UNITY

Owner's Manual



LEISURE
TRAVEL VANS

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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 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 Leisure Travel Vans. These vendors are unrelated to Triple E Canada Ltd.

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 Operator's 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 information kit includes but isn't limited to information on the following components, equipment and appliances listed below.

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
Rearview Monitor
Inverter
Entertainment System
Safety
Flooring and Countertops
Electric Step
Solar Panel
Surge Protector
Safe

Options and Equipment

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

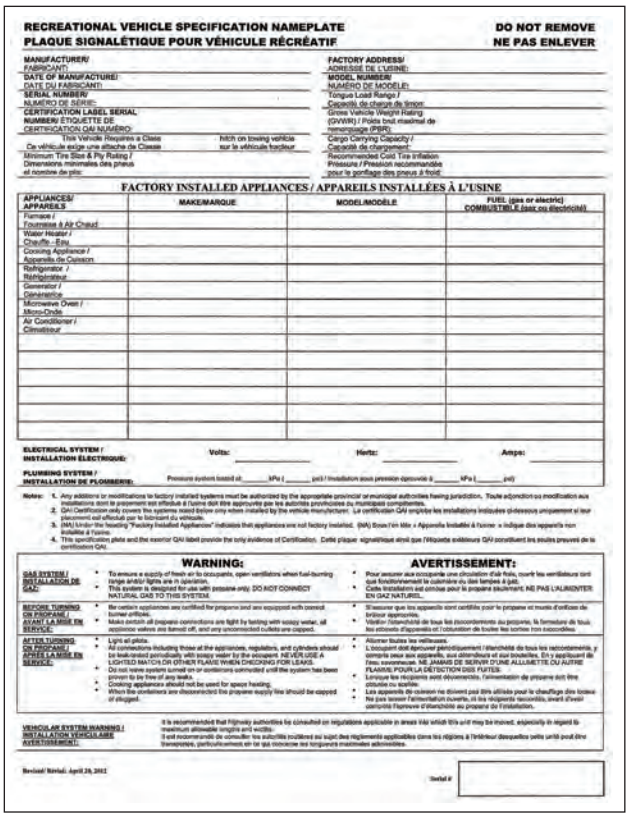
Vehicle Certification Labels

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

Reference Number Codes:

1. **Manufacture/Conversion Date:**
   The date on which the coach portion of your Motorhome was built.
2. **Gross Vehicle Weight Rating (GVWR):**
   The maximum permissible weight of this fully loaded Motorhome.
3. **Sleeping Capacity Weight Rating (SCWR):**
   The manufacturer's designated number of sleeping positions multiplied by 154 lbs (70 Kgs).
4. **Occupant and Cargo Carrying Capacity (OCCC):**
   The value equal to the GVWR minus UVW and LP. In other words, OCCC is how much weight in occupants, cargo, water and trailer tongue weight that can be added to the Motorhome without exceeding the GVWR.
5. **Gross Combined Weight Rating (GCWR):**
   The Gross Combined Weights Rating of the Motorhome, i.e, combined weight of the Motorhome and any towed vehicle.
6. **Designated Sleeping Capacity:**
   The manufacturer's designated number of sleeping positions multiplied by 154 lbs (70 Kgs).
7. **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.
8. **Tire Specification:**
   Recommended tires specification to meet handling, loading and safety requirements. Replacement tires must meet these specifications.
9. **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.
10. **Cargo Carrying Capacity (CCC) (Canada):**
    Equal to GVWR minus each of the following: UVW, full fresh (potable) water weight (including water heater), full LP-Gas weight and SCWR.
11. **Unloaded Vehicle Weight (UVW):**
    The weight of this Motorhome as manufactured at the factory with full fuel, engine oil and coolants.
12. **Mass of Waste Water Tanks:**
    Total weight of the black and grey water tanks when filled to capacity.
13. **Vehicle Identification Number (VIN):**
    This number Identifies the chassis on which the Motorhome is built.
14. **Type:**
    States 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
PLAQUE SIGNALÉTIQUE POUR VÉHICULE RÉCRÉATIF

DO NOT REMOVE
NE PAS ENLEVER

MANUFACTURER/
FABRICANT:
DATE OF MANUFACTURE/
DATE DU FABRICANT:
SERIAL NUMBER/
NUMERO DE SERIE:
CERTIFICATION LABEL SERIAL NUMBER/ ÉTIQUETTE DE CERTIFICATION QAI NUMERO:

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:

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 INSTALLED APPLIANCES / APPAREILS INSTALLÉES 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 / Réfrigérateur			
Generator / Generatrice			
Microwave Oven / Micro-Ondes			
Air Conditioner / Climatiseur			

ELECTRICAL SYSTEM / INSTALLATION ÉLECTRIQUE: Volts: Hertz: Amps:

PLUMBING SYSTEM / INSTALLATION DE PLOMBERIE: Pressure system tested at ____ kPa (____ psi) / Installation aux pression éprouvée à ____ kPa (____ psi)

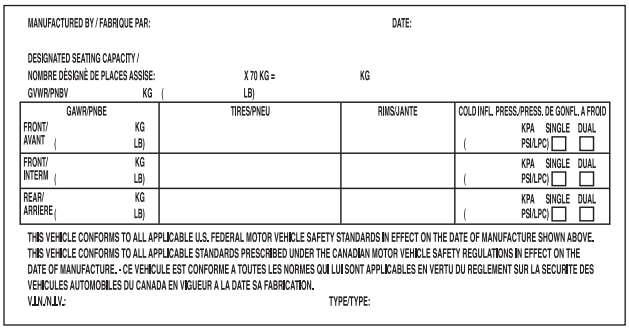
Notes:
1. Any additions or modifications to factory installed systems must be authorized by the appropriate provincial or municipal authorities having jurisdiction. Toute adjonction ou modification aux installations sont le présent est effectué à l'usine doit être approuvée par les autorités provinciales ou municipales compétentes.
2. QAI Certification only covers the systems listed below only when installed by the vehicle manufacturer. La certification QAI 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 QAI label provide the only evidence of Certification. Cette plaque signalétique ainsi que l'étiquette extérieure QAI constituent les seules preuves de la certification QAI.

	WARNING:	AVERTISSEMENT:
GAS SYSTEM / INSTALLATION DE GAZ:	To ensure a supply of fresh air to occupants, open ventilators when fuel-burning range and/or lights are in operation. This system is designed for use with propane only. DO NOT CONNECT NATURAL GAS TO THIS SYSTEM.	Pour assurer aux occupants une circulation d'air frais, ouvrir les ventilateurs lors que fonctionnement la cuisinière ou des lampes à gaz. Cette installation est conçue pour le propane seulement. NE PAS L'ALIMENTER EN GAZ NATUREL.
BEFORE TURNING ON PROPANE / AVANT LA MISE EN SERVICE:	Be certain appliances are certified for propane and are equipped with correct burner orifices. Make certain all propane connections are tight by testing with soapy water, all appliance valves are turned off, and any unconnected outlets are capped.	S'assurer que les appareils sont certifiés pour le propane et munis d'orifices de brûleur appropriés. Vérifier l'étanchéité de tous les raccordements au propane, la fermeture de tous les robinets d'appareils et l'obturation de toutes les sorties non raccordées.
AFTER TURNING ON PROPANE / APRÈS LA MISE EN SERVICE:	Light all pilots. All connections including those at the appliances, regulators, and cylinders should be leak-tested periodically with soapy water by the occupant. NEVER USE A LIGHTED MATCH OR OTHER FLAME WHEN CHECKING FOR LEAKS. Do not leave system turned on or appliances connected until the system has been proven to be free of any leaks. Cooking appliances should not be used for space heating. When the containers are disconnected the propane supply line should be capped or plugged.	Allumer toutes les veilleuses. L'occupant doit éprouver périodiquement l'étanchéité de tous les raccordements, y compris ceux aux appareils, aux détendeurs et aux bouteilles. En n'employant 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 soit être obturée ou scellée. Les appareils de cuisson ne doivent pas être utilisés pour le chauffage des locaux. Ne pas laisser l'alimentation ouverte, ni les récipients raccordés, avant d'avoir contrôlé l'épreuve d'étanchéité au propane de l'installation.

VEHICULAR SYSTEM WARNING / INSTALLATION VEHICULAIRE 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 28, 2011 Serial #

Located in wardrobe closet (Canada models only)



MANUFACTURED BY / FABRIQUE PAR: DATE:

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

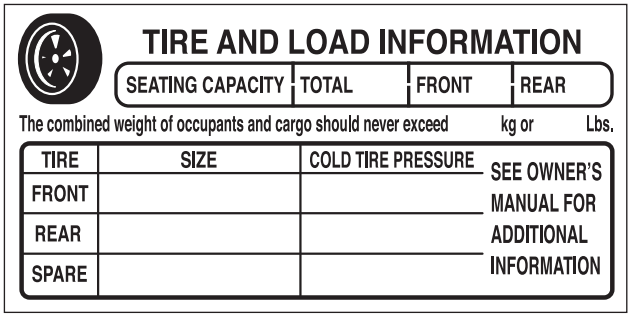
GAWR/PNBE		TIRES/PNEU	RIMS/JANTE	COLD INFL. PRESS./PRESS. DE GONFL. A FROID
FRONT/ AVANT	KG (LB)			KPA SINGLE DUAL (PSI/LPC) ☐ ☐
FRONT/ INTERM	KG (LB)			KPA SINGLE DUAL (PSI/LPC) ☐ ☐
REAR/ ARRIERE	KG (LB)			KPA SINGLE DUAL (PSI/LPC) ☐ ☐

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

Located on 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)



TIRE AND LOAD INFORMATION

SEATING CAPACITY	TOTAL	FRONT	REAR

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

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

Located on driver-side door frame (US models only)

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

Located on driver-side door frame (Canada models only)

Motor Home OCCC Label

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

Located on passenger-side door frame (US models only)

