove the slide out snap-on trim boards ⑪ on both sides.
5. Remove the mounting screws on either side ⑫.



6. Push in the slide out room until fully retracted, keeping both sides of the slide out level with the coach while retracting.

NOTE: Manual movement of the slide out requires significant effort and may require the assistance of several people.

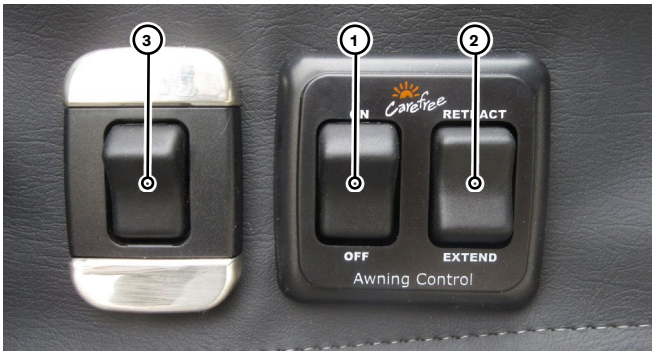
7. Peel back the exterior sweep gasket ⑩ from the top corners of the slide out, and reengage the slide out motor.
8. Replace the motor mounting screw ⑨ on each side of the slide out, and replace the snap-on trim boards ⑪.
9. Reconnect both electrical connectors (③&④) to the control module ②.
10. Install the travel lock before moving the motorhome.

AWNING

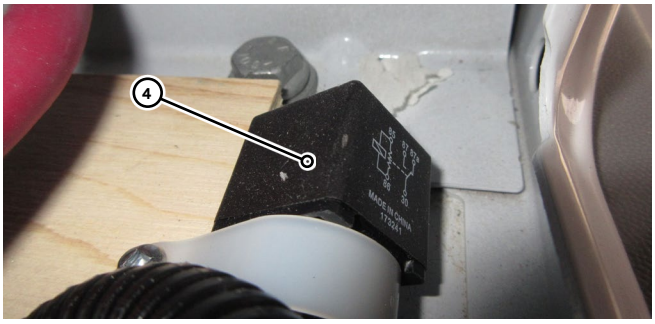
CAREFREE AWNING

EXTENDING THE AWNING

1. Turn the main awning power switch ① located on the passenger side seat base to the “ON” position.
2. Press the bottom section of the awning control switch ② to extend the awning fully.
3. Turn on the awning light ③ if desired.



NOTE: The power awning will not operate with the motorhome ignition on. The power awning is equipped with a safety feature preventing the awning from extending while the motorhome ignition is on (driving). This relay ④ is located under the front passenger seat.

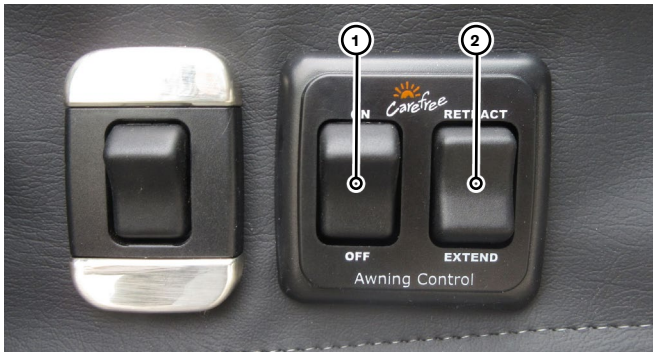


⚠ NOTICE

Awnings are designed to provide shade and protection from the sun. Retract awning if experiencing rain or wind conditions and when leaving unit unattended. Always secure awning in travel position when not in use.

RETRACTING THE AWNING

1. Ensure the main awning power switch ① located on the passenger side seat base is set to the “ON” position.
2. Press the top section of the awning control switch ② to retract the awning fully.



AUTO-RETRACT

Your awning is equipped with an auto-retract system that will automatically retract the awning in wind and rain conditions so long as the main awning switch power is set to ON. The system works by sensing movement at the end of the awning, and will retract if a certain movement threshold is surpassed. This includes, but is not limited to: wind gusts, heavy rain, excessive rocking of the motorhome, etc.

NOTE: Do not turn the main awning power switch ① off while the awning is extended to allow for the auto-retract system to operate as intended.

⚠ CAUTION

Always place the main awning power switch ① in the “OFF” position when the awning is not used and retracted during transit. This prevents the awning from being accidentally opened.

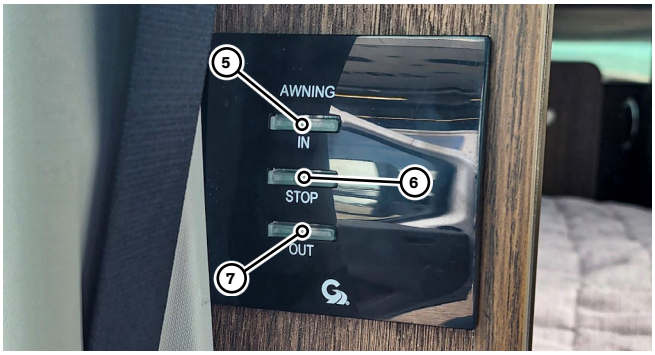
⚠ CAUTION

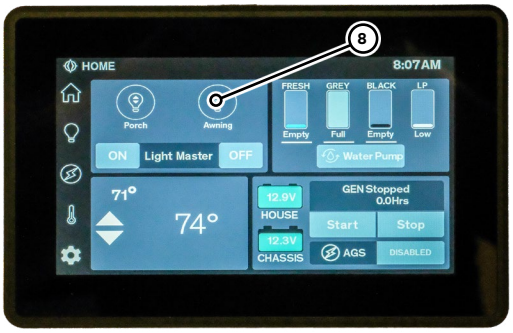
The auto-retract system is disabled when the main awning power switch is in the OFF position.

GIRARD AWNING

EXTENDING THE AWNING

1. Press the “OUT” button ⑦ located on the passenger seat pillar to begin extending the awning.
2. At any point during travel, you can press the “STOP” button ⑥ to stop the awning at its current position.
3. To turn on the awning lights, press the awning light button ⑧ on the home screen of the multiplex system.





NOTE: The power awning will automatically retract when the motorhome ignition is turned on. The power awning is equipped with a safety feature preventing the awning from extending while the motorhome ignition is on.

RETRACTING THE AWNING

1. Press the “IN” button ⑤ located on the passenger seat pillar toretract the awning fully.

ATUO-RETRACT

Your awning is equipped with an auto-retract system that will automatically retract the awning in wind and rain conditions. The system works by sensing movement at the end of the awning, and will retract if a certain movement threshold is surpassed. This includes, but is not limited to: wind gusts, heavy rain, excessive rocking of the motorhome, etc

⚠ CAUTION

Auto-retract systems provide protection against adverse elements; but no auto-retract system is a guarantee against severe or destructive weather; the effects of wind and rain on an awning are unpredictable and may cause severe damage to the awning and/or vehicle. If wind or extended periods of rain are expected, retract the awning.

⚠ DANGER

Keep all sources of heat and flame away from the awning canopy. Fabric is not fire-proof and can burn if left in contact with any flame or heat source.

APPLIANCE AND EQUIPMENT OPERATION

Appliances and equipment may vary according to your motorhome model, specifications and floor plan. Refer to the Motorhome Information Kit for operation and maintenance details relating to the specific appliances and equipment installed in your motorhome.

REFRIGERATOR

⚠ NOTICE

The motorhome MUST be completely level for the refrigerator to operate properly and safely.

⚠ CAUTION

Operating the refrigerator with the motorhome parked on unlevel ground could result in permanent damage to the appliance.

Parking and leveling the motorhome for comfortable living will usually place the refrigerator within satisfactory level limits. Use a level to ensure the motorhome is level.

If the refrigerator is unused for an extended period of time, make sure it is emptied, switched off, defrosted, cleaned and left with the door ajar. Use the travel latch to lock the door in the ajar position.

NOTE: Leaving the door slightly ajar allows air to circulate and prevents the build-up of odor or mold.

⚠ CAUTION

Do not cover or obstruct exterior refrigerator vents.

OPERATING THE REFRIGERATOR

DOMETIC 3-WAY REFRIGERATOR

The Dometic 3-way refrigerator in your motorhome operates in any one of the following modes:

- 120 volt AC electric
- LP gas with 12 volt DC ignition
- 12 volt DC

Press and hold the power button ① to turn the refrigerator on and off. After the refrigerator has been turned on, turn the dial ① to select the desired menu, then press the dial ① to select.



Refer to the refrigerator owner's manual in the Motorhome Information Kit for detailed operating instructions.

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



⚠ CAUTION

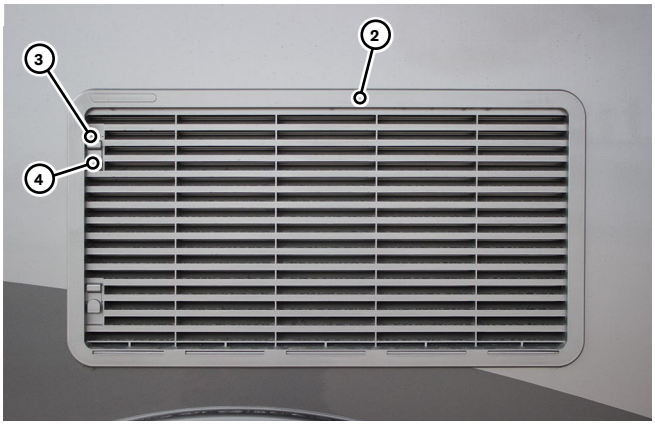
Do NOT store explosive substances in the refrigerator, such as lighter fluid, petrol, ether etc.

REFRIGERATOR OPERATING TIPS

1. Start the refrigerator at least 24 hours before loading it with food to allow sufficient time to cool.
2. Ensure the refrigerator is cold before placing items in it.
3. Allow items to cool before loading the refrigerator. Do not add warm or hot items.
4. Do not pack the refrigerator too full. To operate efficiently, the refrigerator needs air to circulate.
5. Use smaller containers to store items.
6. Use containers that seal tightly.
7. Place crumpled paper between items in the refrigerator to prevent them from rattling while driving.

EXTERIOR REFRIGERATOR COMPARTMENT

The exterior refrigerator compartment, accessible by an exterior door (2), allows access to the rear of the refrigerator for cleaning, inspection, maintenance and service. Keep this compartment clean and free of debris in order to maintain efficient operation of the refrigerator. Remove the exterior door by removing screw (3) and pushing up the locking clips (4).



STOVE TOP

The stove top operates on LP Gas. It must be lit manually using the integrated igniter. Ensure the LP gas valve switch (5), located in the utility center, is turned to the “ON” position. Refer to “Liquid Propane Gas System” section for details.



LIGHTING BURNERS

1. Turn on the appropriate burner control knob (6).
2. Depress and hold the igniter switch (7) until the burner lights.

NOTE: If the igniter fails to operate, check the 1 amp igniter fuse located in the cabinet below the stove top



3. Do not operate the stove top or the igniter while traveling or while refueling your motorhome. The burners may ignite fumes present during refueling.
4. Do not allow stove top burners to remain lit for an extended period of time without placing cookware above the flame. Overheating the burner grates may cause damage.

5. Turn on the roof vent and open a window to ensure proper ventilation when operating the stove top.
6. Do not remove the warning label on the stove top lid.
7. Do not operate burners with glass stove top lid closed.

⚠ WARNING

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

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

MICROWAVE/CONVECTION OVEN

OPERATING THE MICROWAVE/ CONVECTION OVEN

Refer to the microwave/convection oven manual in the Motorhome Information Kit for detailed operating and safety instructions specific to your unit.



MICROWAVE/CONVECTION OVEN OPERATING TIPS

1. Do not attempt to operate the oven with the door open. 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 the oven if there is damage to the door hinges, latches, seals or sealing surfaces. Do not operate the oven if the door does not close properly or is bent.
5. Do not adjust or repair the oven door. Have the unit serviced by qualified service personnel if necessary.
6. Do not operate the oven when empty.
7. When using the microwave on inverted power (lithium option only), be aware that the batteries may drain quickly.

EXTERIOR BBQ CONNECTION

Your motorhome is equipped with an exterior supply source to furnish LP Gas to your own barbeque (BBQ). The connection point is located at the rear on the passenger side.

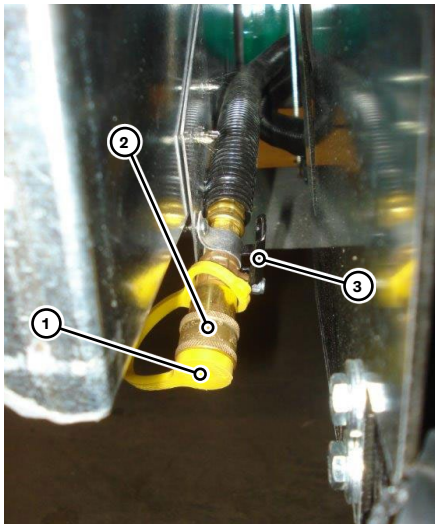
OPERATING THE EXTERIOR BBQ CONNECTION

1. Remove protective cover ① from the quick connect fitting ②.
2. Pull the collar of the quick connect fitting back and insert connecting hose to the quick connect fitting ②.

NOTE: Ensure collar is pulled forward once connecting hose is inserted.

3. Turn lever ③ to supply LP Gas to your BBQ.

NOTE: LP Gas supplied to the exterior BBQ connection is regulated; therefore, use only a non-regulated BBQ.



⚠ CAUTION

Any exterior heat source (BBQs, space heaters, etc.) must be positioned away from the sidewall and directed away from the motorhome to prevent damage.

LP GAS FURNACE

OPERATING THE LP GAS FURNACE

The LP Gas furnace is controlled by the multiplex system ④ located in the coach living area. See the Multiplex section for more detailed information on using the system.



⚠ WARNING

Before operating the thermostat, carefully read and follow the operating instructions in the LP Gas furnace manual located in the Motorhome Information Kit.

⚠ WARNING

Do NOT operate the furnace while the vehicle is moving.

⚠ CAUTION

Do not cover or obstruct exterior furnace vent.

LP GAS FURNACE OPERATING TIPS

1. Make sure the LP Gas valve switch ⑥ or valve ⑦ , located in the rear utility center, is turned “ON.” Refer to the “Liquid Propane Gas System” section for details.



2. Do not attempt to manually light the furnace. The furnace does not have a pilot light. It is ignited by a direct spark ignition system.
3. If the burner fails to light, check the LP Gas level at the system monitor panel to ensure there is LP Gas in your tank. Refer to the “Liquid Propane Gas System” section for details.
4. If there is LP Gas in the tank and the burner fails to ignite, verify that the LP Gas valve switch (6) is in the “ON” position.
5. If there is LP Gas in the tank and the LP Gas valve switch (6) is on, but the furnace still fails to light, turn off the thermostat (4), turn off the LP gas valve switch and contact your dealer or a local RV service center.

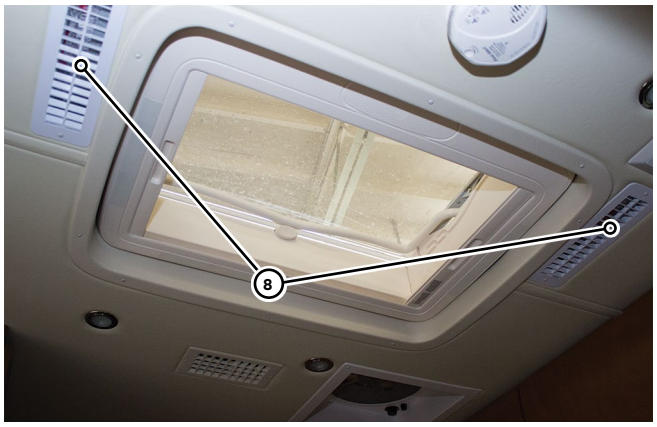
⚠ NOTICE

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

ROOF AIR CONDITIONER WITH HEAT PUMP

The roof air conditioner is controlled by the same coach thermostat that controls the furnace. Refer to the “LP Gas Furnace” section for details. When the thermostat is switched to the “cool” position and the temperature is set below the ambient room temperature, the air conditioner will operate automatically.

Air flow into the coach cabin can be controlled and directed by adjusting the vents (8).



⚠ CAUTION

Before operating the thermostat, carefully read and follow the operating instruction in the manual located in the Motorhome Information Kit.

HEAT PUMP

The air conditioner has a heat pump designed to take the chill out of the air. To turn on the heat pump, turn the thermostat to “Heat Pump” mode and set the temperature just above the ambient room temperature. The heat pump should only be used at temperatures above 41°F (5°C).

⚠ NOTICE

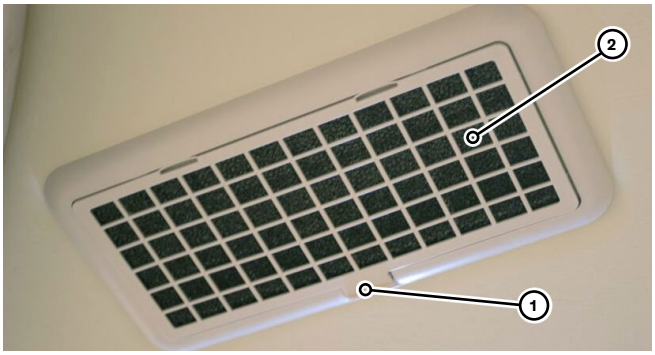
The air conditioner/heat pump operates only on 120 volt AC shoreline or generator power.

MAINTAINING THE ROOF AIR CONDITIONER/HEAT PUMP

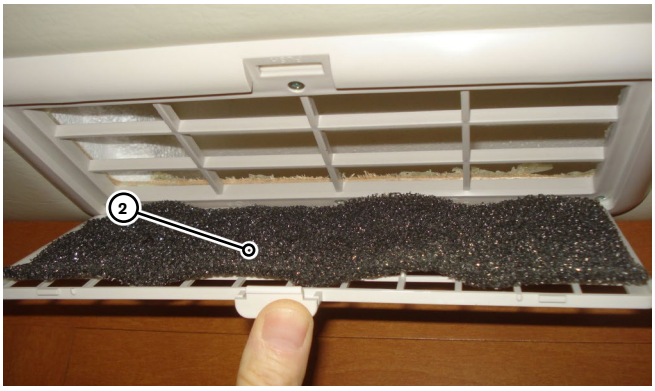
Clean or change the air conditioner filter at least every two weeks when the air conditioner is in operation. Do not operate the air conditioner without a filter.

Cleaning/Changing Air Intake Filter

1. Release the filter cover by depressing the retainer clip ①.



2. Remove the filter ② and wash in warm soapy water. Dry the filter thoroughly before reinstalling. If the filter is excessively dirty, replace with a new filter.



NOTE: Refer to the air conditioner manual in the Motorhome Information Kit for detailed maintenance instructions.

COACH POWER ROOF VENT

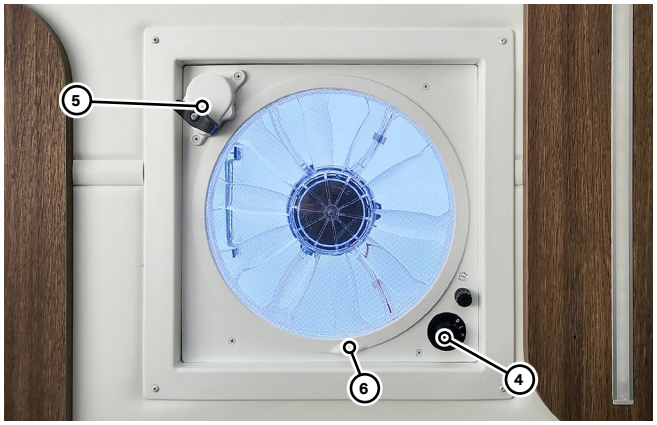
The coach power roof vent is used to provide controlled air flow throughout the coach cabin. Use the vent fan in conjunction with an open window to provide fresh air flow.

OPERATING CONTROLS

The vent button ③ on the main multiplex display controls the power to the fan. A three-position rotary switch ④ controls the fan speed. Turn the switch clockwise to positions 1, 2, or 3 to set the fan speeds to low, medium or high respectively.



The 12 volt DC fan provides proper ventilation, comfortable temperature control and adequate air flow. It is also used to vent the shower and toilet. Opening a window while operating the fan produces maximum air flow. Opening windows farthest away from the fan will provide the best air exchange. Open windows sufficiently to allow proper air circulation.



NOTE: The roof vent must be open at least 3 inches (76 mm) or the internal safety switch will prevent the fan from operating.

VENT HOOD HEIGHT CONTROL

The rotary knob ⑤ controls the height position of the vent hood. Turn the knob clockwise to pull the hood down and close it. Turn the knob counterclockwise to raise or open the hood.

CLEANING INSTRUCTIONS

1. Turn off the fan motor using the on/off switch ③.
2. Locate the thumb tab on the screen ⑥, and pull down to unsnap the screen.
3. Wash the screen and fan blade with a light, non-abrasive soap, rinse and dry.
4. Reinstall the screen by gently snapping it back into place.

CLEANING TIP

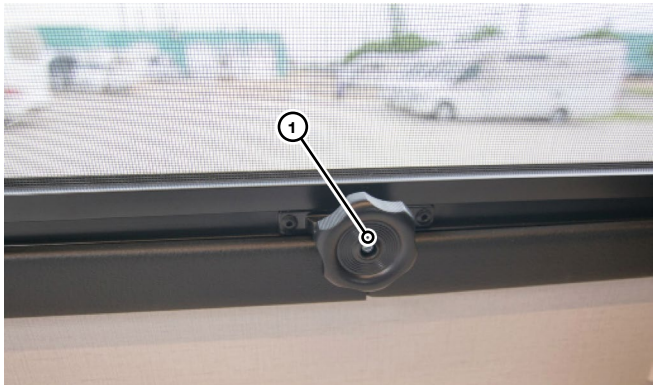
Once washed and dried, you may wipe or spray protectant onto the screen and blade (use only a water based protectant – do NOT use a petroleum based protectant). Buff to a high-gloss finish. This will minimize the amount of dust and dirt buildup.