Custom paint colors

Located in Wardrobe

Unity Floor Plans

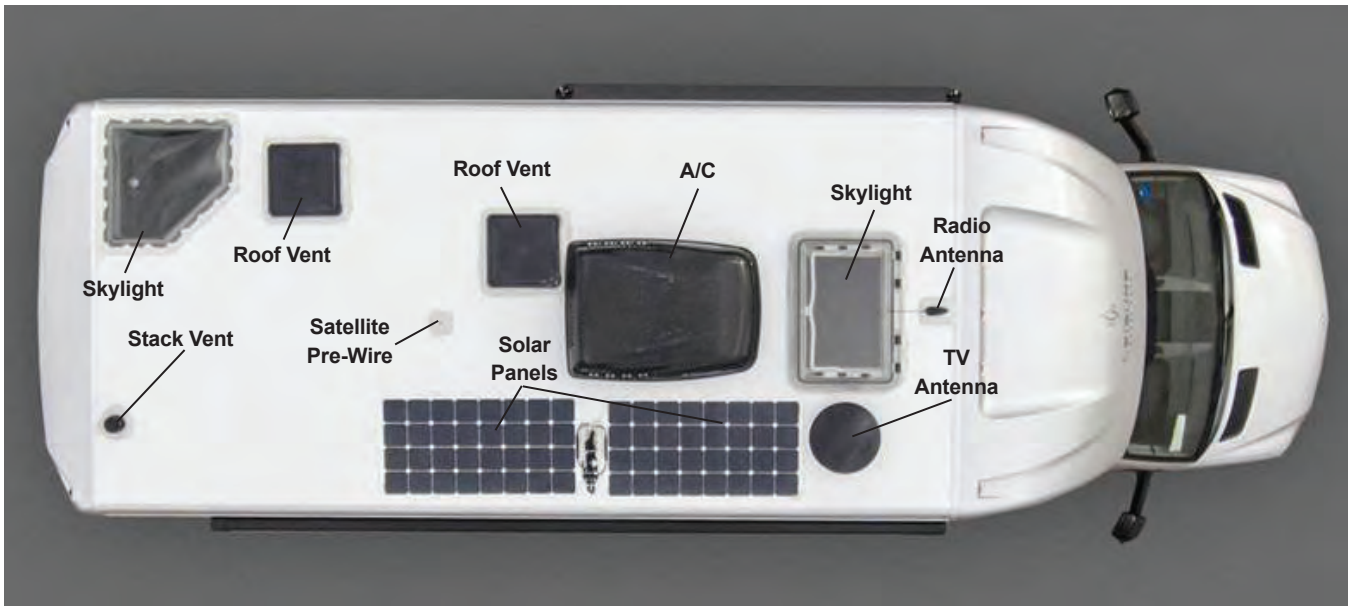
U24MB Passenger Side View



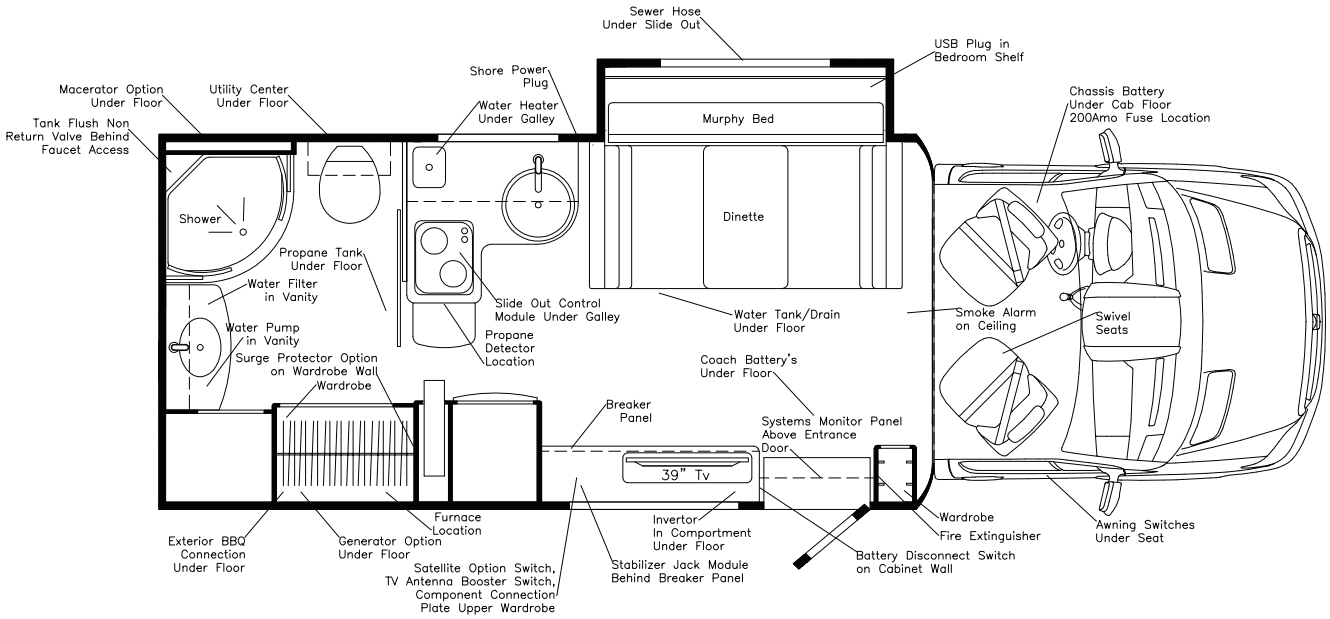
U24MB Driver's Side View



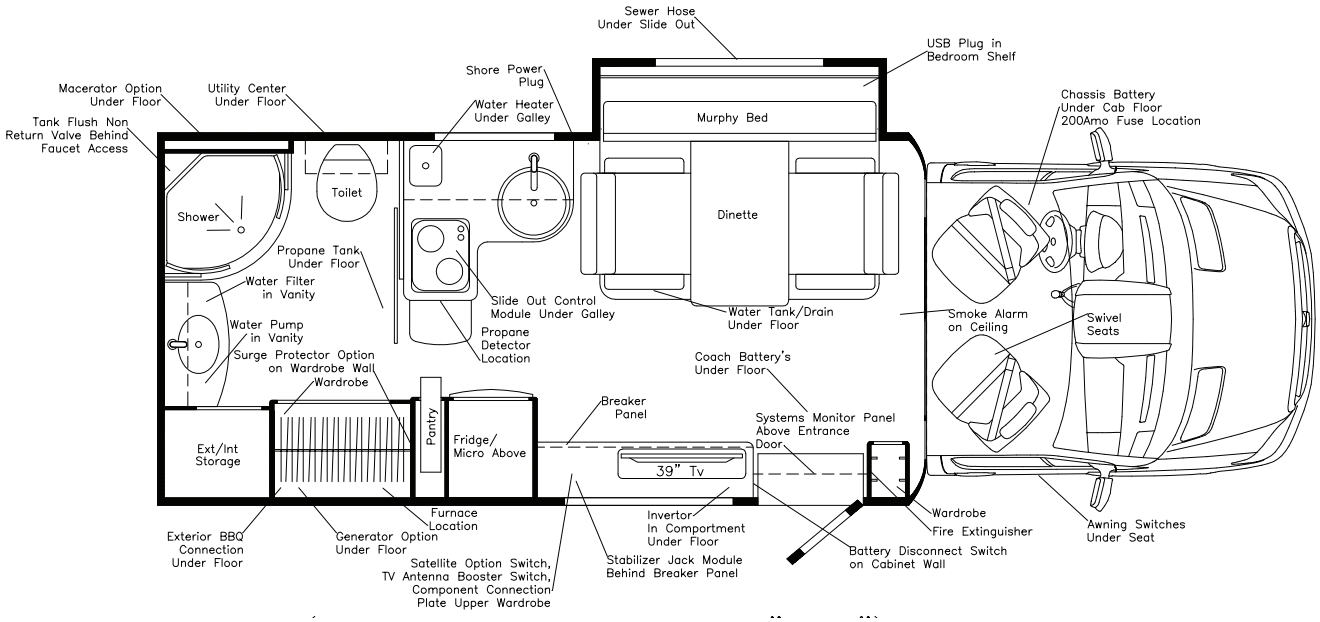
U24MB Top View



U24MB Leisure Lounge Floor Plan



U24MB Leisure Lounge Plus Floor Plan



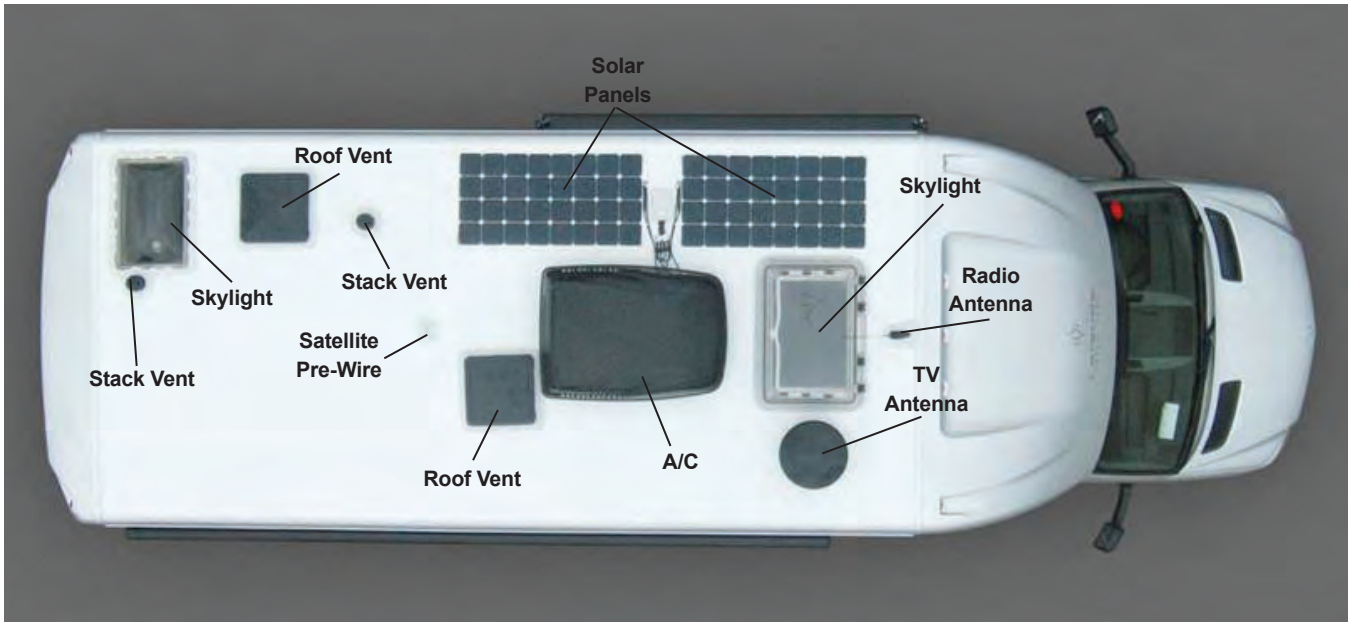
U24CB Passenger Side View



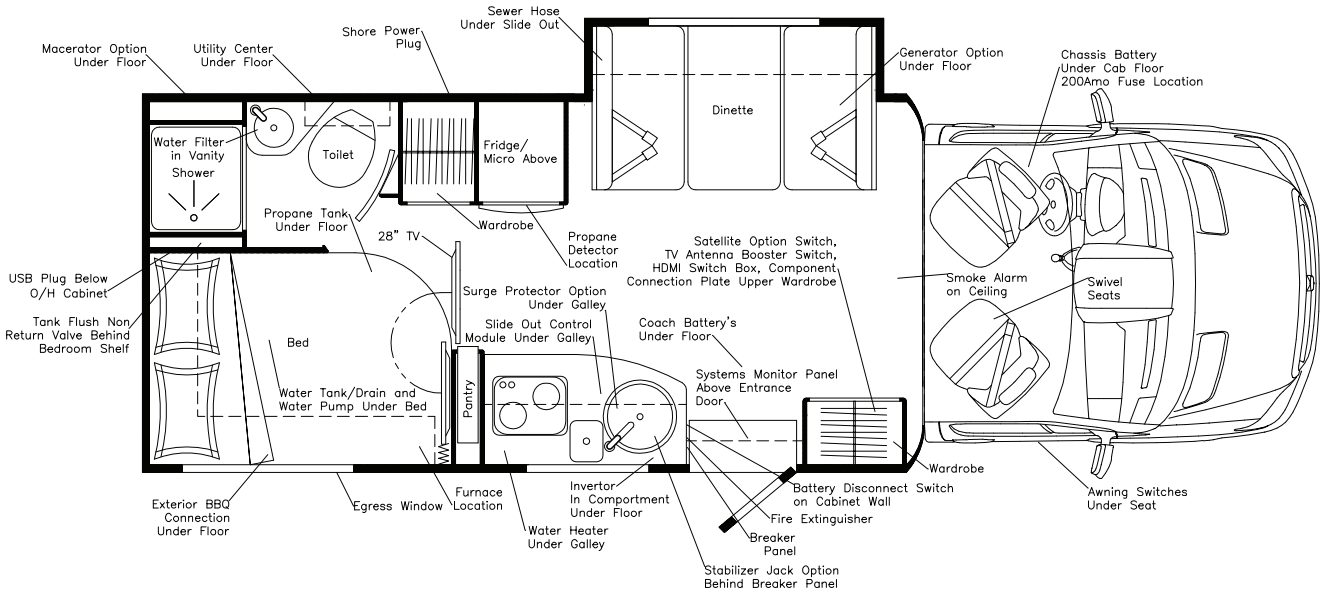
U24CB Driver's Side View



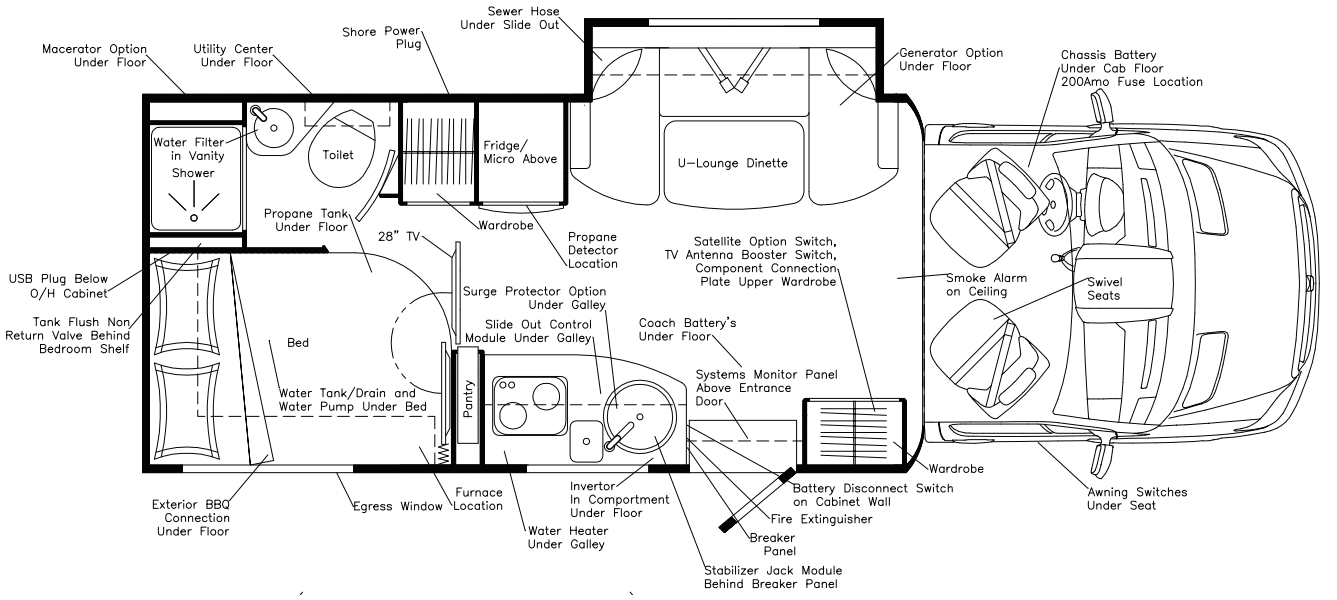
U24CB Top View



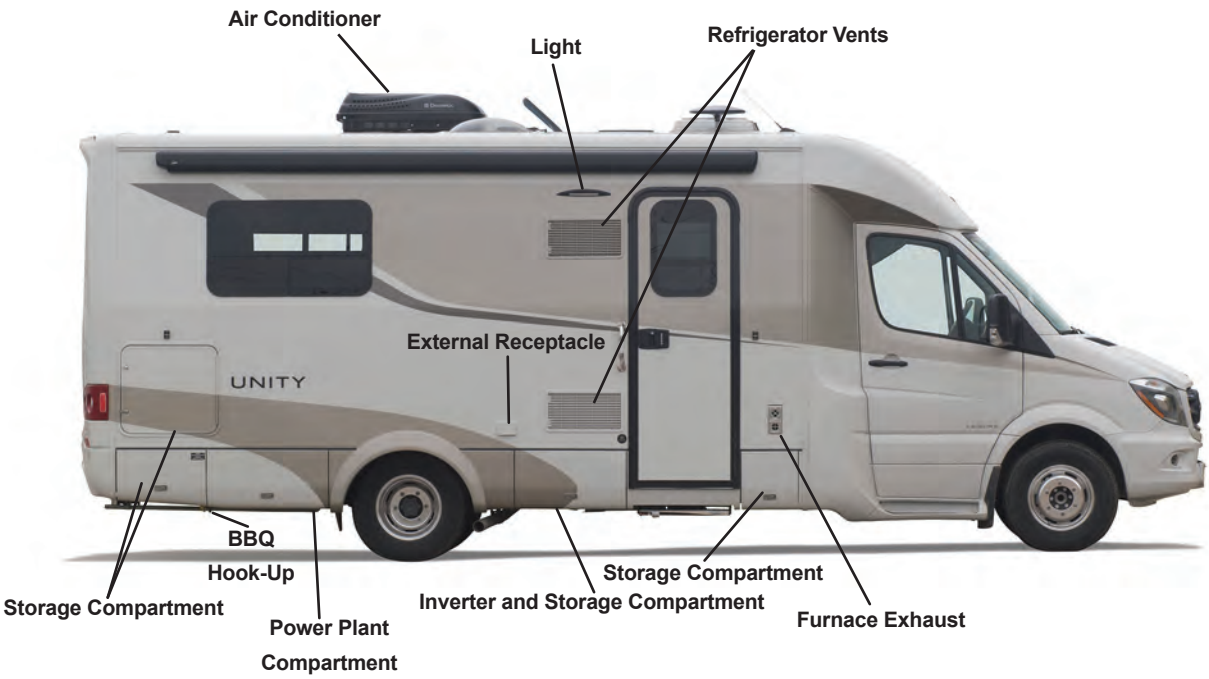
U24CB Booth Dinette Floor Plan



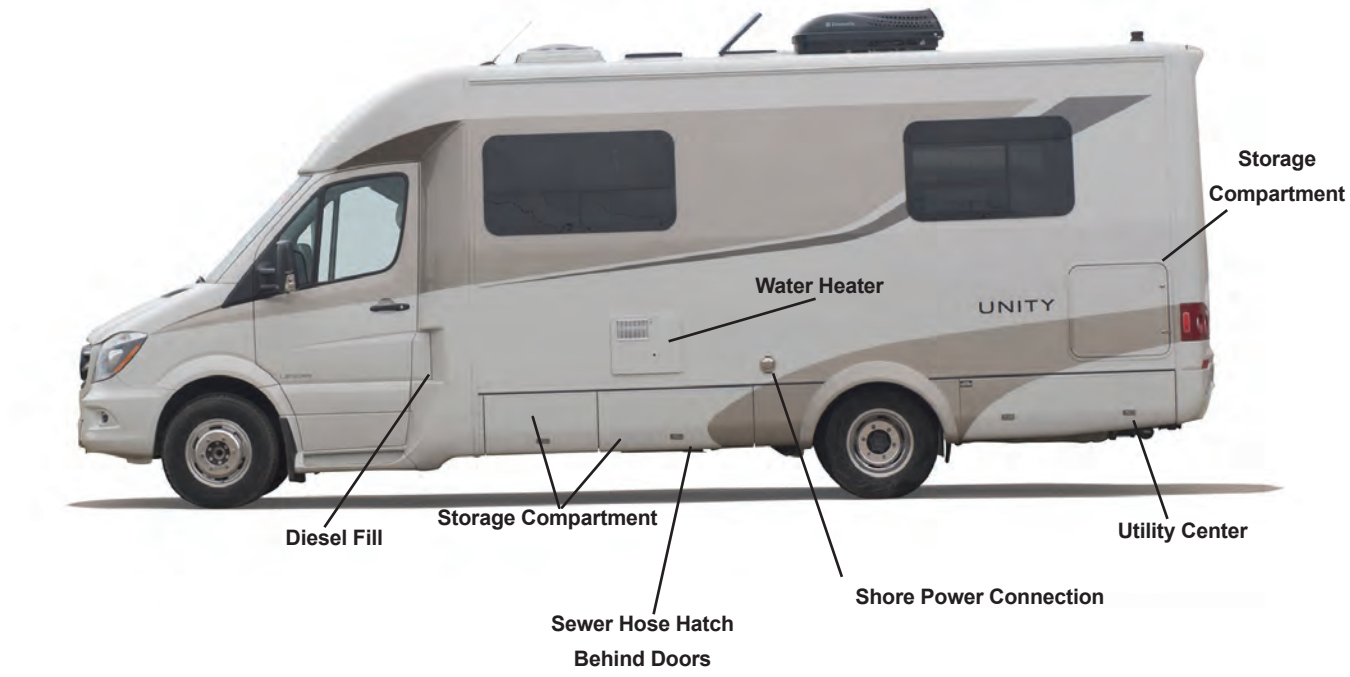
U24CB U-Lounge Floor Plan



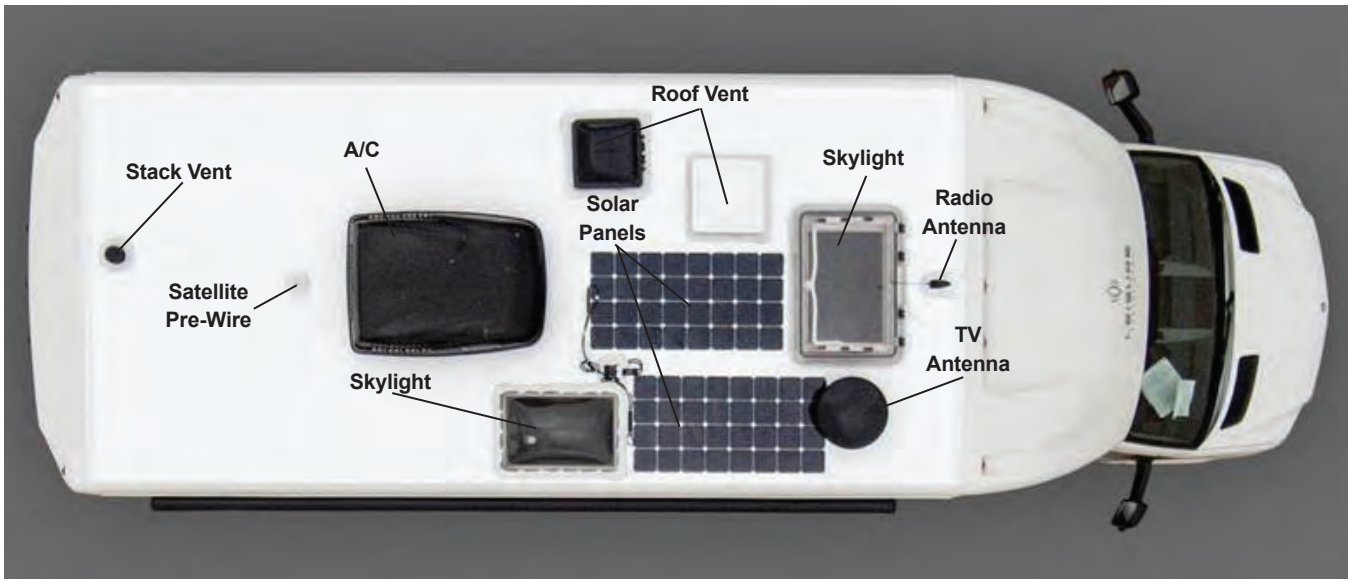
U24IB Passenger Side View



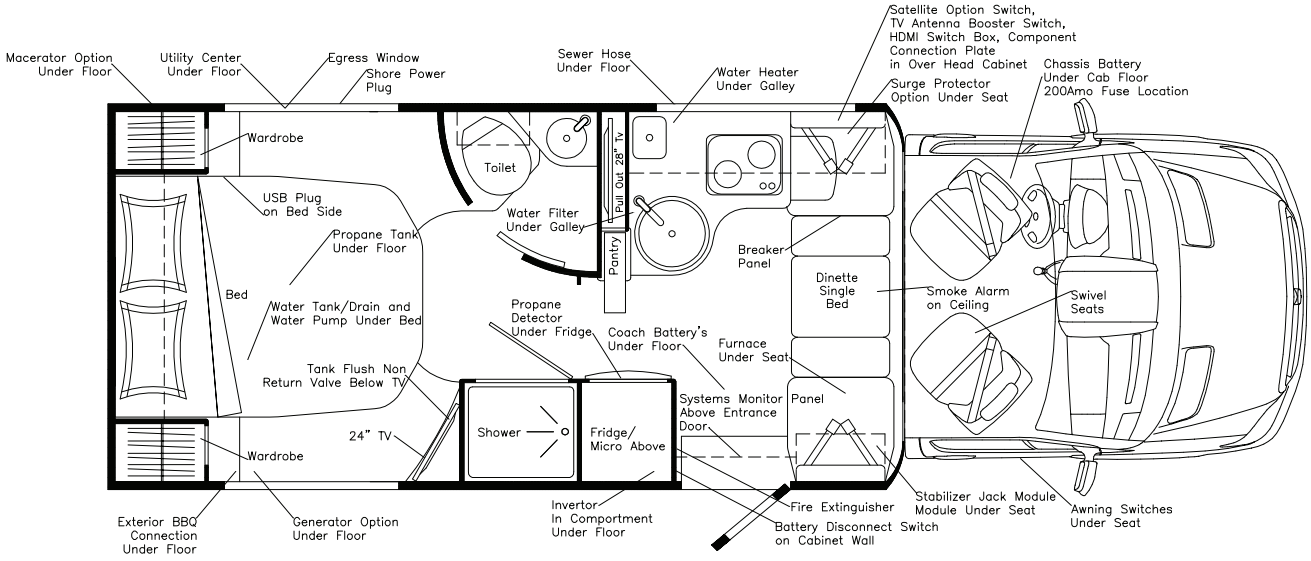
U24IB Driver's Side View



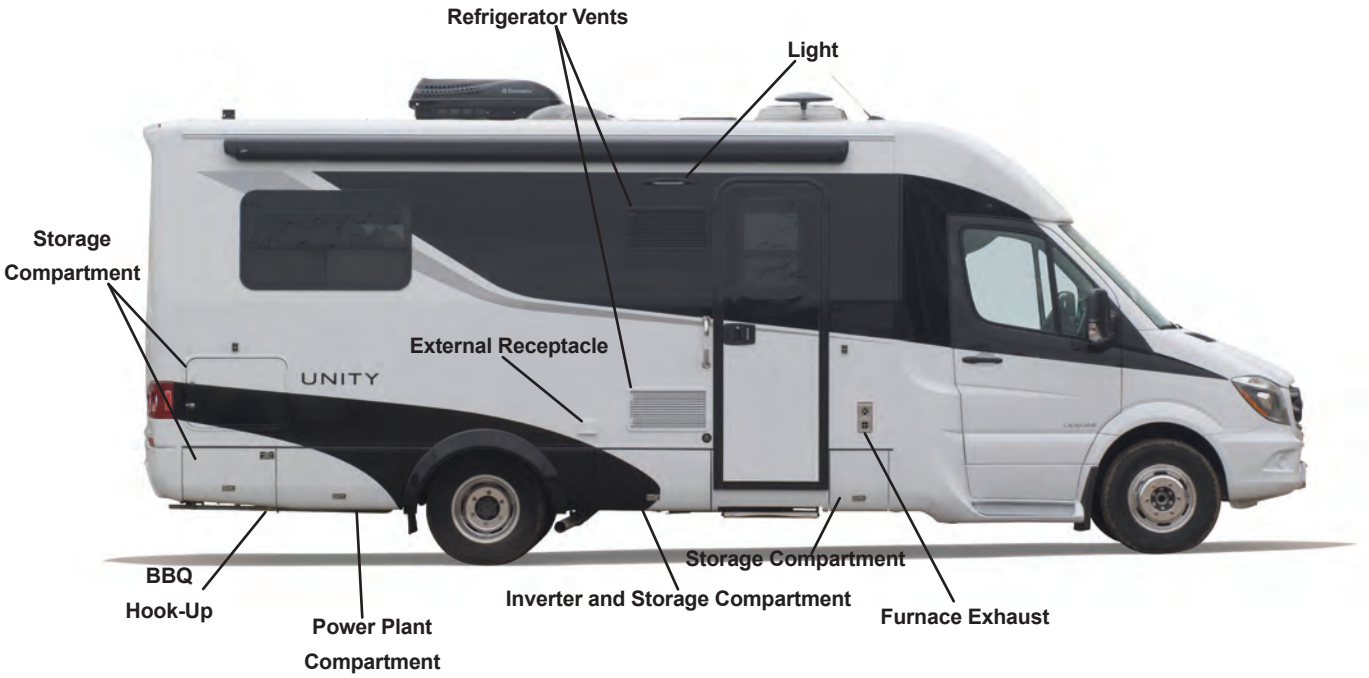
U24IB/TB Top View



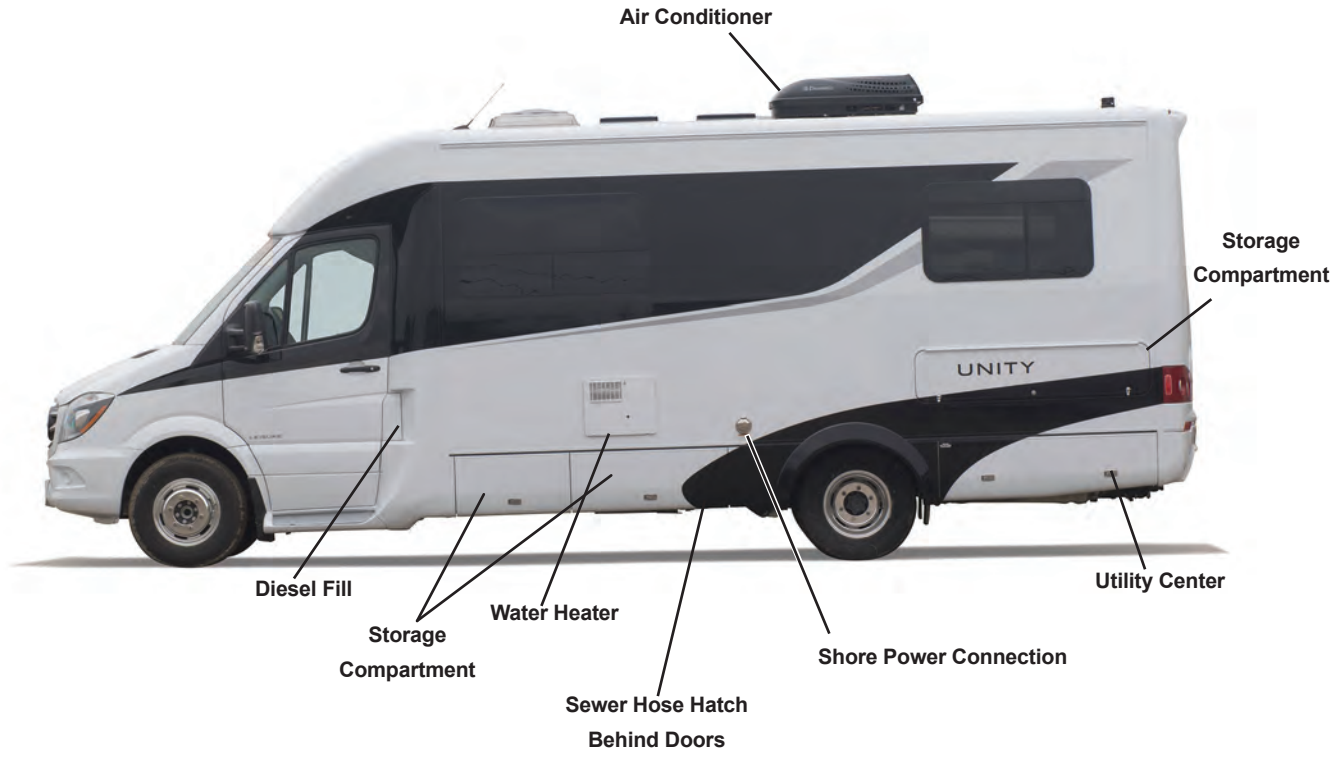
U24IB Floor Plan



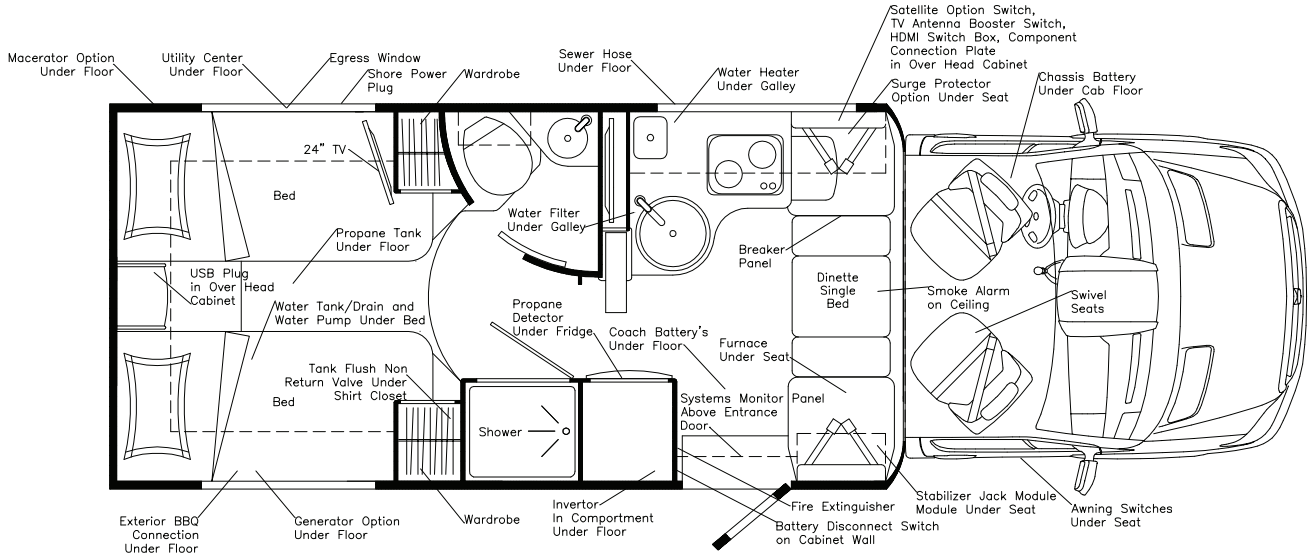
U24TB Passenger Side View



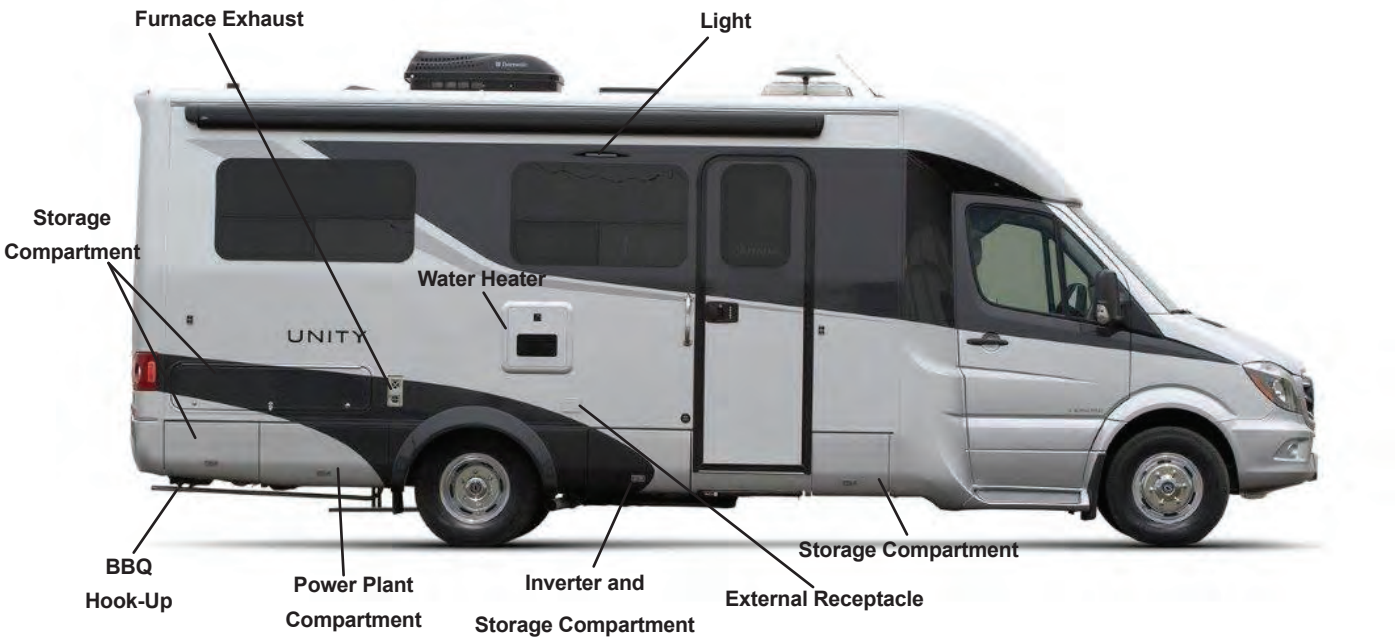
U24TB Driver's Side View



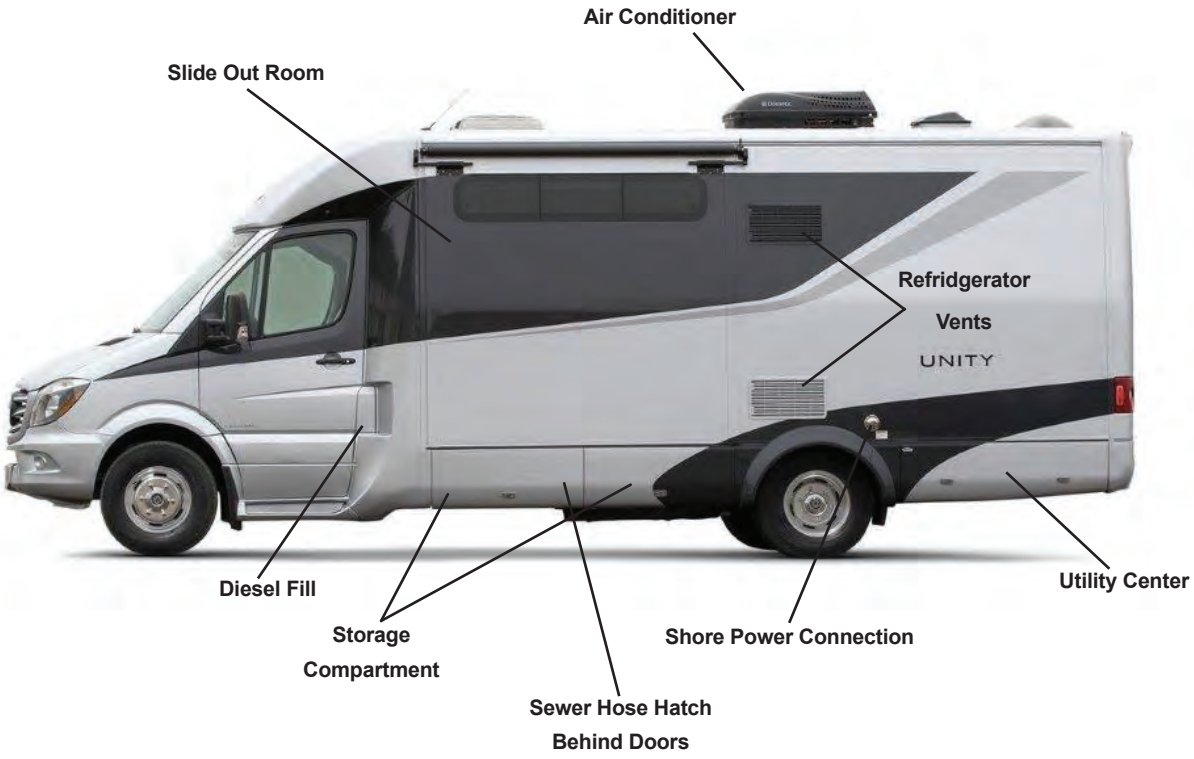
U24TB Floor Plan



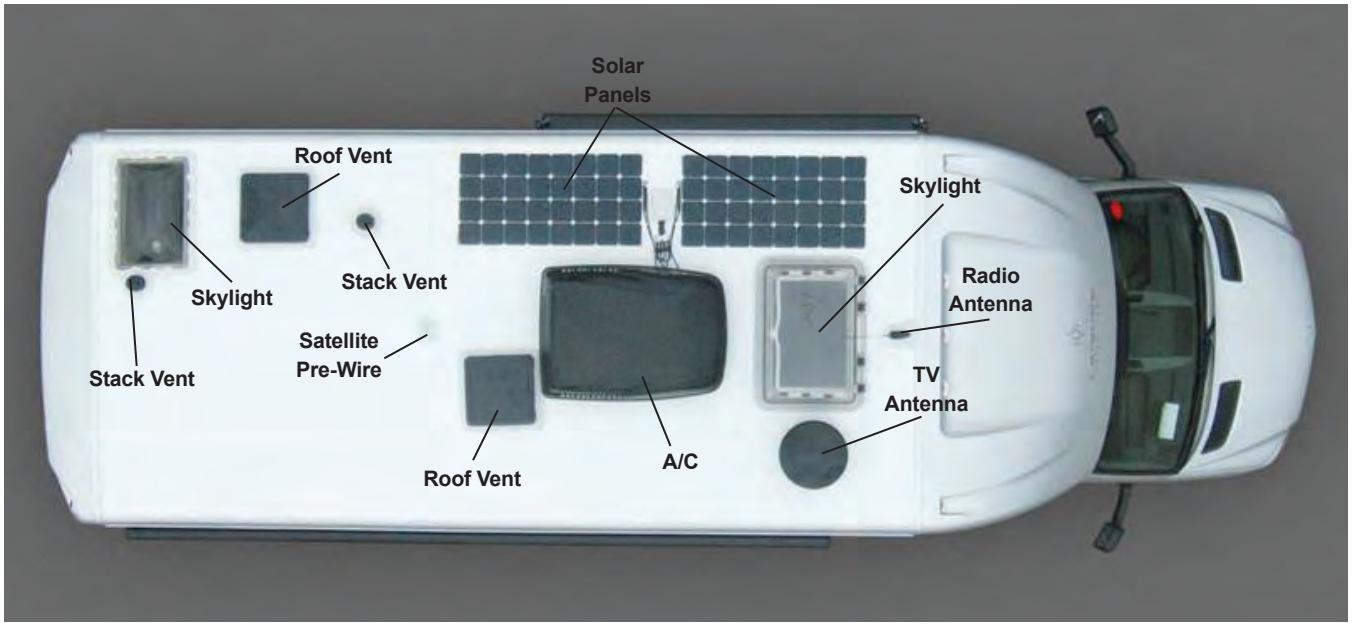
U24FX Passenger Side View



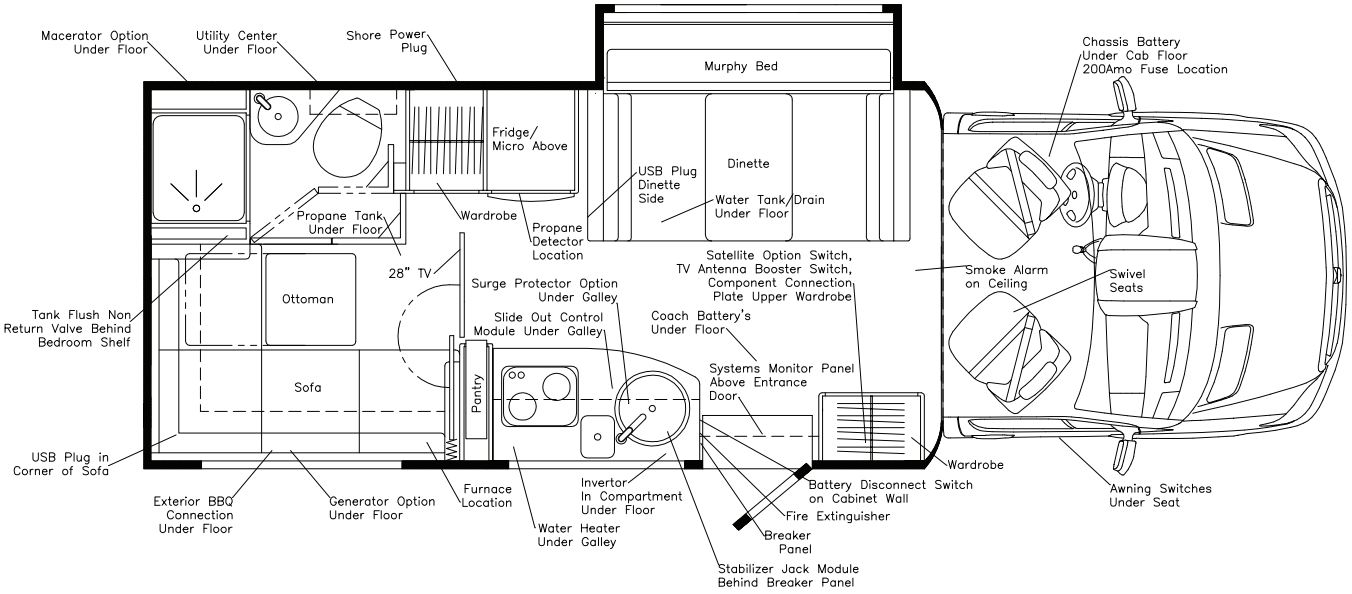
U24FX Driver's Side View



U24FX Top View



U24FX Floor Plan



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. Leisure Travel Vans 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 travelling:

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

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

* This Emergency Roadside Service is available to the owners during the first two years after purchase by the customer.

Reporting Safety Defects

If you suspect your motorhome has a safety defect that could cause injury or death, immediately contact Leisure Travel Vans. 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. They have 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 Hotline 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 hotline also will provide you with additional information on motor vehicle safety.

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

Coach Specifications

Chassis Sprinter Engine - MBE 3.0L V6 Diesel Transmission - Mercedes 5 speed Auto w/Autostick	**U24MB**	**U24CB**	**U24IB**	**U24TB**	**U24FX**
GVWR - lbs (kg)	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)
Wheelbase - in (mm)	170.3" (4326)	170.3" (4326)	170.3" (4326)	170.3" (4326)	170.3" (4326)
Length Not incl spare - ft (mm)	25'1" (7645)	25'1" (7645)	25'1" (7645)	25'1" (7645)	25'1" (7645)
Width - ft (mm)	7'10" (2388)	7'10" (2388)	7'10" (2388)	7'10" (2388)	7'10" (2388)
Height Incl A/C - ft (mm)	10'6" (3200)	10'6" (3200)	10'6" (3200)	10'6" (3200)	10'6" (3200)
*Fresh Water Capacity - gal (L)	30 (114)	36 (137)	36 (137)	36 (137)	30 (114)
Black Water Holding Capacity - gal (L)	29 (110)	29 (110)	29 (110)	29 (110)	29 (110)
Grey Holding Tank Capacity - gal (L)	37 (140)	37 (140)	37 (140)	37 (140)	37 (140)
Fuel Capacity - gal (L)	26.4 (100)	26.4 (100)	26.4 (100)	26.4 (100)	26.4 (100)
Propane Capacity - gal (L)	15 (57)	15 (57)	15 (57)	15 (57)	15 (57)
Exterior Storage Capacity	55 cu. ft.	36 cu. ft.	63 cu. ft.	54 cu. ft.	34 cu. ft.
*Includes 6 gal water heater. All Capacities in US Gallons					

Safety

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

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

⚠ Danger

⚠ Warning

⚠ Caution

NOTICE

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

Warning - Indicates a hazardous situation which, if not avoided, COULD result in death or serious personal injury.

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

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 sign or manual instruction. 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 subassemblies 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 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 vehicle.
- 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 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 operating or occupying 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 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) is mounted on the lower cabinets.

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

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

⚠ 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 area until odor is gone.
6. Have a qualified service technician check the system for leaks and make any necessary corrections and repairs.

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

Fuel and Propane Safety

⚠ Danger

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

⚠ Danger

Never use a naked flame to check for LP gas leaks.



⚠ Warning

Do NOT place or store gasoline, propane, or any other flammable liquids onboard 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.

Carbon Monoxide Alarm

The Combination Carbon Monoxide/Liquid Propane Alarm (1) is mounted on the lower cabinets.

⚠ Danger

Carbon monoxide is an colorless, odorless gas that is lethal to humans and pets.

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

⚠ Warning

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

1. Open doors, windows, and roof vents to air out motorhome and silence the alarm.
2. Have a qualified service technician check, clean, repair, or replace any defective burners.
3. Have a qualified service technician check, repair, or replace any defective exhaust system components.
4. Position your motorhome so the wind blows engine exhaust fumes away from the vehicle.



Visual and Audible Alarm Signals:

This **SAFE-T-ALERT™** CO/Propane Gas Alarm is designed to be easy to operate. The alarm has two indicator lights that display a specific color for each monitored condition. There also is a matching sound pattern for alarm conditions.

CO Alarm:

The Red CO LED will flash and the alarm will sound 4 “beeps” then silent for 5 Seconds. These signals indicate that the CO level is over 35 ppm. **Immediate action is required**. See Procedures To Take During An Alarm. This cycle will continue until the TEST/Mute button on the front of 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 return to normal operation after the RV s properly ventilated.

Propane Gas Alarm:

The Red LED will Flash and the alarm will sound a steady tone whenever a dangerous level of propane gas is detected. **Immediate action is required**. See Procedures Take During A Gas Alarm The detector will continue to alarm until the Test/Mute switch 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 5 minutes if the gas is still present. **Do not re-enter the RV**. This alarm will return to normal operation after the RV s properly ventilated.

Malfunction/Service Signal:

If any malfunction is detected, the Gas LED will remain off and the Operational/CO LED will alternate red/green and the alarm will sound once every 15 seconds. Press the Test/Mute button. If the Test/Mute button does not clear the signals, check the 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.

OPERATION	AUDIBLE SIGNAL	VISUAL SIGNAL
Normal	None	Steady Green
C.O. Alarm	4 beeps 5 seconds off	Steady Red
Propane Alarm	Constant beeping	Flashing red
Alarm Malfunction	Beep every 30 seconds	Alternating red/ green
End of Life	Beep every 20-30 seconds	Red, red, green, green flashing
Warm-Up Cycle	No sound	Flashing green

⚠ Warning

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

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. Position and close cover.
- If you suspect the smoke alarm is not functioning properly, replace the alarm - do NOT attempt to repair it.

NOTICE

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

- Clean and vacuum opening on smoke alarm once a month.
- If you suspect the smoke alarm is not functioning properly, replace the alarm - do NOT attempt to repair it.

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 better 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:

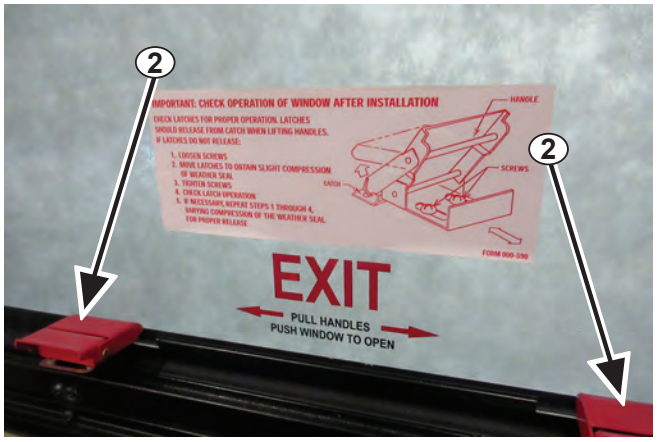
Fire Safety Tips

1. Establish and maintain good housekeeping practices. Never allow combustible materials to accumulate.
2. Store flammable liquids in approved containers in a well-ventilated space.
3. Have fully charged fire extinguishers readily available.
4. Avoid using flammable products in the motorhome.
5. Never smoke in bed or when relaxing on the couch.
6. Do not overload electrical outlets.
7. Do not leave cooking food unattended.
8. Keep children away from electrical outlets and LP gas controls.
9. 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 reenter the motorhome until the fire officials declare that it's safe.

Emergency Escape - Egress Windows

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 (2), and push out the window.



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

5. Pull the safety pin, and grasp the fire extinguisher firmly while holding it in an upright position.
6. Aim the fire extinguisher nozzle at the base of the fire. Do NOT spray at the smoke or flames.
7. Squeeze the handle to release the extinguishing agent.
8. Sweep the fire extinguisher from side to side until the fire appears to be out.
5. Discharge the fire extinguisher entirely and get it recharged or replaced immediately. For detailed information, refer to the fire extinguisher manual provided in the information kit.

⚠ 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.

Function

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

Periodically check the pressure gauge (1) on your fire extinguisher. If it loses pressure, the dry chemical will not effectively discharge.

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.

Vehicle Operation

Vehicle Preparation

Before beginning an extended trip, ensure you are thoroughly familiar with your motorhome's 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.

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 Sprinter dealer.

Vehicle Loading and Weights

The components of your vehicle are designed to perform if the motorhome is not loaded in excess of the Gross Vehicle Weight Rating (GVWR), the maximum front and rear Gross Axle Weight Rating (GAWR), or the Gross Combined Weight Rating (GCWR). These ratings are listed on the Canada and U.S. Department of Transport decals located on the driver's seat pedestal behind the skirting.

The GVWR is the maximum permissible weight of the fully loaded motorhome.

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

The Cargo Carrying Capacity (CCC) (Canada) is equal to the GVWR minus each of the following: UVW, full fresh (potable) water weight (including water heater), full LP gas weight, and Sleeping Capacity Weight Rating (SCWR).

The Occupant and Cargo Carrying Capacity (OCCC) is equal to the GVWR, minus UVW, plus 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.

The Gross Combination Weight Rating (GCWR) is the maximum allowable loaded weight of the motorhome and any towed vehicle.

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

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

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

Compare the gross vehicle weight with the GVWR on the sticker. If the gross vehicle weight exceeds the GVWR, you will have to reduce the total vehicle load. If the gross vehicle weight is less than the GVWR on the sticker, check the front and rear gross axle weights against the front and rear GAWRs on the sticker. If either axle weight exceeds the GAWR for that axle, redistribute the load to ensure that loads on front and rear axles are within the required limits.

Load heavier items as centrally and as low as possible. Store lighter items in cabinets, closets, and drawers. Secure luggage or similar cargo inside your motorhome to prevent it from causing damage or injury.

⚠ Caution

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

Towing

Towing a trailer can affect the handling, durability, performance, and fuel economy of your motorhome. The factory-installed class III towing hitch is rated as follows:

A. 500 lb (227 kg) - maximum hitch or tongue weight

B. 5000 lb (2270 kg) - maximum trailer weight.

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

(GCWR) = 15,250 lb (6917 kg)

To ensure the correct weight balance, take your loaded motorhome to a weigh scale to determine the actual weight distribution. After you have done this once, you will have a better understanding about how to load your vehicle in the future.

Remember, your motorhome will handle differently when towing a trailer, and stopping distances will be longer. Make sure your trailer is equipped with a braking system and is properly connected to your motorhome.

When descending a steep or long grade, reduce speed and shift to a lower gear to control speed. Avoid prolonged or frequent application of brakes to prevent overheating and possible brake system failure. Refer to the chassis manual in the Motorhome Information Kit for further information.

Auxiliary Vehicle Towing

If you are planning to tow another vehicle or a trailer with your motorhome, contact your local DOT 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 be sure the Motorhome loading specifications 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 DOT regulations.

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



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 to correct pressure.
3. Check All Fluids:
   - Engine/crankcase oil
   - Power steering fluid
   - Radiator recovery system
   - Battery electrolyte level
   - Windshield washer reservoir
   - DEF fluid
4. 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.
5. Consult the chassis manual in the Motorhome Information Kit for a list of pre-trip inspection requirements.
6. Verify that all lights are in working order.
7. 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.

8. 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 System Monitor section in “Electrical System Operation” chapter for details.)
9. Start the refrigerator a day ahead of time so it will be cold for your trip.
10. Fill the LP gas tank to a 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.

11. Check that sewer connections are properly stored and all external compartments and filler openings are closed and/or locked.
12. Ensure the roof vent opens and closes.
13. 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.
14. Deodorize the waste holding tank. (See details in “Black Water - Waste Holding Tank” in “Water / Plumbing” Section).
15. Check that all blocks and chocks are removed and stowed.
16. 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.
17. Disconnect and stow the shoreline power cord. (Refer to details in this section.)
18. Lock exterior compartment doors.
19. Check that the fire extinguisher is in good condition and fully charged. (Refer to details in Safety section.)

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

Final Checks

1. Secure all objects in the vehicle. 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 rearview 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. Strap small children into a rear-facing car seat. Refer to Child Restraints section.
7. 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. This is referred to as the Occupant and Cargo Carrying Capacity (OCCC) in the U.S.A. or the Cargo Carrying Capacity (CCC) in Canada.

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

⚠ Warning

All occupants must be in seats equipped with lap or shoulder harness seatbelts 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.

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.

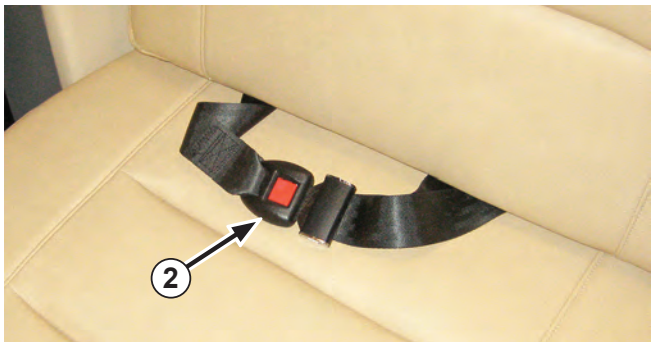
Lap/Shoulder Belts

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



Lap Belts

The dinette is 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.



⚠ 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.

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 this does 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 varies 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. Your motorhome, in accordance with applicable law, is not manufactured 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's 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 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

Swivel Function

1. Lift the slide release bar (1), and 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 behind the seat) to the left, and swivel the seat slowly to the rear to prevent damage to the door panel and post.

NOTICE

Swivel must be locked in 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

Turn the lumbar support knob (1) clockwise or counterclockwise to suit your comfort needs.

Back Rest Adjustment

Turn the back rest adjustment knob (2) clockwise or counterclockwise to adjust the tilt of the back rest.

Back Rest Tilt

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

Seat Cushion Height Adjustment

Turn the seat cushion height adjustment knob (4) clockwise or counterclockwise to adjust the height of the seat cushion.

Travelling

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

Driving Characteristics

1. Controls

Your motorhome driver controls are automotive type. Steering and braking controls are power assisted to help make driving as comfortable as possible. Your motorhome is much higher, wider, and heavier than a family automobile so the operator must anticipate and account for the differences.

2. General Handling

The motorhome power-to-weight ratio is lower than that of the average automobile; therefore, it is essential to compensate for slower acceleration when moving into traffic or when passing another vehicle. Allow extra room to corner and to change lanes. When going underneath a bridge or similar overhang, you must be aware of your maximum height. (Measurement must include the air conditioner plus 6 in. (152 mm). Height may vary depending on chassis, make, suspension, and air conditioner.)





3. 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 of the road and take shelter.
- Park your motorhome facing directly into the wind to minimize high wind buffeting.

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

- **Climbing a Hill**

The transmission 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.

- **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.

⚠ 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 topping up the radiator.

Driving Safety Tips

1. When backing the motorhome, have a person stand to the rear on the driver's side to guide you.
2. Before departing on the trip, check your routes for height restrictions. Remember, some tunnels prohibit motorhomes with LP gas systems.
3. While travelling, make sure all occupants correctly use their seatbelts.
4. While travelling, make sure all doors are closed and that cabinets, drawers, and loose objects are secure.
5. Instruct your family 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 onboard the motorhome.
9. Check tires often while travelling. Make it a habit to check tire pressures before each trip, and each time you refuel.
10. If you have a cellular phone, carry it with you for emergencies. Do not 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. Make sure all compartment, refrigerator, and freezer doors are closed securely. Carefully open these doors after travelling: the contents may have shifted while travelling 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 centre 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 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.
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 travelling so you will not be caught unaware of sudden weather changes.
2. Remember the following terms:
   - **Weather Watch** - Severe weather may develop in your area. Be prepared for an emergency.
   - **Weather Warning** - Severe weather is occurring or is imminent. Immediately find a safe location.
3. When camping near a body of water, leave plenty of space and elevation between your motorhome and the water.
4. Avoid canyons or dry washes during threatening weather. Prepare an alternate exit, and move to higher ground as soon as it starts raining.
5. 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.
6. Comply with all warnings and instructions provided by local authorities.
7. Stock enough survival supplies for several days. This should include food, water, first aid supplies, and necessary medications.

8. When you leave home, inform someone of your destination and your schedule. Notify the same person if your plans change.

Emergencies While Driving

Your motorhome is designed with features that allow the driver and occupants to resolve emergencies or failures while travelling. 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 vehicle 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 retorque 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 in the Motorhome Instruction Kit 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 them 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.

NOTICE

BATTERY BOOST WARNING: Consult the chassis manual in the Motorhome Information Kit for proper jump starting/ boosting procedures.

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.
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 belts are 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 fan 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

1. 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.

2. 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. The rear view camera is a visual parking aid only.

- **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, or when you press and hold the “SYS” button (3), and will remain visible for approximately fifteen seconds after shifting the motorhome out of reverse. Push any button on the in-dash entertainment system to instantly exit rear camera view. For complete operating instructions, refer to the chassis manual in your Motorhome Information Kit.

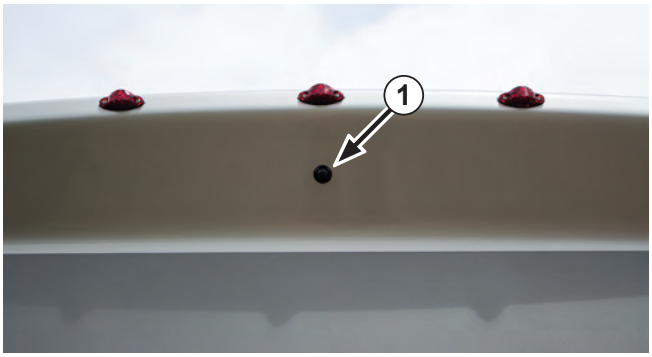
⚠ Caution

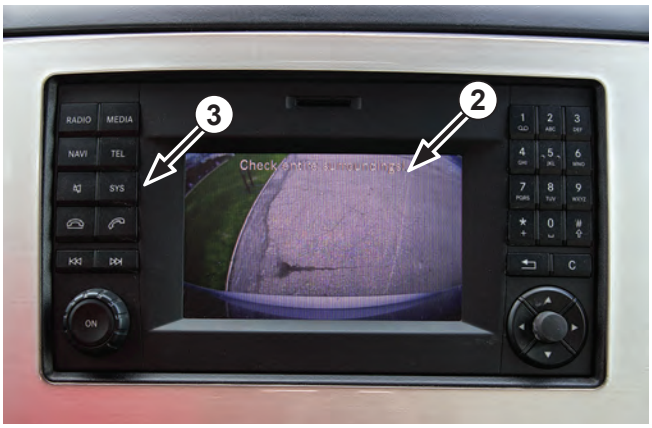
Do NOT take your eyes off the road for extended periods of time or a crash causing injury or death could result. Do NOT give extended attention to the in-dash entertainment system while driving.

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 carpenter’s level on the floor to determine the locations where it is necessary to place blocks 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 everyone, especially children, are clear of the motorhome until leveling is complete and the motorhome is stable.

Stabilizers

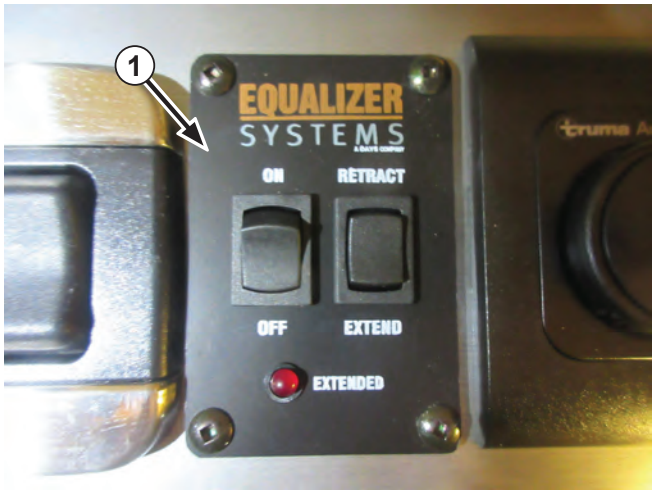
Your motorhome may be equipped with electric stabilizers. The stabilizer control panel (1) is located in the cabinet above the coach entrance doorway. Refer to the detailed operating instructions in the Motorhome Information Kit before operating.

NOTICE

Always verify that stabilizers are completely retracted before moving the motorhome. NOTE: Refer to the equalizer system manual in the Motorhome Information Kit for details on manual operation of the stabilizers.

⚠ Caution

Use stabilizers to stabilize the motorhome only. Do NOT use stabilizers to level the motorhome.



⚠ 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.

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.

Removing The Fuel Cap

The fuel tank filler cap (1) is located behind a flap adjacent to the driver's door. Slowly remove the fuel cap to release any built up pressure. If you hear a hissing sound, wait for hissing to stop before fully removing the cap.

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.

Fuel Tank Capacity

Refer to the chassis manual in the Motorhome Information Kit for details.

Fuel Types

Use only ultra-low sulphur diesel fuel. Refer to the chassis manual in the Motorhome Information Kit for details.

NOTE: Auxiliary generators may draw fuel from the main engine fuel tank. The auxiliary generator fuel pick-up tube is shorter than the engine fuel pick-up tube to prevent the generator from inadvertently draining the vehicle's fuel tank.

NOTICE

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

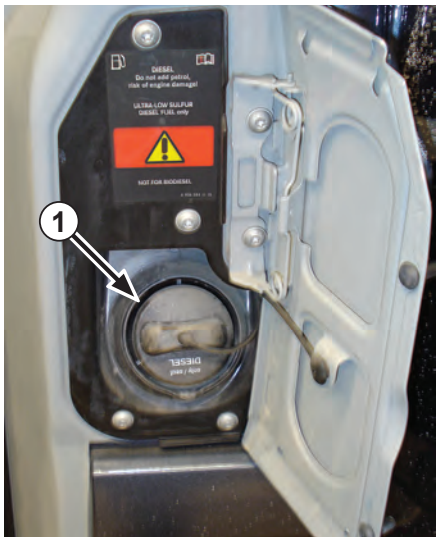
NOTICE

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

Door Locks - Standard

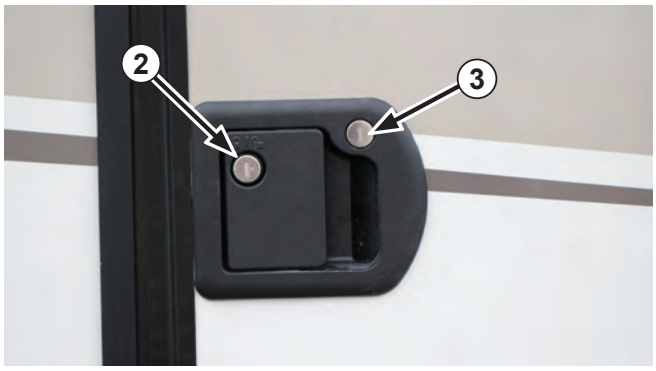
Separate keys are required for the chassis and motorhome door locks.

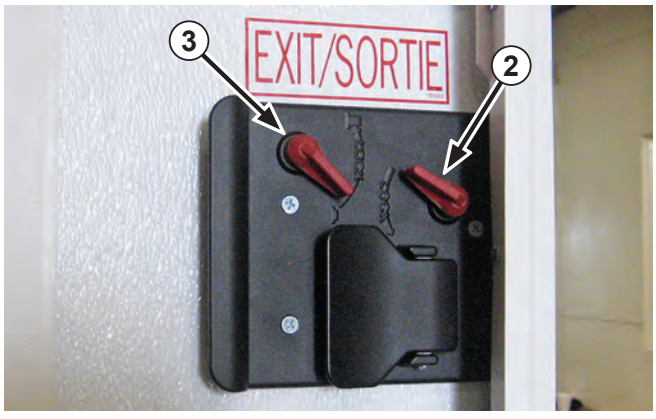
The coach entrance door is equipped with two interior locks. The first lock (2) secures the exterior and interior door handles, and the other lock (3) is a door dead bolt lock.



IMPORTANT

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 vehicle to a refueling facility. Do not run the generator so long it uses all the fuel.

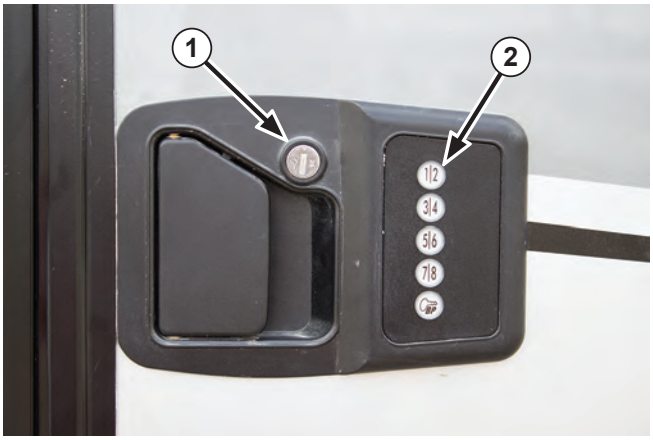




Door Locks

Separate keys are provided for the chassis and motorhome door locks. You can unlock the motorhome door lock using the key lock (1) or by entering your access code into the optional keypad (2).

NOTE: Store a copy of your door access code in a safe location. Do NOT store the access code inside the motorhome.



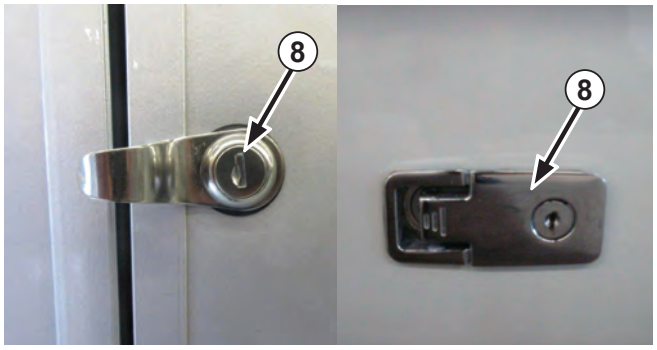
The coach entrance door is equipped with an interior deadbolt style lock (3). Turn the lock clockwise to lock, and counterclockwise to unlock.



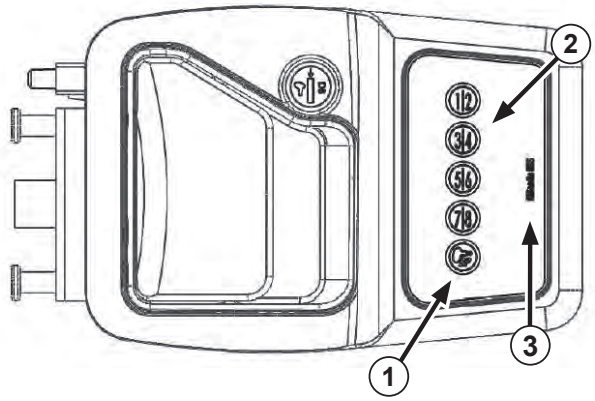
Keys

The following keys are provided with your motorhome: Sprinter chassis key (4), standard lock keys dead bolt (5) and door handle lock (6), key for electronic lock (7), and baggage door key (8).





Bauer EM Operation



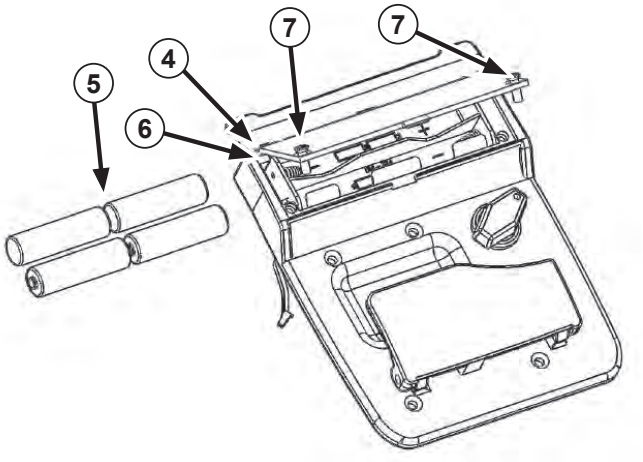
1. Touch the first button of the code you wish to enter. The buttons will Illuminate to indicate the lock is ready to accept the code.
2. The factory default code is 3,7,1,5 followed by the “enter button” (1).
3. To set your Personal Code simultaneously touch and hold the “3/4” button (2) and “enter button” for 2 seconds. The lock will beep 3 times to accept the new code.
4. Enter a 4 digit code followed by the “enter button”. The lock will beep 4 times to indicate new code acceptance. This Is now your new code.

NOTE: Please enter your Personal Code upon installation of lock to prevent inadvertent programming.

IMPORTANT: The touch pad only activates the dead bolt.

NOTE: AISentis HSS Technology Indication on touch pad (3).

Bauer EM Battery Installation



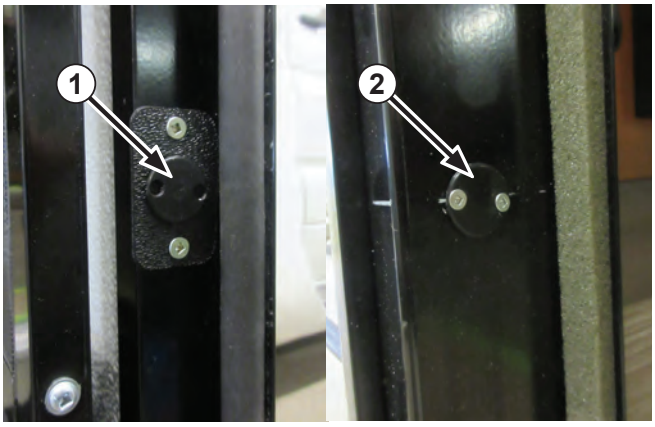
1. Loosen two 6 x 32 captured screws (4). Screws will remain with battery compartment lid.
2. Install four fresh AA batteries (5) according to the orientation symbols.
3. Install battery compartment lid by aligning the tabs (6) and slots (7).
4. Tighten 6 x 32 captured screws to attach battery compartment lid.

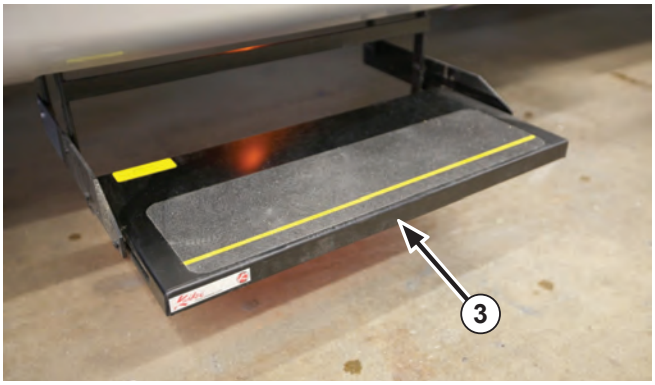
Entry Door Step

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.

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 vehicle ignition switch to the "ON" position.

Step Override Switch

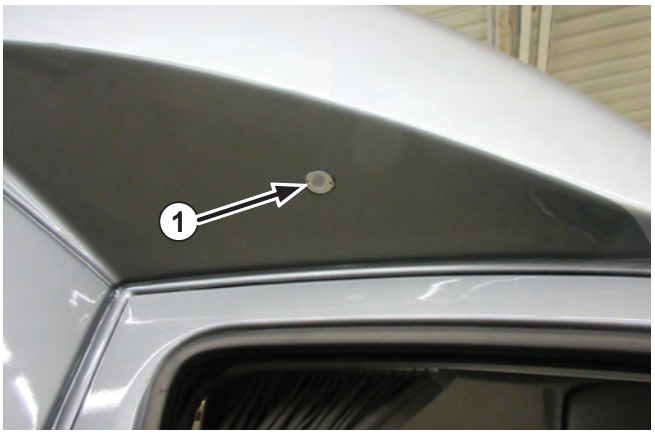
Depress the top of the step override switch (4), located inside the coach entrance, to prevent the steps from retracting when the coach door is closed.

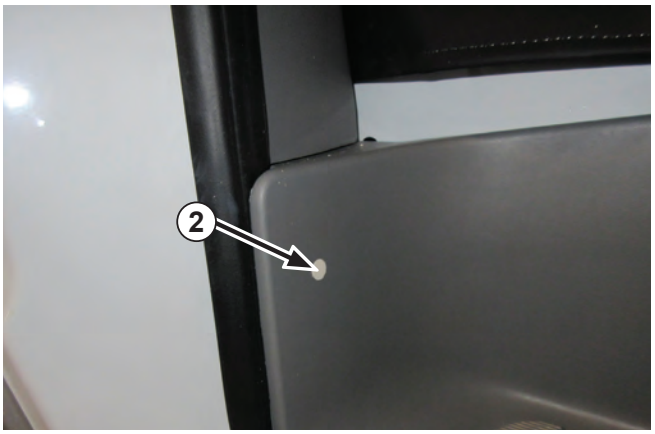
NOTE: The vehicle ignition switch must be in the "OFF" position for the step override switch to work.