⚠ NOTICE

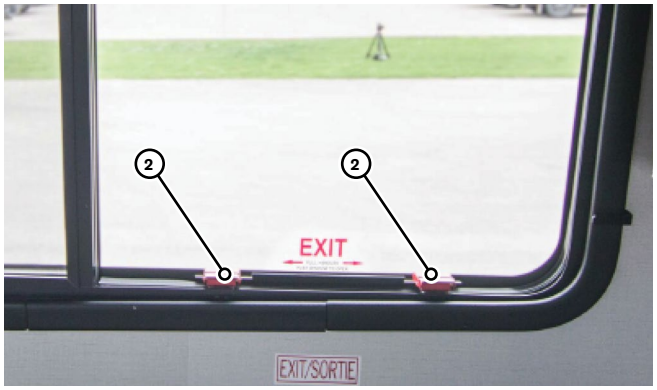
The power roof vent is protected by a 4 amp fuse ⑧. If the fan fails to operate, verify that the fuse is intact and replace if necessary.

SIDE WINDOW VENTS

Turn the knob ① counterclockwise to open the window vent and clockwise to close the window vent.



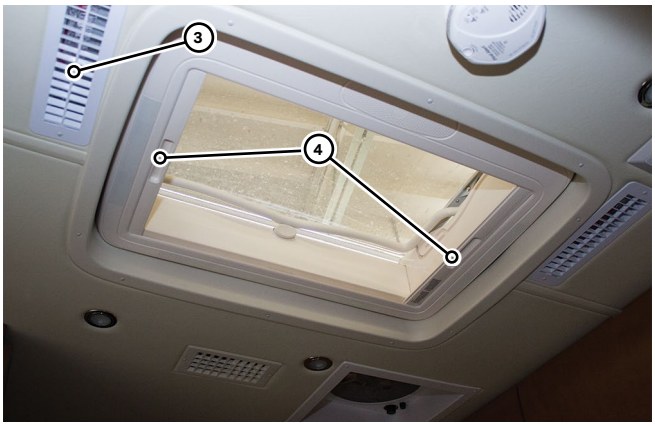
To open egress windows (if equipped), pull up the two handles ②, and push out the window.



MANUAL ROOF VENT

Use the manually operated roof vent ③ in conjunction with the power roof vent to provide adequate air flow throughout the motorhome.

The roof vent is equipped with a blind ④ that slides across the opening to limit the amount of sunlight entering the motorhome.

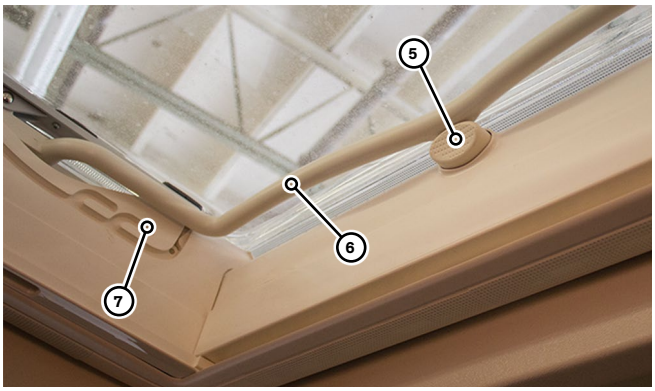


⚠ NOTICE

When leaving the motorhome for extended periods, ensure all roof vents are fully closed to prevent rain from entering the coach interior.

OPENING THE ROOF VENT

1. Press the latch release button ⑤ on the handle ⑥.
2. Push upwards on the handle ⑥ and latch the handle bar into the desired seat ⑦.



CLOSING THE ROOF VENT

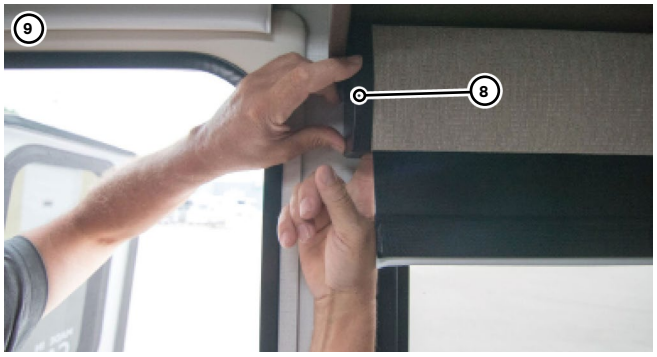
1. Lift the handle ⑥ to release it from the seat ⑦.
2. Pull down the roof vent using the handle ⑥.
3. Ensure latch ⑤ securely locks the handle ⑥ in the closed position.

ADJUSTMENTS FOR DAY/NIGHT SHADES

The spring tension should be accurately set in order to rewind the material gradually back into the fully rolled up position. Too much tension in the spring may cause damage to the shade material.

REMOVING END CAP

1. Reach with your hand between the end cap ⑧ and the wall as shown in figure ⑨.



2. Push clip ⑩ away from the wall with your hands still in the same position as figure ⑨.

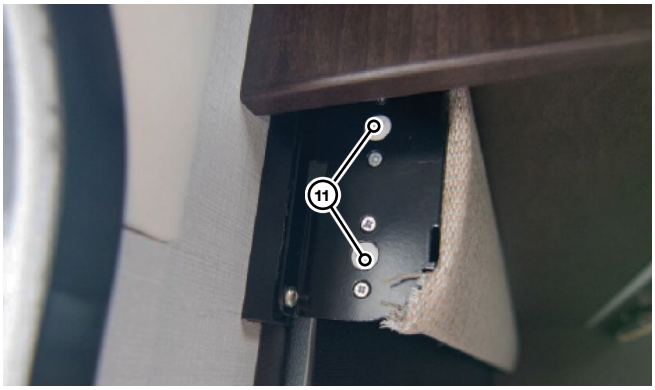


3. Pull off end cap ⑧.

ADJUSTING THE TENSION

INCREASING TENSION

To increase the spring tension remove the end cap, and use a flat head screw driver to twist the tension adjustment screw (11) on the left side of the shade clockwise until the preferred tension is reached. If there are two shades in the Impulse Platform, you must modify the tension individually.



DECREASING TENSION

To decrease the spring tension remove the end cap, and use a flat head screw driver to twist the tension adjustment screw (11) on the left side of the shade counterclockwise until the preferred tension is reached. If there are two shades in the Impulse Platform, you must modify the tension individually.

ENTERTAINMENT SYSTEMS

TV OPERATION

Refer to the TV manual in the Motorhome Information Kit for detailed operating instructions.

⚠ WARNING

Do NOT watch TV while driving. Do NOT take your eyes off the road for extended periods of time or a crash causing injury or death could result. Do NOT give extended attention to the in-dash navigation or entertainment system while driving.

BLURAY OPERATION

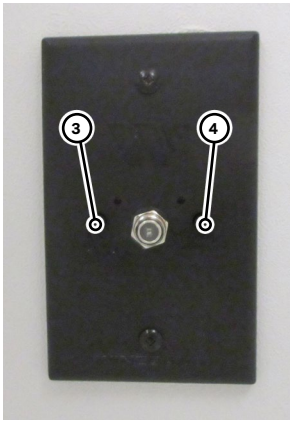
All motorhomes are equipped with a smart BluRay (11) for viewing DVDs or Bluray Discs on the TV. Refer to the entertainment system operator's manual in the Motorhome Information Kit for detailed operating instructions for the entertainment system.



TV UTILITY PANEL

The TV utility panel ① (location varies depending on floor plan) is equipped with a TV antenna booster /WiFi power switch ②. The TV antenna booster button ③ will enhance performance of the TV only when receiving a signal or program “over the air” while the WiFi power button ④ will enable or disable the 12v power to the WiFi router.





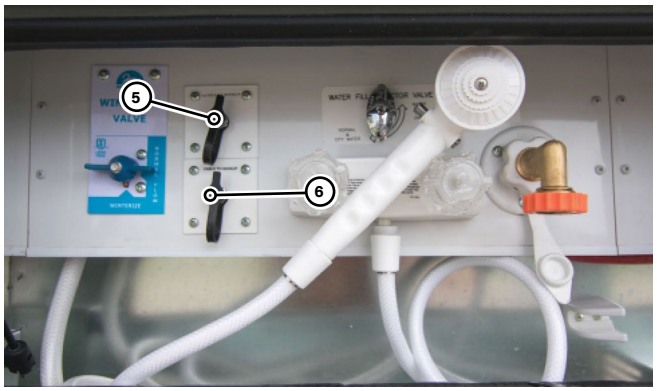
⚠ NOTICE

Press the black button ③ to turn on the antenna booster when viewing TV using only the roof antenna. Turn off the antenna booster for all other TV functions.

EXTERNAL CABLE TV CONNECTION

Your motorhome is equipped with an external cable TV hookup connector ⑤ located in the rear utility center.

NOTE: Perform a channel scan on your TV after connecting cable.



EXTERNAL SATELLITE TV CONNECTION

Your motorhome is equipped with an external satellite TV hookup connector ⑥ located in the rear utility center.

HDMI SWITCH BOX

Your motorhome may be equipped with an HDMI audio/video switch box ⑦. This enables HD quality viewing for your DVD player or satellite receiver (not supplied).

Refer to the “Entertainment System Schematics” section in the model specific manual and the HDMI switch box manual in the Motorhome Information Kit for further details.



WIFI EXTENDER

Your motorhome is equipped with a Winegard ConnecT 2.0 WiFi Extender with a built in TV Antenna ⑧. This enables WiFi signal amplification or 4G/LTE data service (with subscription).

In order to use the WiFi extender, the WiFi power button ④ must be enabled.

Refer to the WiFi Extender manual in the Motorhome Information Kit for further details.



ELECTRICAL SYSTEM OPERATION

ELECTRICAL SUPPLY

Your motorhome is equipped with two electrical systems that operate 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 power from the engine's battery and charging system while driving.

When parked, the 12 volt DC system operates from the coach batteries, from shore power cable through the inverter/charger or from the generator through the inverter/charger. The coach batteries charge automatically when the unit is connected to shore power or when the engine or 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 cable connection. 120 volt inverted AC power is available in designated receptacles restricted to the inverter wattage limitations.

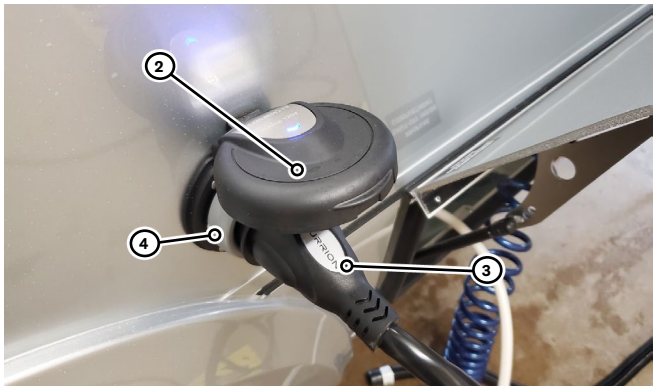
⚠ WARNING

Do not connect the external power cord until you have confirmed the campground has the proper polarity and grounding. Improper grounding or reverse polarity may cause component damage or failure and/or personal injury or death.

SHORE POWER

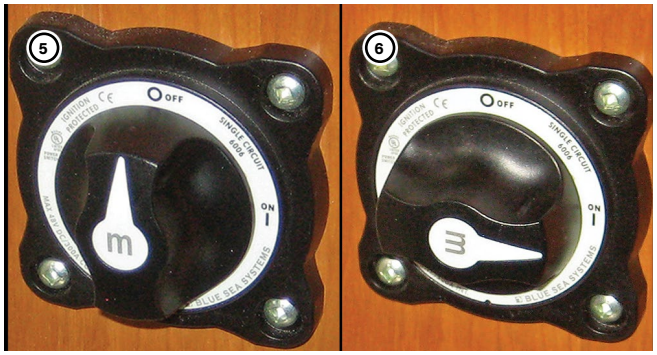
To operate using shore power, connect the 120 volt AC power supply cable (stored in the driver's side rear exterior storage compartment) to the external receptacle located on the driver's side of the motorhome.

To connect the 30 amp power supply cable, rotate the cover (2) counterclockwise and lift up. Insert the power cable (3) 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. Use a locking ring (4) to prevent accidental disconnection.



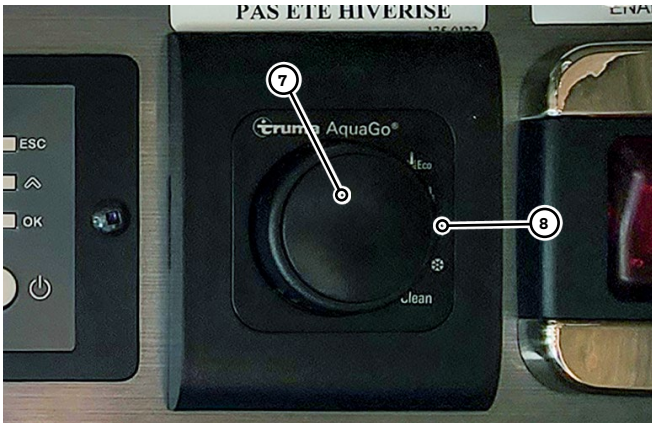
BATTERY DISCONNECT SWITCH

The 12 volt DC electrical supply to the coach portion of the motorhome is controlled by the battery disconnect switch located in the coach doorway. The switch reduces the demand on the coach batteries to a limited residual draw when the motorhome is not in use or in short-term storage. Rotate the switch to the 12 o'clock position (5) to disconnect the batteries. Rotate to 3 o'clock position (6) to connect the batteries.



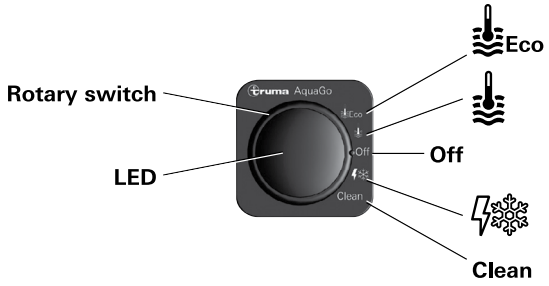
WATER HEATER SWITCH

The water heater switch ⑦ controls the power to the water heater. Turn the switch counterclockwise from the “OFF” position for water heater function or clockwise from the “OFF” position for winterization or cleaning. Reverse direction to the “OFF” position to turn off the water heater.



⚠ NOTICE

The on-demand water heater switch light ⑧ illuminates when the water heater is turned to the ON setting.



⚠ NOTICE

Do not turn the water heater switch to “Clean” unless you plan on cleaning the water heater. Leaving the switch on “Clean” for 30 seconds will begin the cleaning procedure, which can not easily be cancelled.



⚠ NOTICE

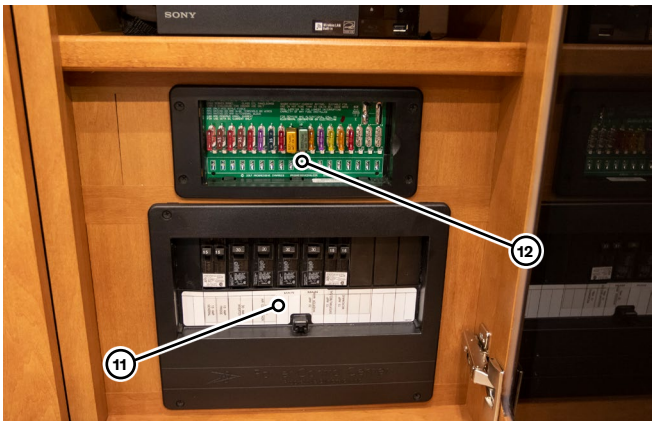
The power switch ⑨ must be in the “on “ position (either up or down) on the water heater itself outside of the coach in order for the water heater to function.

POWER DISTRIBUTION PANELS

The power distribution panels ⑩, located in a lower cabinet fascia, contain the 120 volt breakers for the 120 volt AC system and 12 volt fuses for the 12V DC system. Refer to your floor plan in the “Introduction” section for the power distribution panel locations.



The lower breaker panel ⑪ contains 120 volt AC breakers. Refer to the circuit breaker panel decal to identify the function of each breaker. The upper panel ⑫ contains 12 volt DC fuses. Refer to the circuit fuse panel decal to identify the function of each fuse.



120 VOLT AC CIRCUIT BREAKERS

The circuit breaker panel protects all 120 volt AC equipment and components in the motorhome from overload, a short in the wiring or a short in the component itself. In the event of an overload, the circuit breaker cuts off the flow of electricity in the particular affected circuit of the system and helps prevent damage or fire.

If a circuit breaker “trips,” allow a brief cool down period of 30–90 seconds, then reset the breaker by turning it “OFF” and then “ON.” If a circuit breaker “trips” repeatedly, the circuit is overloaded or there may be a short in the wiring or in the equipment, and both should be checked and serviced by qualified service personnel. Refer to the control panel manual in the Motorhome Information Kit for further details.

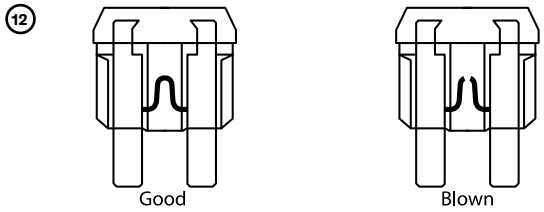
⚠ CAUTION

If a breaker trips more than twice, leave the breaker off and have a qualified technician inspect it.

NOTE: There is a single 30 amp main circuit breaker which protects the entire AC electrical system. Check the main breaker if the entire electrical system will not function on shore power or generator (if equipped).

12 VOLT DC COACH FUSES

Each 12 volt DC system circuit is protected by a dedicated fuse. When a fuse blows (refer to Figure 12), shut off all appliances or lights on the affected circuit and replace the fuse with a new one of the same amperage.



Fuse Rating	Color
5 Amp	Tan
7.5 Amp	Brown
10 Amp	Red
15 Amp	Blue
20 Amp	Yellow
30 Amp	Green

⚠ WARNING

The fuse rating for each dedicated circuit is determined by the use and character of the equipment on that circuit.

⚠ WARNING

Only replace fuses with the same amperage rated fuse. Failure to do so could result in fire.

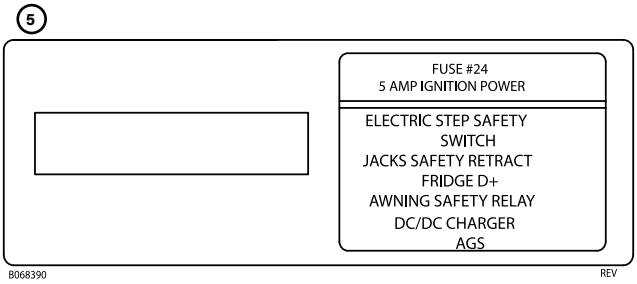
12 VOLT DC CHASSIS FUSES

Refer to the chassis operator's manual for chassis fuse functions.

DRIVER SEAT PEDESTAL FUSES

Fuse #24: 5 amp fuse powers the following components:

- Electric step safety retract
- Stabilizer jack safety retract
- Refrigerator (when on AUTO select 12 V power source
- Awning relay (safety lock)
- Isolator relay delay module
- DC/DC Charger
- AGS



GROUND FAULT CIRCUIT INTERRUPTER (GFCI)

Various outlets in the motorhome, particularly those near sinks and water supplies, are connected to a GFCI breaker. A GFCI detects electrical current that is traveling along an unintended path and automatically stops the current to reduce the risk of electrical shock and fire. If a GFCI breaker trips, unplug all the appliances on that circuit and reset the breaker in the breaker panel.

NOTE: If a GFCI trips repeatedly there is likely a significant fault in that circuit. Have the faulty circuit and the GFCI investigated and repaired by a qualified technician before using it again.

For detailed wiring, GFCI locations and GFCI-protected receptacles see the AC wiring schematics.

⚠ CAUTION

The GFCI will not completely eliminate the risk of electrical shock. Small children or persons with heart conditions should be extra cautious because electrical shock could cause burns or cause the heart to stop even when a GFCI is present.

NOTE: The GFCI circuit in the bathroom will trip when a fault occurs at the exterior receptacle. The U24MB galley receptacle is protected through a GFCI located in the pillar behind the driver's seat.

AUXILIARY LP GAS/GASOLINE GENERATOR (OPTIONAL)

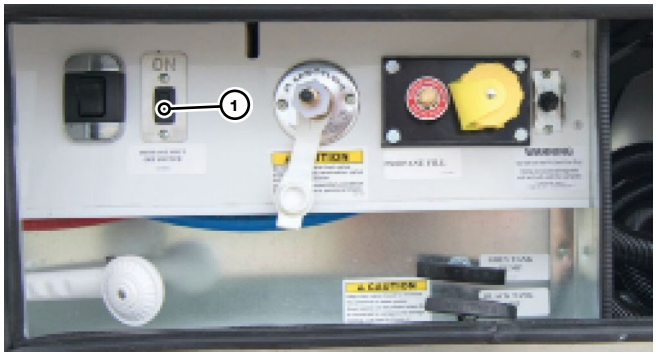
The generator is located below the coach floor in a location which varies depending on the floor plan.

⚠ CAUTION

Before operating the generator, refer to the LP Gas generator operator's manual located in the Motorhome Information Kit.

OPERATING THE AUXILIARY LP GAS/ GASOLINE GENERATOR

For the LP Gas generator option, turn on the LP Gas valve by depressing the top of the LP Gas shut off switch (1) located in the utility center in the driver's side exterior compartment. The Gasoline Generator does not require LP gas to operate.



⚠ NOTICE

The generator starter draws power from the coach batteries, so the chassis ignition switch does not have to be on for the generator to operate.

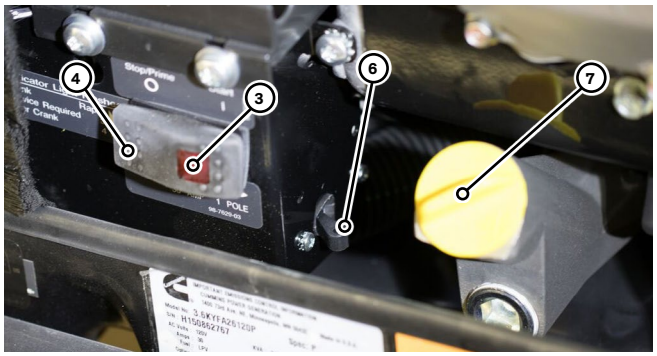
The generator control panel ② is built in to the Multiplex control panel at the front of the coach.



STARTING THE AUXILIARY LP GAS / GASOLINE GENERATOR

1. Press and hold Start ③ to start the generator. Please note that the generator requires a press and hold because it operates on a one-second delay as a safety feature to help prevent accidental generator starts.
2. Allow the generator engine to settle and run smoothly before operating any 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 Motorhome Information Kit for further details.

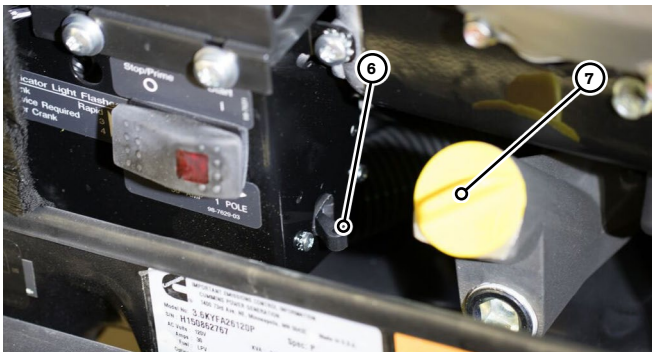
Alternativley, there is a start ③/stop ④ swith located on the generater itself behind the front panel.



STOPPING THE AUXILIARY LP GAS/ GASOLINE GENERATOR

Prior to stopping the generator, turn off all large appliances and let the generator run for two minutes to cool down.

To stop the generator, press and hold Stop ④ to stop the generator.



⚠ NOTICE

There is a breaker ⑥ on the side of the unit. If the power plant is running and there is no power, check this breaker. The generator should be run a minimum of two hours a month.

⚠ NOTICE

Be sure to check the generator oil reservoir on a regular basis ⑦.

AUTO GEN START

The Generator is equipped with an Auto Gen Start (AGS) system, that will allow the generator to automatically start based on the settings. See the Firefly Multiplex section for more information.

⚠ WARNING

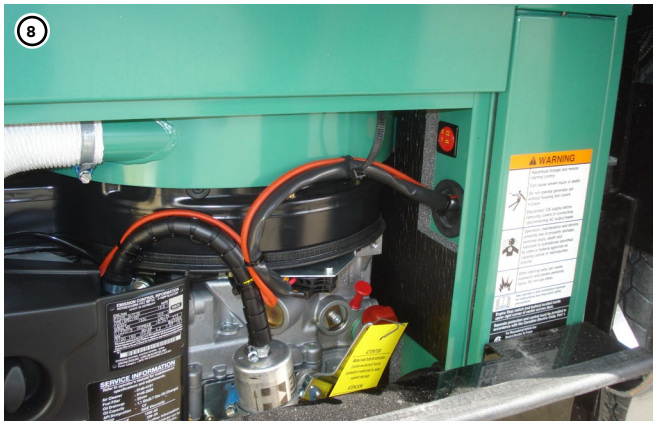
Do not run the genset or use the auto on or quiet modes when the motorhome is indoors or in a confined space. Asphyxiation or carbon monoxide poisoning hazards exist wherever genset exhaust gasses can accumulate.

⚠ WARNING

Disable the AGS system before working on any electrical components in the motorhome. Unexpected starting of the genset while working on the electrical system can cause serious personal injury or death.

AUXILIARY DIESEL GENERATOR (OPTIONAL)

The auxiliary diesel generator ⑧ is located below the coach floor in a location which varies depending on the floor plan.



⚠ NOTICE

Before operating the auxiliary diesel generator, refer to the diesel generator operator's manual in the Motorhome Information Kit.

The diesel generator control panel ② is is built in to the Multiplex control panel at the front of the coach.

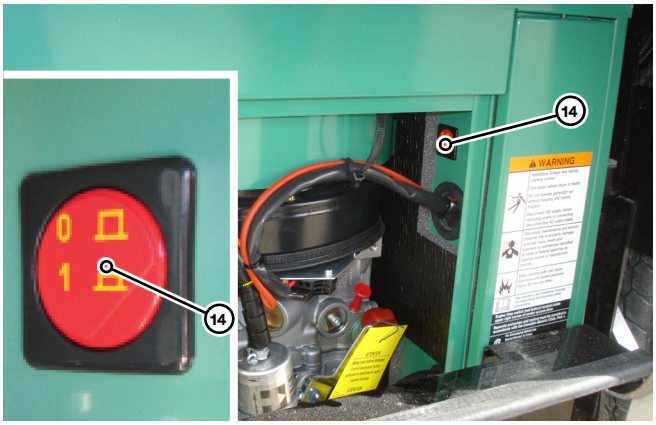
STARTING THE AUXILIARY DIESEL GENERATOR

1. Press and hold Start ③ to start the generator. Please note that the generator requires a press and hold because it operates on a one-second delay as a safety feature to help prevent accidental generator starts.
2. Allow the diesel generator engine to settle and run smoothly before operating any electrical appliances.
3. Become familiar with the output capacity and capability of your diesel generator.
4. Be careful not to overload the diesel generator. Refer to the diesel generator manual located in the Motorhome Information Kit for further details.

STOPPING THE AUXILIARY DIESEL GENERATOR

Prior to stopping the generator, turn off all large appliances and let the generator run for two minutes to cool down.

To stop the generator, press and hold Stop (4) to stop the generator. There is also a stop button (14) located behind the front panel on the generator itself.



⚠ WARNING

Press the stop switch (14) to stop the generator set or to prevent it from starting while performing maintenance and/or service. To allow the generator set to run, press the switch again.

⚠ NOTICE

Overloading the generator for long periods of time can cause the generator windings to overheat. Keep electrical loads within the recommended wattage ratings.

⚠ CAUTION

Do not smoke while refueling. Keep flames, sparks, and smoking materials away from fuel or flammable fumes.

⚠ NOTICE

The "Gen OFF" button does not also function as a start switch. The diesel generator can only be started using the remote control panel inside the motorhome.

GENERATOR SAFETY

ELECTRICAL

⚠ WARNING

Exercise extreme care and caution 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 or clothes are wet or when you are standing on wet ground or in water.

Do NOT attempt to repair the generator yourself. Have all service and repairs performed at an authorized service center only.

Never check the 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 is lighter than air.

⚠ WARNING

1. **Do not run the generator and an intake vent fan at the same time. This could draw gases into the motorhome.**
2. **Do not open windows or vents on the side where the generator exhaust pipe is located.**
3. **Park so the wind carries exhaust gases away from the motorhome. Be aware of potential gas fumes from other nearby vehicles.**
4. **Do not operate the generator if there are any obstructions such as vegetation, snow, buildings, etc., which could deflect gas fumes under or into the motorhome.**

AUTOMATIC POWER TRANSFER SWITCH

AUTOMATIC SWITCH OVER

Starting the generator will automatically switch power from 120 volt AC shore power to generator power.

BUILT-IN DELAY

An automatic 20–30 second delay feature prevents the generator from starting while under load. This delay allows the generator to have the required amount of warm-up time before transferring power.

This switch ③ automatically transfers power from 120 volt AC shore power to generator power and prevents damage to any circuitry if shore power and the generator are inadvertently connected and operated simultaneously.

⚠ NOTICE

Always verify that appliances are turned off before starting or stopping the generator. Do NOT start the generator while it is under load. Ensuring all appliances are in the off position will help prolong the life of the appliances.



12 VOLT DC SYSTEM

The 12 volt DC power system in your motorhome consists of the following two distinct, but interconnected, battery systems

CHASSIS BATTERY

The chassis battery ① operates the vehicle starter, vehicle accessories and all vehicle controls on the instrument console, such as the heater fans, exterior lights, horn, speed control, windshield wipers, etc.

Disconnect the chassis battery cable when parking the motorhome for an extended period of time. Refer to the chassis operator's manual in the Motorhome Information Kit for the chassis battery quick disconnect location.

⚠ NOTICE

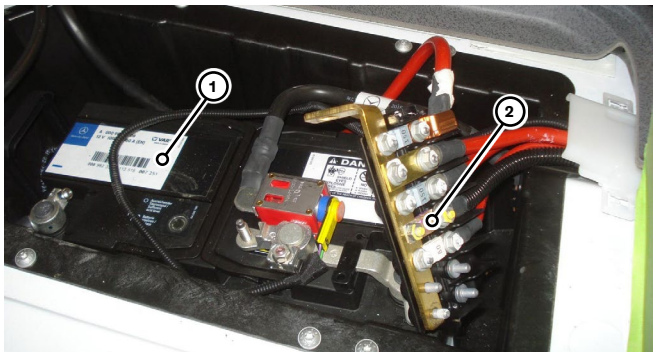
Disconnecting the battery cables from the chassis battery can clear the engine/transmission logic modules. These modules will automatically re-calibrate when you reconnect the battery and start the engine.

CHASSIS BATTERY LOCATION

See the chassis owners manual for the location of the chassis battery.

⚠ NOTICE

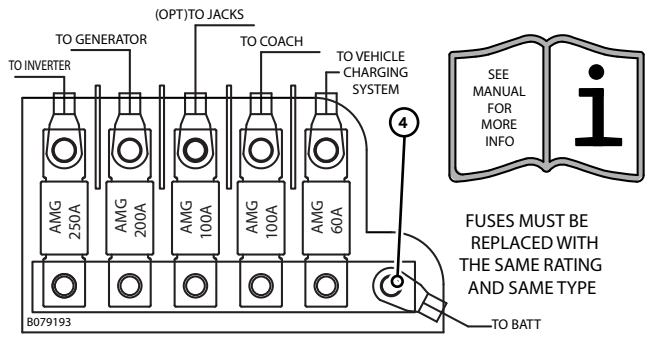
A 150 amp fuse ② located on the side of the chassis battery, protects 12 volt DC coach power system.



COACH BATTERIES (12 VOLT DC POWER SUPPLY)

The coach batteries ③ supply power to all the 12 volt DC lights and equipment in the living area of your motorhome. This includes the roof vents, refrigerator (when operating in 12 volt DC mode), generator starter, water pump, furnace fan, interior lights, holding tank, water level gauges, etc.

The coach fuse block and the fuse for the solar panel are located inside the chassis battery compartment. Inside the fuse block, a cable ④ connects the Solar Panel Fuse.

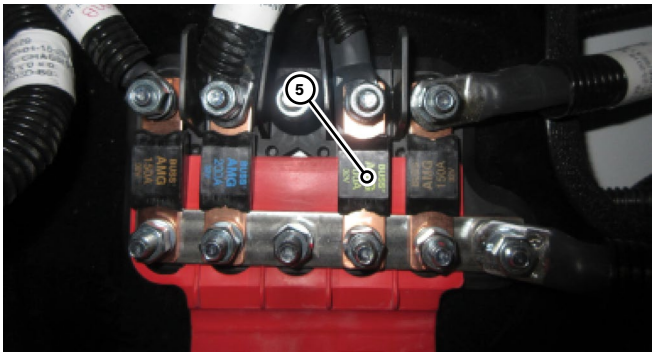


⚠ CAUTION

Fuses must be replaced with the same rating and same type.

⚠ NOTICE

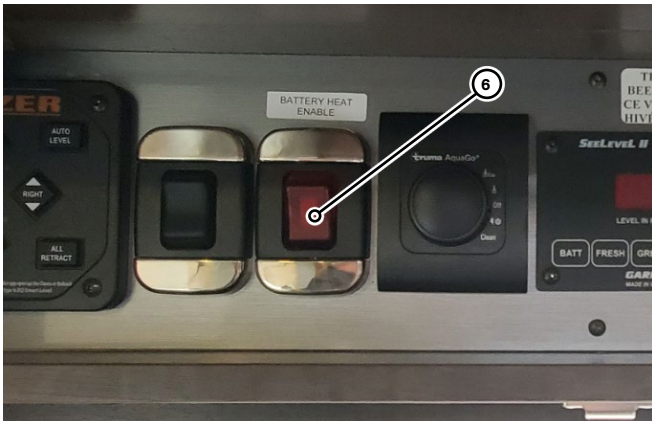
A surge protection fuse is installed inside the coach battery storage compartment ⑤. If the coach batteries fail to operate, inspect this fuse and replace if necessary.



LITHIUM BATTERIES (OPTIONAL)

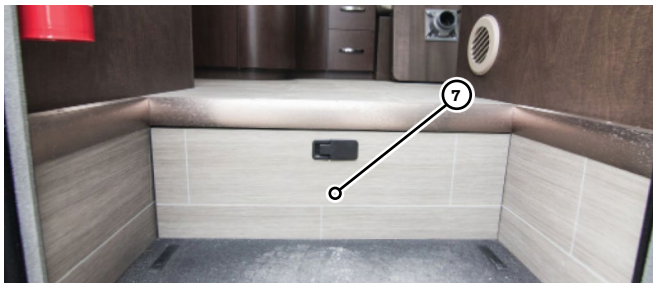
Your coach may have the optional Lithium batteries installed. Lithium batteries will allow more usable amp hours, but have decreased efficiency in colder temperatures, as well as the inability to charge below freezing. To counteract this, the lithium batteries have a built in heating system to keep them warm in colder weather.

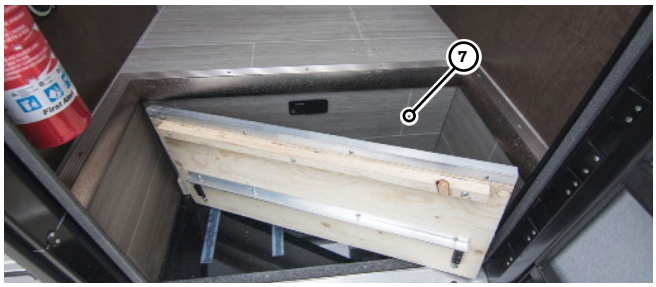
In the overhead cabinet above the coach entrance door, there will be a Battery Heat Enable switch ⑥. When the Battery Heat Enable switch is on, the lithium battery heating system will automatically come on to heat the batteries when their temperature reaches below 41°F(5°C). You can disable this feature by turning the Battery Heat Enable switch to the OFF position to conserve power.

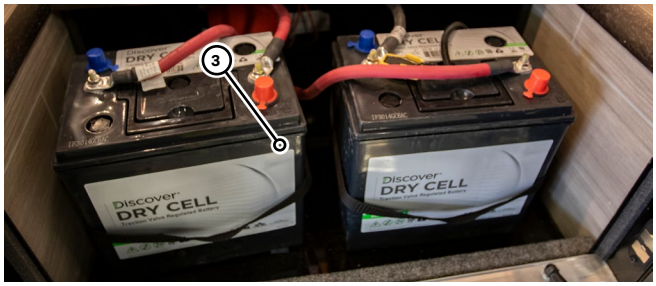


COACH BATTERIES LOCATION

The coach batteries ③ are located behind a panel ⑦ in the interior coach doorway steps on Unity models, or in an external compartment on Wonder models..







COACH BATTERY CONDITION METER

For voltage readings, refer to Xantrex Inverter Remote Control Status display ⑧ and press OK ⑨.



LOW VOLTAGE DISCONNECT (AGM ONLY)

Your coach is equipped with a low voltage disconnect to protect the batteries from over discharging and causing permanent damage. The cut off switch will cut off all 12v power if the battery voltage drops below 12 volts for 90 seconds. You can then recharge the batteries via shore power, generator or engine alternator. The low voltage disconnect will then re-enable 12v power once the batteries have reached 13 volts for at least 30 seconds.

BATTERY MAINTENANCE

Automotive batteries store chemicals that react and convert chemical energy into electrical energy. When electrical energy resources are used the battery drains and becomes discharged. Directing charging current to the batteries from the engine alternator (when the motorhome's engine is running) or by using the motorhome inverter/charger will recharge the coach batteries and enable them to continue functioning normally.

BATTERY PROBLEMS

Several conditions can destroy the battery's function including sulfation and freezing.

Sulfation occurs when lead sulfate crystallizes and deposits on the negative plates inside the battery. This condition is caused when a battery is deprived of a full charge for an extended period of time (30 days or more, especially during warm weather). If sulfation occurs, you will have to replace the battery.

Freezing can discharge, damage or destroy a battery. Batteries must be maintained at a nearly fully-charged condition to prevent the liquid electrolyte inside the battery from freezing.

LONG-TERM STORAGE

Turn off the coach battery disconnect during extended periods of storage. Hook up a battery charger at least once a month, or connect the 120 volt AC shore line to a suitable power source.

NOTE: If the unit is equipped with a factory solar option, the battery disconnect does not need to be on for the solar option to charge the coach batteries.

NOTE: If storing your motorhome for an extended period of time and batteries cannot be routinely charged, it's advised to remove the batteries and store them in a cool, dry location. If batteries are not recharged routinely while in storage, ensure batteries are fully recharged prior to reinserting batteries into your motorhome.

ADDITIONAL BATTERY MAINTENANCE SUGGESTIONS

1. Ensure batteries are securely fastened in the proper position.
2. Make sure battery clamps are tight and free from corrosion.
3. Keep the batteries and terminals clean and tight. Dirt accumulation can prevent sufficient current from flowing through the cables, and can permit current to flow between the terminals causing the batteries to discharge.
4. For AGM batteries, clean the battery with a 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 during the cleaning process.

⚠ NOTICE

Do NOT allow any baking soda solution to get into the battery. This can neutralize the battery acid.

5. Dry the cables and terminals before reinstalling them. Do NOT apply grease to the metal surfaces inside the cable terminals to prevent corrosion. Grease is an insulator and will prevent the flow of electricity. Use a plastic ignition spray to protect the terminals after you have cleaned and reinstalled them.

NOTE: When removing, replacing, boosting or charging the batteries, ensure the red positive (+) cable terminals are connected to the positive (+) posts and the black negative (-) cable terminals are connected to the negative (-) posts.

6. If installing batteries or booster/charger cables, attach the red positive (+) cable terminals first then attach the black negative (-) cable terminals.
7. If removing batteries or booster/charger cables, remove the black negative (-) cable terminals first then remove the red positive (+) cable terminals.
8. Do NOT attempt to recharge frozen batteries.
9. If using a battery quick-charge unit, disconnect the cables from the batteries.

NOTE: A battery quick-charge unit would be equivalent to a boost using booster cables from another vehicle but is not a battery tender or intelligent battery charging system.

⚠ NOTICE

Do NOT attempt to start the engine using a battery quick-charge unit.

10. If you do not have maintenance-free batteries, check the battery fluid level and fill with distilled water if necessary. Follow manufacturers guideline for fill height. Do not overfill.
11. Have the specific gravity of the battery fluid checked during regular motorhome service and maintenance.

⚠ CAUTION

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 the metal connected to them a short circuit could result.

INVERTER

Triple E RV uses a Xantrex 2000W Pure Sine Wave Inverter/Charger. The 2000W inverters are standard on all units. Inverters change 12V DC power stored in batteries into 120V AC power used in household appliances. The 2000W inverter can supply 16.7A AC at full capacity.



When shore power or generator power is absent, the inverter can be switched on and used to supply 120 volt AC power to the microwave (only with optional lithium batteries), entertainment center, and any outlets being marked as inverted. No other receptacles will have power. The 2000 watt inverter has an internal 80 amp battery charger. Once the inverter has accepted the AC input power, Charge Mode will begin. It is not possible to turn off this charge mode.

The Xantrex Remote Panel is a complex computer control and monitor device, and is used on all models and floorplans. It is factory configured for the particular inverter and battery installation of Triple E RV. If any modifications are made to the battery bank, it may be necessary to change some internal settings. Please refer to the Inverter / Remote Control manual for setting or contact the manufacturer. The Xantrex Remote Panel controls the invert and charge features of the inverter.

⚠ NOTICE

The invert feature needs to be manually switched ON and OFF. However if the inverter feature is turned ON and the battery disconnect switch has been turned off, the inverter will need to be powered up and switched ON manually the next time it is turned on.

⚠ NOTICE

Please be aware that the inverters create a standby current drain even when your equipment is turned off. To ensure battery life, turn the inverter function OFF when not in use.

⚠ NOTICE

The inverter is not intended for appliances that consume more than the specified inverter wattage. Exceeding the specified wattage could result in damage to the appliance or the inverter. Extended use of the inverter-powered receptacles will drain your batteries.

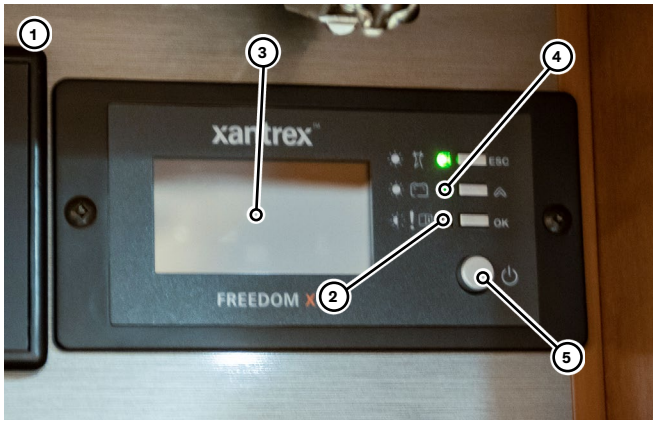
⚠ CAUTION

Before performing any service, ensure the inverter is completely disconnected from power sources. Disconnect battery (12V DC) and shore power (120V AC). Inverter should only be services by a qualified technician.