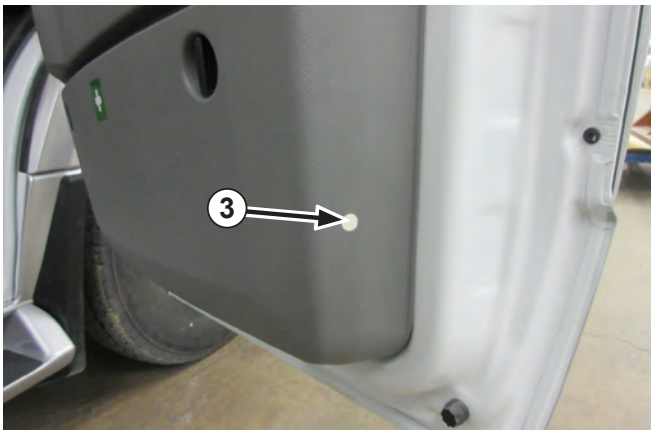


Cab Entry Light

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. Each door is equipped with a magnetic interlock system that activates the light when the magnetic field is broken. When the door is opened, the magnetic field is broken the light comes on. When the is closed, the light goes out. The magnet (2) is mounted on the rear frame of the entry door and the energizing metal (3) is positioned in the door itself.







Step Override Switch

Depress the top of the step override switch (1), located inside the coach entrance, 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 (1) to work.



Interior Overhead Light Dimmer Switch

Turn dimmer switch (2) to turn on the interior overhead lights. Rotate the dimmer switch to control the interior light level. Turn the dimmer switch back to turn off the lights.

Exterior/Interior Light Switches

Depress the top of switch (3) to turn on the exterior patio, assist handle and entrance step ground illumination lights.

Depress the top of switch (4) to turn on the interior accent lights.

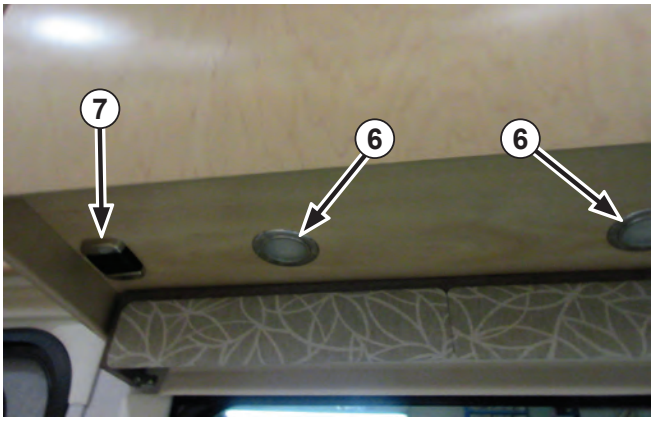
Depress the top of switch (5) to turn on the exterior storage and utility center lights.

NOTICE

Turn the battery disconnect switch to internal 12 volt DC power to operate the interior roof lights. Refer to the "Electrical System Operation" chapter in this manual for battery disconnect switch details.

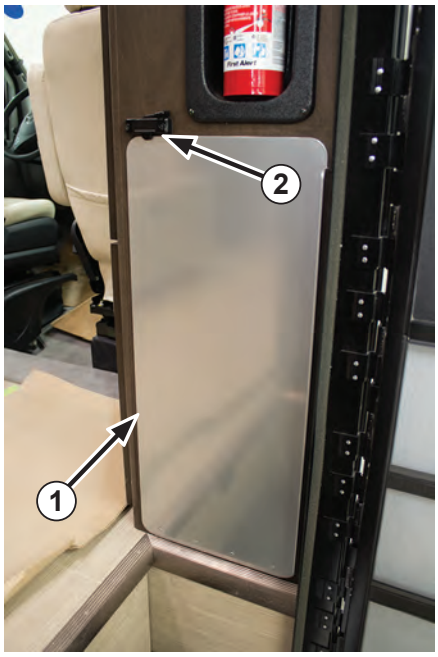
Under Cabinet Light Switches

Under cabinet lights (6) are controlled by adjacent switches (7).



Step Cover (on Specific Models)

When the coach door is closed, you can lower hinged plate (1) by releasing the latch (2). This plate covers the steps, providing a safe and level floor area (available on select models only).



Slide Out Room

Your motorhome may be equipped with an expandable slide out room (3), 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 (3), the slide out mechanism could bind causing damage.

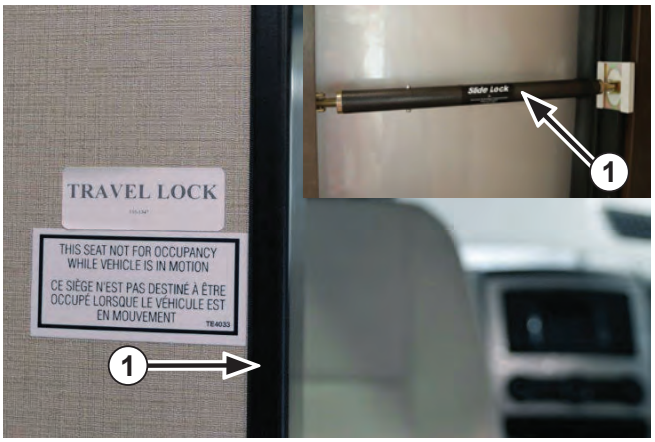
3. Make sure there is adequate space beside your motorhome for the slide out room to fully extend.
4. The slide out room is powered by two 12 volt DC motors. Ensure the batteries are fully charged when operating the slide out room controls.
5. Before operating the slide out room, review the instructions 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.
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 contravenes all 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 (1) 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 (2) is located in the cabinet above the coach entrance doorway.

Depress and hold the bottom of the slide out control switch (2) 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.

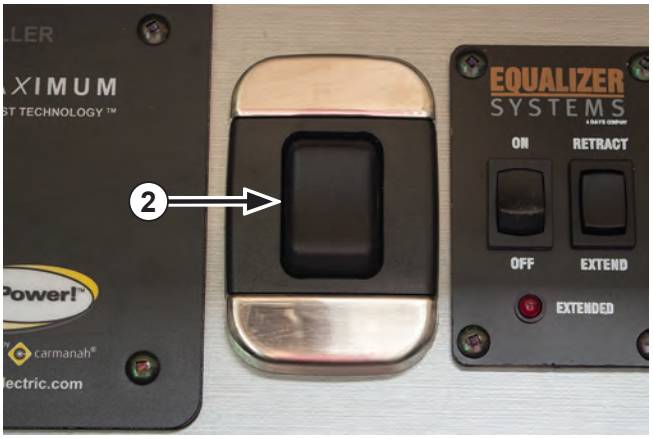
Retracting the Slide Out Room

Depress and hold the top of the slide out control switch (2) 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

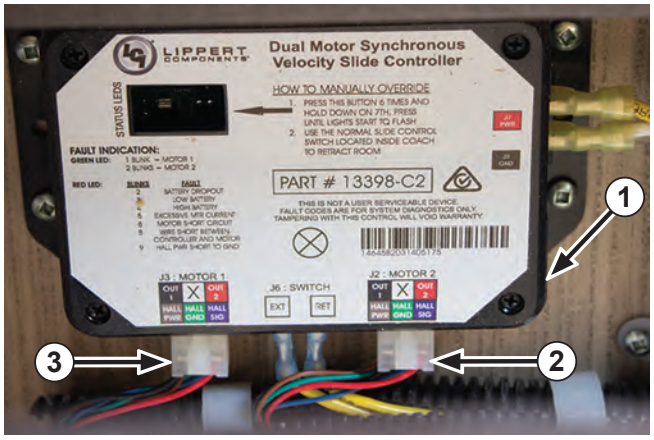
If the slide out room fails to extend or retract electrically, you can manually operate the slide out mechanism. Manual operation of the slide out is not recommended unless the slide out needs to be retracted in order to move the motorhome.

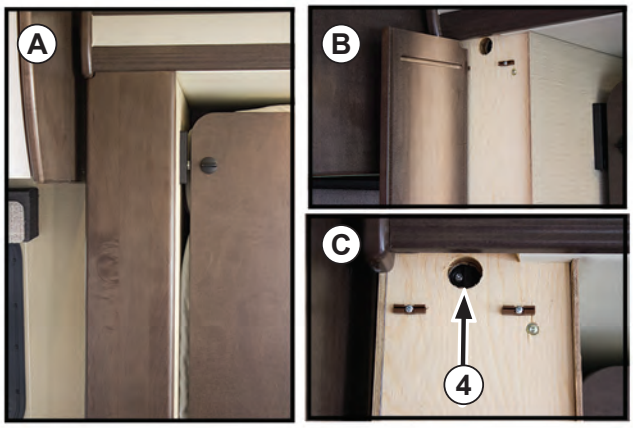
NOTICE

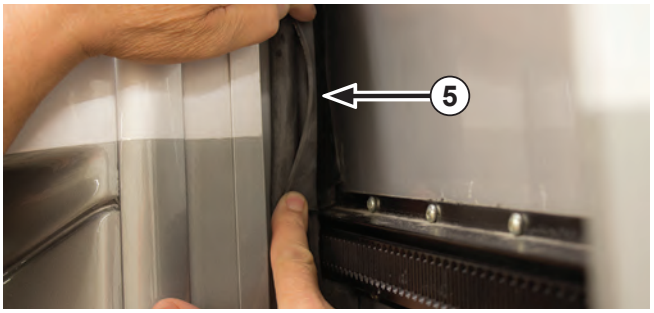
The slide out electrical function is protected by a fuse located on the power distribution panel. Check that the fuse is intact before resorting to manual slide out operation.

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" chapter.
2. Locate the control module (1) (installed in lower galley.
3. Unplug both motor electrical connectors (2 & 3) from the control module (1).
4. Remove the slide out snap-on trim boards (A, B, C) to access the motor mounting screw (4) on each side of the slide out, and remove the screw.
5. Peel back the exterior sweep gasket (5) from the top corners of the slide out, and lift the slide out motor to release.
6. Push in the slide out room until fully retracted, keeping both sides of the slide out level with the coach while retracing.

   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 (5) from the top corners of the slide out, and reengage the slide out motor.
8. Replace the motor mounting screw (4) on each side of the slide out, and replace the slide out snap-on trim boards (A, B, C).
9. Reconnect both electrical connectors (2 & 3) to the control module (1).
10. Install the travel lock before moving the motorhome.







⚠ Caution

Do NOT move the motorhome unless the slide out room motors electrical connectors (2, 3) are connected to the control module (1). 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.

Awning

Extending the Awning

1. Depress and hold the awning switch (1), located on passenger side seat base, in the “OUT” (extend) position until the awning has fully extended and the lead rail (2) is accessible.

   NOTE: The power awning will not operate with the motorhome ignition on.



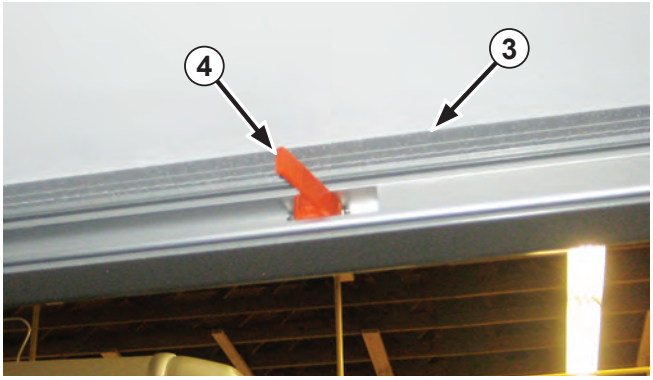
IMPORTANT

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.



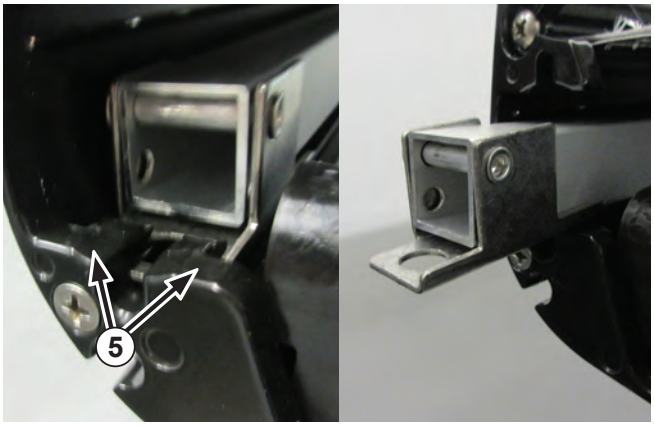
2. Unlock the right support leg (3), stored in the lead rail (2), by lifting the latch (4) and sliding the foot back to clear the tabs on the lead rail end cap (5).

   NOTE: Ensure that the support leg feet have been properly locked into the tabs on the lead rail end caps when retracting the awning.



3. Slide out the right support leg (3) fully until it reaches the end cap stop.

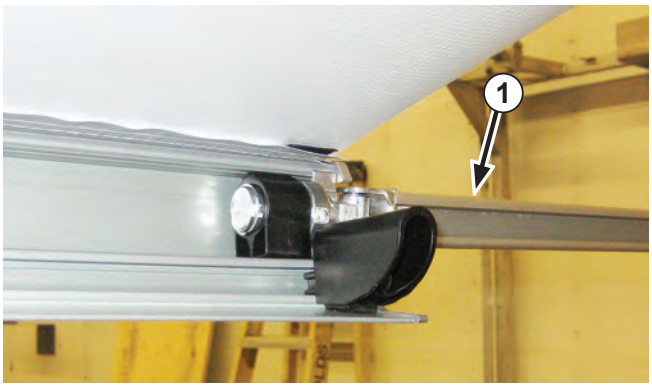
   NOTE: Close latch (4) to clear the awning support hinge.

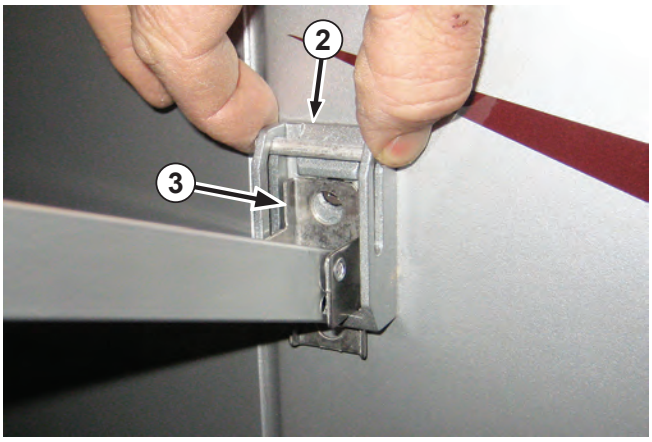


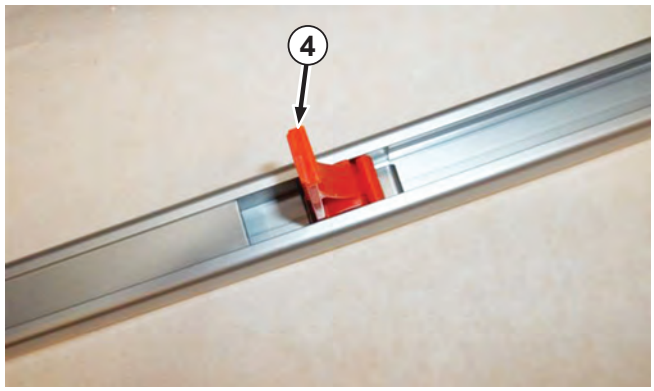
4. Rotate the support leg (1) 90 degrees and swivel the support leg down.
5. Lift the retaining pin (2) on the coach awning support bracket, and insert the support foot plate (3). Allow the retaining pin to drop down and lock the foot plate in place.
6. Repeat steps 3, 4, 5, and 6 to install the left support leg.
7. Ensure that the latches (4) in the left and right support legs are unlocked (raised).
8. Fully extend the awning by depressing and holding the awning switch in the “OUT’ (extend) position.
9. Lift the lead rail of the awning to the desired height and lock the left and right latches (4).

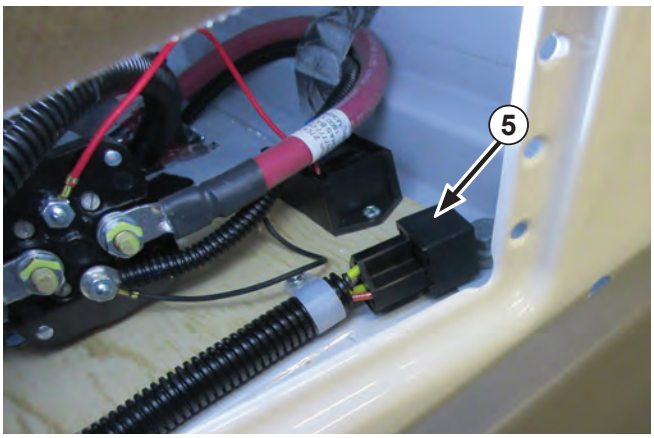
NOTE: Adjust the side of the awning furthest away from the coach door to a slightly lower position to enable rainwater to run off.

10. Turn on the awning light if desired (6 on previous page).









Retracting the Awning

1. Release and stow the legs by following the steps in the Extending the Awning section in reverse order.
2. Depress and hold the awning switch, located on passenger side, in the “IN” (retract) position until the awning fully retracts.

NOTE: Store the foot inside the lead rail.

NOTE: The power awning is equipped with a safety feature preventing the awning from extending while the motorhome ignition is on (driving). This relay (5) is located under the front passenger seat.

Appliance and Equipment Operation

Appliance 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

The refrigerator in your motorhome operates in the following modes:

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

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 within a couple degrees of 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 open allows air to circulate and prevents the build-up of odor or mold.

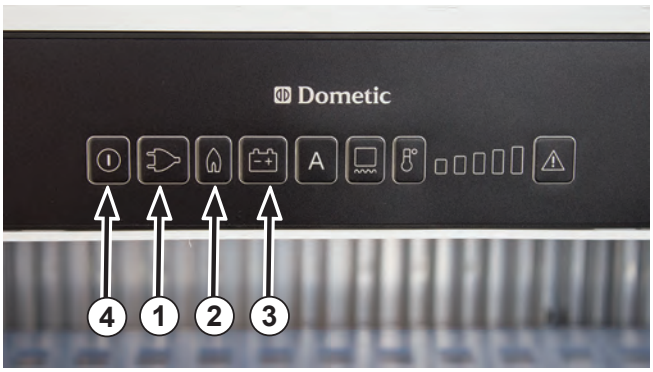
Operating the Refrigerator

Press and hold the power button (4) to turn the refrigerator on and off. The display panel will illuminate when the refrigerator is operating, and the display panel lights will shut off when the refrigerator power is off.

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. Ensure the refrigerator is cold before placing items in it.
2. Allow items to cool before loading the refrigerator. Do not add warm or hot items.
3. Do not pack the refrigerator too full. To operate efficiently, the refrigerator needs air to circulate.
4. Use smaller containers to store items.
5. Use containers that seal tightly.
6. 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 (1), 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 (2) and pushing up the locking clips.



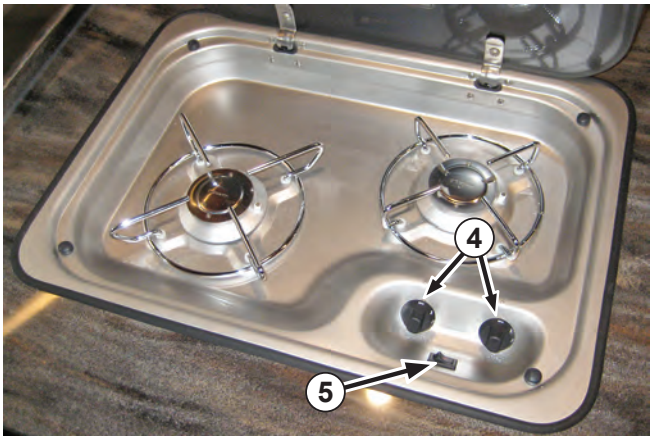
Stove Top

The stove top operates on LP gas. It must be lit manually using the integrated igniter. Make sure the LP gas valve switch (3), located in the utility center, is turned to the “ON” position. Refer to Liquid Propane Gas System chapter for details.

Lighting Burners

1. Turn on the appropriate burner control knob (4).
2. Depress and hold the igniter switch (5) until the burner lights.

   NOTE: If the igniter fails to operate, check the 1 amp igniter fuse located in the cupboard below the range.
3. Do not operate the stove top or the igniter while travelling or while refueling your motorhome. The burners may ignite gasoline fumes.



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 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.

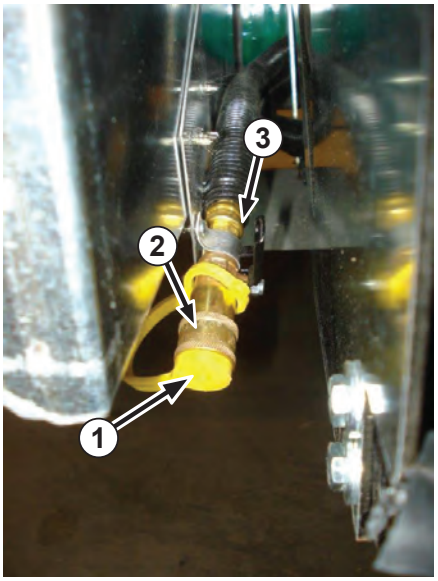
Exterior BBQ Connection

Your motorhome is equipped with an exterior BBQ connection 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. Connect your BBQ to the quick connect fitting (2).
3. Turn lever (3) to supply propane to your BBQ.

   NOTE: Propane supplied to the exterior BBQ connection is regulated; therefore, use only non-regulated BBQs.





LP Gas Furnace

Operating the LP Gas Furnace

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

⚠ 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.

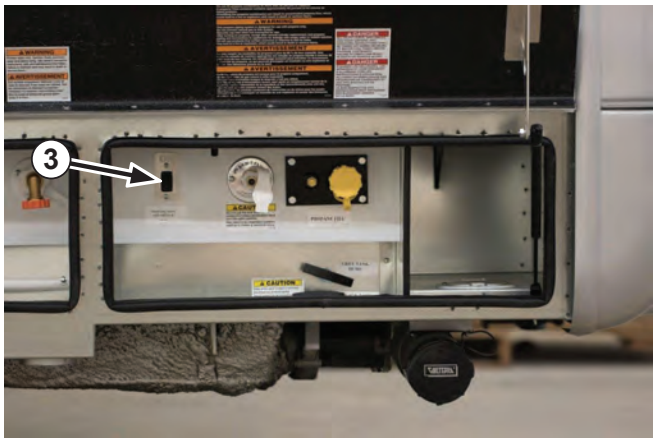
LP Gas Furnace Operating Tips

1. Make sure the LP gas valve switch (3), located in the rear utility center, is turned "ON." Refer to the "Liquid Propane Gas System" chapter 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.

   NOTE: Simultaneously hold the thermostat plus (+) and minus (-) buttons (2) to switch between °C and °F.

3. If the burner fails to light, check the propane level at the system monitor panel to ensure there is propane in your tank. Refer to the "Liquid Propane Gas System" chapter for details.
4. If there is propane in the tank and the burner fails to ignite, verify that the LP gas valve switch (3) is in the "ON" position.
5. If there is propane in the tank and the LP gas valve switch (3) is on but the furnace still fails to light, turn off the thermostat (1), turn off the LP gas valve switch, and contact your dealer or a local RV service center.





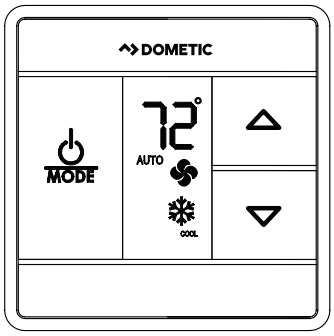
NOTICE

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

Dometic Capacitive Touch Thermostat

Operating Thermostat

1. To turn ON, depress "mode" button.
2. To turn OFF, depress mode button and toggle through until OFF is displayed.
3. To change from °F to °C, depress both the UP and DOWN buttons.



Refer to Dometic Capacitive Touch Thermostat manual for detailed instructions.

Roof Air Conditioner with Heat Pump

The roof air conditioner is controlled by the same coach thermostat that controls the furnace. Refer to 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 (1).

⚠ 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.

NOTICE

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

Maintaining the Roof Air Conditioner/Heat Pump

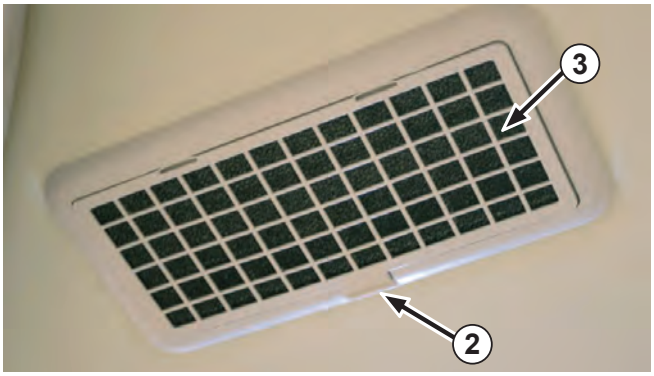
Clean or change the air conditioner filter at least every two weeks when the air conditioner is in operation. Do not operate the air conditioner without installing the filter.

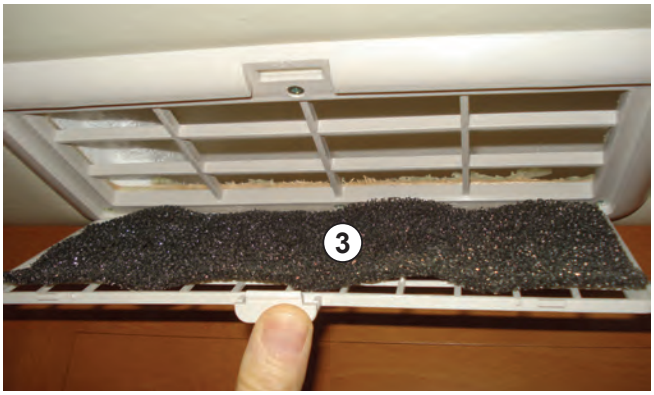
Cleaning/Changing Filter

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

   Refer to the air conditioner manual in the Motorhome Information Kit for detailed operating 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 roof vent controls include an on/off switch and a thermostatically controlled fan speed switch. 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.

An on/off switch (1) controls the power to the fan. A three-position rotary switch (2) 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.

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

Thermostat Operation

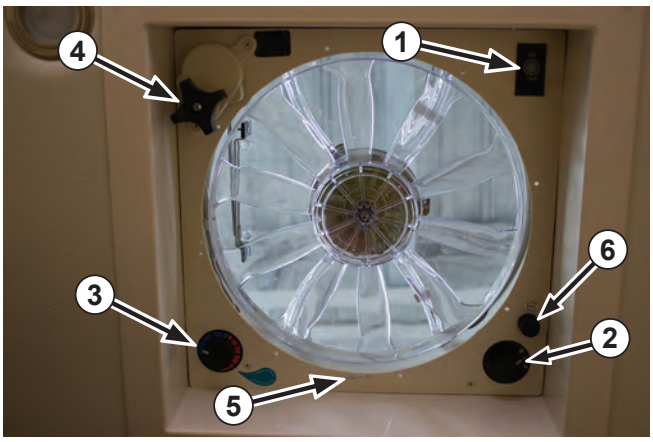
A rotary thermostat (3) controls the coach cabin temperature. If the roof vent is open, the fan motor will start and stop automatically as the interior coach temperature exceeds or drops below set levels.

Vent Hood Height Control

The rotary knob (4) controls the height position of the vent hood. Turn the knob clockwise to pull the hood down and close it. Turn counterclockwise to raise or open the hood.

Cleaning Instructions

1. Turn off the fan motor using the on/off switch (1).
2. Locate the thumb tab on the screen (5), 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 (6). If the fan fails to operate, verify that the fuse is intact and replace if necessary.

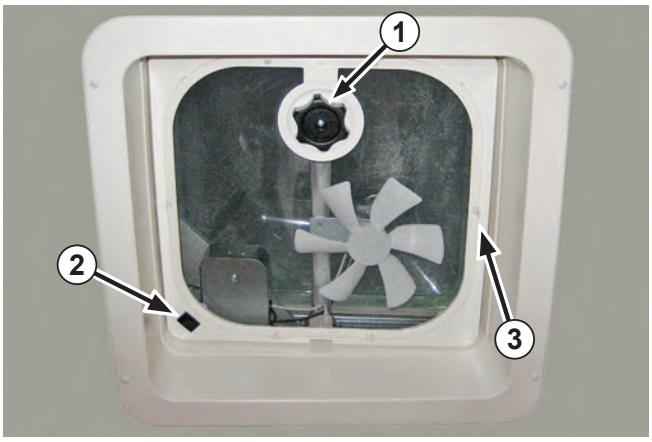
Bathroom Roof Vent

The bathroom roof vent provides air flow and venting when using the shower.

Operation Controls

Vent Hood Height Control

The rotary knob (1) controls the height position of the vent hood. Turn the knob clockwise to pull the vent hood down and close. Turn counterclockwise to raise and open.



Fan ON/OFF Switch

The 12 volt DC fan provides proper ventilation of the shower cubicle.

The switch (2) is used to turn the fan on and off.

Cleaning Instructions

1. Turn off the fan motor.
2. Release the retaining tabs (3) securing the screen and pull the screen down.
3. Wash the screen and fan blade with a light, non-abrasive soap, rinse, and dry.
4. Reinstall the screen by gently snapping 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.

Side Window Vents

Turn the knob (4) counterclockwise to open the window vent and clockwise to close the window vent.

To open egress windows (if equipped), pull up the two handles (5), and push out the window.



Manual Roof Vent

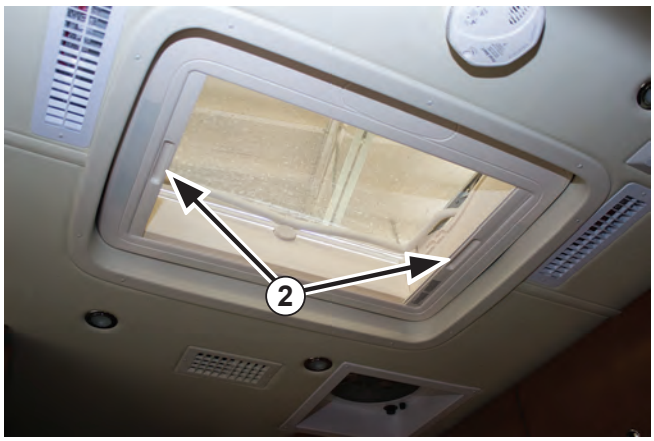
Use the manually operated roof vent (1) in conjunction with the power roof vent to provide adequate air flow throughout the motorhome.

The roof vent is equipped with a blind (2) that slides across the opening to limit the amount of sunlight entering the motorhome.



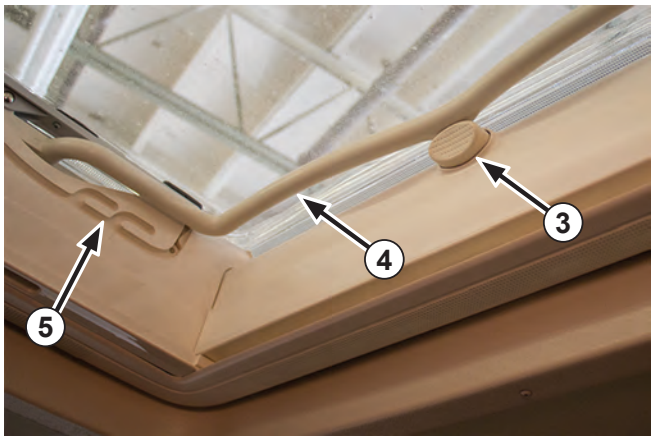
Opening the Roof Vent

1. Press the latch release button (3) on the handle (4).
2. Push upwards on the handle (4), and latch the handle bar into the desired seat (5).



Closing the Roof Vent

1. Lift the handle (4) to release it from the seat (5).
2. Pull down the roof vent down using the handle (4)
3. Ensure latch (3) securely locks the handle (4) in the closed position.



NOTICE

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

Operating the TV

The TV is stowed in the following locations:

Island and Twin Bed Floor Plans

The TV is stowed in the coach dividing wall (1), and is accessible by pressing the pop-out latch button (2) and pulling out the TV cabinet. Push in to close.

NOTE: When travelling, ensure the pop-out latch button (2) is pressed in. This locks the cabinet in the closed position.

Corner Bed Floor Plan

The TV is located in the bedroom area and is locked in position when travelling. To unlock the TV, pull down the latch release knob (3), and reposition the TV.

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

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

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

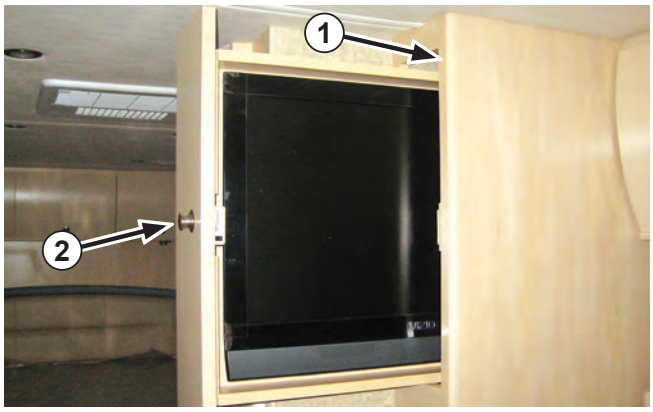
Murphy Bed Floor Plan

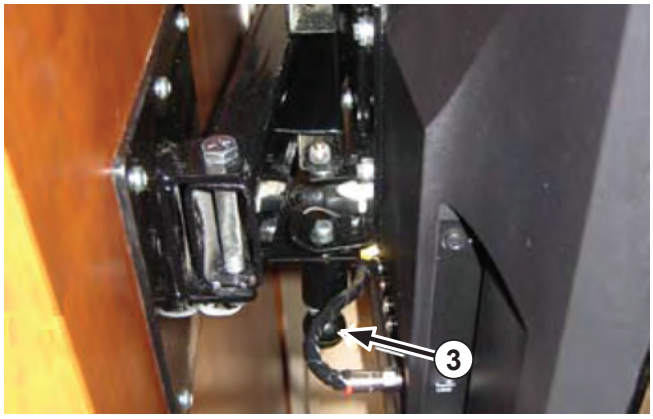
The TV is stowed in the coach passenger side countertop (4) and is accessed by pressing the release lever (5) located at the coach entrance.

NOTE: The TV will rise from the cabinet under spring tension. Ensure the top of the TV cabinet is clear before opening.

To store, use the cover panel (6) to push down the TV into the cabinet until the TV assembly latches.

NOTE: Push down only in the center of the cover panel to prevent damaging the panel.









TV Operation

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

⚠ Warning

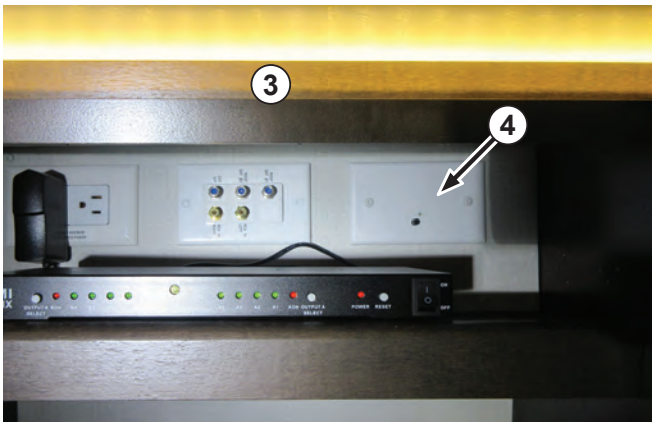
Do NOT take your eyes off the road for extended periods of time or a crash causing injury or death could result. Do NOT give extended attention to the in-dash entertainment system while driving. Do NOT watch TV while driving.



DVD Operation

All motorhomes are equipped with an entertainment system (1) for viewing DVD's on the TV. Refer to the entertainment system operator's manual in the Motorhome Information Kit for detailed operating instructions.

NOTE: Entertainment systems (1) automatically default to the most recently used setting when switched off and back on. To change settings, make your selection and press the "ENTER" button (2). You must press the "ENTER" button within approximately 3 seconds each time you make a new selection, or the system defaults back to the most recently used setting.



NOTICE

When parked for extended periods, switch off the entertainment system to avoid draining the battery.

TV Utility Panel (4)

The TV utility panel (location (3) varies depending on floor plan) is equipped with a TV antenna booster switch (5).



NOTICE

Press the black button (5) to turn on the antenna booster when viewing TV using only the roof antenna. Turn off the antenna booster for all other TV functions.

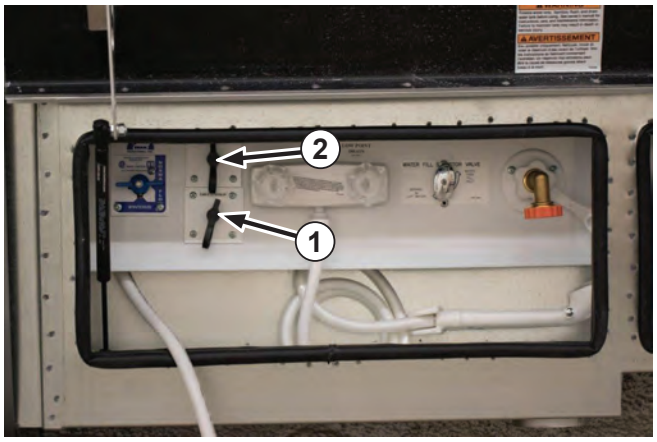
External Cable TV Connection

Your motorhome is equipped with an external cable TV hookup connector (1) located in the rear utility center.

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

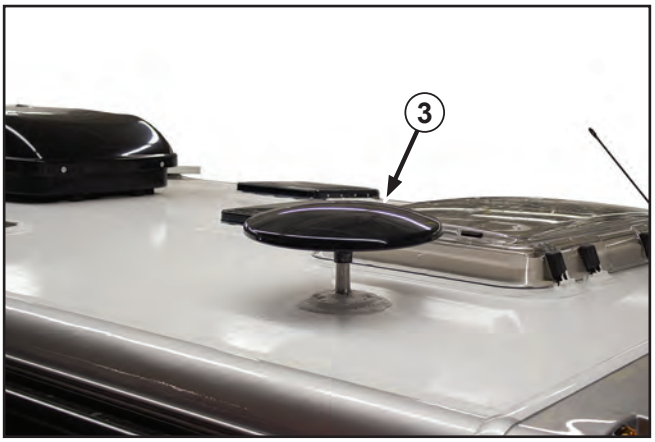
External Satellite TV Connection

Your motorhome is equipped with an external satellite TV hookup connector (2) located in the rear utility center.



TV Antenna

Your motorhome is equipped with an omnidirectional antenna (3) mounted on the coach roof. The antenna is not adjustable.



HDMI Switch Box

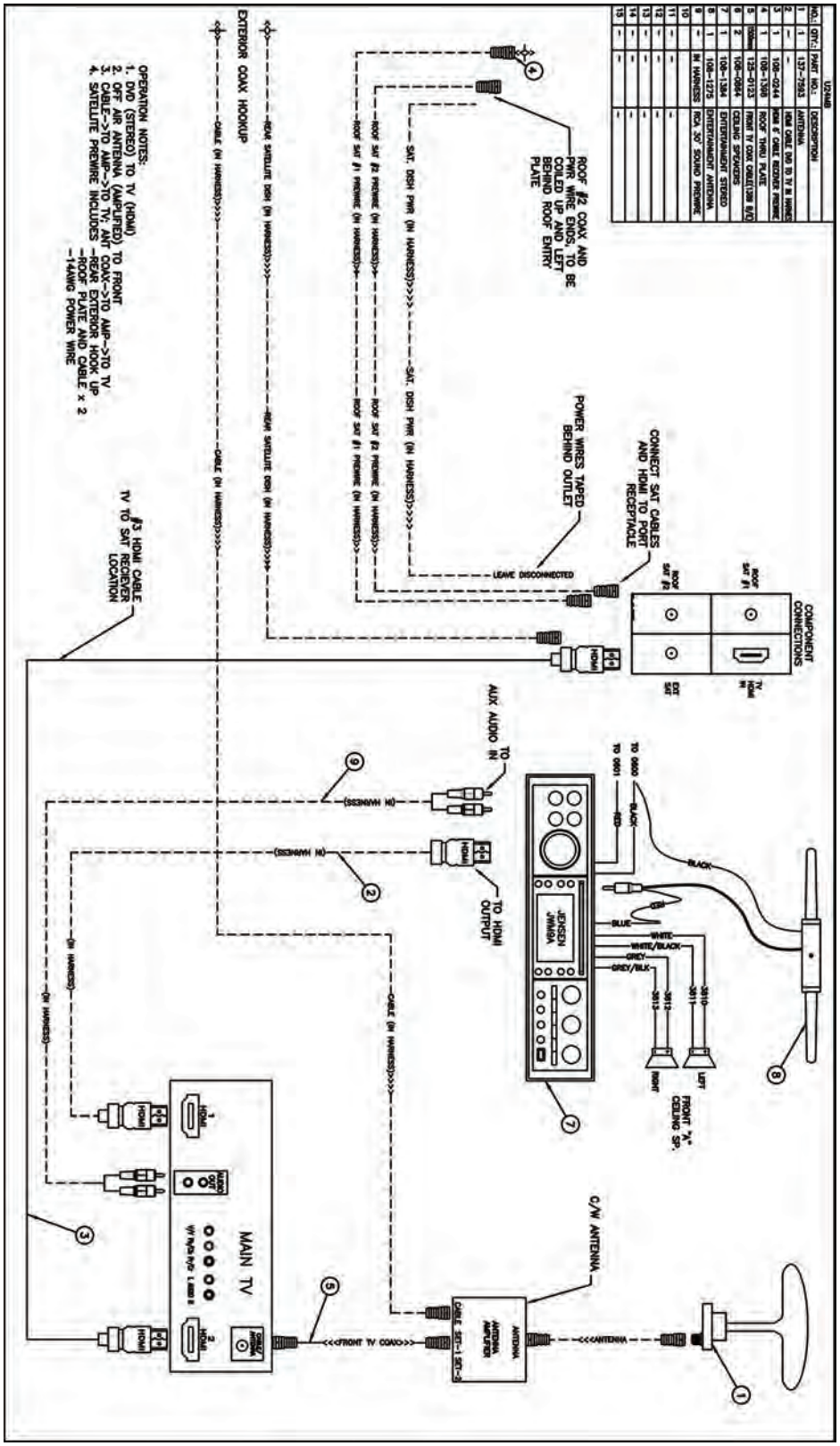
Your motorhome may be equipped with an HDMI audio/video switch box (4). This enables HD quality viewing for your DVD player or satellite receiver (not supplied).

Refer to the AV Wiring Diagrams section in this manual and the HDMI switch box manual in the Motorhome Information Kit for further details.

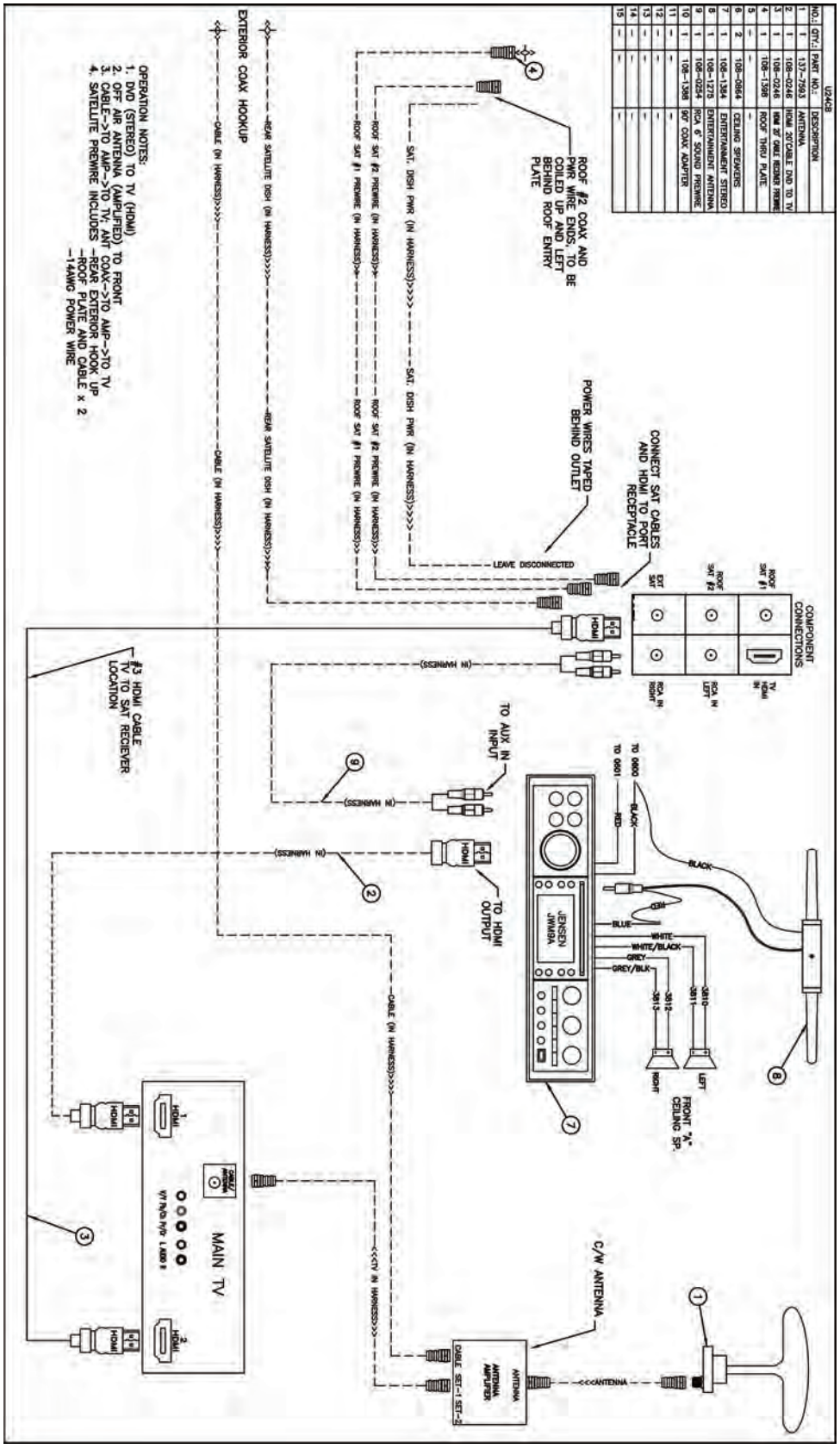


Entertainment System Schematics

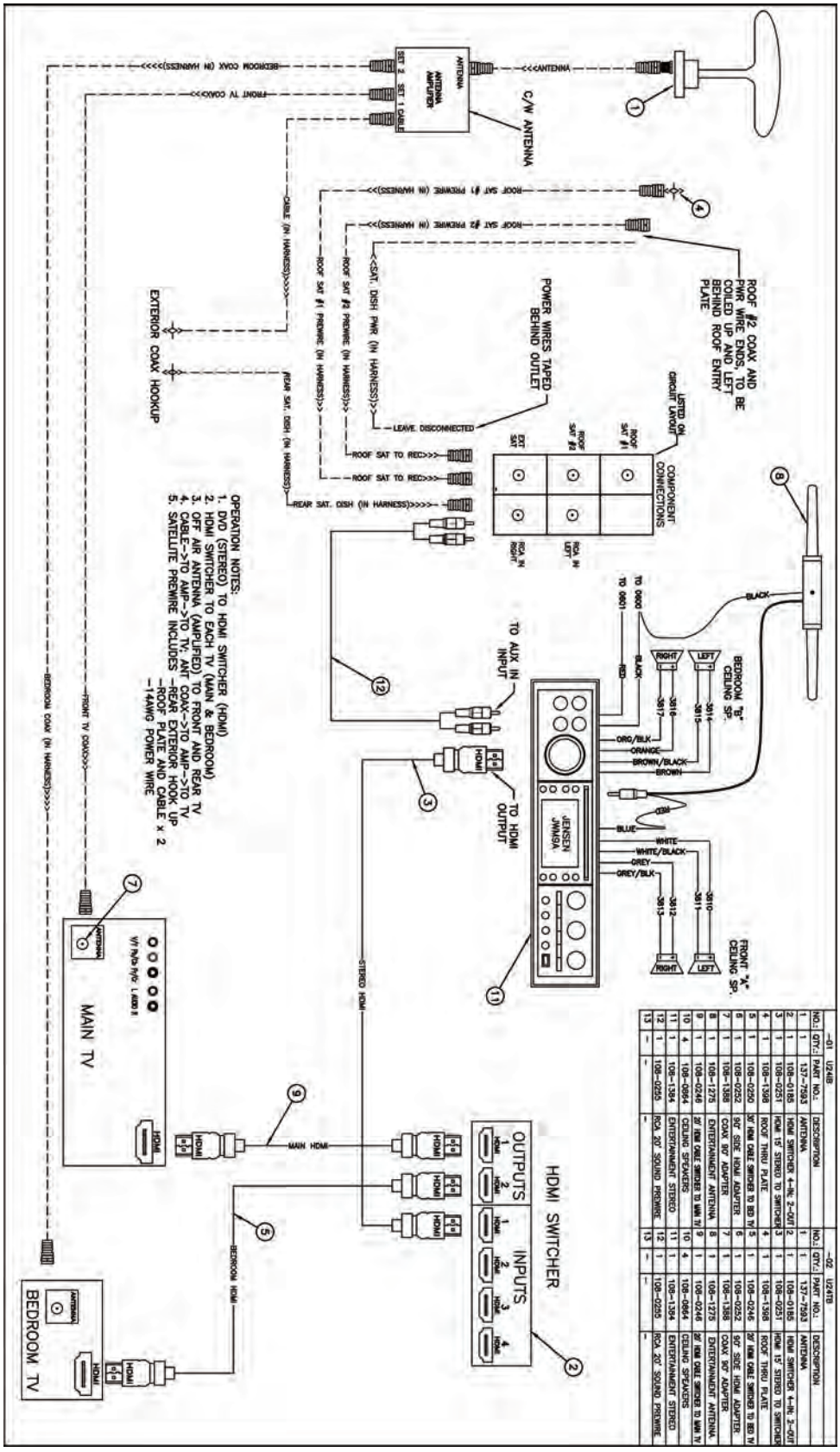
U24MB Entertainment System Schematic



U24CB/FX Entertainment System Schematic



U24 IB/TB Entertainment System Schematic



-01 U24IB				-02 U24TB			
NO.	QTY.	PART NO.	DESCRIPTION	NO.	QTY.	PART NO.	DESCRIPTION
1	1	137-7693	ANTENNA	1	1	137-7693	ANTENNA
2	1	108-0185	HDMI SWITCHER 4-IN, 2-OUT	2	1	108-0185	HDMI SWITCHER 4-IN, 2-OUT
3	1	108-0251	HDMI 15' STEREO TO SWITCHER	3	1	108-0251	HDMI 15' STEREO TO SWITCHER
4	1	108-1398	ROOF THRU PLATE	4	1	108-1398	ROOF THRU PLATE
5	1	108-0250	30' HDMI CABLE SWITCHER TO BED TV	5	1	108-0246	30' HDMI CABLE SWITCHER TO BED TV
6	1	108-0252	90° SIDE HDMI ADAPTER	6	1	108-0252	90° SIDE HDMI ADAPTER
7	1	108-1388	COAX 90° ADAPTER	7	1	108-1388	COAX 90° ADAPTER
8	1	108-1275	ENTERTAINMENT ANTENNA	8	1	108-1275	ENTERTAINMENT ANTENNA
9	1	108-0246	30' HDMI CABLE SWITCHER TO MAIN TV	9	1	108-0246	30' HDMI CABLE SWITCHER TO MAIN TV
10	4	108-0864	CEILING SPEAKERS	10	4	108-0864	CEILING SPEAKERS
11	1	108-1394	ENTERTAINMENT STEREO	11	1	108-1394	ENTERTAINMENT STEREO
12	1	108-0255	RCA 20' SOUND PREWIRE	12	1	108-0255	RCA 20' SOUND PREWIRE
13	-			13	-		

HDMI Matrix Switch Schematic

nextech

HDMI Matrix Switch

USER'S MANUAL

8024040

1. Description:

The switch is HDMI compliant and supports up to 48-bit deep colour, Dolby True-HD, DTS HD, Full 3D & 4K2K video formats. The remote and the front panel can fully select input for both outputs independently.

This HDMI matrix switch allows for up to four HDMI source devices to be independently switched to two HDMI compatible monitors, HDTV and/or projectors.

2. Features:

- Supports HDMI deep colour signal for true matrix output
- Maintains 480p, 720p, 1080i,1080p and 4K2K video formats
- Supports HDMI digital audio format: LPCM/Dolby-AC3/DTS7.1/DSD
- Manual and remote operation
- HDCP compliant

3. Specifications:

Input HDMI Connector	4
Output HDMI Connector	2
Selection Method	Front Push Button, Remote
Bandwidth	340 MHz / 10.2 Gbps
Maximum Transmission Distance	Input: 7 ft Output: 50 ft (24 AWG cable)
Power adapter	DC 5V 2A
Dimension (mm)	168(L) x 75.5(W) x 25(H)
Weight (kg)	0.23

4. Introduction:

Number	Feature	Function
1	Switch button	Switch between devices
2	LED	OUTPUT1 LED
3	LED	OUTPUT2 LED
4	IR sensor	Remote Control
5	Power Jack	Power Adapter
6	Output side Connector	Connector HDTV
7	Input side Connector	Source
8	USB Type A Connector	Firmware update
9	SPDIF Connector	Connect to speaker

5. Installation:

6. Channel Selection:

You can select the channels you want to access in two ways, front panel push button selection and the remote control. (1 x CR2025 button cell battery included).

Front Panel Push Button Selection:
The front panel button is used to select which channel is currently displayed on the HDTV. Pressing the button during normal operation will cause the next channel to be selected.

Remote Control Selection:
The channels can also be selected using the remote.

7. Remarks:

The UPDATE jack on the unit is for firmware updates.

THE SOURCE – WARRANTY

The Source warrants that this product will be free from defects in materials and workmanship for a period of (1) year from the date of purchase. Within this period, simply take the product and your proof of purchase to any The Source store or participating dealer and the product will be replaced (where available) without charge. Any product which has been subject to misuse or accidental damage is excluded from this warranty. This warranty is only applicable to a product purchased through The Source company-owned stores or participating dealers in Canada where the warranty is included with the product. While this warranty does not confer any legal rights other than those set out above, you may have additional statutory rights which will vary under the laws of the various countries, states, provinces and other governmental entities in which The Source operates. This warranty is subject to all statutory rights you may have in Canada.

Imported by The Source
Barrie, Ontario, Canada, L4M 4W5
Manufactured in China
www.thesource.ca

Please Recycle

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The FCC Wants You to Know

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed or used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

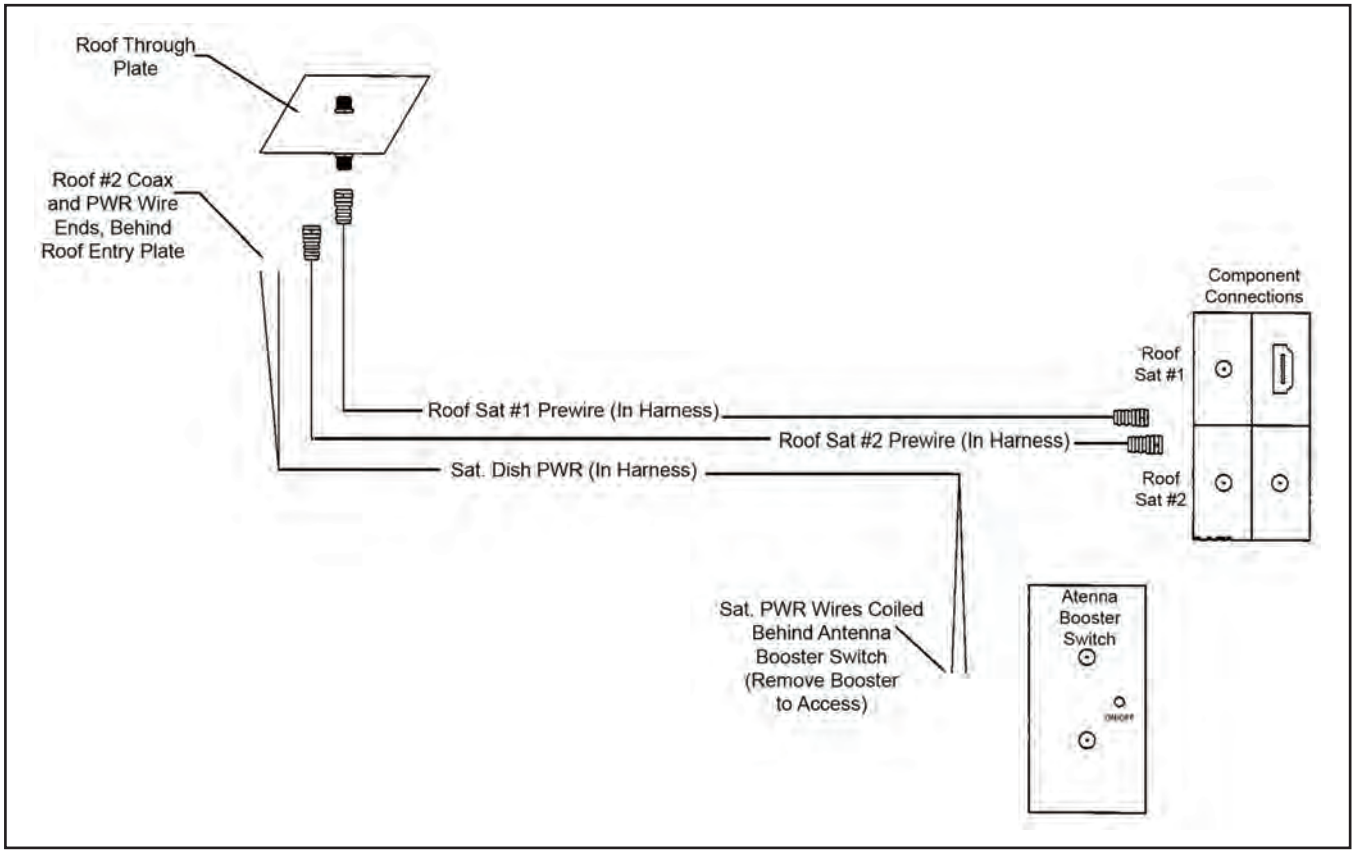
If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
1) reorient or relocate the receiving antenna;
2) increase the separation between the equipment and the receiver;
3) connect the equipment to an outlet on a circuit different from that to which the receiver is connected;
4) consult the dealer or an experienced radio/TV technician for additional suggestions.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. Where shielded interface cables have been provided with the product or specified additional components or accessories elsewhere defined to be used with the installation of the product, they must be used in order to ensure compliance with FCC regulation.