INVERTER REMOTE CONTROL PANEL

The Inverter Remote Control Panel ① is located in the overhead cabinet above the coach entrance door. The Inverter Remote Control Panel is equipped with an Inverter Function - ON/OFF switch ⑤. The Inverter/Charger System Status Display ③ shows the Battery Voltage, different stages of Battery Charging, DC Power Usage while Inverting and more information.

1. Fault ②
2. Status Display ③
3. Inverting LED ④
4. Inverter Function ON/OFF ⑤



Refer to the Inverter Remote Control manual in the Motorhome Information Kit for more information.

⚠ NOTICE

The inverter remote control panel is factory-configured for the specific inverter and battery installed in your motorhome. If modifications are made to the battery bank, it may be necessary to reconfigure the remote. Have the inverter and controls serviced by authorized personnel only.

SURGE GUARD



When shore power is connected it passes through the EMS-LCHW30 surge protection device to protect the wiring in the Unity.

- Do not exceed the rating on the EMS for any reason. These devices are designed to be reduced down to 120V/15A and maintain full protection.
- Do not modify the EMS in any way, as this will void the warranty, compromise protection and could result in possible shock and/or a fire hazard.
- It is important to always check the pedestal power outlet for charring. Charring indicates the AC receptacle is providing a weak connection. Should this condition exists DO NOT USE as it could result in possible melting of the RV power plug.
- All AC power extension cords in conjunction with your EMS unit should be rated 10 gauge for 120V, 30A systems and rated for outdoor use to reduce the risk of electrical shock. We recommend the length not to exceed 30'. Small gauge cable has higher resistance and can result in voltage loss or an electrical fire.
- Whenever servicing or installing the EMS, or any other AC powered device, make sure AC power is disconnected.
- Refer to your floor plan in the "Introduction" section for the surge protector location.

Error Code Chart	
E0	Normal Operating Condition.
E1	Reverse Polarity (hot and neutral wires reversed).
E2	Open Ground (no ground wire connection).
E3	Line 1 High Voltage (line voltage above 132V).
E4	Line 1 Low Voltage (line voltage below 104V).
E5*	Line 2 Voltage High (Line voltage above 132).
E6*	Line 2 Voltage Low (Line voltage below 104 volts).
E7	Line Frequency High (line frequency above 69 cycles per second).
E8	Line Frequency Low (line frequency below 51 cycles per second).
E9	Data Link Down (call technical support)
E10	Replace Surge protector Module (call technical support).
*Codes only apply to EMS-LCHW50 models.	

NOTE: If the EMS cuts the power to the RV it will show a PE code following the E code. This denotes the previous error or why the EMS shut down. Example: The EMS cuts power for low voltage on Line 1, and then the power is restored. The Error Code reads E 0, but the PE code reads PE 4 which tells the user low voltage was the reason for the EMS previously cutting power. This PE error code will be deleted when power is disconnected from the EMS.

NOTE: There will be a 15 second delay after plugging the motorhome into shore power while the surge protector verifies the incoming voltage.

ACCIDENTAL 240 VOLT PROTECTION

Should this condition occur, the display will read 240 volts instead of displaying the voltage and the error code message will read E3. AC power will shut down instantly.

⚠ WARNING

Do not under any circumstances bypass the EMS. Any bypass will result in severe damage to the motorhome.

TROUBLESHOOTING GUIDE

In order to help troubleshoot the problem(s) you are experiencing and render the best possible solution, it is necessary you be at your motorhome when you place your call.

1. If the display is illuminated and scrolling information, note the Error Code. If there is an Error code of 1-9, the device will interrupt the power. See Error Chart for definition of AC power problem. The device being off when an Error Code is present indicates the product is working properly and protecting your motorhome.
2. If the display is illuminated and reading Error code E 0, and yet no power is present in the coach, please contact Technical Support. You must wait for the time delay light to stop flashing.
3. If the display is not illuminated and power is in the coach there is a connection issue between the display and the main control box. Contact a qualified service center.

Refer to the surge protector manual in the Motorhome Information Kit for further details.

FIREFLY MULTIPLEX SYSTEM

Your coach is equipped with a multiplex system to control and operate many different features of the motorhome. For more information on using the multiplex system, see the Firefly Multiplex section.

SOLAR POWER UNIT (OPTIONAL)

Your motorhome may be equipped with a solar power kit. The solar power unit continuously charges the coach batteries to maintain the optimal charge, so long as sunlight is available. The solar controller ① is located in the main overhead console. Refer to the solar controller manual in the Motorhome Information Kit for detailed operating instructions.



⚠ NOTICE

The solar power unit is intended to charge the coach batteries only. It does not generate enough power to run the motorhome's electrical system.

LIGHTING MAINTENANCE

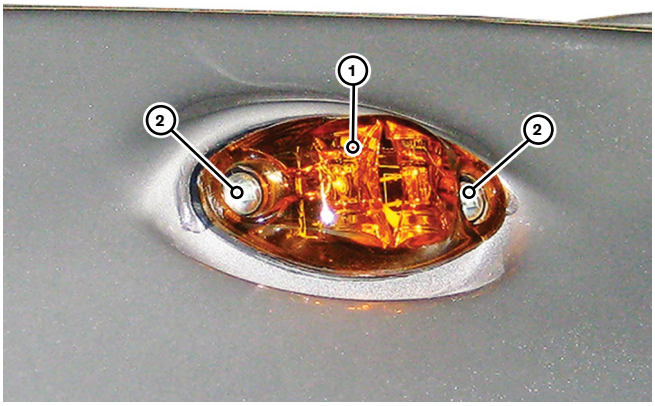
The following procedures detail replacement of the coach interior and exterior lights.

⚠ CAUTION

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

EXTERIOR LIGHTING

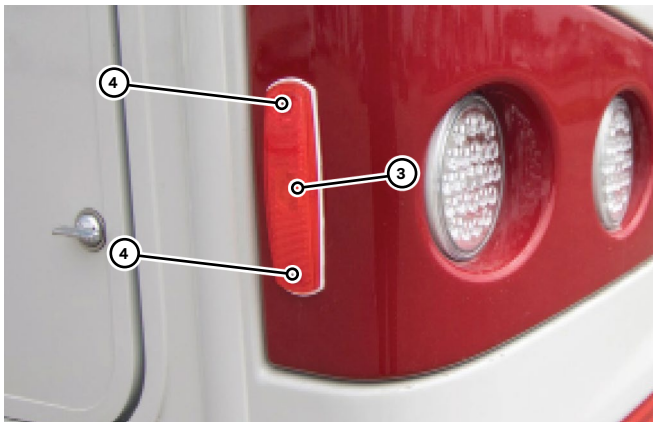
Upper Clearance Lights ①



NOTE: This is a sealed LED unit and must be replaced as complete unit.

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

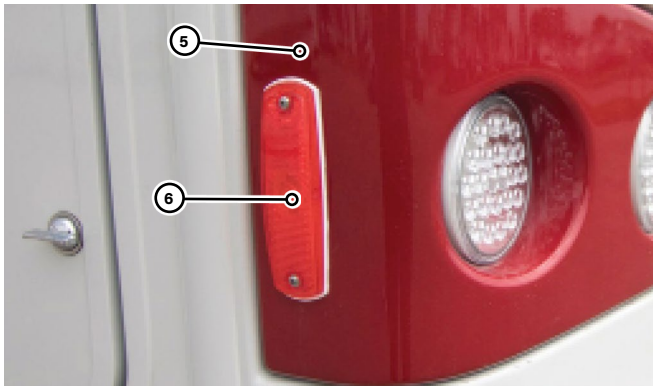
SIDE MARKER LIGHTS ③



NOTE: This is a sealed LED unit and must be replaced as complete unit.

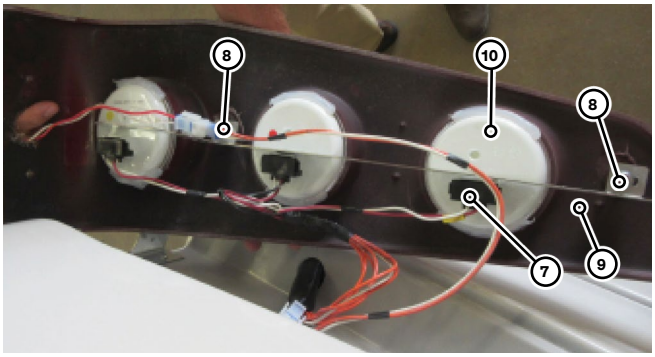
1. Remove the two screws ④ and pull the light out of the bodywork to gain access to the connections.
2. Disconnect the old and reconnect the new light.
3. Insert the new light into the bodywork, secure with the two screws ④ and reinstall the lens cover.

REAR INDICATOR/REVERSE/BRAKE/ROAD LIGHTS ⑤



1. Unscrew the side marker lens cover ⑥.
2. Pull the light assembly ⑤ away from the coach body.

3. Unclip the electrical connector ⑦ from the light you are replacing.

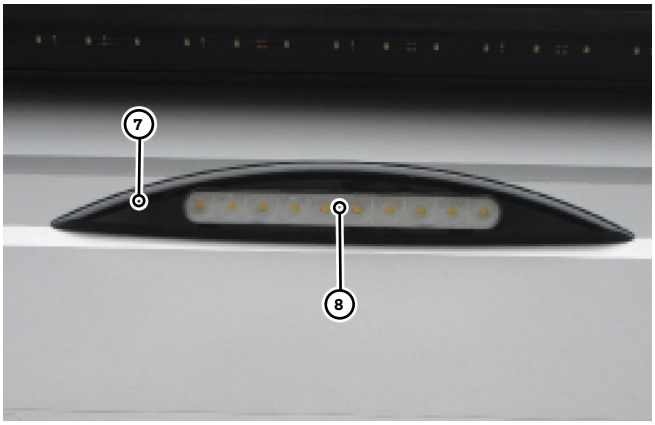


4. Remove the two nuts ⑧ securing the support bracket ⑨ to the light assembly and remove the support bracket.
5. Remove the defective light ⑩ and install a new one.

NOTE: The lights ⑩ are sealed with a bead of silicone to prevent dust and moisture from entering the light assembly ⑥. Carefully remove the silicone when changing the light and apply a new bead before reinstalling the light assembly.

6. Reinstall the light assembly ⑥ by following Step 5 to Step 1 in reverse order.

EXTERIOR LIGHT ⑦



1. Unclip plastic cover ⑧.
2. Remove and replace light.
3. Install cover.

INTERIOR LIGHTING

CEILING AND OVERHEAD CABINET LIGHTS ①



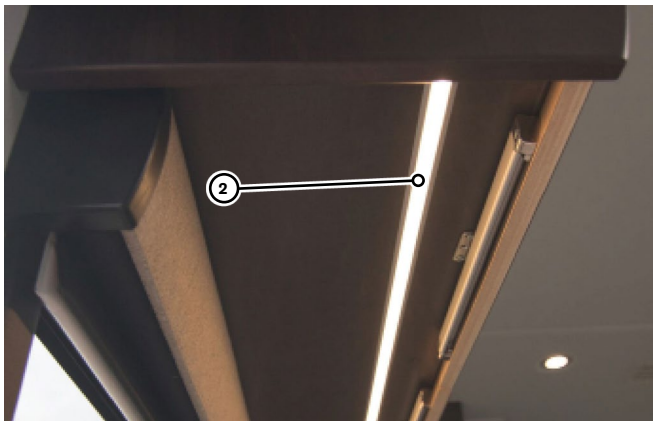
Ceiling and overhead lights are not serviceable. If the lighting stops working, have the entire unit replaced by a qualified service technician.

⚠ NOTICE

LED lights are not serviceable. If any light stops working, have the entire light replaced by a qualified service technician.

UNDER CABINET LIGHTS ②

Under cabinet lights are not serviceable. If the under cabinet light stops working, have the entire unit replaced by a qualified service technician.

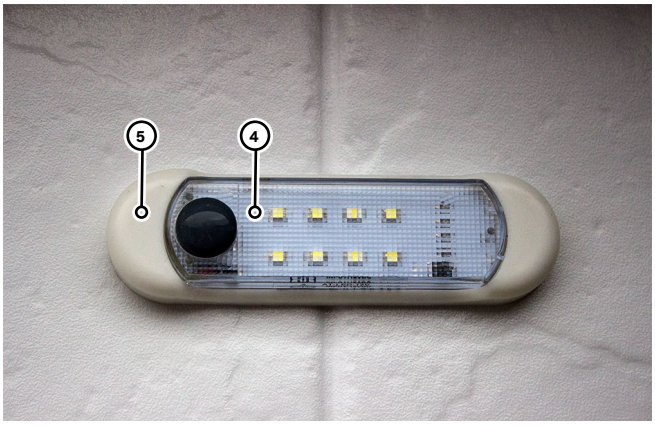


READING LIGHTS ③

The coach reading lights are not serviceable. If the reading light stops working, have the entire unit replaced by a qualified service technician.



INTERIOR SHOWER LIGHT ④

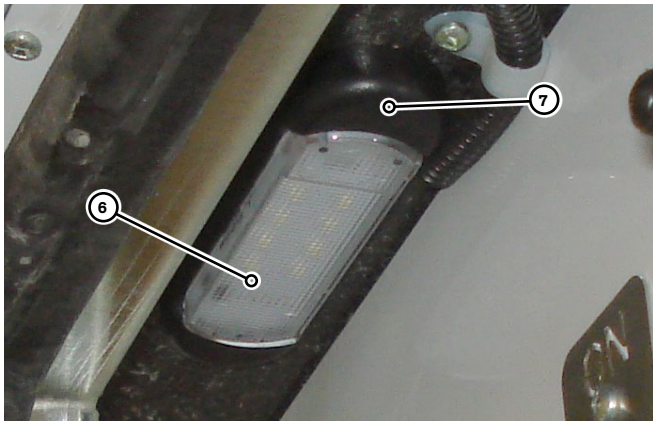


NOTE: This is a sealed LED unit and must be replaced as complete unit.

1. Unclip plastic cover ⑤.
2. Remove and replace light.
3. Install cover

EXTERIOR UTILITY CENTER LIGHT ⑥

The exterior utility center light ⑥ is controlled by the exterior storage and utility center light switch inside the coach. Refer to the “Exterior/Interior Light Switches” section in the “Motorhome Operation” section for instructions.

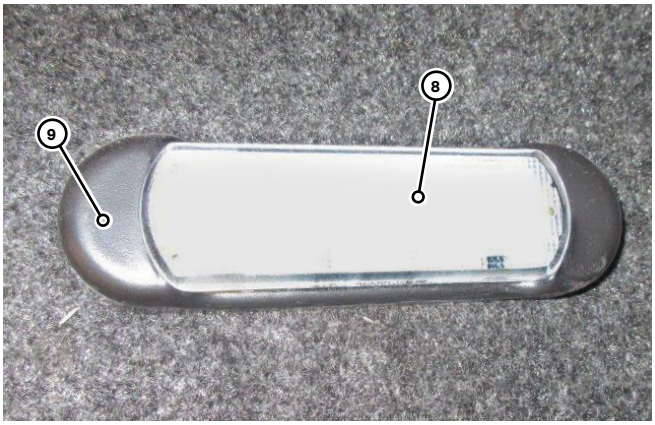


NOTE: This is a sealed LED unit and must be replaced as complete unit.

1. Unclip plastic cover ⑦.
2. Remove and replace light.
3. Install cover.

BAGGAGE COMPARTMENT LIGHT ⑧

The baggage compartment light ⑧ is controlled by the exterior storage and utility center light switch inside the coach. Refer to the “Exterior/Interior Light Switches” section in the “Motorhome Operation” section for instructions.



NOTE: This is a sealed LED unit and must be replaced as complete unit.

1. Unclip plastic cover ⑨.
2. Remove and replace light.
3. Install cover.

FIREFLY MULTIPLEX SYSTEM

HOME SCREEN

The multiplex Home screen gives a basic control and information on many of the installed components. To activate the home screen, simply tap on the Home icon ① in the left navigation.



LIGHTING ②

Lighting buttons will turn Blue while a circuit is on and Black/White once the circuit has been turned off. This color change is known as “showing feedback.”
The Light Master controls all interior lights at once. When Light Master Off is pressed, it will remember which lights were on. Then, when Light Master On is pressed, it will only turn on the lights that are in memory.
NOTE: To turn on all lights again, press and hold Light Master On for at least one second.

⚠ NOTICE

Memory is rewritten each time Light Master Off is pressed. In the case that it is pressed twice in a row, it will remember that no lights were on and just touching Light Master On won’t turn on any lights. Press and hold Light Master On to turn the lights back on. Note: Light Master On/Off buttons will always appear blue and will not show feedback at any time.

CLIMATE CONTROL ③

The Home screen also gives you basic information and control of the climate control. It will display the current climate control mode, the current temperature, and allow you to adjust the internal temperature by touching the up and down arrows.

TANK INFORMATION ④

The Home screen will show the current fill level of the fresh water, gray, and black tank, as well as the remaining level of the LP tank.

WATER PUMP ⑤

Tap the water pump button to toggle the water pump on/off. The Water Pump icon will be bright blue if the pump is on.

BATTERY LEVEL INDICATORS ⑥

These graphics will indicate the battery voltage for the House and Chassis batteries. The graphics will display Green while above 12V and Red while below 12V.

GENERATOR CONTROLS ⑦

The Generator display will show the total number of generator hours accumulated as well as the current operating status (running or stopped). Generator hours are saved to the system, not to the generator itself.

- **Gen Start:** Press and hold to start the generator. Please note that the generator requires a press and hold because it operates on a one-second delay as a safety feature to help prevent accidental generator starts.
- **Gen Stop:** Press and hold to stop the generator.

SATELLITE POWER (OPTIONAL) ⑧

If you have the optional Winegard satellite installed, you will find an icon that will allow you to turn the power for the satellite on and off.
NOTE: If you do not have the satellite option installed, this icon will not be displayed.

LIGHTS SCREEN

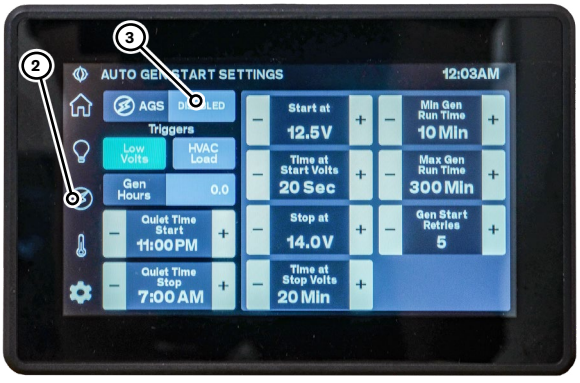
This screen will control the lighting for the entire coach, including the exterior, as well as adjust the intensity of dimmable lights in the coach. To activate the Lights screen, simply tap on the Lights icon ① in the left navigation.



To turn individual lights On and Off, simply tap the desired lighting icon once. If the light icon has an ▲▼ icon, that light is dimmable. To dim the light, just press and hold the button and the light will begin to cycle the brightness up and down. Release the button when the desired lighting is achieved.

AUTO GEN START SETTINGS SCREEN

The Firefly multiplex system is equipped with an AGS (Auto Gen Start) system that will automatically attempt to start the generator. To activate the Auto Gen Start screen, simply tap on the Auto Gen Start icon ② in the left navigation.



To enable AGS, tap on the Enable/Disable toggle button ③. You will have to confirm you want the AGS turned on by following the screen prompts.

⚠ WARNING

Enabling AGS in an enclosed or unventilated space may cause injury or death.

Do not enable AGS without ensuring it is safe to do so.

TRIGGERS

In order for the AGS to run, it needs a trigger to tell it when to start. This can be either low battery voltage, the air conditioner/heat pump, or both. If no triggers are selected, the AGS will not run.



LOW VOLTS ④

This trigger will cause the generator to start when the coach batteries fall below a set voltage. To enable the low volt trigger, ensure AGS is enabled, and tap the Low Volts button.

HVAC LOAD ⑤

The HVAC trigger will cause the generator to start with the air conditioner or heat pump.

⚠ WARNING

Do not use this trigger if plugged into shore power.

SETTINGS

- **Quiet Time Start/Stop** ⑥**:** Between these hours, the AGS will not attempt to automatically start the generator.
- **Start at** ⑦**:** The AGS will start the generator when the motorhome's batteries reach this voltage.
- **Time at Start Volts** ⑧**:** The amount of time for the batteries to stay at the set start voltage before the generator attempts to start.
- **Stop at** ⑨**:** The battery voltage at which the AGS will turn off the generator.
- **Time at Stop Volts** ⑩**:** The amount of time for the batteries to stay at the set stop voltage before the generator stops.
- **Min Gen Run Time** ⑪**:** The minimum amount of time for the generator to run once started.
- **Max Gen Run Time** ⑫**:** The maximum amount of time for the generator to run once started.
- **Gen Start Retries** ⑬**:** The amount of times the AGS will attempt to start the generator if the first attempt does not succeed.

CLIMATE SCREEN

Here you will find the settings for the climate control of your motorhome. To activate the Climate screen, simply tap on the Climate icon ⑭ in the left navigation.



Use the arrow keys ⑮ to select your desired temperature, and set the climate control type to either cool, heat pump, furnace, or auto.

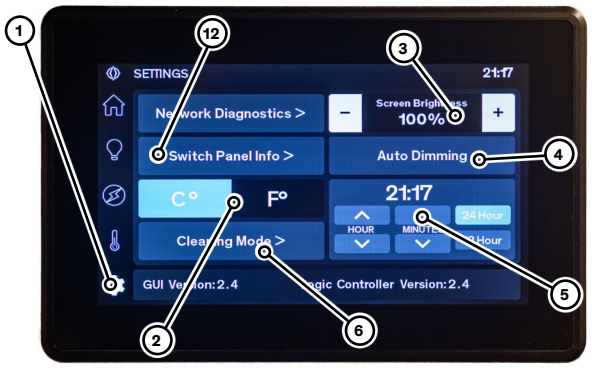
- **Cool** ⑯**:** Tap to operate the air conditioning. The A/C will run until the current temp reaches your desired temp and then shut off.
- **Heat Pump** ⑰**:** Tap to operate the Heat Pump. The Heat Pump will run until the current temp reaches your desired temp and then shut off.
- **Furnace** ⑱**:** Tap to operate the Furnace. The Furnace will run until the current temp reaches your desired temp and then shut off.
- **Auto** ⑲**:** Tap to put the system into Auto mode. The A/C or Heat Pump will automatically run to keep your desired temperature consistent.
- **Vent Fans** ⑳**:** Tap to open the ceiling vent fan controls

NOTE: The furnace will not run automatically in auto mode.

To adjust the fan speed ㉑, simply tap on the mode you would like. The fan will operate by choosing High or Low. Auto will turn the fan off. Fan Only Mode is only available if HVAC is off.

SETTINGS SCREEN

The Settings screen contains the general settings for the multiplex system. To activate the Settings screen, tap on the Settings icon in the left navigation.



CHANGING TEMPERATURE UNITS

To change between Fahrenheit and Celsius for the climate control, tap on either C or F to set the preferred units.

SCREEN BRIGHTNESS

Use the +/- buttons to select between 10 levels of screen brightness or screen sleep mode. Tapping the screen after it has been asleep will bring it back to previous brightness.

AUTO DIMMING

When enabled, the screen will enter sleep mode after 60 seconds of inactivity. Tap anywhere on the screen to wake it up.

SETTING THE TIME

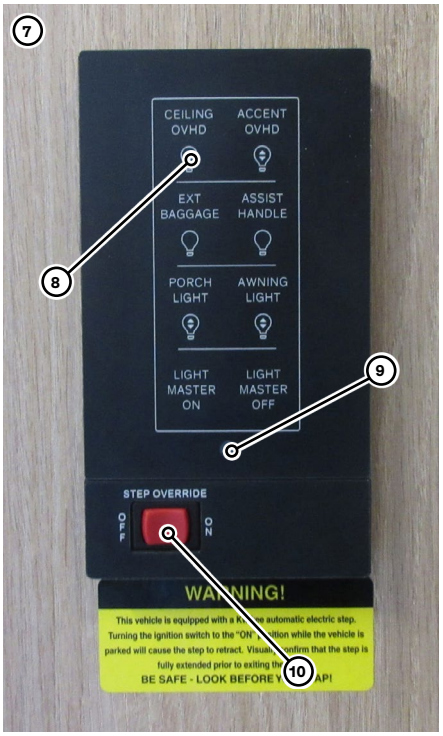
Use the up and down arrows to adjust the hours and minutes. Select 24-hour time mode or adjust Hour/Minutes.

CLEANING MODE

Tap to put your screen to sleep for 15 seconds for the purpose of cleaning.

SWITCH PANELS

You will find wirelessly connected switch panels (7) with backlit keys throughout the motorhome to control lights remotely.



Lights that are dimmable (8) will have Up/Down arrows next to the icon. Press and hold these buttons to ramp the brightness up and down. Each time that a button is pressed, the Operational LED (9) will illuminate green to indicate that the command has been sent to the touchscreen.

The switch nearest the coach entrance also contains the Step Override switch (10). Turn the Step Override on to prevent the steps from retracting when the coach door is closed.

NOTE: The vehicle ignition switch must be in the “OFF” position for the step override switch to work.

TROUBLESHOOTING

If you press a switch panel button and the operational LED does not illuminate, you'll need to change the battery. Simply use your fingers to pry the switch panel away from the wall-mounted backplate to access the battery compartment on the back of the switch. These switches are powered by a 2032 coin cell battery (11).



Once you replace the battery, line the switch panel up with the backplate and apply pressure to snap the switch panel back into place.

If the switch panel operational LED lights up but the lights do not toggle, you may have to re-pair the switch to the control panel.

1. From the Settings screen, tap on Switch Panel Info (12).
2. Tap on the icon for the switch that is not working and hold for 3 seconds.
3. Tap on "Start Pairing" to begin the pairing process.
4. The control panel will begin counting down from 30 seconds. Before the timer runs out, press and hold 2 buttons on the switch to be paired for 5 seconds.

The control panel should display the pairing was a success. If it does not, make sure the Operational LED is lighting up when a button is pressed, and replace the battery if necessary.

WATER AND PLUMBING SYSTEM

WATER SUPPLY

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

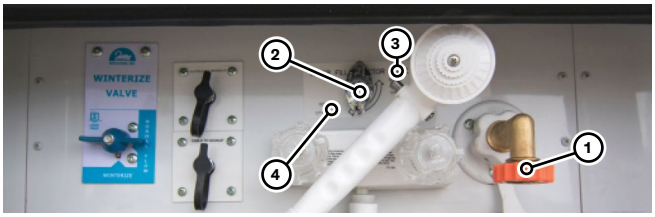
FRESH WATER SYSTEM

The following two sources may supply fresh water to your motorhome:

- Fresh water tank - located inside your motorhome or below the coach floor (location varies according to floor plan)
- City water - a connection that supplies water to your motorhome through a hose.

The fresh water tank 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 the cold water faucets and the water heater. An automatic pressure switch, located inside the water pump, maintains positive line pressure.

The city water connection ① and water fill selector valve ② are located in the rear utility center.



The water fill selector valve ② has the following two positions:

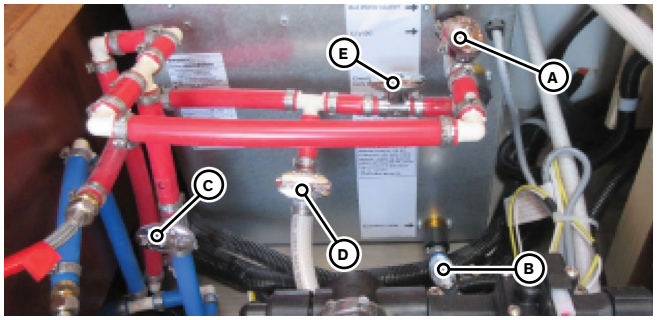
- City water ④
- Water tank fill ③

CITY WATER SUPPLY

The city water source supplies your motorhome's water system with water at pressure of the external source when the water pump is switched off.

CONNECTING THE EXTERNAL WATER SUPPLY

Press any water pump switch to turn off the water pump.
Attach a potable water hose to the city water connection .① Turn the water fill selector valve ② to the city water position ④.
Turn on the city water supply.
Make sure water heater valves are set as shown below: Ⓐ, Ⓑ and Ⓔ should be open Ⓒ and Ⓓ should be closed.

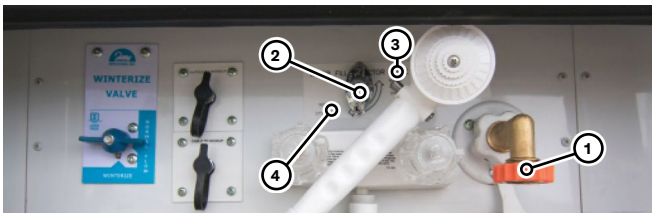


⚠ NOTICE

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. Drape a washcloth over the faucet to prevent excessive splashing.

DISCONNECTING THE CITY WATER SUPPLY

1. Turn off the city water supply.
2. Relieve the 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 over the city water connection ①.



FILLING THE FRESH WATER TANK

FROM CITY WATER CONNECTION

1. Connect the water hose to the city water connection ①.
2. Turn the water fill selector valve ② to water tank fill ③.
3. Turn on the city water supply.
4. Set the Multiplex display to the home screen ⑤ and monitor the fresh water level. Once the fresh water level ⑥ reads full on the display, turn off the city water supply.



5. Turn the water selector valve ② to the city water position ④.
6. Turn on the water pump switch ⑦.
7. Slowly open the cold water tap until the water runs smoothly. Repeat with the hot water taps.

⚠ NOTICE

Always turn off the water pump switch ⑦ if leaving the motorhome unattended for an extended period of time and when driving to prevent excessive damage and battery discharge in the event of a leak.

⚠ CAUTION

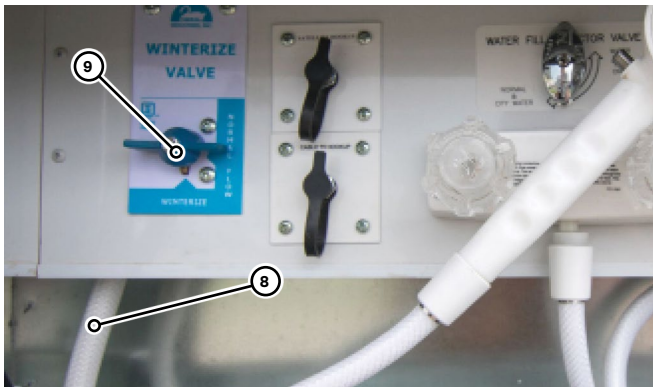
Do not leave the coach unnatented when filling with pressurized supply. Damage to tank may occur.

FROM POTABLE WATER SUPPLY

When a city water supply connection is not available, fill the fresh water tank using the following procedure:

1. Fill a suitable water container with potable water.
2. Place the suction hose ⑧ attached to the winterize by-pass valve into potable water container.

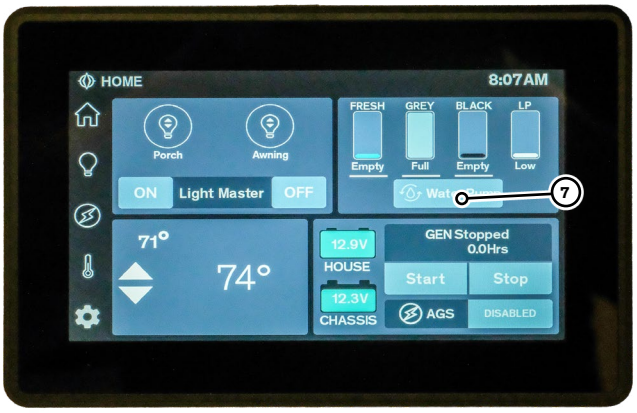
NOTE: The winterize by-pass valve ⑨ is located in the exterior utility center.

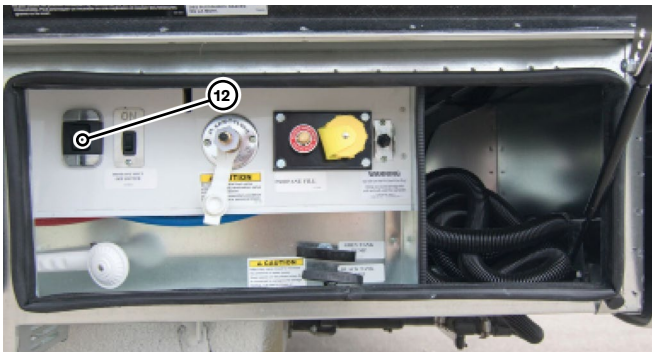


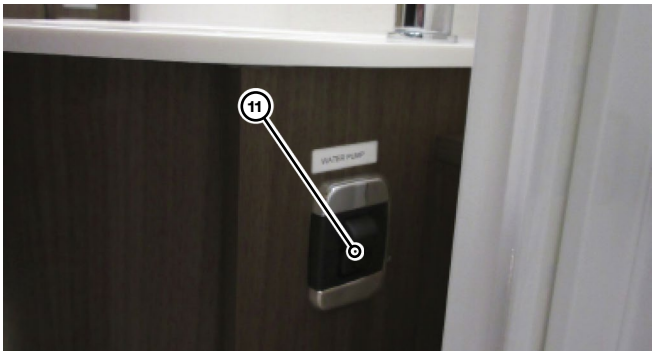
3. Turn the winterize by-pass valve ⑨ to “WINTERIZE” and water fill selector valve ② to water tank fill ③.
4. Turn on the water pump switch ⑦ on the system monitor panel.
5. Depress and hold the fresh water tank level switch ⑤ to show the percent-full level on the LED display ⑥. Once the fresh water level reads full on the LED display, turn off the water pump.
6. Turn the winterize by-pass valve ⑨ to “NORMAL FLOW” and the water fill selector valve ② to city water ④.

WATER PUMP SWITCH

To power the water pump one of the three switches needs to be turned on. To shut down depress any of the 3 switches. When the water pump is turned “ON” it will automatically activate when using the shower, toilet or any faucet. One of the water pump switches is located on the home screen of the main multiplex panel. Additional switches are located in the bathroom (11) and in the rear utility compartment (12).



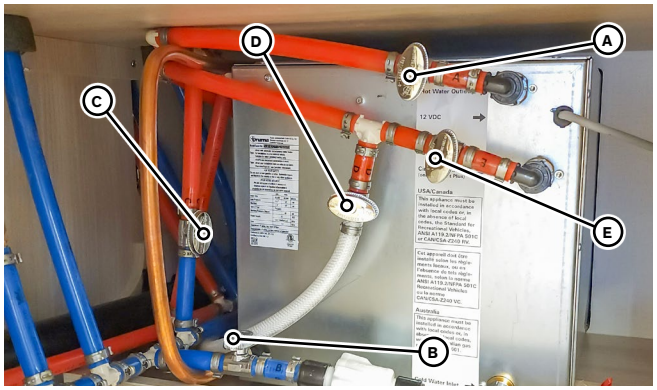




DISINFECTING THE WATER TANK

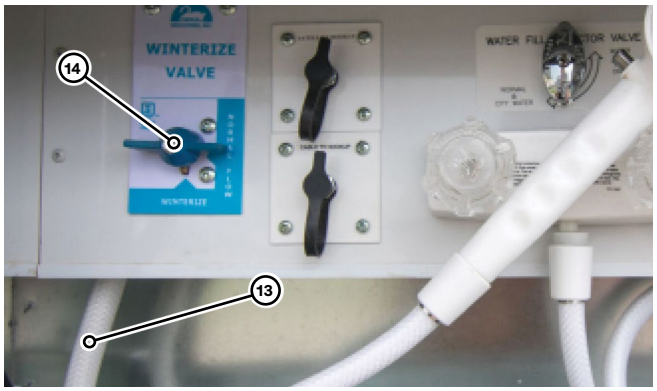
Periodically disinfect the fresh water system. Disinfect when the system is new or has not been used for an extended period of time. Disinfect the water tank as follows:

1. Make sure the water pump is turned off
2. Set your hot water tank to bypass mode by setting the valves as follows:



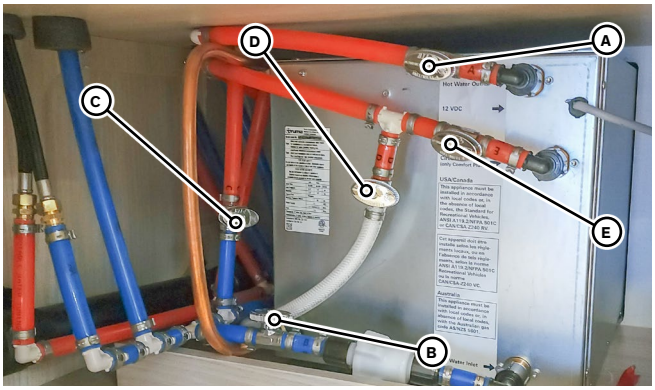
VALVES A, B, D, AND E CLOSED
VALVE C OPEN

3. If your coach has a built in water filtration system, remove the water filter from the housing by using the water filter wrench supplied with your unit. The Wonder does not come equipped with a water filter. Reattach the housing once filter is removed.
4. At the utility center on the exterior of the coach, set your winterize valve (13) to “Winterize” and your water fill selector (14) to “Water Tank Fill Only”



5. In a separate container, mix 1/4 cup of bleach for every 15 gallons of water needed to fill the tank
6. Insert the end of the winterize hose in to the bleach/water mixture and turn the pump on.

7. Continue to fill the fresh water tank with the bleach/water mixture until the monitor panel shows it as full, or you see water coming out of the fresh water overflow.
8. Once the fresh water tank is full, turn off the pump and remove the hose from the container. Set the Winterize valve back to “Normal Flow”.



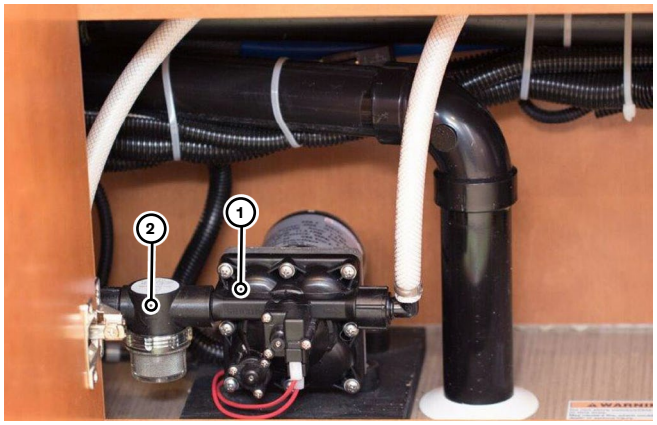
VALVES A, B, AND E OPEN
VALVES C AND D CLOSED

9. One at a time, turn on all of the taps (Galley, Vanity, Shower, etc...) and allow water to run through for a few moments to allow the bleach to enter the lines.
10. Let the mixture soak in the tank for approximately 2 hours.
11. Once the 2 hours is up, set the Winterize and water fill valves to their normal operating positions.
12. Inside the unit, turn on all of the faucets to allow the water to drain from the fresh water tank and enter the grey and black tanks, as well as flush the water lines.
13. Once the fresh water tank has been drained, dump the grey and black tanks, and refill the fresh water tank with clean water.
14. Once the fresh water tank is filled, run through the process of draining it through the galley and vanity faucet to ensure the lines are flushed.
15. Once flushed, set your hot water tank back to normal operating position and replace the water filter removed earlier.

Refill your fresh water tank. Your water system is now sanitized and ready for use!

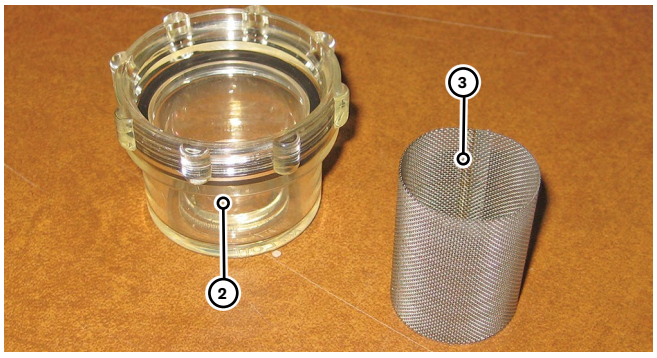
WATER PUMP

The water pump ① is designed to supply on-demand water from the fresh water tank to the various water and plumbing systems in your motorhome. When a faucet is opened, the pump comes on automatically and pressurizes the various water lines.



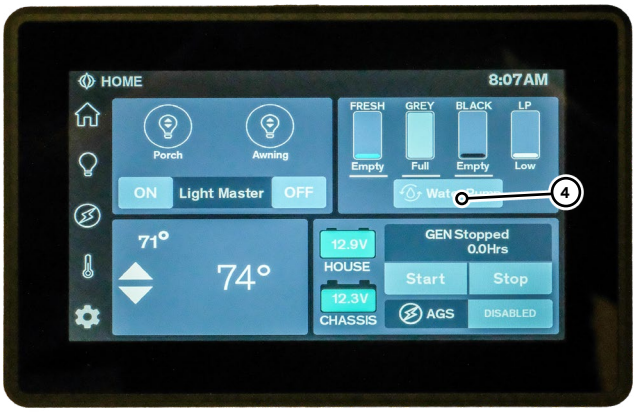
⚠ NOTICE

Periodically check the screen ③ on the intake side of the water pump ①. Clean or replace the screen at least annually to ensure proper water pressure. Unscrew the filter bowl ② to access the screen remove the screen, 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 Motorhome Information Kit for further information.



WATER PUMP INITIAL STARTUP

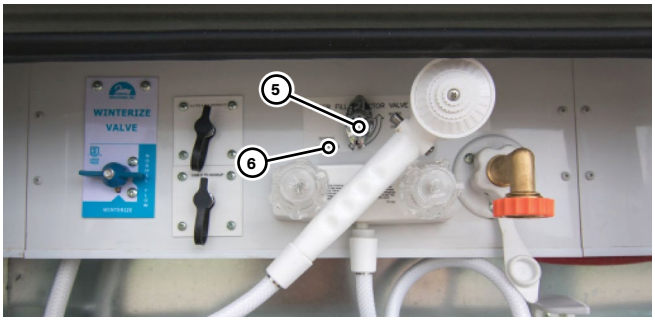
1. Make sure all drain valves are closed.
2. Turn off the water pump switch (4).
3. Fill the water tank.
4. Open the hot and cold faucets.
5. Turn on the water pump switch .(4)
6. Close each faucet (hot and cold) as soon as water flows steadily through the faucet.
7. Verify that the water pump stops after closing all faucets.
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 discharged.
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 (5) in the exterior utility center is set to “NORMAL POSITION” (6) as shown.