CAN ICES-3(B)

Satellite Pre-wire Schematic

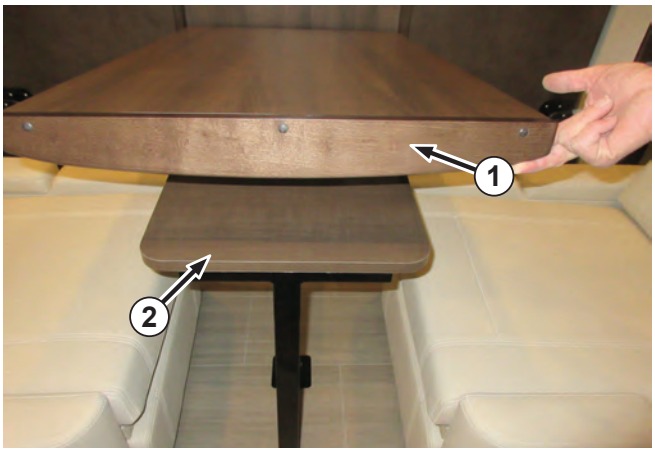
Your motorhome is pre-wired for satellite dish installation (location varies according to floor plan).

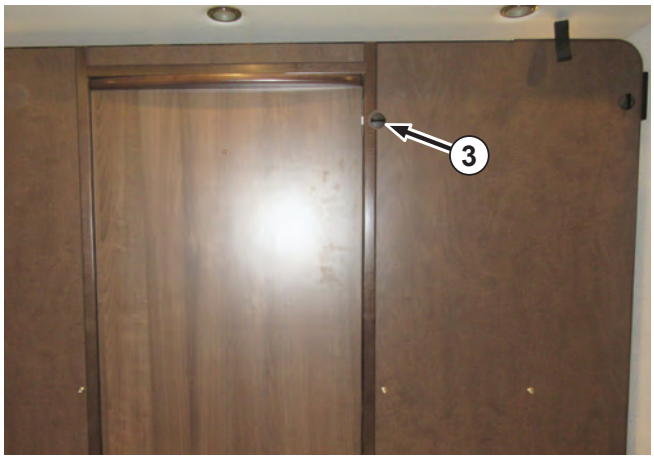


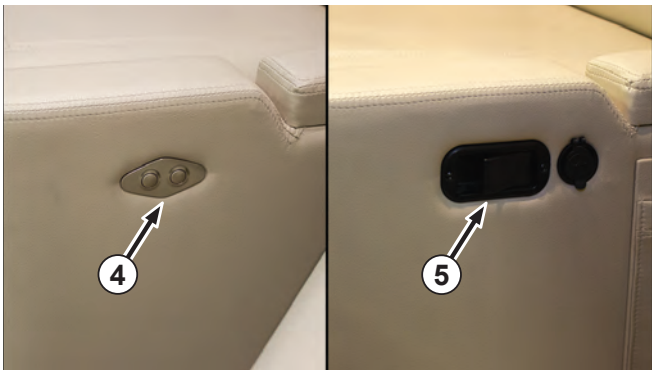
Leisure Lounge Plus System (optional)

Lowering the Murphy Bed

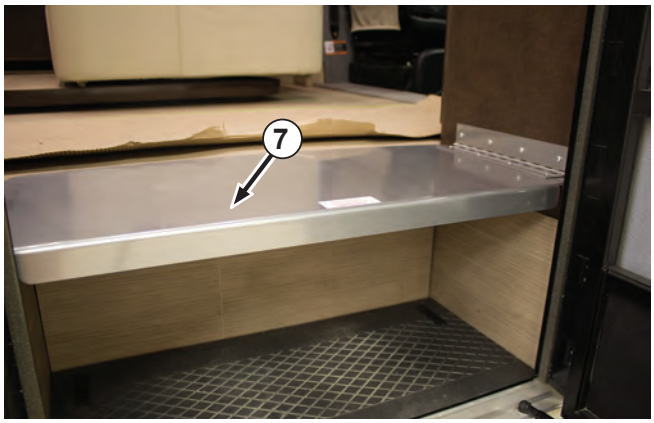
1. Refer to the Slide Out Room section in the "Vehicle Operation" chapter in this manual for details.
2. Raise the table (1), secure in upright position with latch (3), fold support/small table (2).
3. Ensure lounge chairs are in the fully upright position using recliner buttons (4) on the side of the chair.
4. Rotate lounge chairs so they are facing away from bed by lifting and holding the lock button (5) while you swivel the seat. Release the lock button when the chair is slightly rotated to ensure the seat locks into the next position.
5. Remove the lounge chair seat back cushions and headrests, and fold the seat backs forward until they lay flat (6).
6. Release the locks on both sides of the Murphy bed (rotate to unlock).
7. Slowly and carefully lower the Murphy bed. Ensure the Murphy bed locks into place once fully lowered by lifting slightly on the side of the bed. If bed is not locked, sit on corner of bed to apply additional downward pressure.
8. Lower step cover (7). Refer to the Step Cover section in the "Vehicle Operation" chapter of this manual.





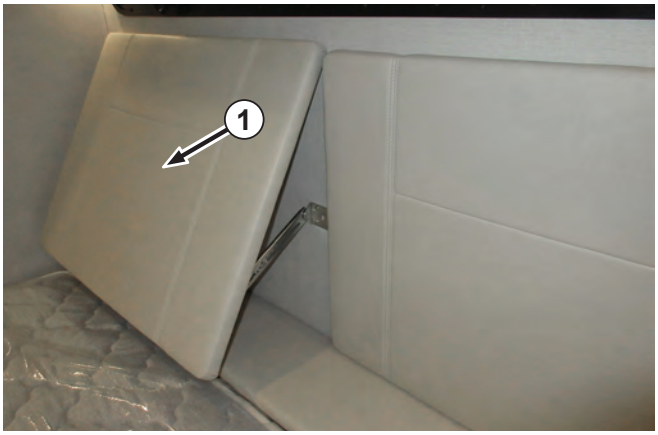




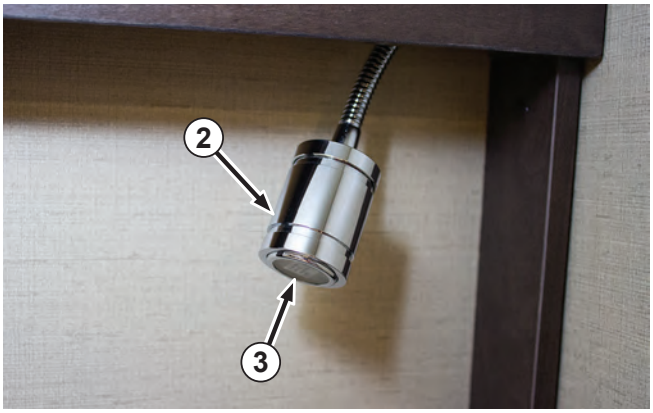


Raising the Murphy Bed

1. Pull the adjustable headboard/backrest (1) toward you for desired comfort. To collapse headboard/backrest, pull it out all the way and it will release. Push it back toward the wall.



2. Ensure both Murphy bed reading lights (2) are switched off by pressing the lens on/off button (3).



3. Pull the release strap (4), and slowly raise the Murphy bed.

⚠ Caution

Failure to pull the strap will cause damage to the pins.



4. Rotate the locks (5) on both sides of the Murphy bed to secure the bed in place.



Leisure Lounge Plus Seating

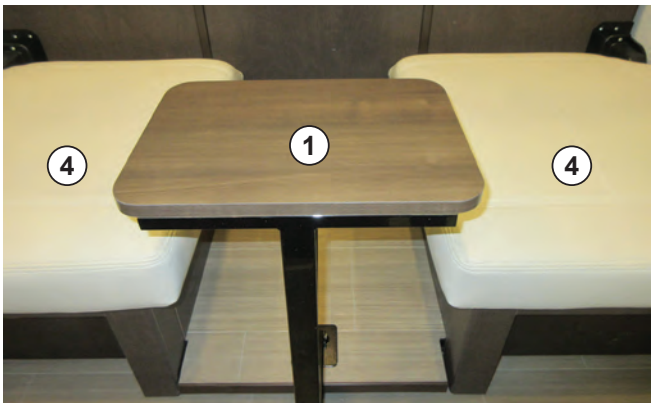
Leisure lounge recliners can be configured as follows:

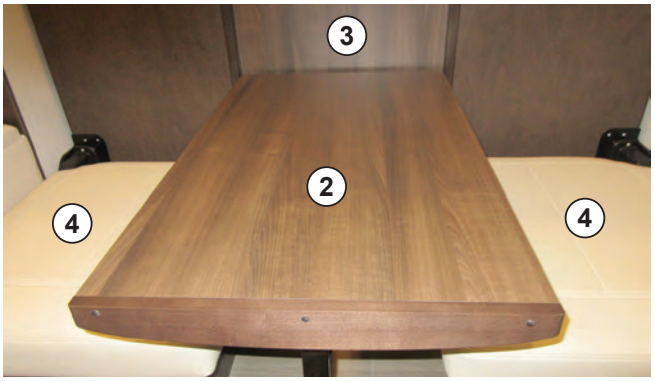
- Coffee Table (1): Use the small flip-up coffee table/support for a dinette table or to support large table. Stow the table (2) in the wall of the bed (3) when not in use. Use the chairs (4) on each side of the tables as required.
- Armchair seating (5): You can rotate the chairs by lifting and holding the lock button (6) on the side of the chair, and releasing the lock when the chair is at the desired angle.
- Recliner mode (7): Push the recliner buttons (8) on the side of the chair to recline the seats.

NOTE: The dinette table must be stowed when using the lounge chairs in armchair or recliner mode. Refer to Lowering the Murphy Bed instructions in this section for details.

⚠ Caution

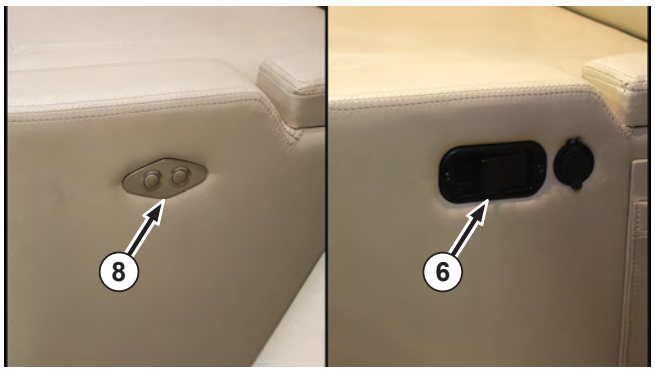
Lower the step cover when lounge chairs are in recliner mode (7) to prevent tripping accidents. Refer to the Step Cover section in the "Vehicle Operation" chapter of this manual for detailed instructions.











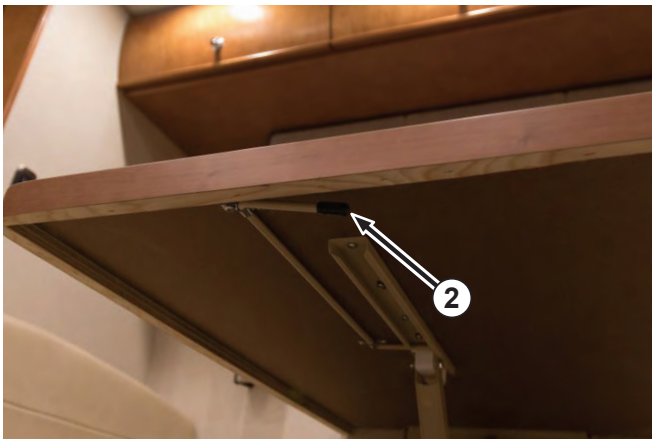
Corner Bed Seating/Sleeping

(Varies According to Floor Plan)

Booth Dinette Bed (1) Conversion

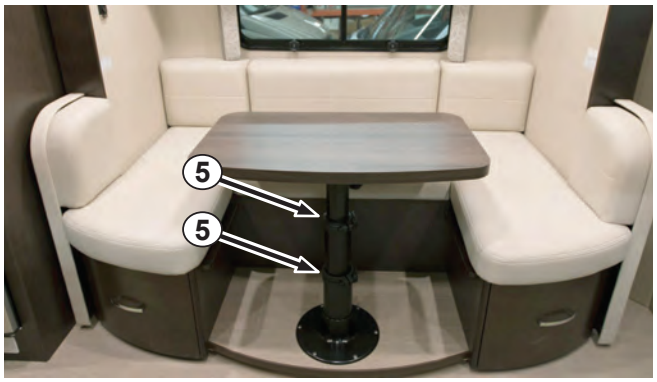
1. Pull the table release handle (2) downwards, and lower the table until it is level with the seating base.
2. Arrange the seat cushions as shown in Figure (3).

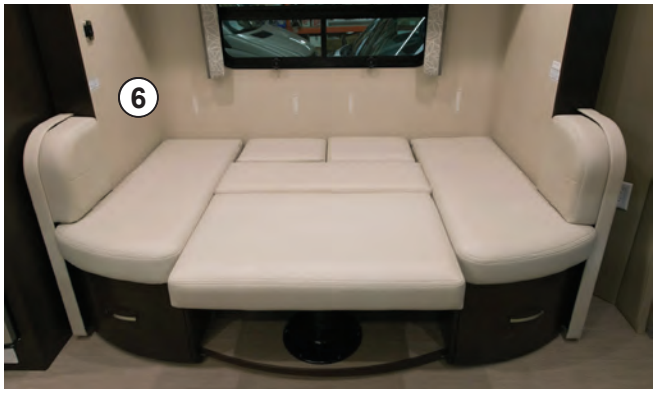




Booth Dinette Bed U Lounge (4) Conversion

1. Pull the table release handle (5), and lower the table until it is level with the seating base.
2. Arrange the seat cushions as shown in Figure (6).







Twin Bed Conversion

1. Fold out the cushion support (1).
2. Insert the two cushions (2), stored below the bed cabinet.



Seating/Sleeping
(Varies According to Floor Plan)

Installing the Removable Table Assembly

1. Locate the table leg and table top stored in the bedroom cabinet/bed base.
2. Engage the table leg into the floor plate (3), and install the table top onto the leg.



Converting Removable Table into Bed

1. Remove the table top and table leg from the floor plate (3). Store the table and leg in the bedroom cabinet/bed base.
2. Remove the seat cushions and extend the seat bases as shown in Figure (4).
3. Arrange the seat cushions as shown in Figure (5).





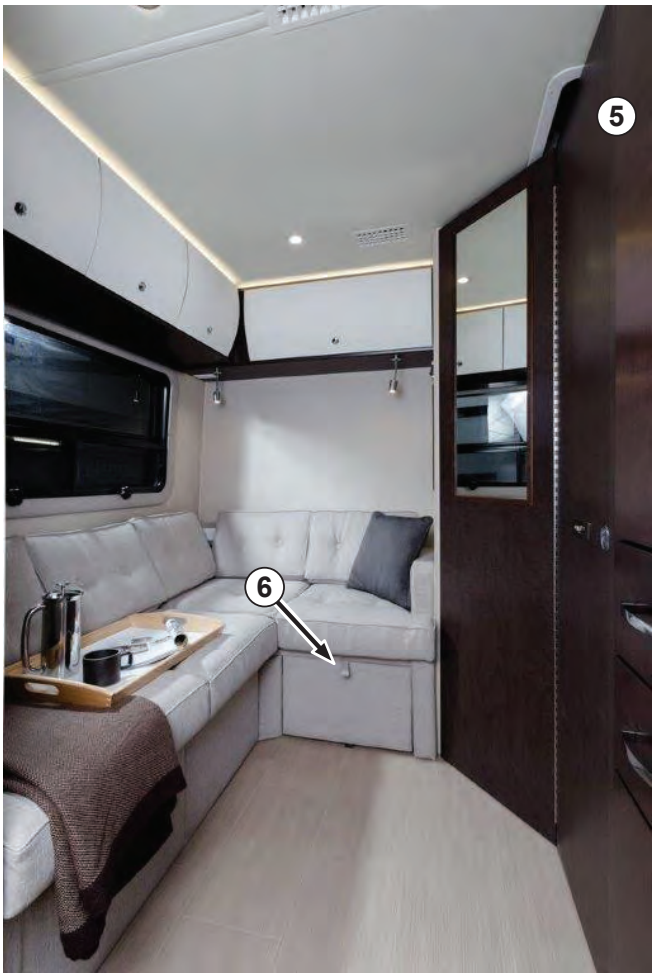


Leisure Lounge Seating Available in U24MB and U24FX

1. Bench configuration.
2. Seats with the table configuration.
3. Seats pulled out (Pull out seats before lowering Murphy Bed.).
4. Bed down with the headboard tilted out as backrest.
5. Rear seating (lock ottoman before travelling or moving motorhome.

⚠ Caution

Lock ottoman (6) in its storage position to prevent movement when stopping vehicle.











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 either the engine's battery and charging system while driving or from the coach batteries when parked.

The 12 volt DC System operates from the coach batteries, from shore power 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 connection.

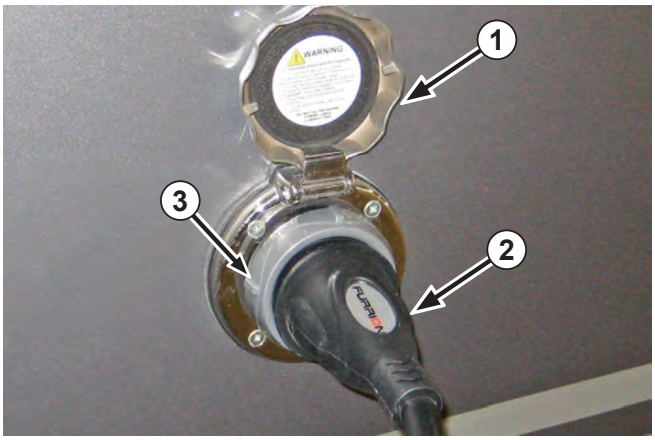
⚠ Warning

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 failure, injury, or death.

Shore Power

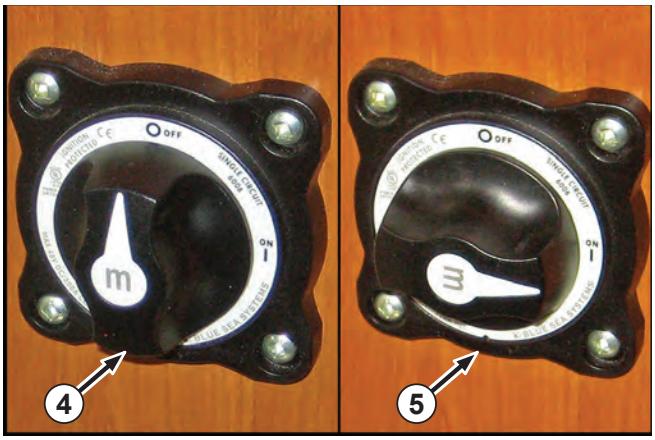
To operate using shore power, connect the 120 volt AC power supply cable (stored in the driver's side rear exterior storage compartment) to the external receptacle located on the driver's side of the coach.

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

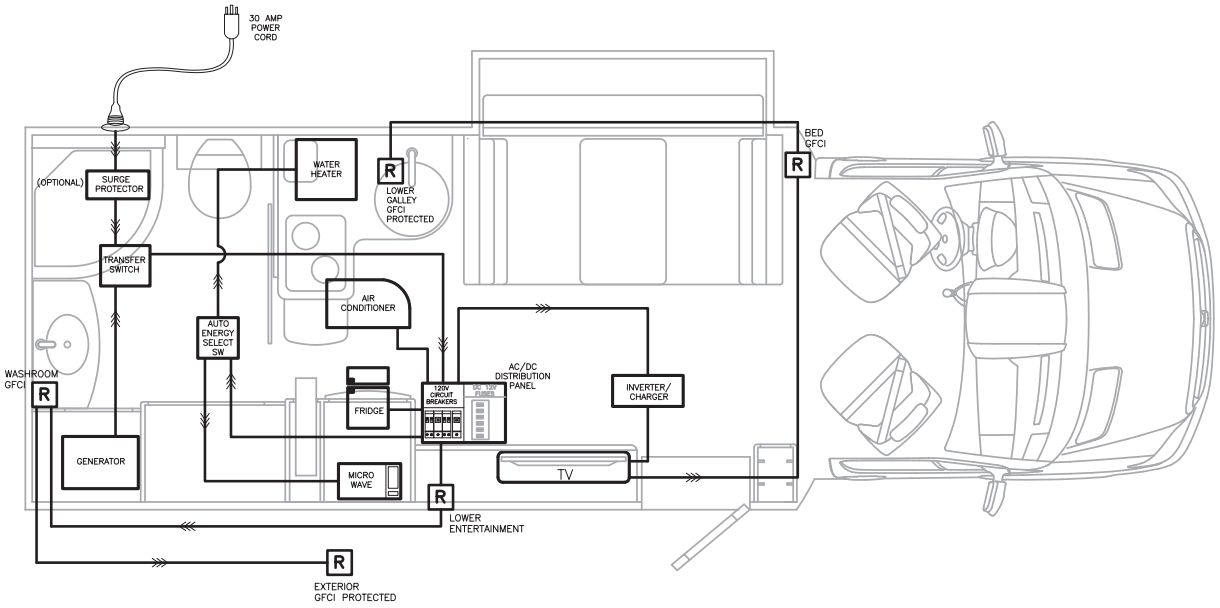


Battery Disconnect Switch

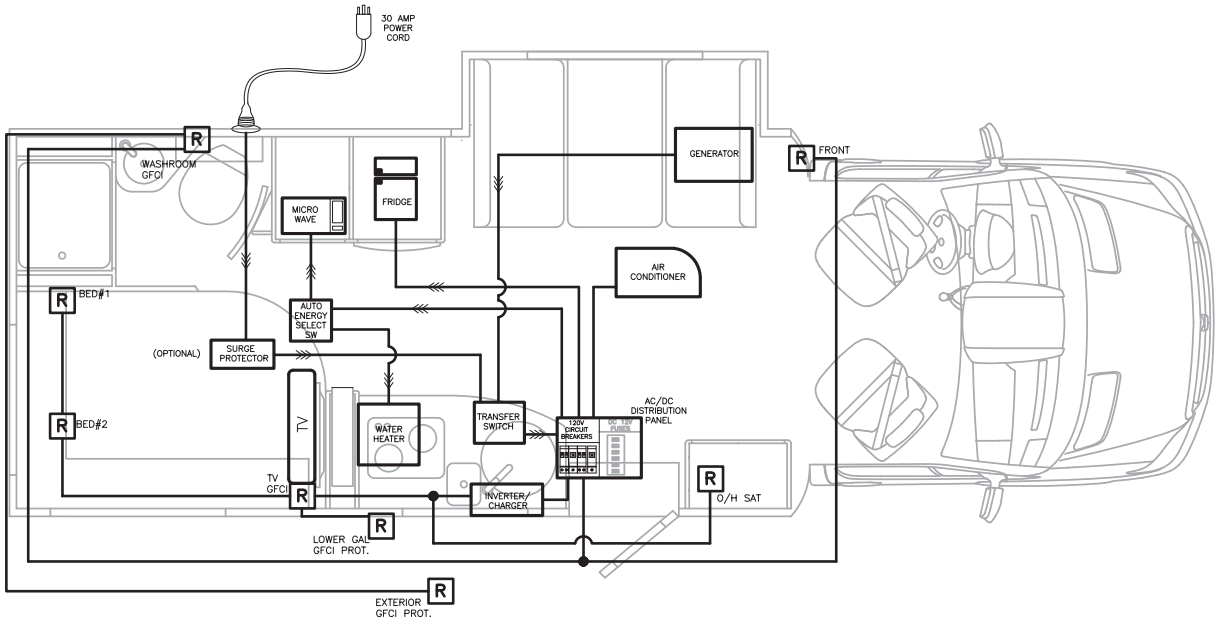
The 12 volt DC electrical supply is controlled by the battery disconnect switch located in the coach doorway. The switch minimizes amperage draws on the coach batteries when the motorhome is not in use or in short-term storage. Rotate the switch to the 12 o'clock position (4) to disconnect the batteries. Rotate to 3 o'clock position (5) to connect the battery.