6. Check for clogged screens.

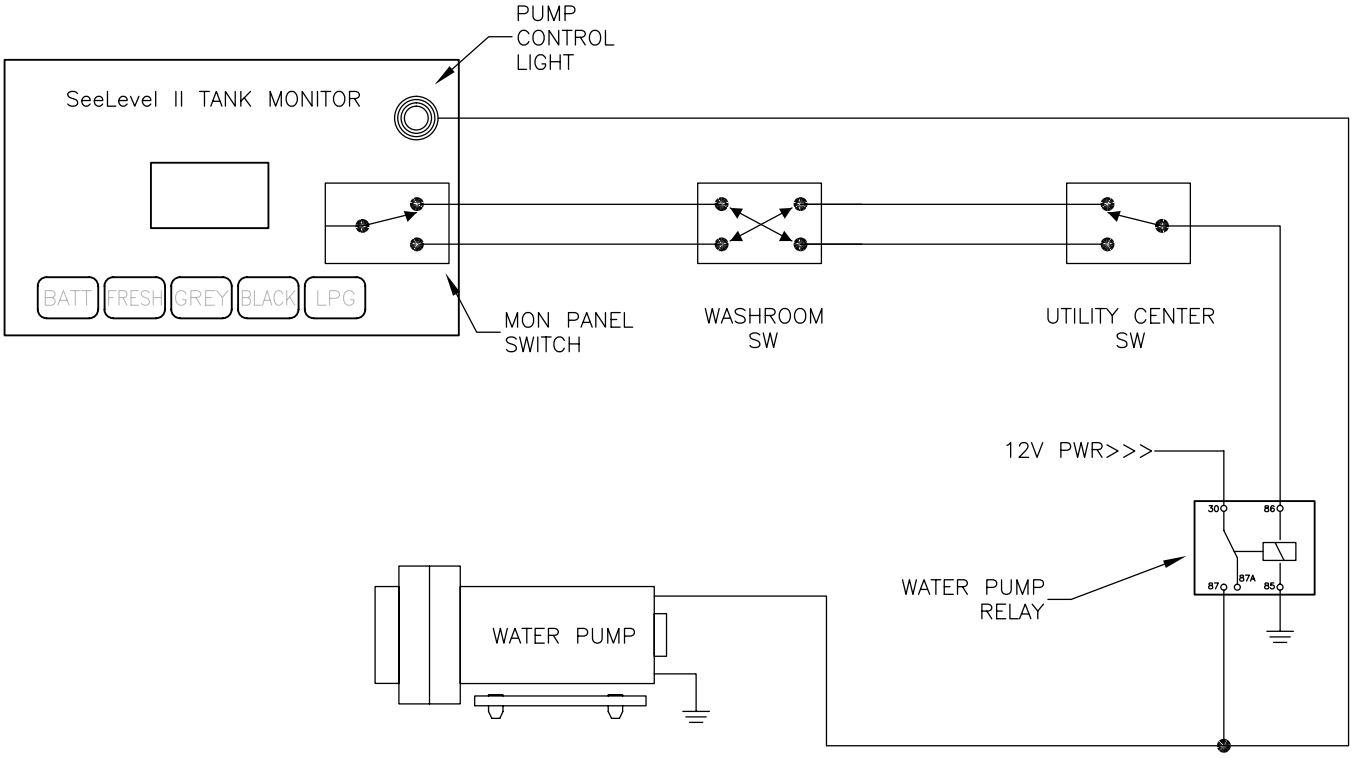
IF WATER PRESSURE DROPS

1. Check faucets and connections for leaks.
2. Make sure faucet aerators and filters are clean.
3. Make sure there is water in the tank.
4. Make sure the chassis battery is not discharged.
5. Make sure the water pump screen is not clogged.

IF PUMP RUNS WHEN THERE IS NO 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 (5) is set to “NORMAL POSITION” (6) as shown.

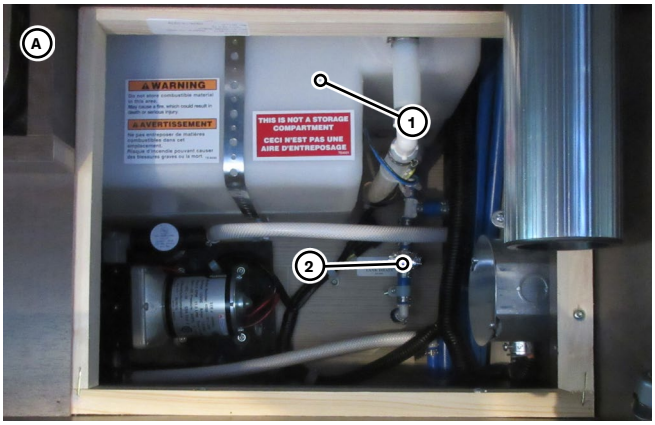
WATER PUMP ELECTRICAL DIAGRAM

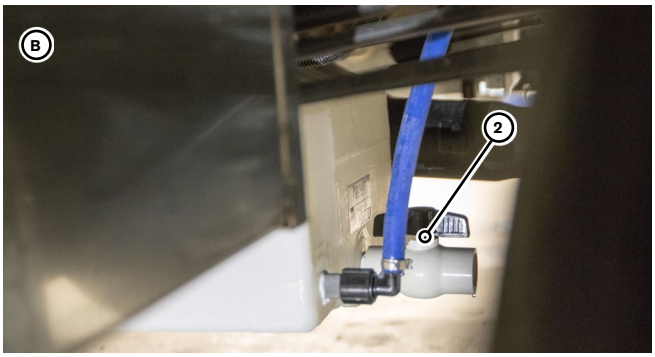


DRAINING THE FRESH WATER SYSTEM

To drain the fresh water tank ①, open the fresh water tank drain valve ② located either under the bed Ⓐ or on the underside of the coach Ⓑ between the frame rails.

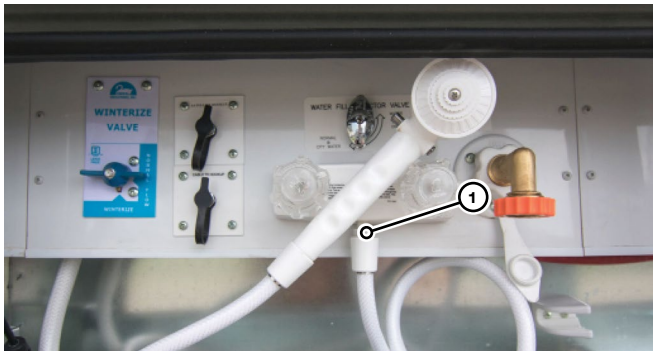
NOTE: If the drain valve is located internally, the drain hose is routed outside through the floor.





DRAINING THE HOT AND COLD WATER SYSTEMS

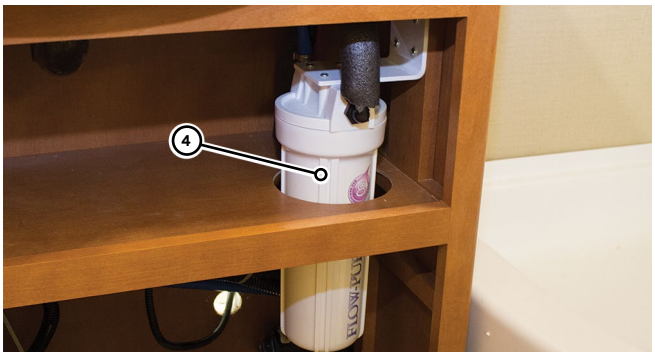
1. Disconnect the city water supply if connected
2. Turn off the water pump at any water pump switch.
3. Open all coach faucets.
4. Open the exterior shower faucets ③ (this is the lowest drain).The exterior shower faucet is located in the rear utility center.



WATER FILTER

Your coach may come equipped with a water filtration system. The water filter ④ is located below the kitchen or bathroom sink (location varies depending on floor plan). Replace the water filter at least annually to ensure water quality. To replace the filter, unscrew the canister and replace the filter. Refer to the water filter manual located in the Motorhome Information Kit for further information.

NOTE: Your entire water system gets filtered through water filter ④.



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 ⑤, set the main Multiplex panel to the home screen.



⚠ NOTICE

Overfilling the grey water holding tank could cause the overflow to 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 into the toilet.

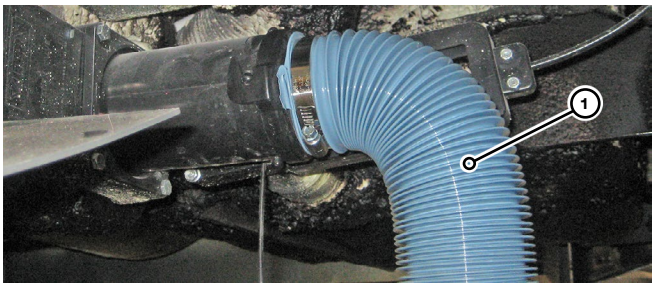
To display the black water holding tank level, set the multiplex panel to the home screen to show the percent-full level on the display ⑥.

⚠ NOTICE

Overfilling the black water holding tank could cause the overflow to back up through the toilet.

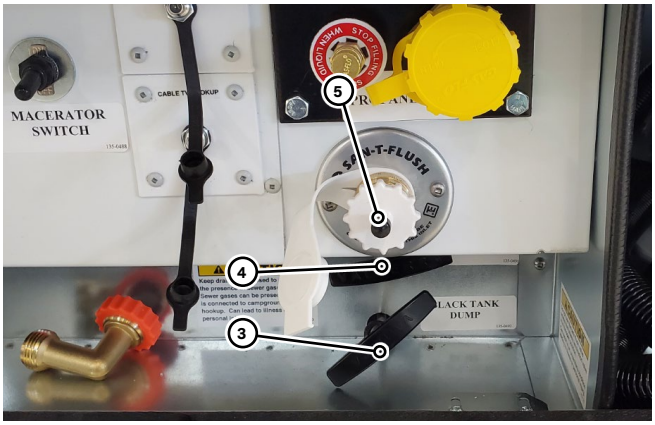
DUMPING HOLDING TANKS

1. Connect the sewer hose ① to the tank outlet located on the rear driver's side underbody. The sewer hose is stored on the driver's side under the floor as shown in ② (island and twin bed floor plans) or below the slide out (corner and Murphy bed floor plans).





2. Pull the black water tank dump valve handle ③ to empty the black water tank. Leave the dump valve open and pull grey water dump valve handle ④ to empty grey water tank. Close both valves when you no longer hear or feel waste water flowing through the sewer hose. Remove, rinse and store hose.



BLACK WATER WASTE TANK RINSE

The motorhome is equipped with a black water waste tank flushing system to improve draining and to reduce odor. To flush the tank, follow these steps:

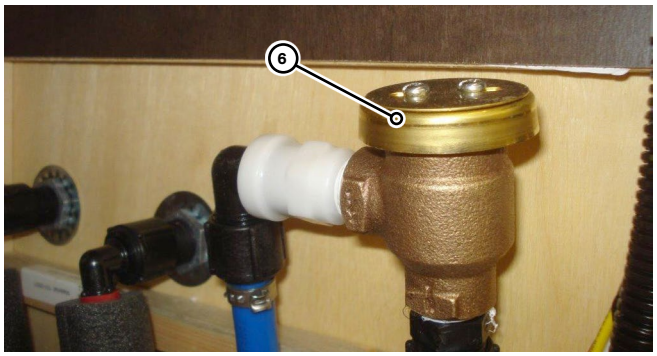
1. Remove the protective cap and connect the city water supply hose to the connector ⑤ located in the exterior utility center.
2. Open the black water tank dump valve ③.

⚠ NOTICE

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

3. Turn on the city water supply to thoroughly flush the system.
4. Turn off the city water supply, disconnect the city water supply hose and install the protective cap on the connector ⑤.
5. Close the black water tank dump valve ③.

NOTE: The black water tank flush line incorporates a non-return valve ⑥, 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 is located behind various wall panels depending on coach floor plan (see floor plan for location).



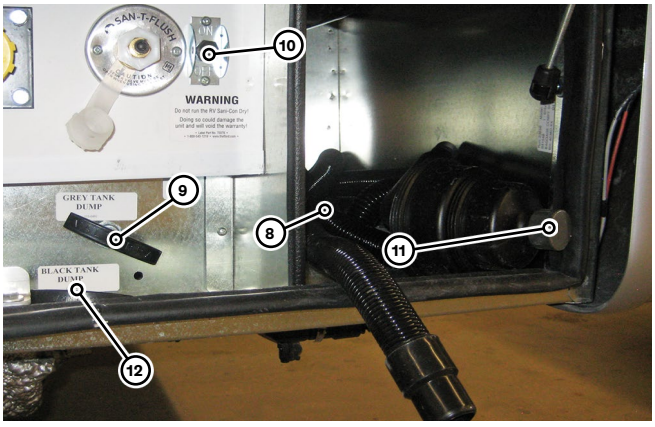
MACERATOR (OPTIONAL)

Your motorhome may be equipped with a macerator ⑦. The macerator breaks down the solid matter in the black water holding tank.



DUMPING HOLDING TANK WITH MACERATOR

1. Remove the cap ⑪ from the sewer line and remove the macerator waste hose ⑧ located in the rear driver's side utility compartment. Connect the macerator waste hose to the sewer line and a sewer hook-up.



2. Open the black water tank dump valve ⑫.
3. Turn on the macerator pump switch ⑩.
4. While emptying the black water tank, open the grey water tank dump valve ⑨.
5. Turn off the macerator pump switch ⑩ and close the black water tank dump valve ⑫ and the grey water tank dump valve ⑨ when both tanks are empty. Replace the sewer line cap, rinse the macerator waste hose and return the hose to the rear driver's side utility compartment.

Refer to the macerator manual located in the Motorhome Information Kit for further information.

WASTE WATER HOLDING TANK - DO'S AND DON'TS

DO keep your holding tank clean using a cleaning agent approved for recreational vehicle sanitation systems.

DO add a special deodorizer or chemical additive approved for recreational vehicle sanitation systems to reduce odor and help break down waste.

DO keep both tank dump valves closed to enable the tanks to fill before emptying.

DO keep both tank dump valves closed and the drain cap tightly in place while traveling.

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

DO open the shower room vent to provide fresh air and reduce excessive moisture buildup.

DO keep all roof vents and windows closed when traveling to prevent odors caused by negative pressure.

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 that could scratch or damage the plastic components.

DON'T use any mechanical drain cleaning devices unless the in-line trap has been removed.

USING ON-SITE SEWER HOOK-UPS

When staying at a campsite where sewer hook-up is available, the sewer hose may be attached and left in place for the duration of the stay.

Do NOT leave the dump valves open. Open the dump valves 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 you open the valves. If the valves are left open, the liquid waste will drain, leaving the solids to collect on the floor of the black water holding tank. If solids collect, close the valves, fill the tank with water and drive a few miles. You can also help clean the tank by adding 1/4 cup of dish detergent to the water. The motion of the vehicle and the water will help dislodge the wastes and allow the tank to drain in the usual manner.

WATER HEATER

WATER HEATER OPERATION

The water heater is accessible from outside the coach. The water heater is designed to operate on LP gas only and is a tankless pressure operating system which provides hot water on demand.

⚠ NOTICE

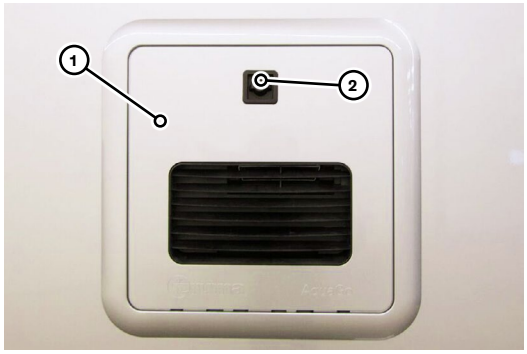
Make sure the city water supply is turned on or the fresh water tank fill level is adequate for use.

⚠ CAUTION

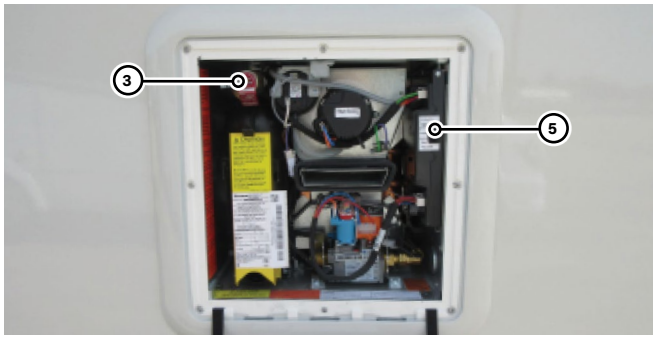
Do not cover or obstruct exterior water heater vent.

OPERATION

1. Remove the water heater exterior cover ① by turning the latch ② counter-clockwise.



2. Ensure the water heater pressure relief valve ③ is closed.

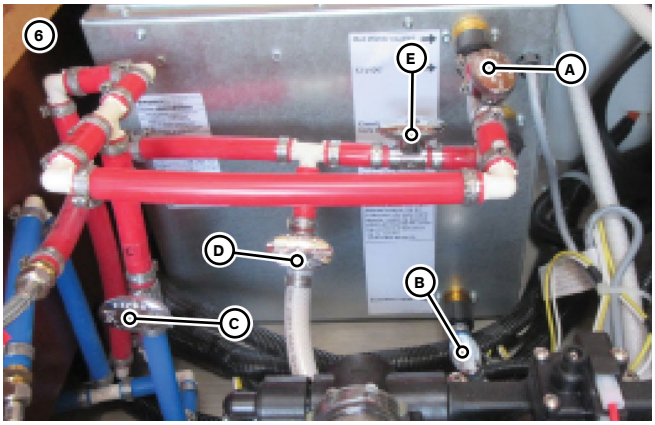


(SHOWN WITH EXTERIOR COVER OPEN)

3. Turn the propane “shut off” switch ④ to ON.



4. Press the exterior water heater switch (5) to either Eco or Comfort ON position (refer to water heater operating instructions in the Motorhome Information Kit for detailed instructions).
5. Ensure the water heater valves (6) are in the position shown for normal operation (A, B, and E open; C and D closed).

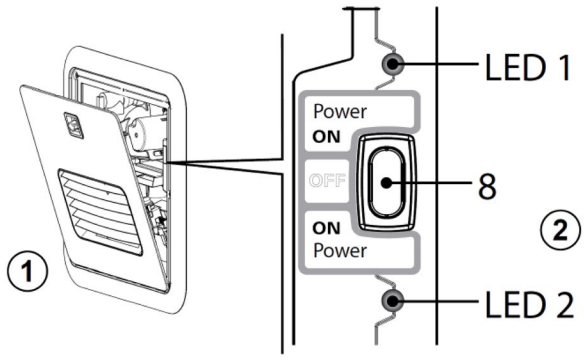


⚠ NOTICE

Always refer to the owner's manual for the water heater (included in your Motorhome Information Kit).

SWITCHING ON THE APPLIANCE

1. Open the access door.
2. To switch on the appliance, switch the POWER switch to one of the two "ON" positions. Both ON positions on the POWER switch have the same function. Choose your preferred position.
   - When the green power ON LED (1) is lit, the appliance is switched on.
   - If the red error code LED (2) is lit or flashes, there is a fault or warning.



AQUAGO® COMFORT PLUS

The appliance is now ready for using the control panel inside your vehicle.

OPERATING MODES

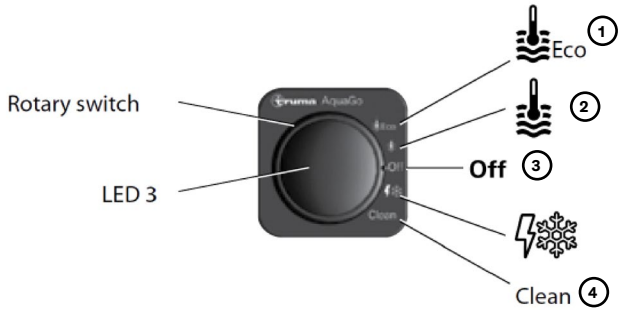
AquaGo® comfort plus features a control panel to select the operating mode.

WINTERIZING

Refer to the water heater operating instructions located in the Motorhome Information Kit for detailed winterizing procedures.

LED ROTARY SWITCH ECOCLEAN

All floor plans will have a Truma Rotary switch to control the water heater modes, with the exception of the Unity/Wonder MBL which controls the water heater via the multiplex system.
With the rotary switch you can choose between the following operating modes:



OPERATING MODE / DESCRIPTION

ECO ①

The appliance is now running in energy-saving mode.
Water temperature at outlet is approximately 120 °F (49 °C).
Prevention of freezing by using propane gas. The temperature in the appliance is automatically kept above 41 °F (5 °C) .
During operation, the yellow status LED 3 is lit

COMFORT ②

The appliance is now running in a mode that provides rapid availability of hot water.
Water temperature at the outlet is approximately 120 °F (49 °C).
Stand-by heat.
The temperature in the appliance is automatically kept above 102 °F (39 °C).
During operation, the yellow status LED 3 is lit.

OFF ③

Stand-by. The appliance is not running in any operating mode.
The yellow status LED 3 is off.
To switch off the POWER and gas supply.

DECALCIFICATION ④

Use to decalcify the hot water heater. Refer to the Truma manual for more information.

⚠ NOTICE

For safety reasons, after 30 seconds the decalcification process cannot be stopped until the system has been rinsed in accordance with the instructions.

WATER FIXTURES

FRESH WATER TOILET

The toilet in your motorhome operates much like a residential toilet except it uses much less water.

Your motorhome is equipped with either a manual flush or macerator toilet.

MANUAL FLUSH TOILET

(U24MB, U24CB, AND U24FX FLOOR PLANS)

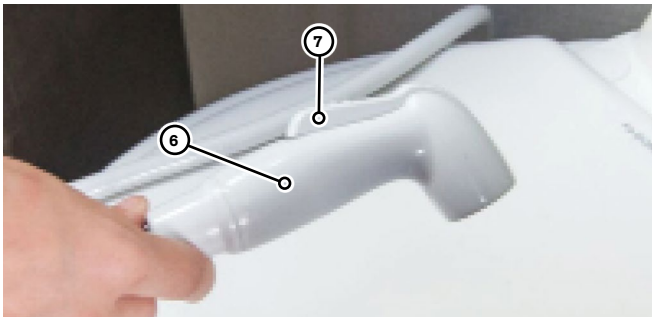
OPERATING THE MANUAL FLUSH TOILET

Push down the foot valve ⑤ to flush the toilet. A high-velocity stream of water produces a swirl effect to effectively cleanse the toilet. Use a deodorizing agent to eliminate toilet and holding tank odors.



Refer to the toilet operating manual in the Motorhome Information Kit for further details.

SPRAY NOZZLE
The manual flush toilet is equipped with a hand held spray nozzle (6).



Press the lever (7) to activate the spray nozzle.

Refer to toilet operating instructions in the Motorhome Information Kit for further details.

MACERATOR TOILET

(U24IB, U24TB AND U24RL FLOOR PLANS)

Flush the macerator toilet (8) using the wall mounted control panel (9) as follows:





WATER FILL
Press and release button (10) to raise the water in the toilet.

NORMAL FLUSH
Press and release button (11) to flush.

NOTE: To adjust the flush settings from “Normal” to “Low” hold in button (11) for about 5 seconds. When the power light (12) starts flashing release button (11). The settings have been adjusted to “Low.” To change it back to “Normal,” repeat the steps.

Use a deodorizing agent to eliminate toilet and holding tank odors.

Refer to the toilet operating manual in the Motorhome Information Kit for further details.

OPERATING TIPS

1. Do not flush facial tissue or regular household toilet tissue down the motorhome toilet. It will not disintegrate properly and will cling to the sides and bottom of the holding tank, making it hard to clean. Use toilet tissue designed for motorhome toilets only.
2. Do not flush sanitary napkins or other non-dissolving items down the motorhome toilet.
3. Do not use automotive antifreeze or caustic chemicals such as household bleach in the toilet or holding tank. These liquids can damage plastic or rubber parts in the system.

CLEANING THE MANUAL FLUSH TOILET

1. Clean the toilet regularly for sanitary reasons and to ensure efficient operation.
2. Clean the toilet using a mild bathroom cleanser. Do NOT use caustic or abrasive cleansers. Do not allow cleansers to remain in the toilet bowl for any length of time or damage to plastic surfaces and seals could result.
3. Dump and rinse the black water holding tank after cleaning and flushing the toilet.
4. Add a small amount of deodorizing agent every few days to eliminate toilet and holding tank odors.

5. If the operation of the manual flush valve is diminished or becomes stiff, lubricate the toilet plunger. 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 the plunger O-ring inside the toilet. Operate the valve several times to make sure it is operating freely.

Refer to the toilet operating manual located in the Motorhome Information Kit for details on preparing the toilet for cold weather storage. Also refer to the "Storage and Winterization" section of this manual for further details.

SHOWERS

HOT WATER

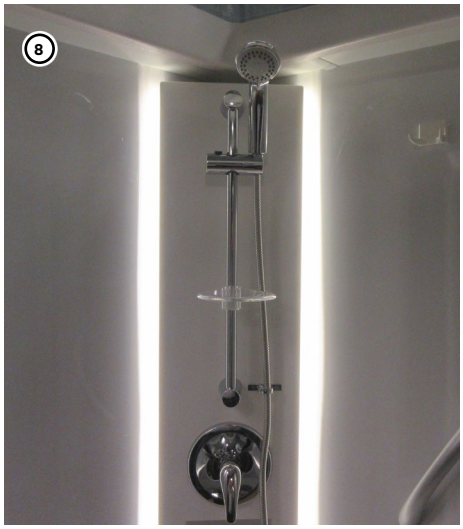
This standard water tap controls the flow of hot water to the shower head. Turn clockwise to turn off the water, and counterclockwise to turn on the water.

COLD WATER

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

INTERIOR SHOWER

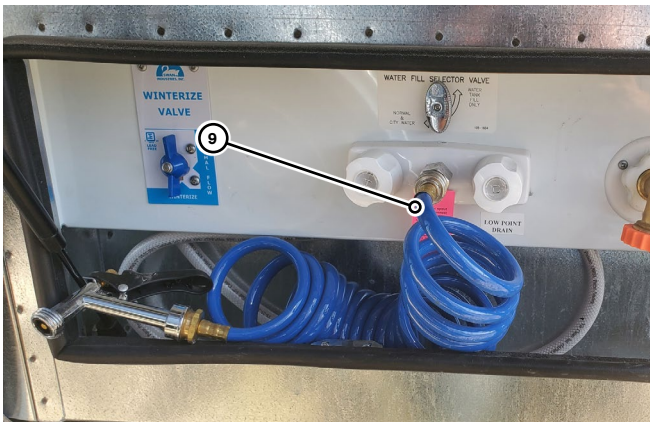
Your motorhome is equipped with a full shower unit (8). Lock the shower doors while in transit.



(MURPHY BED MODEL SHOWN)

EXTERIOR SHOWER

Your motorhome is equipped with an exterior shower unit (9) located in the exterior utility center.



SHOWER HEAD

This standard flexible hose shower system is mounted in the exterior utility center. Turn the handle and lift the head to use it.

LIQUID PROPANE GAS SYSTEM

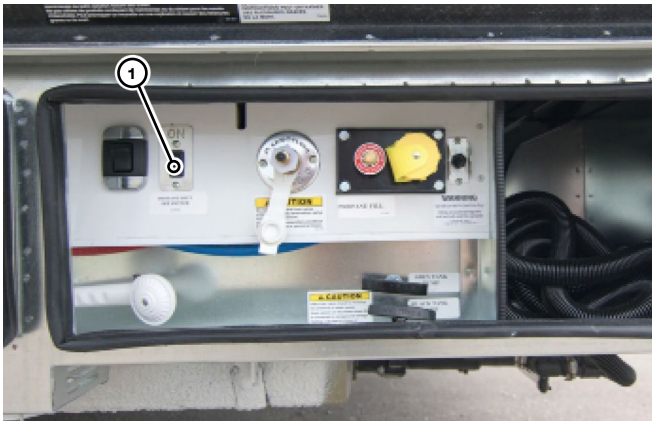
LP (Liquid Petroleum) Gas is a colorless gas compressed into liquid form for easy transportation and storage. It is the energy source for your cooktop, furnace, hot water heater, LP generator, and an alternate energy source for your refrigerator. LP Gas is an excellent fuel source that is safe and economical when used properly.

⚠ WARNING

These instructions are provided as a general guideline only. To ensure proper service and safety, always take your motorhome to a qualified service center.

LP GAS CONTROL VALVE

The LP Gas control valve ①, located in the exterior utility center, 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 regulatory requirements.

Many safety devices and backup systems have been installed in your motorhome to improve safety and reliability. These devices and systems include the following: LP Gas tank overflow valves, LP Gas detectors, and carbon monoxide (CO) detectors. In addition, although LP Gas is naturally odorless, LP Gas contains an odor additive so it can be more easily detected.

⚠ WARNING

Do not tamper with any part of the LP Gas system, piping or regulator. Service and maintenance must be performed by a qualified service center.

PRECAUTIONS FOR THE SAFE USE OF LP GAS

1. Familiarize yourself with the odor of LP Gas. If you suspect a leak, immediately turn off the LP Gas supply and have qualified service center determine the source of the leak.
2. Check the entire system for leaks every time the tank is filled. Take time to regularly inspect the system for leaks.
3. Turn off the LP Gas supply valve when the LP Gas system is not used.
4. Do NOT fill the LP Gas tank above 80% of its maximum capacity. LP Gas requires room to expand within the tank.
5. Make sure all appliance vents are open and free of obstruction when using the LP Gas system.
6. When drilling holes in walls or attaching objects, be careful not to damage gas lines or electrical wiring.

HOW LP GAS WORKS

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

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

Exercise caution when temperatures fall below -40 °F (-40 °C). Propane will not convert from a liquid to a gas in extremely cold temperatures, and LP Gas appliances will not function proper

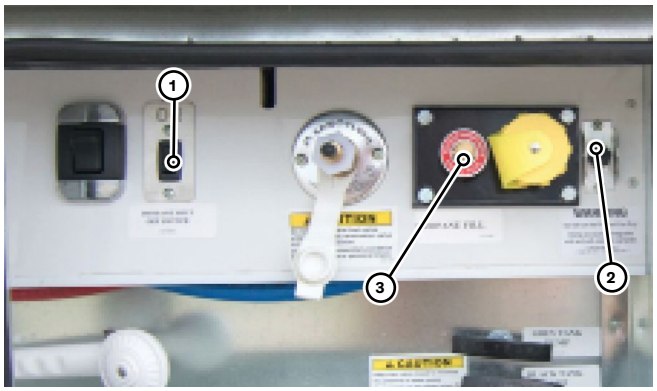
SELECTING FUEL TYPES

Propane burns at a lower temperature and will convert from liquid to gas at temperatures as low as -40 °F (-40 °C). Butane is not recommended due to its high vaporization temperature 32 °F (0 °C). Using butane in cold temperatures may block the system and cause components to malfunction.

LP gas dealers typically provide only the type of gas commonly used and suited for the climate in their area. If you travel from a warmer to a colder region, verify that you have the appropriate type of LP Gas for the climate.

LP GAS TANK SYSTEM

The LP Gas storage tank is mounted underneath the motorhome and is attached to the vehicle floor. It is accessible only from outside the vehicle. Before turning on the LP Gas control valve ① located in the exterior utility center, make sure all controls for the various LP Gas appliances are in the “OFF” position to prevent any LP Gas from leaking into the motorhome. The LP Gas supply valve is operated by the LP Gas switch in the exterior utility center. The valve is held open using 12 volt DC power. If the battery is dead or the battery disconnect is in the “OFF” position, the LP Gas supply valve will automatically close.



NOTE: The LP Gas storage tank is also equipped with a manually operated shut-off valve. Refer to the “Motorhome Maintenance” section of this manual for details.

REFILLING THE LP GAS TANK

1. Shut off the LP Gas control valve ① in the exterior utility center before filling the tank or traveling. Always refill an empty LP Gas tank as soon as possible.
2. Connect the LP Gas supply to the 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 limits the liquid level to 80% of container capacity, allowing 20% for expansion.
4. Check the LP Gas level after refilling by opening the overflow valve and bleeding gas in a well-ventilated area until the white liquid stops emerging from the overflow valve. Overfilling may cause damage to the regulator and cause malfunction of LP Gas appliances.

⚠ NOTICE

The LP Gas tank has an automatic 80% stop-fill device to prevent overfilling of the tank. To prevent against overfilling, 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 for refilling. When 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 or on-line if you have trouble finding a station. Look under “Gas - Liquid Petroleum - Bottled and Bulk” or “Propane.”

⚠ DANGER

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

⚠ DANGER

- **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.**

⚠ DANGER

Never carry LP Gas 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, asphyxiation or explosion.

⚠ 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.**
- **Use a soap and water solution to test for leaks in the LP Gas system.**

⚠ WARNING

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

AFTER REFILLING THE LP GAS TANK

1. Periodically check all container and line connections to be sure they are tight. Use soapy water when testing for leaks—do NOT use an open flame.
2. If you notice diesel or LP Gas fumes at any time, immediately determine and correct the source of the problem.
3. Before opening the LP Gas control valve in the exterior utility center, check that controls for all gas appliances are in the “OFF” position. An accumulation of LP Gas inside the motorhome could create a fire or explosion hazard.
4. Remember, 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 there is a sufficient fuel supply, there may be air trapped in the LP Gas tank. The air should eventually escape along with the LP Gas, but it may be necessary to have your LP Gas tank purged of air by your LP Gas dealer.

TRAVELING WITH LP GAS

⚠ NOTICE

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 of transporting LP Gas.

LP GAS TANK REGULATOR

The LP Gas tank regulator has a plastic cover to protect it from the weather. Only qualified service personnel are permitted to remove this cover.

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

An LP Gas regulator may freeze in extremely cold temperatures. This may result from a small amount of moisture in the fuel, even though LP Gas dealers take precautions to prevent this from happening. Keep the LP Gas control valve closed when not in use, even when the LP Gas tank is empty. This helps to prevent condensation from forming and helps to prevent freezing. If necessary, hold an incandescant light bulb near the regulator to thaw it.

If moisture in the LP Gas tank is a recurring problem, 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 in warmer temperatures. In colder conditions, this vaporization process significantly slows down. 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 operating 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 if possible.

The LP Gas regulator pressure is preset. Do NOT attempt to adjust it. Adjustments must only be performed by an authorized service center. Do NOT expose the regulator to the elements.

If the LP Gas regulator fails, the LP Gas tank may be overfilled or impurities may mix with the propane. Regulator failure could cause LP Gas components to malfunction.

⚠ CAUTION

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

LP GAS LEAKS

Read, understand and follow the safety label affixed near the range area in your motorhome's galley. Do NOT remove this label. If you ever smell LP Gas inside the vehicle or if the detector alarm sounds, carefully follow the instructions on the label.

Road vibration can loosen propane fittings. Check the propane system for leaks at least every 5000 miles (8000 Kms) and whenever the tank is refilled. Have the entire propane system inspected annually by qualified service personnel regardless of the number of miles driven.

1. Read, understand and follow safety labels, signs and directions in the motorhome.
2. Use soapy water to check for leaks and watch for bubbles. Never use an open flame.
3. Correct or repair leaks before using appliances or operating the vehicle.

⚠ DANGER

If you smell propane, follow these steps:

1. **Extinguish all open flames, pilot lights and smoking materials.**
2. **Do NOT touch any electrical switches.**
3. **Shut off the propane supply at the tank valves or propane supply connections.**
4. **Open doors, windows and vents.**
5. **Leave the area until the odor clears.**
6. **Have the propane system checked and repaired by a qualified service technician before using the LP Gas system. Failure to comply could result in asphyxiation, fire or explosion causing serious injury or death.**

AVOIDING ASPHYXIATION

1. Do not use portable fuel-burning equipment such as wood or charcoal grills, heaters or stoves inside the motorhome. The use of this equipment can produce deadly carbon monoxide gas or cause fires.

⚠ WARNING

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

⚠ WARNING

Do not use materials that contain ammonia or chlorine to check for LP Gas leaks.

2. Ensure there is proper ventilation before using the gas range to prevent asphyxiation. Do NOT use the range to heat the motorhome. Long term use of these appliances for space heating increases the chance of asphyxiation. Open the overhead vent and open a window before using the range.
3. Avoid breathing the exhaust fumes from gas or diesel engines and LP Gas burners. Poisonous exhaust fumes are produced from operating the motorhome or generator engine, stove, oven, refrigerator, furnace and hot water heater. Position the motorhome so the wind blows exhaust fumes away from the motorhome. Ensure proper ventilation and adequate air exchange when using LP Gas appliances to prevent a buildup of deadly carbon monoxide gas. Be sure all alarms are in proper working condition.
4. Do not run the motorhome or generator engine in a confined area such as a garage, except to remove the motorhome from the confined area.
5. Use the vent or air conditioning fan to force fresh air into the motorhome if the vehicle is not moving but the engine is running for more than just a few minutes.
6. Maintain engine and generator exhaust system components to prevent fumes from entering the motorhome. Check exhaust systems when changing oil, when exhaust system sounds change or when the underbody of the motorhome makes contact with an object or becomes damaged.
7. Close rear windows when driving to prevent drawing exhaust fumes into the motorhome.

NOTE: When the motorhome is new, some of the appliances will burn off paint or residue which has accumulated during production. You also may notice some odors from cleaners which will dissipate with use and ventilation.

MOTORHOME MAINTENANCE

EXTERIOR CARE AND MAINTENANCE

ROOF

The roof is manufactured with a bowed aluminum frame and constructed using a laminated 'sandwich' method. It is strong enough to support the weight of an average adult if it becomes necessary to repair the roof or any of the roof mounted components. Avoid carrying large heavy objects onto the roof. The additional strain of the weight, along with the movement of the motorhome, could cause damage to the roof. Check the roof regularly for possible leaks, especially the sealant around the vents, air conditioners, body-to-roof seams, etc. Immediately repair any suspected leaks. Any leakage could result in damage to the interior of the motorhome.

UNDERBODY

Mud and dirt mixed 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. Rinse and flush the undercarriage and the entire underbody every time you wash the motorhome.

WASHING, WAXING AND POLISHING

Damaging salts, calcium chloride, road tar, tree sap, insects and other foreign material can accumulate on the body of your motorhome. To reduce the harmful effects of these agents, wash the motorhome frequently and thoroughly using mild soap and warm water. Do not wash the exterior in direct sunlight and never use hot water. Avoid using pressure washers because they can loosen decals and sealants. Regularly wax your RV to reduce the negative effects of UV exposure on the exterior fiberglass parts.

Carefully inspect all caulking around windows, doors, vents and all other joints. Re-caulk if necessary using the correct caulking material available from a qualified service center. If water fails to bead on the surface of the motorhome, it is time to polish and wax it.

This will not only improve the appearance of your motorhome, but will also protect the painted surfaces from oxidation and corrosion making it easier to wash.

⚠ NOTICE

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 a qualified service center.

⚠ NOTICE

Please refer to the "How to Maintain and Care for your Exterior Finish" document in the Motorhome Information Kit for further instructions.

STRIPES AND DECALS

Follow these steps for the care and maintenance of your motorhome's stripes and decals:

- Wash with mild soap and warm water and rinse thoroughly.
- Never wash using a 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 stripes and decals and rinse immediately if splashing occurs.

EXTERIOR LIGHTING

Before each trip, inspect all clearance lights, identification lights, marker lights, stop lights, turn signal lights and backup lights. Immediately replace burned out bulbs. Use soap and water to keep all light lenses clean.

SOLAR PANELS

Solar panels should be cleaned monthly using water and a soft sponge or cloth. If required, a mild non-abrasive cleanser can be used for more stubborn residue. Ensure solar panels are rinsed thoroughly following cleaning.

For best performance, solar panels should be cleaned more frequently during drier months as they may become covered in dust more quickly. Use of a pressure washer to clean the solar panels is not recommended.

⚠ NOTICE

Solar panels contain acrylic (Plexiglas®) components. Refer to the acrylic manufacturer's cleaning instructions. Do NOT clean using Windex® style glass cleaners.

INTERIOR CARE

Dirt and dust accumulation can not only detract from the motorhome's appearance, but can also shorten the life of carpets and fabrics. Clean and vacuum weekly to keep your motorhome in pristine condition.

UPHOLSTERY

Use care when cleaning the motorhome's upholstery and choose an appropriate cleaner or spot remover to avoid damaging the materials. Regular vacuuming and wiping with clear water will remove most stains. Any major cleaning problems should be referred to a professional cleaning service.

⚠ NOTICE

Direct sunlight will fade upholstery and fabrics. To minimize fading, close drapes, blinds and shades whenever possible.

SPOTS AND STAINS

Most spots and stains can be removed using clear warm water. To prevent a stain from spreading, start from the outside of the stain and clean toward the center.

Stains such as lipstick, grease, ink or mustard are very hard to remove and might require the help of a professional cleaning service.

VINYL FABRICS

Clean vinyl surfaces using a soft, damp cloth and mild detergent. Never use solvents of any kind on vinyl surfaces.

NOTE: The vinyl manufacturer recommends the following: "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

Draperies, curtains and bedspreads are made from a variety of fabrics and materials. Many of these materials could shrink up to 5 percent during the cleaning process. Always use a professional cleaning service for you motorhome's textiles.

⚠ NOTICE

Using water-based or detergent-based solvent cleaners on fabrics may cause excessive shrinkage and permanent stains.

WALLS

Clean walls using warm water and mild soap. For extensive accumulations of dirt and grime, add a small quantity of rubbing alcohol to the water. Do NOT use solvents or abrasives.

CABINETRY, TABLES AND COUNTERTOPS

The wood's beauty comes from the natural variations in grain and density. Some minor variations in color and shading are normal.

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.

⚠ NOTICE

Some units contain acrylic (Plexiglas®) components. Refer to the acrylic manufacturer's cleaning instructions. Do NOT clean using Windex® style glass cleaners.

REFRIGERATOR

Clean the refrigerator interior regularly. Remove the shelves and wash inside the refrigerator using warm water and mild soap. Dry thoroughly, especially around door frame and door gasket. Use only warm water to clean the cooling evaporator, ice trays and shelves. Never use strong chemicals or abrasive cleaning materials on any part of the refrigerator cabinet. Refer to the refrigerator manual in the Motorhome Information Kit for additional information.

STOVE TOP - GENERAL

Clean the stove top as soon as it cools using warm water and a mild detergent solution. Clean the stove top regularly to help keep the appliance looking and operating like new.

STOVE TOP - BURNERS

Clean the stove top burners (caps and grates) after they have cooled using warm water and a mild detergent solution. Clean plugged burner ports with a toothpick. Do NOT clean burner ports using metal objects of any kind because it could enlarge the port.
If washing a cap or grate in the sink, dry it immediately by shaking off all excess water, reinstalling it onto the stove top and lighting the burner until all water evaporates.

MICROWAVE/CONVECTION OVEN

Keep the door and inside of your microwave/convection oven clean. Do not allow grease, spatter or solid matter to build up. An accumulation of solid matter can absorb microwave energy and increase cooking time. Clean the microwave/convection oven as follows:

- Wipe walls with a damp cloth and mild detergent to remove spatters and spills. Do not use harsh detergents or abrasives.
- Clean the outside surface of the oven with soap and water. Rinse and dry with a soft cloth. Do NOT allow water to enter the oven's ventilation openings to avoid damaging the oven's internal components.
- 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. Remove the glass tray for cleaning. Wash the tray in warm soapy water or in a dishwasher.
- Refer to the microwave/convection oven manual in the Motorhome Information Kit for further details.

BATHROOM - GENERAL

Use warm water and mild soap to clean the walls and surfaces in your bathroom. Clean mirrors using a good-quality glass cleaner. Do NOT use harsh cleansers, detergents or abrasives.

TOILET

Refer to the toilet manual in the Motorhome Information Kit for cleaning and care instructions.