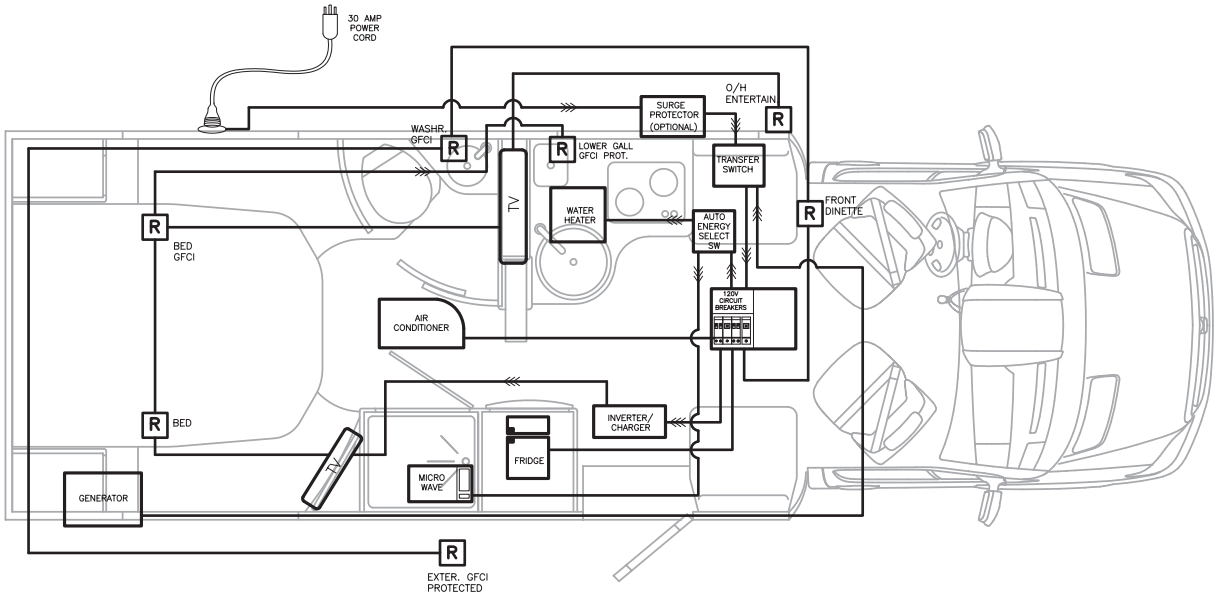
U24MB 30 amp 120V Wiring Schematic



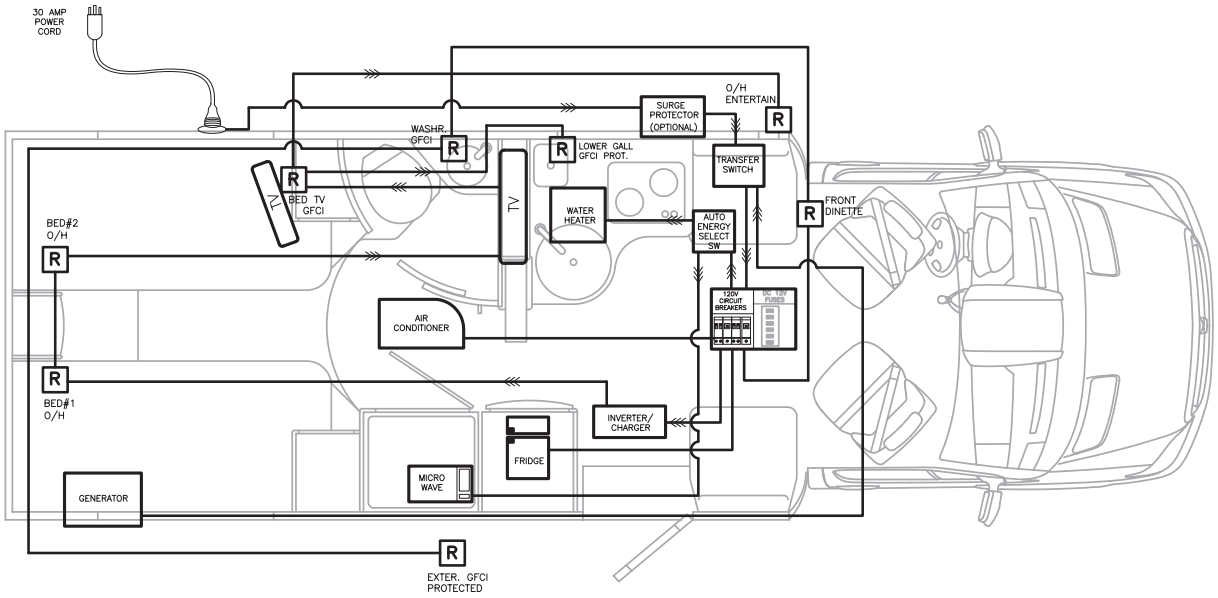
U24CB 30 amp 120V Wiring Schematic



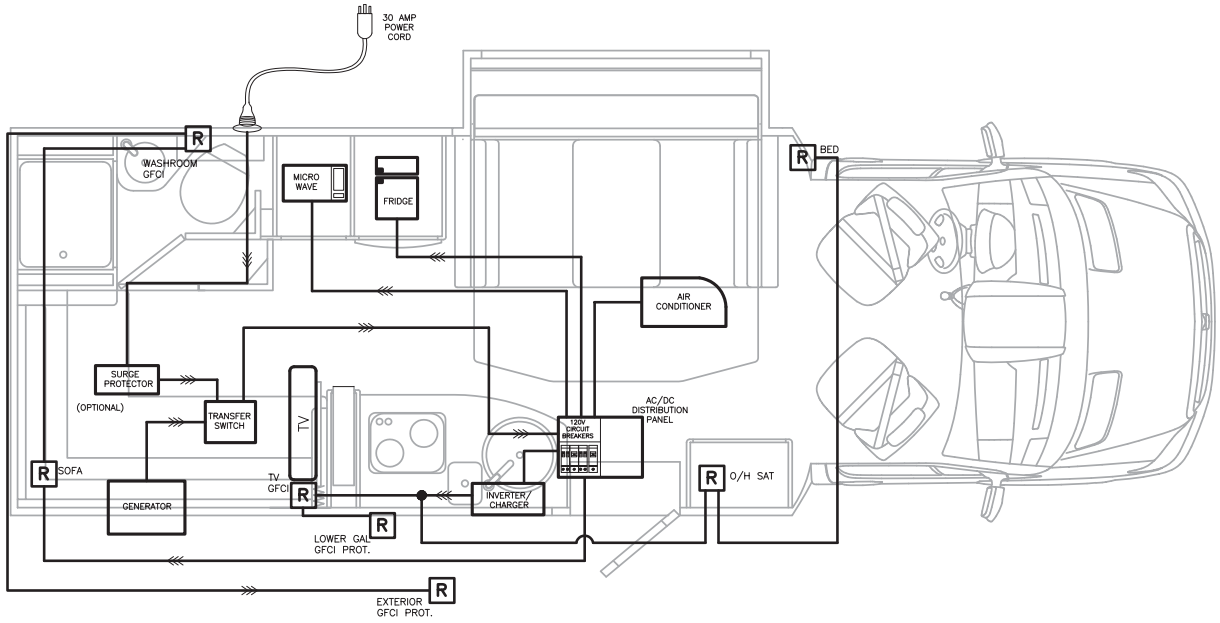
U24IB 30 amp 120V Wiring Schematic



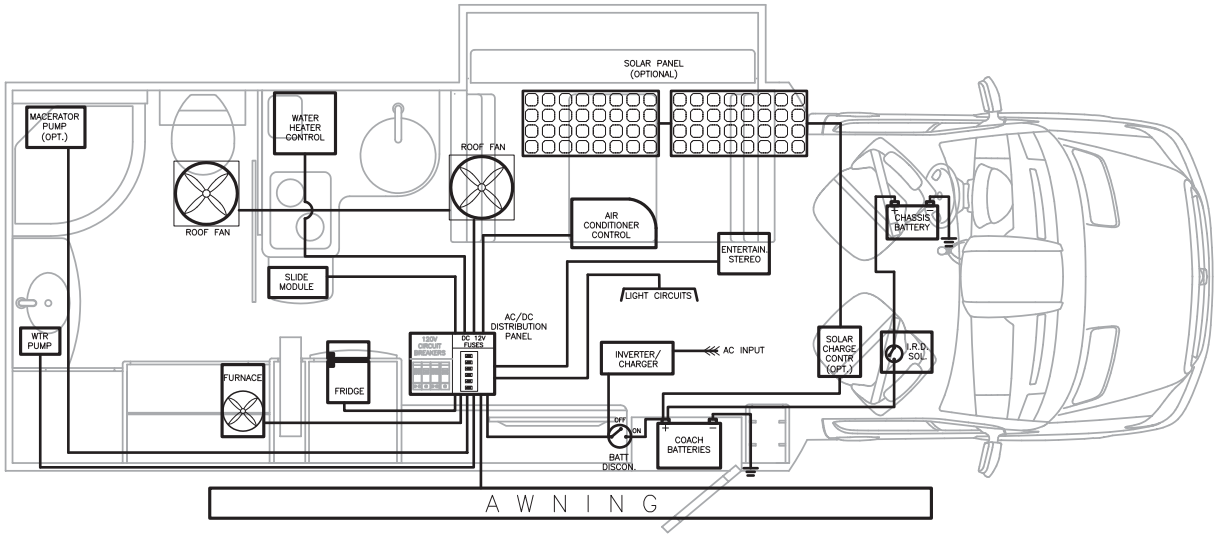
U24TB 30 amp 120V Wiring Schematic



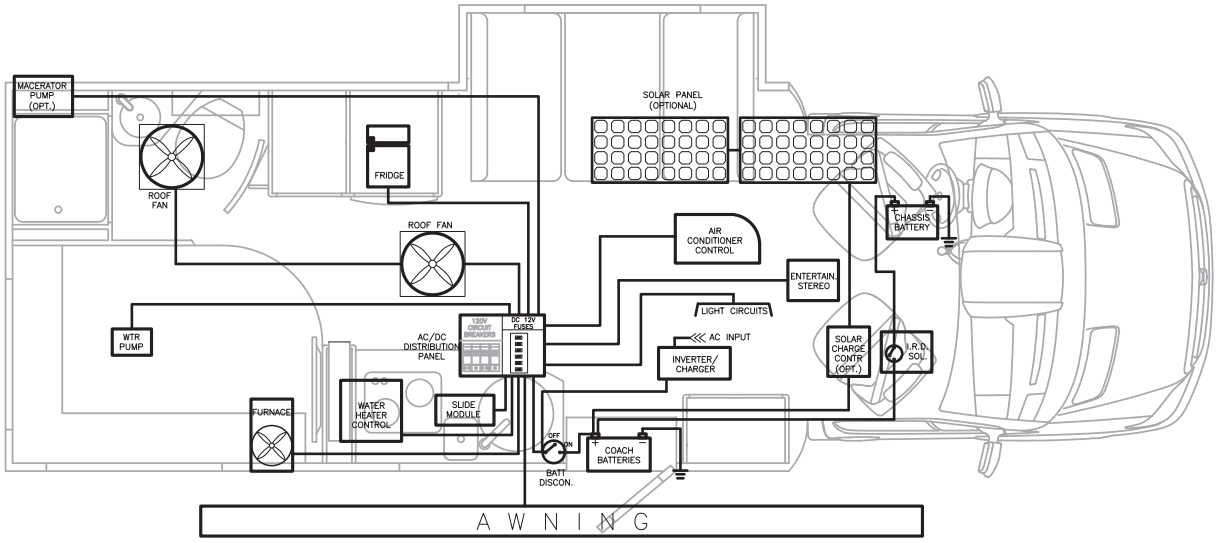
U24FX 30 amp 120V Wiring Schematic



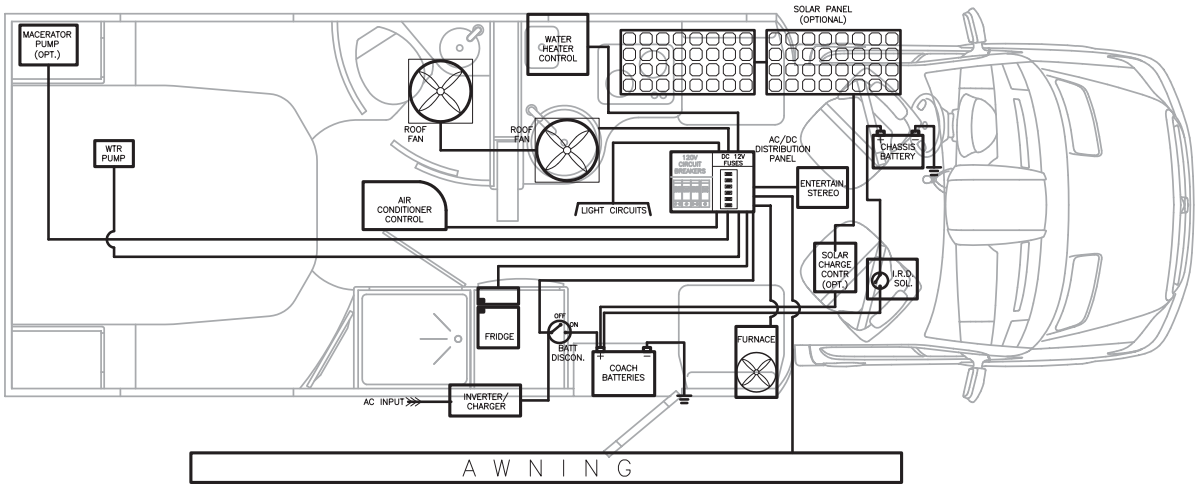
U24MB 12V Wiring Schematic



U24CB 12V Wiring Schematic

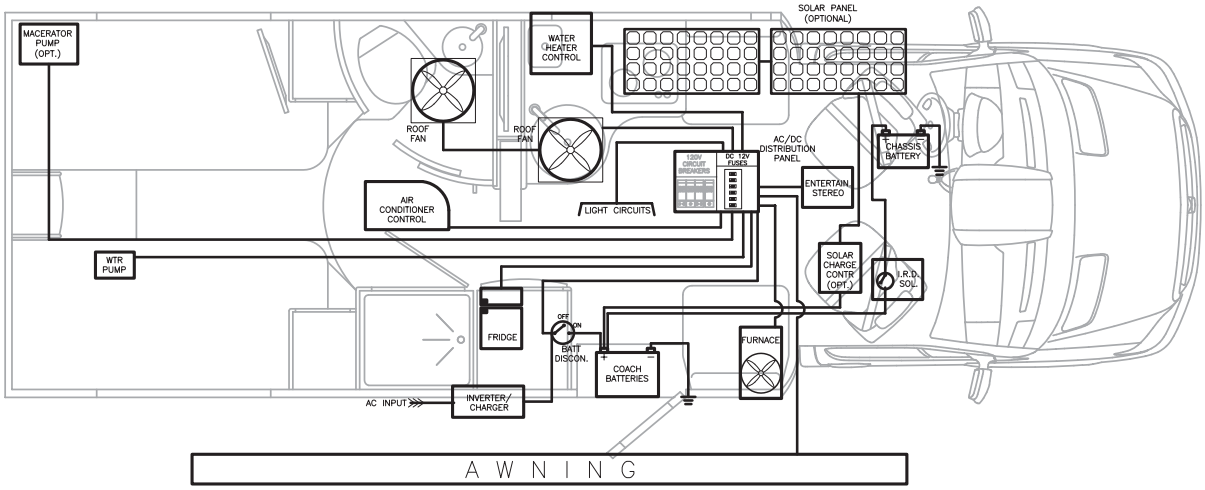


U24IB 12V Wiring Schematic

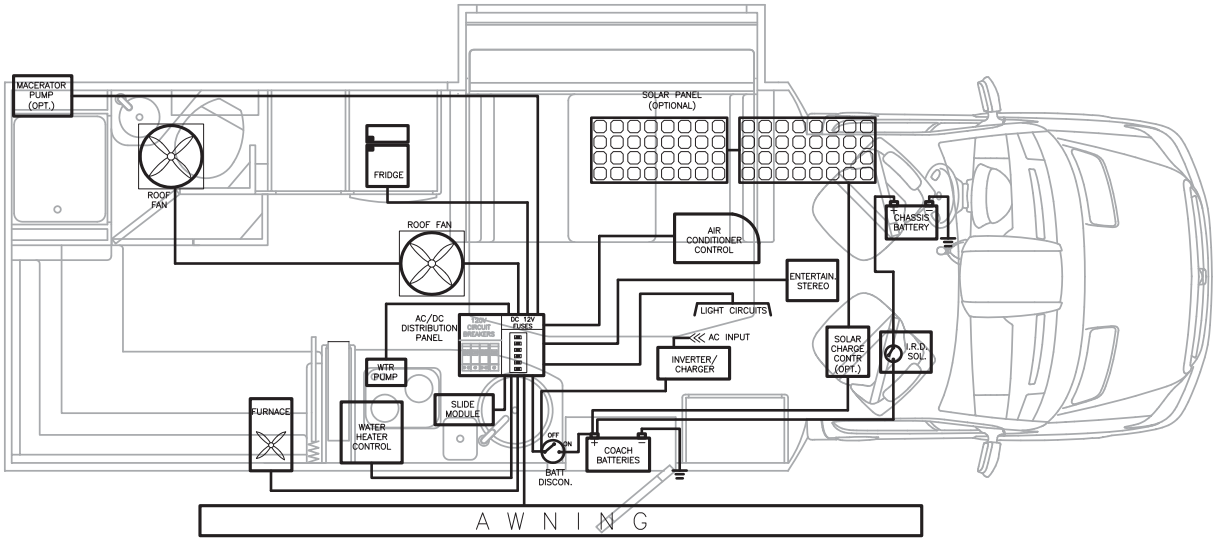


U24 IB 12V ELECTRICAL WIRING SCHEMATIC

U24TB 12V Wiring Schematic



U24FX 12V Wiring Schematic



System Monitor

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

Water Pump Switch (2)

This switch controls the power to the water pump. Press the top of the switch to turn on the water pump, and press the bottom of the switch to turn off. The switch light illuminates when the switch is in the on position.

Test Switches (3-7)

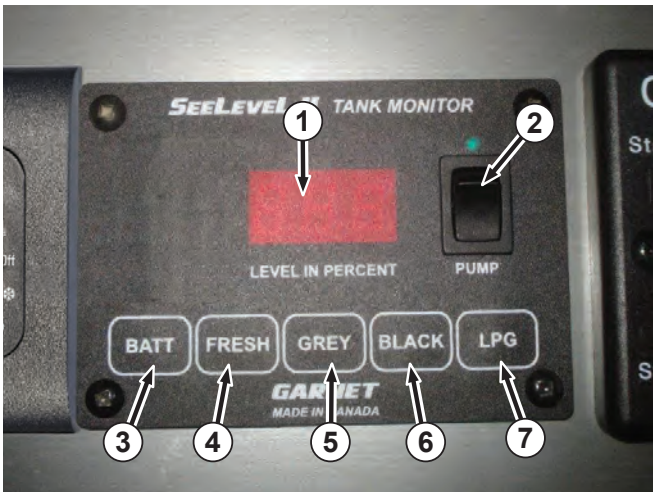
Depress the following switches to monitor the level of the system capacity used/available on the LED display (1):

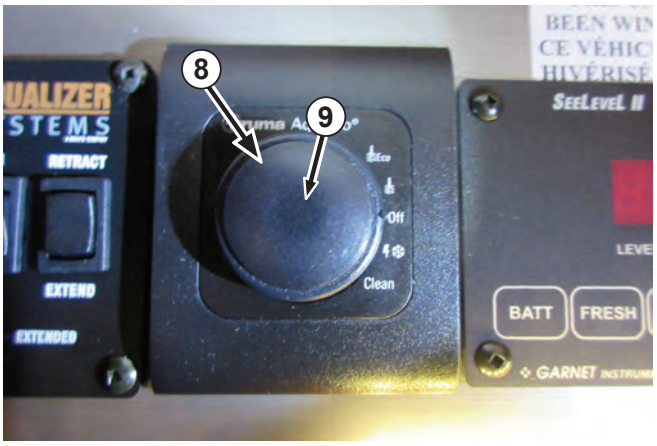
- **BATT (3)** - Displays the battery power level
- **FRESH (4)** - Displays the fresh water holding tank level
- **GREY (5)** - Displays the grey water holding tank level
- **BLACK (6)** - Displays the black water holding tank level
- **LPG (7)** - Displays the LP gas tank level

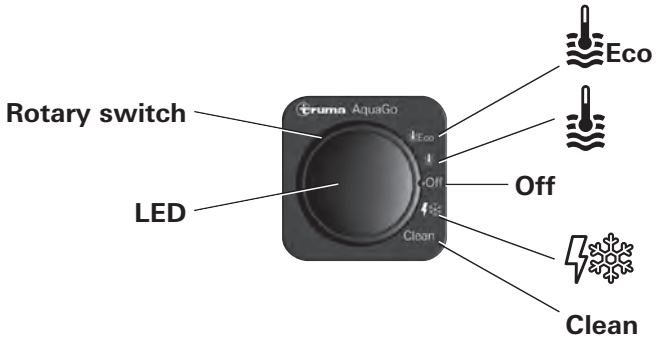
Refer to the detailed operating instructions in the Motorhome Information Kit.

Water Heater Switch (8)

This switch controls the power to the water heater. Turn the switch to turn on the water heater, and turn the switch to turn off.







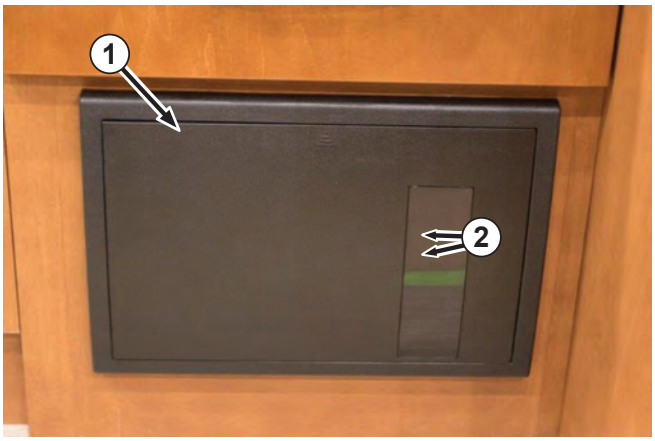
NOTICE

The on-demand water heater switch light (9) illuminates when the water heater is turned to the ON setting.

Power Distribution Panel

The power distribution panel (1), located in a lower cabinet fascia, contains the 120 volt breakers for the AC incoming power and 12 volt fuses for the coach DC battery power. Refer to your floor plan in the “Introduction” section for the power distribution panel location.

The left side of the breaker panel (4) contains 120 volt AC breakers. Refer to the circuit breaker panel decal to identify the function of each breaker. The right side (3) houses 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 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 converter and control panel manuals in the Motorhome Information Kit for further details.

NOTE: There is a single 30 amp main 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 circuit is protected by a fuse. When a fuse blows (refer to Figure 1), shut off all appliances or lights on the affected circuit, and replace the fuse with a new one of the same amperage.

12 Volt DC Chassis Fuses

Refer to the chassis operator's manual in the Motorhome Information Kit for chassis fuse functions.

Mercedes Fuse (in driver pedestal)

Fuse #10 - Replaced with 10 amp fuse to power the exterior courtesy lights above the driver and passenger doors. Refer to Figure 2.

Fuse #11 - Replaced with 10 amp fuse ignition power to 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 model)

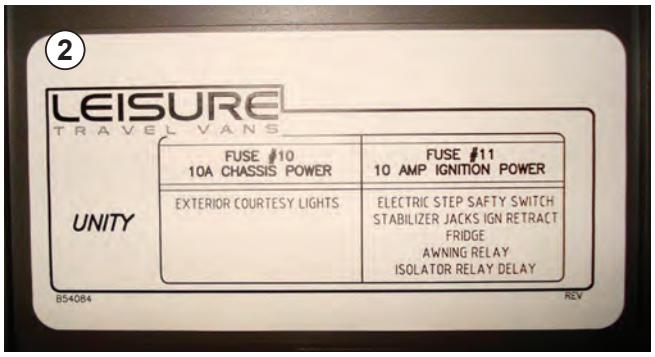
Ground Fault Circuit Interrupter (GFCI)

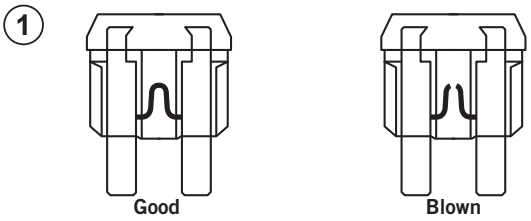
Various outlets in the motorhome, particularly those near sinks and water supplies, are connected to a GFCI. A GFCI detects electrical current that is travelling along and unintended path and stops the current to reduce the risk of electrical shock and fire. If a GFCI breaker trips, unplug all the appliances on that circuit, and press the reset button (3) on the outlet. To test the operation of the GFCI breaker, press the test button (4).

NOTE: GFCI recepticals may not appear as shown.

If the GFCI trips repeatedly, have the problem 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.





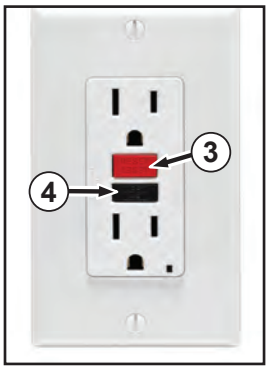
Fuse Condition

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

⚠ 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 galley receptacle is protected through a GFCI located in the bedroom or couch area.



Auxiliary LP Gas Generator (Optional)

Generators are installed below the floor, the location 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 Generator

Turn on the LP gas valve by depressing the top of the propane shut off switch (1) located in the utility center in the driver's side exterior compartment.

NOTICE

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

The LP gas generator control panel (2) is located in the overhead cabinet above the coach entrance door.

Starting the Auxiliary LP Gas Generator

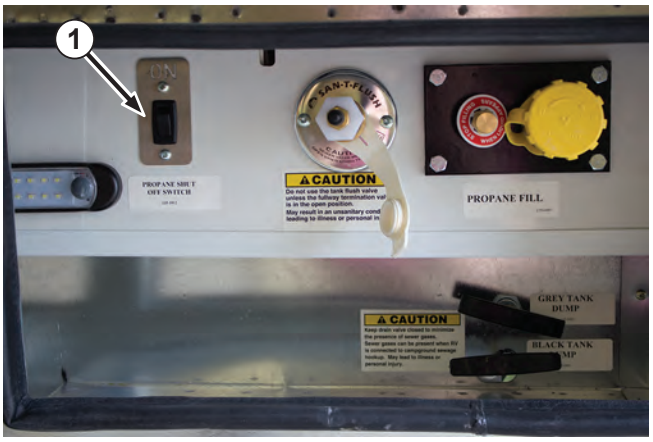
1. Depress and hold the top of the generator start button (3) until the generator engine starts running, then release the button.
2. Allow the generator engine to settle and run smoothly before operating any electrical appliances.
3. Become familiar with the output capacity and capability of your generator.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

Stopping the Auxiliary LP Gas Generator

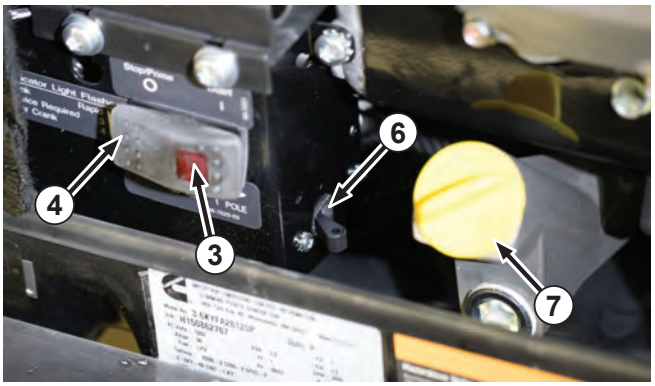
1. Depress and hold the bottom of the generator stop button (4) until the generator engine has completely stopped.

Generator Hour Meter

This meter (5) is for tracking usage of 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 if it is tripped. It is recommended that the generator be run a minimum of two hours a month.

NOTICE

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

Auxiliary Diesel Generator (Optional)

The auxiliary diesel generator (1) is located below the coach floor (location varies depending on floor plan).

The diesel generator control panel (2) is located in the overhead cabinet above the coach entrance door.

NOTICE

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

Starting the Auxiliary Diesel Generator

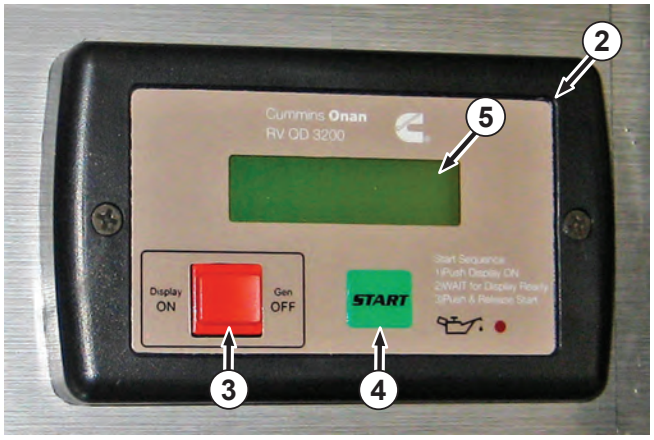
1. Depress red "Display ON" button (3) to waken the generator set display screen (5) and start the fuel pump to prime the system (fuel pump will only run for 5 minutes if generator doesn't start).
2. Depress the start button (4) until the diesel generator engine starts running, then release the button. The display screen will show "GEN OFF" until the engine starts.
3. Allow the diesel generator engine to settle and run smoothly before operating any electrical appliances.
4. Become familiar with the output capacity and capability of your diesel generator.
5. 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

Depress the red "Gen OFF" button (3) to stop the generator.

⚠ Warning

Press the stop switch (6) 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.

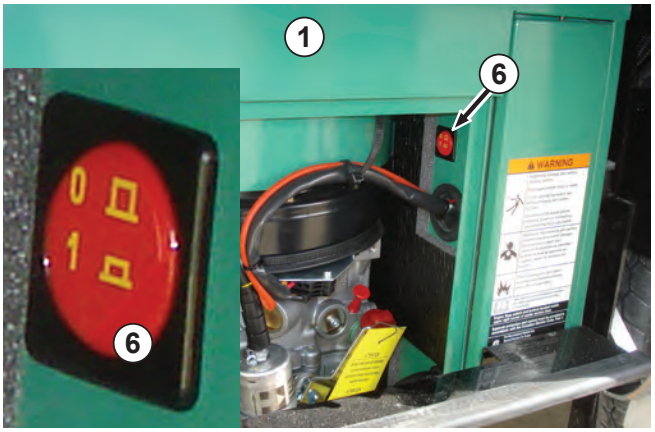


NOTICE

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

This is NOT a start switch. The generator set can only be started using the remote control panel inside the RV.

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 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.

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 pipes are 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

Start the generator to automatically switch over from 120 volt AC shore power to generator power.

Built-in Delay

A 20–30 second delay 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 automatically transfers power when switching between 120 volt shore power and generator power, and prevents damage to any circuitry if the shore power and generator are inadvertently 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 these systems.

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 - Located under the driver's side cab floor (1).

Coach Batteries (3) - Located behind a panel (4) in the interior coach doorway steps.

NOTICE

A 200 amp fuse (2) located on the side of the chassis battery, protects 12 volt coach charging system.

Chassis Battery

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

Disconnect the chassis battery cables 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.

The coach fuse block and the 15 Amp fuse for the solar panel are located inside the chassis battery compartment. Inside the fuse block, a cable (5) connects the Solar Panel Fuse.

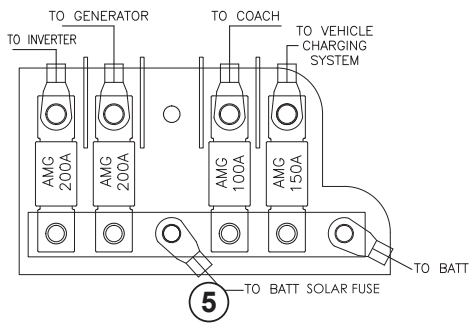
NOTE: Fuses must be replaced with the same rating and same type.











Coach Batteries (12 Volt DC Power Supply)

The coach batteries 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), 120 volt AC generator starter, water pump, furnace fan, interior lights, holding tank, water level gauges, etc.

Coach Battery Condition Meter

For voltage readings, refer to Magnum Inverter Remote Control Status display (2).

Battery Maintenance

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

Battery Problems

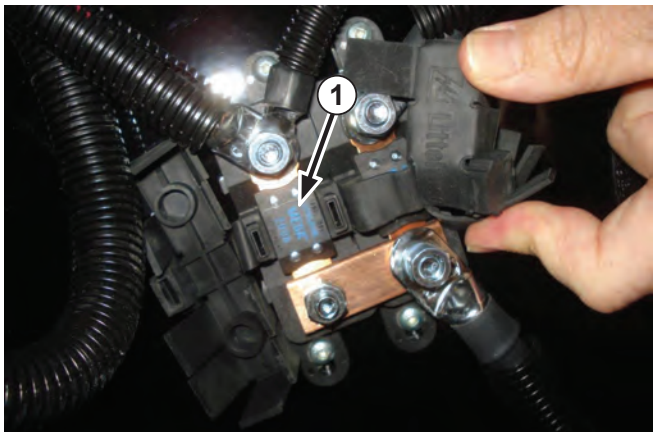
Several conditions can destroy the battery's function including sulfation and freezing

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 close to fully-charged to prevent the liquid electrolyte inside the battery from freezing.

Long-Term Storage

Turn off the 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 storing your motorhome for an extended period of time and batteries cannot be routinely charged, it is advised to remove the batteries and store them in a cool, dry location. Do NOT store batteries on a moist concrete floor. 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. Perform monthly inspections of the batteries' external condition. Look for cracks in the covers and cases.
2. Ensure batteries are securely fastened in the proper position.
3. Make sure battery clamps are tight and free from corrosion.
4. Keep the batteries and terminals clean. Acid and 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.

⚠ Warning

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

5. 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.

6. 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.

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

NOTICE

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

11. If you do not have maintenance-free batteries, check the battery fluid level and fill with distilled water if necessary. Do not overfill.
12. 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/Leisure Travel Vans uses Magnum 1200W Modified Sine Wave Inverter/Charges. The 1200W inverters are standard on all units. Inverters operate on the following principal: they change 12V DC power stored in batteries into 120V AC power used in household appliances. The 1200W inverter can supply 10A A.C. at full capacity; it has a 15A output breaker (1) and a 20A input breaker (2). The 15A breaker powers the Bedroom, Entertainment and Galley receptacle. When the motor home is plugged into shore power, the breaker panel supplies power to the inverter, which switches that power through to the 'inverter loads'.