DOORS AND WINDOWS

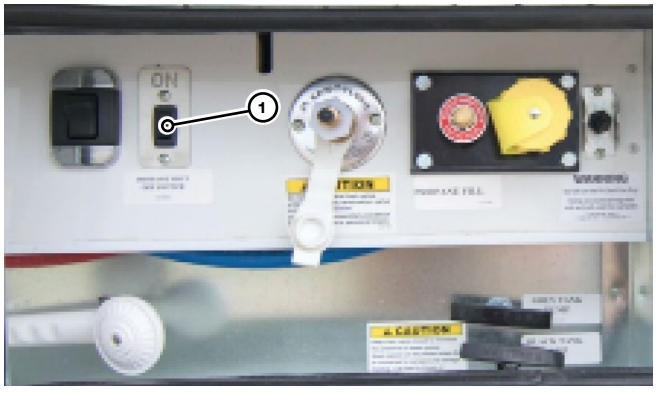
Periodically lubricate the door locks and hinges with powdered graphite for smooth operation and protection from freezing. Clean windows using a good-quality glass cleaner. If cleaning ice from windows, use a plastic scraper and avoid damaging the seals and sealant along the edge of the windows.

STORAGE AND WINTERIZATION

Inspect all systems, components and appliances prior to storing your motorhome.

STORAGE CHECKLIST

Fill the motorhome fuel tank to reduce excessive moisture buildup.
Check coolant level and add antifreeze if necessary. Use an appropriate coolant/water ratio that will protect to the lowest temperature expected during the storage period.
Change the engine oil to the recommended viscosity to aid with cold weather starting.
Park the motorhome as level as possible.
Ensure the battery has a full charge, then disconnect both coach batteries using the battery disconnect switch in the coach. Disconnect the Chassis batteries using the disconnect by under the drivers side dash (Unity) or by disconnecting the negative terminal on the battery. Charge the batteries monthly with a trickle charger or smart charger.
Wash the motorhome. If exposed to road salts, thoroughly wash and flush the exterior and undercarriage.
Remove all perishable items and anything that can freeze (canned goods, medicine, etc). Leave the refrigerator door ajar. Ensure all controls are turned off.
Ventilate the living area by opening drawers, cabinets, closets, etc.
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. Refer to the "Cold Temperature Storage" section in this manual for winterizing procedures.
Turn off the LP Gas tank valve switch ①.



COLD TEMPERATURE STORAGE

SPRING STARTUP

After storing the motorhome for an extended period of time, run the water pump to pressurize the water system and check for leaks. Visually inspect the water system for 15 minutes to ensure there are no leaks.

Clean all your appliances and have the LP Gas line purged by a qualified service center. Ensure everything in the motorhome is working correctly. Refer to the chassis manual in the Motorhome Information Kit for any chassis maintenance recommendations.

COLD TEMPERATURE OPERATION

The plumbing system in this motorhome is not designed for cold weather use. Temperatures at or below freezing will cause damage to the plumbing system.

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. Refer to the chassis manual in the Motorhome Information Kit for further recommendations.

LP GAS

Use propane for winter traveling because it will vaporize in extremely cold temperatures -40 °F (-40 °C). Butane is not recommended due to its high vaporization temperature 32 °F (0 °C). Using butane in cold temperatures may block the system and cause components to malfunction.

WASTE SYSTEM

Prevent winter freeze-up by adding regular non-toxic RV antifreeze into the toilet and kitchen drains to protect the holding tanks from freezing. Be sure to add a sufficient amount of non-toxic RV antifreeze to protect the total volume of the holding tanks.

⚠ WARNING

Do NOT use alcohol-based antifreeze or other petroleum products.

WATER SYSTEM WINTERIZATION

DRAINING THE WATER SYSTEM

1. Switch off the water pump and disconnect the water hose at city water outside.
2. Switch off the water heater inside the motorhome (above the entrance door).
3. Switch off LP Gas in the outside utility compartment.
4. Drain the fresh water tank (U24MB and U24FX fresh water tanks are below the floor outside the coach and U24TB, U24CB, and U24IB fresh water tanks are under the bed inside the coach.) You may want to leave the water tank valve open for winter storage.
5. Relieve the water pressure by opening the hot and cold taps on any faucet.
6. If heater is still hot, be sure to allow the water to cool before proceeding.

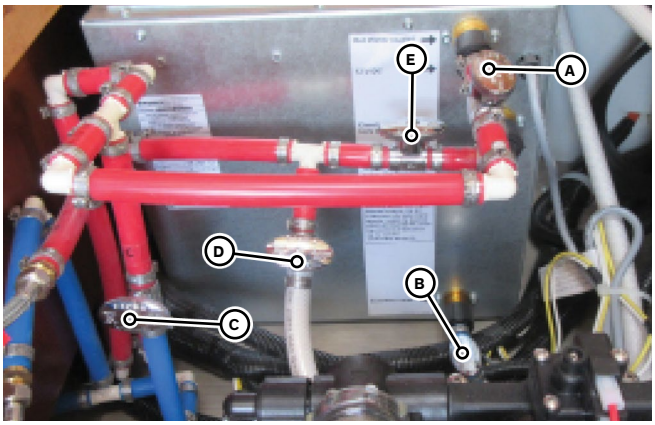
⚠ WARNING

If the water heater contents are still hot, serious burns and scalding may occur

7. Drain the water heater (avoid the risk of being scalded.) Outside at the yellow easy drain lever, lift the black clip and fold down the yellow easy drain lever. Remove the water inlet filter and store in a warm dry place. Close the yellow easy drain lever.

⚠ CAUTION

Failure to drain the water heater reservoir may cause damage to the water heater.



8. Close valves Ⓐ, Ⓑ and Ⓔ.

⚠ CAUTION

Ensure no air pressure or winterization fluid enters the water heater as part of this process.

9. Valve Ⓓ should remain closed at this point.
10. Open valve Ⓒ.
11. Remove the water filter canister (stored under the sink), remove the filter cartridge from the canister and reinstall the water filter canister (make sure it is tight.) Store the filter cartridge in a warm dry place.
12. At this point, you can continue the winterizing process by either adding plumbing anti-freeze to the system, **or** blowing out the airlines. See below for the process on each.

ADDING PLUMBING ANTI-FREEZE

1. Place the suction hose attached to the winterize valve in the utility compartment into a non-toxic plumbing antifreeze container and turn the valve to the winterize position (making sure the city water/tank fill valve is in the city water position) in order not to get antifreeze into fresh water tank.
2. Switch on the water pump inside (above entrance door) and pump antifreeze through all hot and cold faucets one at a time (including toilet flush with the rinse hose (if equipped)) and outside shower until pink antifreeze appears.
3. Go inside and switch off the water pump. You can now open valve Ⓓ at the water heater inside to drain and relieve the pressure in the water lines. Access the water pump inside the coach, unscrew the filter bowl to access the screen, remove the screen and clean the screen and filter bowl with fresh water and dry before reinstalling both components on the water pump.
4. Go outside and remove the screen from the city water fill connection, depress the center stem until no more fluid drains out (you may or may not see any fluid) and replace the screen in the city water fill connection. Turn the winterize valve to normal flow and place the suction hose in the utility compartment.

⚠ NOTICE

Never depress the center stem while the system is under pressure, or damage to the valve may occur.

5. Remove the water filter canister from under the sink, empty the antifreeze from the canister and reinstall the water filter canister (making sure it is tight and o-rings are in place.)
6. Remove the cap from the black tank San-T-Flush connection in the utility compartment and attach the blowout plug to the San-T-Flush connection. Blow compressed air through the San-T-Flush connection for about 15 seconds, remove the blowout plug and replace the cap on the SanT-Flush connection.
7. Drain the black and grey waste holding tanks (pull the black waste tank lever first and wait for it to empty then pull the grey waste tank lever.) Make sure tanks are empty and put one cup of antifreeze down each sink drain, shower drain and toilet. If equipped with a macerator pump, put ½ gal. of plumbing antifreeze down the bathroom vanity sink and run the macerator pump until the antifreeze can be seen running through the hose.

BLOWING OUT THE AIR LINES

1. Attach the blow out plug to the city water hookup in the utility center.
2. Connect a compressed air line to the blow out plug.
3. Open all hot and cold water faucets, including the exterior shower, and blow out all water with 20-30PSI.

NOTE: Place filter in a secure location during the storage period.

NOTE: Unity U24TB, U24IB, and U24RL models only - Flush macerator toilet. DO NOT FLUSH NON-MACERATOR TOILETS AT THIS TIME.

⚠ NOTICE

Do NOT depress the toilet flush pedal if there is air pressure in the system or damage to the toilet flush valve could result.

4. Disconnect the compressed air line and remove the blow out plug. Release air pressure by opening all faucets.
5. For non macerator models only: After releasing all air pressure from the lines, depress the toilet flush lever while an assistant applies compressed air into the blow out plug. Disconnect the compressed air line and remove the blow out plug. Release air pressure by opening all faucets.
6. Remove the water filter canister, empty any remaining water and reinstall the water filter canister.
7. Drain the black and grey waste holding tanks.
8. Add approximately 1 cup of non-toxic plumbing antifreeze to the kitchen sink, bathroom sink, shower drain and toilet bowl.
9. With the termination valves closed, run the macerator (if equipped) for 10 seconds or until the pump is completely empty.

DE-WINTERIZING THE WATER SYSTEMS

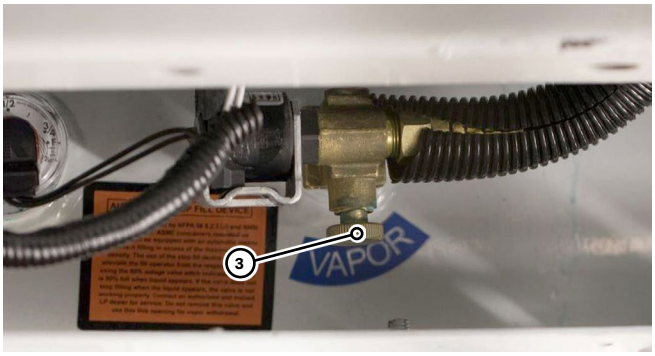
NOTE: Flush entire water system before filling the hot water tank.

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 hot water heater valves to the “NORMAL FLOW” position.
4. Turn on the water pump switch located on the system monitor panel in the cabinet above the coach door.
5. Open the water faucet furthest away from the water tank. Run the water until clear water appears then shut off the faucet. Repeat this procedure for all remaining faucets including the shower and exterior faucets.
6. Open the hot water line until clear water appears.

MAINTENANCE AND SERVICING

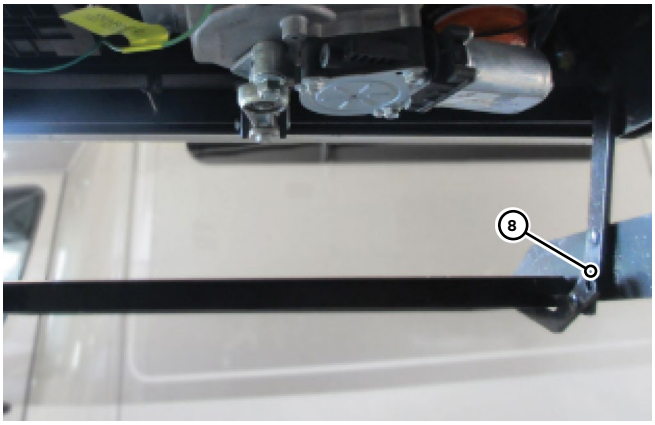
LP GAS TANK VALVE

If the electrically operated LP Gas valve (3) (located underneath the motorhome) fails to operate the LP Gas tank, manually turn the valve clockwise to shut off the LP Gas supply.



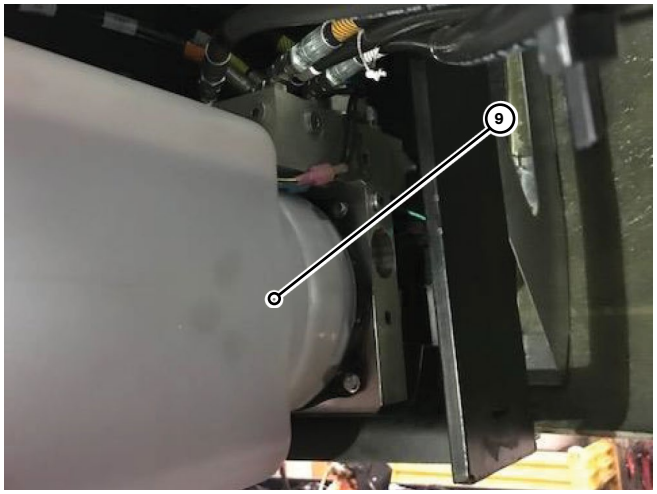
ENTRY DOOR STEP

Periodically clean and lubricate the electric entry door step mechanism (8). Refer to the electric step manual in the Motorhome Information Kit for details.



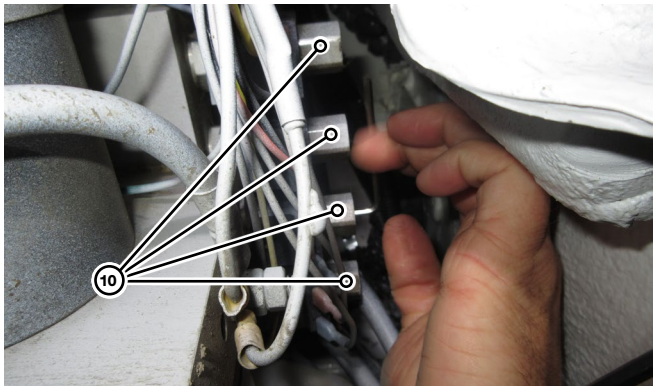
4 POINT LEVELING SYSTEM (OPTION)

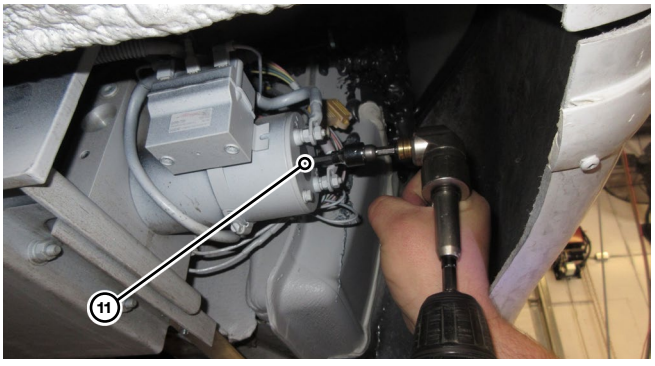
Periodically check the transmission fluid in the pump reservoir (9) and refill as necessary. Refer to the 4 point leveling system manual in the Motorhome Information Kit for details.



MANUAL OVERRIDE PROCEDURES

If electrical power is lost to the leveling system, your system has been equipped with a manual override option.





To retract your jacks:

1. The individual cartridge valves (10) are clustered together on the side of the pump manifold. Valves for leveling jacks are labeled 1 through 4. Locate the screws on the appropriate cartridge valve(s). Using a 1/8" Allen wrench, turn the screw(s) clockwise until all the way in and lightly seated. An individual leveling jack can be manually overridden by only opening the valve associated with that function.
2. Remove the foil sticker from the end of the motor. Place the drill with the 1/4 inch Allen driver bit on the manual override shaft (11) located at the end of the motor. Run drill in a counter-clockwise direction at 2000 r.p.m. (minimum). The jack leg(s) will retract.
3. When retraction is complete, return the cartridge valve(s) to the normal positions.

To extend your jacks: Follow all of the above steps except run the drill in a clockwise direction

⚠ CAUTION

Following manual override operation, return all valves to normal operational position. Failure to do so may result in drifting from the retracted (stowed) position of leveling jacks.

Cartridge valves: Rotate the center screw fully counter-clockwise until lightly seated.

NEW VEHICLE LIMITED WARRANTY

TRIPLE E CANADA LTD.
(REVISED JUNE 2020)

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. **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 the manufacturers of Components offers its own separate warranty, such as 1-year warranty or first retail purchaser warranty, (and in some cases more than 1-year and warranty extension programs) covering its respective Component(s). Triple E RV assigns to the first retail purchaser of the Motorhome each and every such separate warranty, if provided, 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). Information on separate Component warranties and registration for such warranties from Component manufactures may be found in the information kit provided to the first retail purchaser at the time of purchase. 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.**

2. **2-Year Limited Coverage.**
   Triple E RV warrants to the first retail purchaser of the Motorhome that all parts of the Motorhome manufactured by Triple E RV (ie. cabinetry, flooring, upholstery (stitching)) 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 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 Limited Warranty.

3. **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 issues by the original chassis or Component manufacturer. Even if Triple E RV modifies the chassis in order to assembly 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.

4. **Structural Coverage.**
   Triple E RV warrants to the first retail purchaser of the Motorhome that all structural parts 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 parts shall include only the metal structure of the coach and all metal members welded to it, studs and framing in the wall 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 2-Year Limited coverage of this Warranty. On Motorhomes where the chassis 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.

5. Additional Warranty Terms.
Although this Limited Warranty is extended only to the first retail purchaser of the Motorhome the Warranty may be transferable to a second owner of the Motorhome upon written or e-mail request to Triple E RV received within thirty (30) days after sale and transfer of title of the Motorhome. Documentation of Bill of Sale or Transfer must be accompanied with the request for this Limited Warranty to transfer to any second owner. This Limited Warranty to the second owner is 1 year from the original purchase date by the first retail purchaser. In no event shall this Limited Warranty be transferable to a 3rd or any subsequent owner.

6. Exclusions from Limited Warranty.
Use of the Motorhome for commercial, rental, or fleet purposes voids the foregoing New Vehicle Limited Warranty from the time that the vehicle is first used for commercial, rental, or fleet purposes and at all times thereafter. Any Motorhome used other than for temporary recreation purposes, including, but not limited to, use of the Motorhome for residential, rental, business and commercial purposes or any Motorhome purchased by, registered by, or titled in the name of a business association (such as any LLC, Corporation or Partnership). If the Motorhome owner or user files a tax form claiming a business or commercial tax benefit or income related to the motorhome, it shall be irrefutable that the motorhome has been used for rental, commercial or business purposes.

The importing or exporting or shipping of the Motorhome out of the country of original licensing or titling (Canada or United States) voids this New Vehicle Limited Warranty from the time the vehicle is imported or exported and at all times thereafter. Costs, expenses, and damages arising from or related to the following are not covered by this New Vehicle Limited Warranty:

- Extended or full time usage. The Motorhome has been built for enjoyment in a recreational manner. It is not intended for use as a full-time quarters or a permanent residence. Continuous living in your motorhome could cause accelerated wear and damage to the various components.
- The alteration of the Motorhome 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 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.
- Environmental conditions, such as lightning, hail, salt causing rust, or other chemicals in the atmosphere.
- Condensation and the results of condensation including water damage and the growth of mold or mildew, failure to properly ventilate the Motorhome. Mold and mildew are natural growths given certain environmental conditions.
- Improper electric power supply or improper vehicle hookup to other facilities.
- Failure to properly maintain, operate or service the Motorhome, including but not limited to the regular maintenance of lubricants, sealants, seals, hoses, fittings, connections or lines as recommended or required in the Owner's Manual. Improper loading, load distribution, accident, collision, vandalism, abuse, misuse, neglect, fire, flood, normal wear or improper or inadequate maintenance, rust or corrosion.
- Normal pigmentation or color changes as a result of age, exposure to the sun or weather to cover sealant, trims, fabrics, floor coverings, upholstery, draperies, blinds, paint, gel coat or decals which have experienced.
- Tires, batteries, stereo, television, range/stove, furnace, refrigerator, air conditioner, toilet, water heater, microwave, generator, glass breakage,

and other materials, parts and components warranted by persons or entities other than Triple E RV. Please refer to the warranties of component manufacturers provided in the information kit.

- Accessories and equipment that are working as designed, but which you are unhappy because of the design.

The limited warranties stated herein are the sole and only warranties offered and authorized by Triple E RV in respect of your Motorhome. TO THE EXTENT PERMITTED BY APPLICABLE LAW, ALL IMPLIED WARRANTIES AND CONDITIONS, INCLUDING IMPLIED OR STATUTORY WARRANTIES AND CONDITIONS OF MERCHANTABILITY, FITNESS FOR A PARTICULAR OR NORMAL PURPOSE, QUALITY, DURABILITY, AND AGAINST LATENT DEFECTS, ARE HEREBY DISCLAIMED. TO THE EXTENT IMPLIED WARRANTIES ARE NOT PERMITTED TO BE DISCLAIMED UNDER APPLICABLE LAW, THIS WARRANTY EXPRESSLY LIMITS ALL WARRANTIES, INCLUDING BUT NOT LIMITED TO, BOTH EXPRESS AND IMPLIED WARRANTIES, INCLUDING THE IMPLIED OR STATUTORY WARRANTIES AND CONDITIONS OF MERCHANTABILITY, FITNESS FOR A PARTICULAR OR NORMAL PURPOSE, QUALITY, DURABILITY, AND AGAINST LATENT DEFECTS, AND ALL OTHER LIABILITIES OF TRIPLE E RV. 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.

Under no circumstance shall Triple E RV be liable for any consequential and incidental damages, costs, including but not limited to costs incurred in towing, transportation costs (fuel, taxis, bus, air fares, loss of time, inconvenience, telephone, rental vehicle, overnight accommodations, loss or damage to personal property, loss of motorhome) to deliver your motorhome to and from an authorized Triple E RV service center or manufacturing plant location for repair under this limited warranty. Some states do not recognize all the exclusions or limitations of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

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 recommend are not covered by this Warranty.

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 the 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 & 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 any of its products which were manufactured prior to such changes.

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

NOTES

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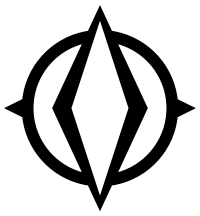

LEISURE

TRAVEL VANS

LTV Roadside Assistance

4287 Beltline Road, Box #198
Addison, TX 75001

for EMERGENCY ROADSIDE CALL
1•877•219•3831





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Product improvement is a continuing process at Triple E Recreational Vehicles.
We reserve the right to change specifications, operating instructions, standards and options on any products without prior notice. The information, illustrations and pictures within this document are current at the time of printing.

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