When shore power or generator power is absent, the inverter can be switched on and used to supply 120 volt power to the loads mentioned above, no other receptacles will have power. The 1200 watt inverter has an internal 55 amp battery charger. Once the inverter has accepted the AC input power, Charge Mode will begin however it is possible to turn charger off.

The Magnum Monitor instrument is a complex computer control and monitor device, it is used on all Units. It is factory configured for the particular inverter and battery installation Triple E RV/Leisure Travel Vans uses. If any modifications are ever made to the battery bank, it may be necessary to change some internal parameters. Please refer to the Inverter / Remote Control manual for setting or contact the manufacturer. The Magnum ME-MR controls the invert and charge features of the Inverter.

NOTICE

The invert feature needs to be manually switched 'on' and 'off', however when the inverter Feature was turned ON and the battery disconnect switch has been turned off, next time the Inverter has been powered up the inverter feature needs to be turned on manually.

IMPORTANT

Please be aware that inverters use a standby current drain even when your equipment is turned off so to ensure your battery life, turn off the inverter function 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, insure 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 cabinet above the coach entrance doorway. The Inverter Remote Control Panel is equipped with an Inverter Function - ON/OFF (5). The Inverter/Charger System Status Display (3) shows the Battery Voltage, different stages of Battery Charging, DC Power Usage while Inverting, and many more...

Refer to the inverter remote control manual in the Motor home Information Kit for more information.

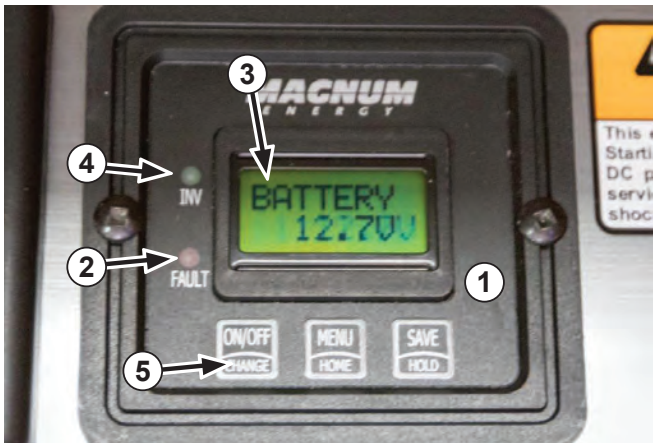
1. Fault (2).
2. Status Display (3).
3. Inverting LED (4).
4. Inverter Function ON/OFF (5).

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 re-configure the remote. Have the unit serviced by authorized personnel only.

NOTICE

The inverter may cause digital clocks installed in small appliances, such as coffee makers, to operate erratically or malfunction. Avoid using digital clocks when operating the inverter.



NOTICE

When the Inverter remote fault light (2) is on and the display (3) shows “Dead Battery”, check to see if the battery disconnect switch (6) is ON.



Progressive Industries Electrical Management System EMS-LCHW30

When shore power is connected it passes through the EMS-LCHW30 to protect the wiring in the Wonder.

- 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; this condition means 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 or 6 gauge for 240V, 50A systems and rated' for outdoor use to reduce the risk of electrical shock. We recommend the length not to exceed 20-25'. Small gauge cable will have a 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

EO 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; otherwise, this will result in severe damage to the RV.

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 RV 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 coach.
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 Technical Support.

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

Solar Power Unit

Your motorhome may be equipped with a solar power kit. The solar power unit continuously charges the coach batteries to help keep them topped up. The solar controller (1) is located in the cabinet above the passenger seat. Refer to the solar controller manual in the Motorhome Information Kit for detailed operating instructions.



NOTICE

The solar power unit is intended to top-up 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

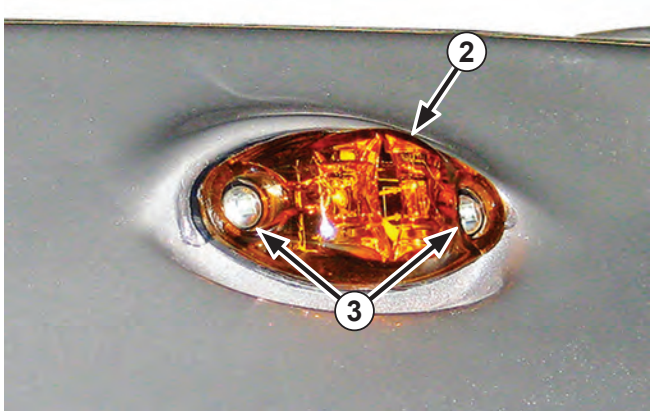
Disconnect the chassis and coach batteries before carrying out maintenance on the lighting system.

Exterior Lighting

Upper Clearance Lights (2)

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

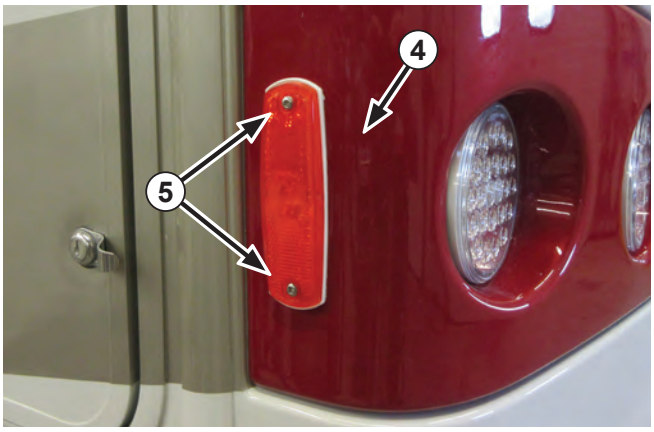
1. Remove the two screws (3) and pull the light out of the bodywork to gain access to the connections.
2. Disconnect the old and reconnect the new light.
3. Insert the new light into the bodywork and secure with the two screws (3).



Side Marker Lights (4)

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

1. Remove the two screws (5), and pull the light out of the bodywork to gain access to the connections.

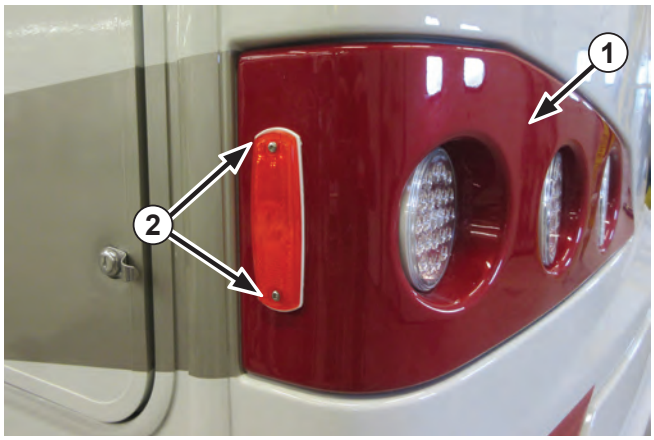


2. Disconnect the old and reconnect the new light.
3. Insert the new light into the bodywork, secure with the two screws (5), and reinstall the lens cover

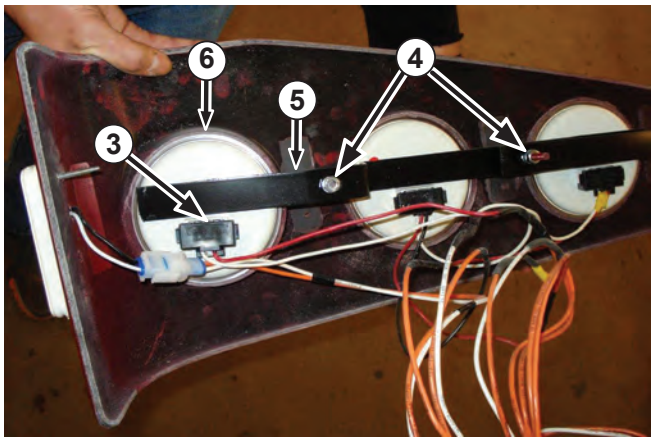
Rear Indicator/Reverse/Brake/Road Lights (1)

1. Unscrew the side marker lens cover (2).
2. Pull the light assembly (1) away from the coach body.
3. Unclip the electrical connector (3) from the light you are replacing.
4. Remove the two nuts (4) securing the support bracket (5) to the light assembly, and remove the support bracket.
5. Remove the defective light (6), and install a new one.

   NOTE: The lights (6) are sealed with a bead of silicone to prevent dust and moisture from entering the light assembly (1). Carefully remove the silicone when changing the light, and apply a new bead before reinstalling the light assembly.
6. Reinstall the light assembly (1) by following Step 5 to Step 1 in reverse order.

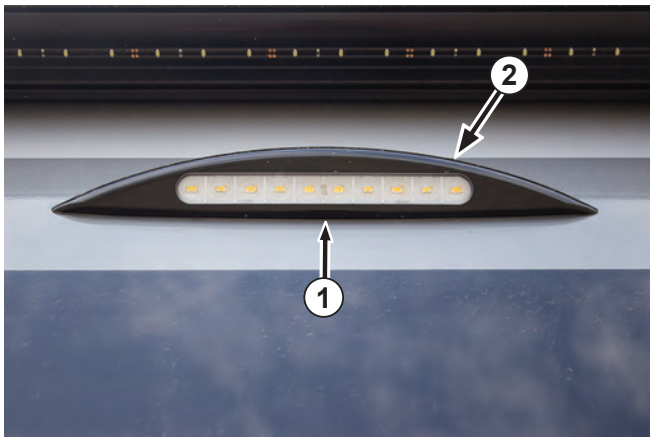






Exterior Flood Light (1)

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

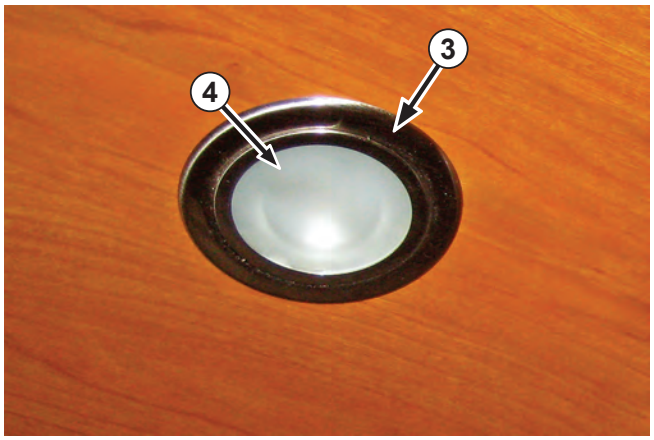


Interior Lighting

Cabin Lights (3)

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

1. Pull down on the light fitting (4).
2. Install a new light into the opening.

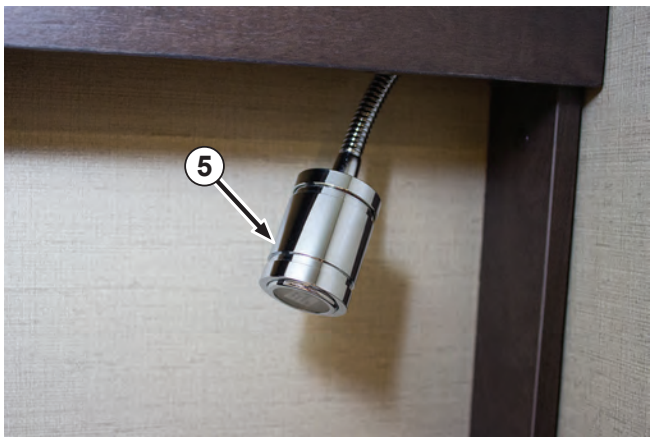


Reading Lights (5)

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

NOTICE

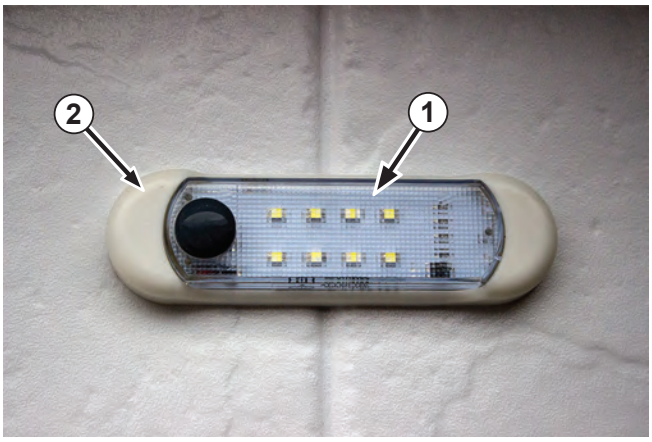
All LED lights are not serviceable. If any light stops working, have the entire light replaced by a qualified service technician.



Interior Shower Light (1)

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

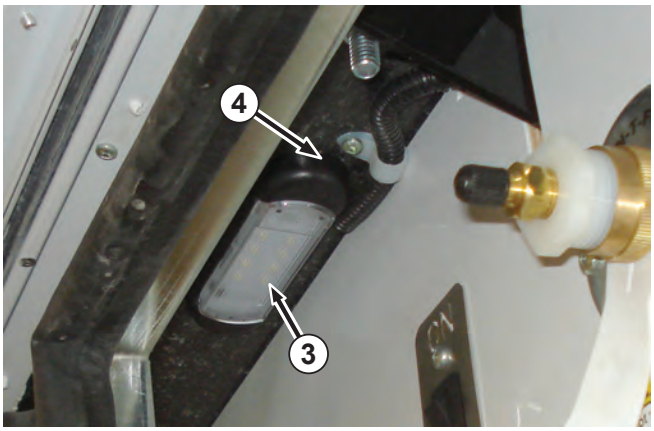
1. Unclip plastic cover (2).
2. Remove and replace light.
3. Install cover



Exterior Utility Center Light (3)

NOTE: This is a sealed LED unit and must be replaced as complete unit. The exterior utility center light (3) is controlled by the exterior storage and utility center light switch inside the coach. Refer to the Exterior Lights section in the "Vehicle Operation" chapter for instructions.

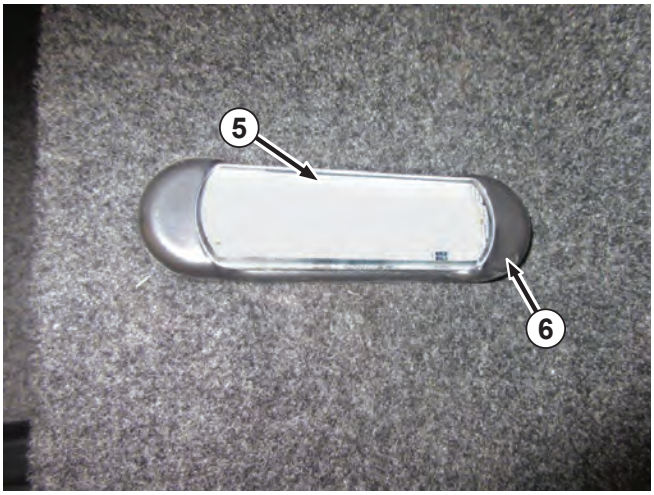
1. Unclip plastic cover (4).
2. Remove and replace light.
3. Install cover.



Baggage Compartment Light (5)

NOTE: This is a sealed LED unit and must be replaced as complete unit. The baggage compartment light (5) is controlled by the exterior storage and utility center light switch inside the coach. Refer to the Exterior Lights section in the "Vehicle Operation" chapter for instructions.

1. Unclip plastic cover (6).
2. Remove and replace light.
3. Install cover.



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 or fresh water supply your motorhome's sink, shower, toilet, and water heater:

- A fresh water tank located inside your motorhome.
- A "city water" connection that supplies water through a hose.

The water system built into your motorhome provides full service similar to the system used in your home. A 12 volt DC self-priming pump draws water from the fresh water storage tank to all 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:

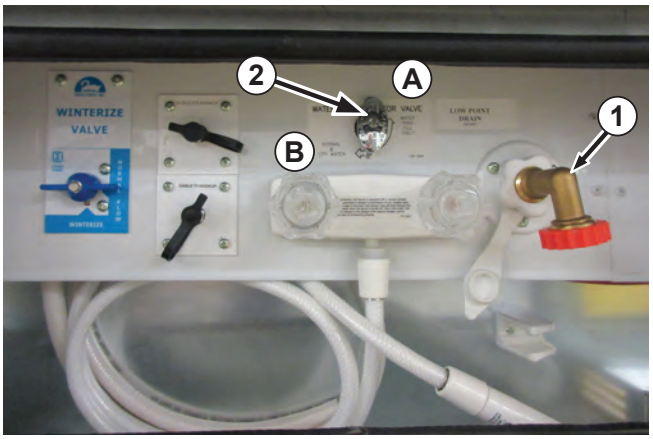
- Water tank fill (i)
- City water (ii)

External Water Supply

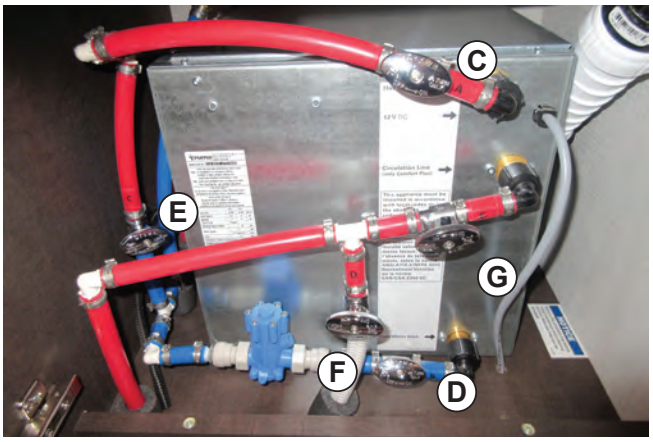
The external water source supplies your motorhome's water system with water at city pressure when the water pump is switched off.

Connecting the External Water Supply

1. Press the bottom of the water pump switch (3) to turn off the water pump. The switch is located on the system monitor panel in the cabinet above the coach entrance doorway.







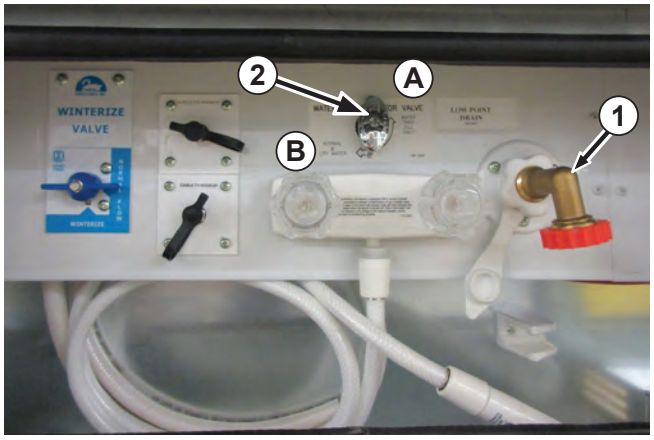
2. Attach a potable water hose to the city water connection (1). Turn the water fill selector valve (2) to the city water position (B).
3. Turn on the city water supply.
4. Make sure water heater valves are set as shown above: C, D and G should be open, E and F should be closed.

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 External 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 (not shown) over the city water connection (1).



Filling the Fresh Water Tank

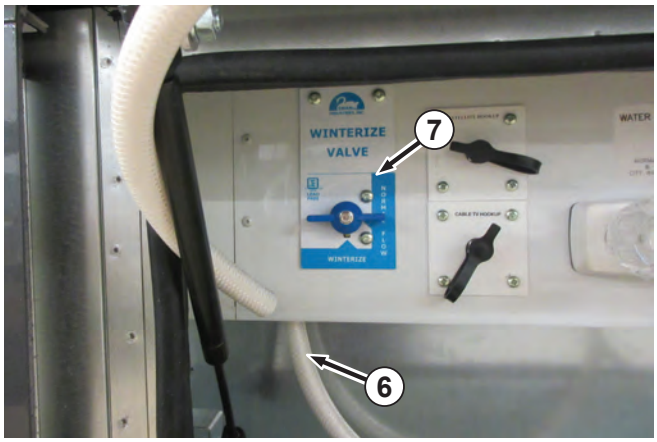
City Water

1. Connect the water hose to the city water connection (1).
2. Turn the water fill selector valve (2) to water tank fill (A).
3. Turn on the city water supply.
4. Depress and hold the fresh water tank level switch (3) to show the percent-full level on the LED display (4). Once the fresh water level reads full on the LED display, turn off the city water supply.
5. Turn the water selector valve (2) to the city water position (B).
6. Turn on the water pump switch (5) on the system monitor panel in the cabinet above the coach entrance doorway.
7. Slowly open the cold water tap until the water runs smoothly. Repeat with the hot water taps.



Potable Water

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



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

   NOTE: The winterize by-pass valve (7) is located in the exterior utility center.
3. Turn the winterize by-pass valve (7) to “WINTERIZE,” and water fill selector valve (2) to water tank fill (A).
4. Turn on the water pump switch (5) on the system monitor panel.
5. Depress and hold the fresh water tank level switch (3) to show the percent-full level on the LED display (4). Once the fresh water level reads full on the LED display, turn off the water pump.
6. Turn the winterize by-pass valve (7) to “NORMAL FLOW,” and the water fill selector valve (2) to city water (B).

Water Pump Switch

When the water pump switch (1) is in the “ON” position, the water pump will automatically activate when using the shower, toilet, or any faucet. The water pump switch is located on the system monitor panel in the cabinet above the coach entrance.

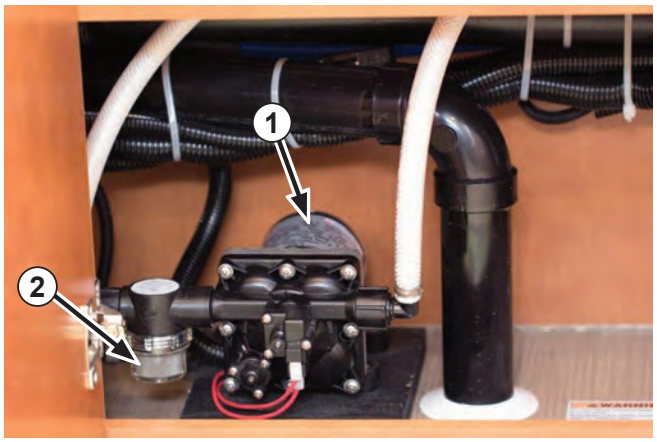


NOTICE

Always turn off the water pump switch (1) 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.

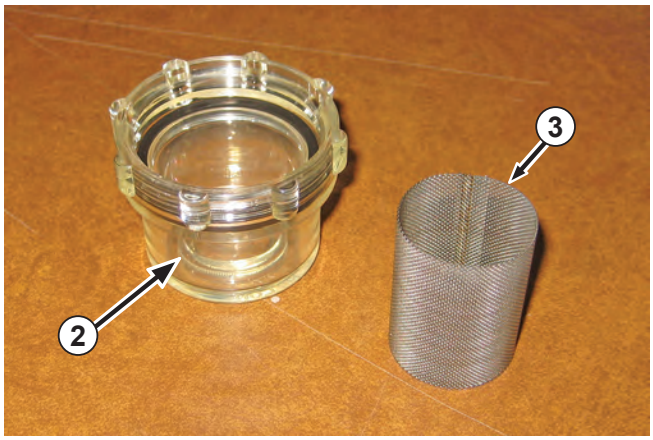
Water Pump

The water pump (1) (location varies depending on floor plan) 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

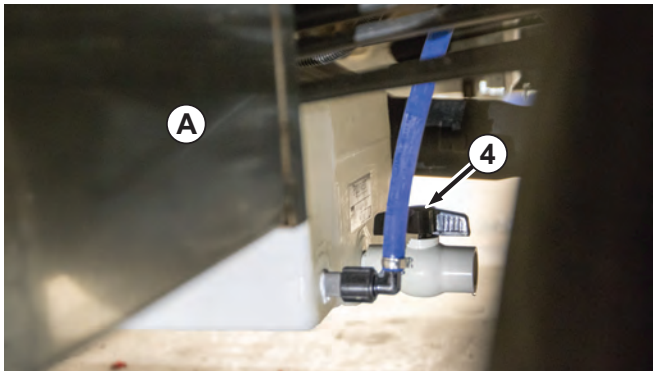
Periodically check the screen (3) on the intake side of the water pump (1), and clean or replace it at least annually to ensure proper water pressure. Unscrew the filter bowl (2) to access the screen, remove the screen, and clean with fresh water. Replace in reverse order, ensuring the filter bowl is securely tightened. Refer to the water pump owner's manual located in the Motorhome Information Kit for further information.

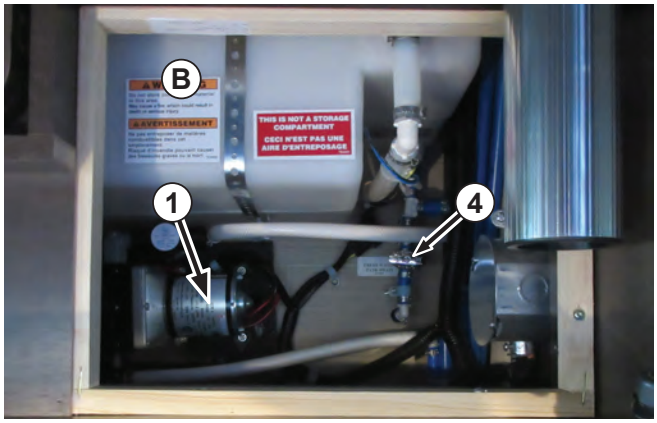


Fresh Water Tank and Water System Drain

To drain the fresh water tank, open the fresh water tank drain valve (4) located either under the bed (B) or on the underside of the coach (A) between the frame rails.

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





Water Filter

The water filter (1) 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 element, unscrew the canister, and replace the inner element. Refer to the water filter manual located in the Motorhome Information Kit for further information.



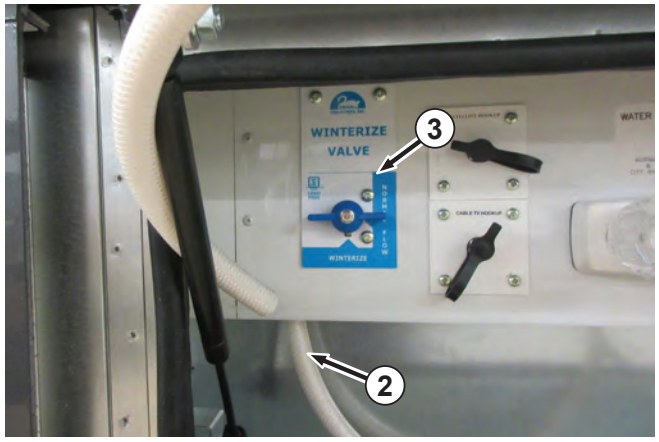
Disinfecting the Water Tank

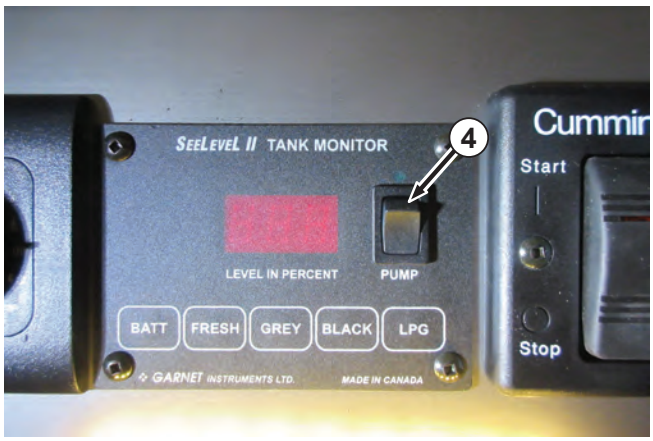
Periodically disinfect the fresh water system. Disinfect when the system is new or has not been used for an extended period of time.

Disinfect the water tank as follows:

1. Prepare a solution of 1/4 cup household bleach to 1 gallon of water.
2. Place the suction hose (2) attached to the winterize by-pass valve (3) into the potable water container.

   NOTE: The winterize by-pass valve (3) is located in the exterior utility center compartment.
3. Turn the winterize by-pass valve (3) to "WINTERIZE."
4. Turn on the water pump switch (4) on the system monitor panel located in the cabinet above the coach door. Turn water selector valve (4) to fill.
5. Fill the tank with fresh water. Run water from each hot and cold faucet until you detect a chlorine odor.
6. Leave the solution in the system for at least four hours. To reduce the waiting time to only one hour, double the concentration of household bleach in your solution.
7. After the required time has elapsed, drain and flush the system with fresh water.





Waste Systems

Grey Water - Waste Holding Tank

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

To display the grey water holding tank level, depress and hold the grey water tank level switch (1) to show the percent-full level on the LED display (2).



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, depress and hold the black water tank level switch (3) to show the percent-full level on the LED display (2).

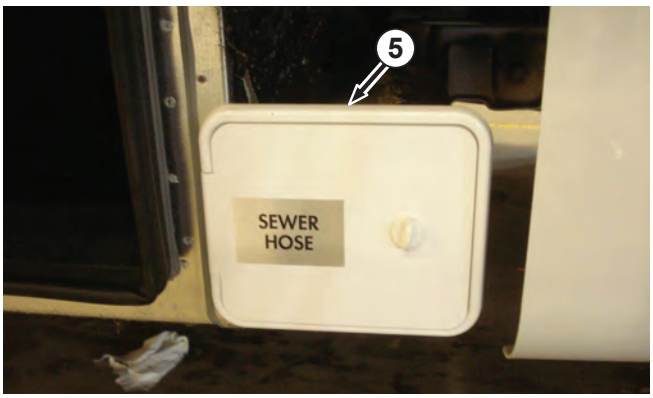
NOTICE

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

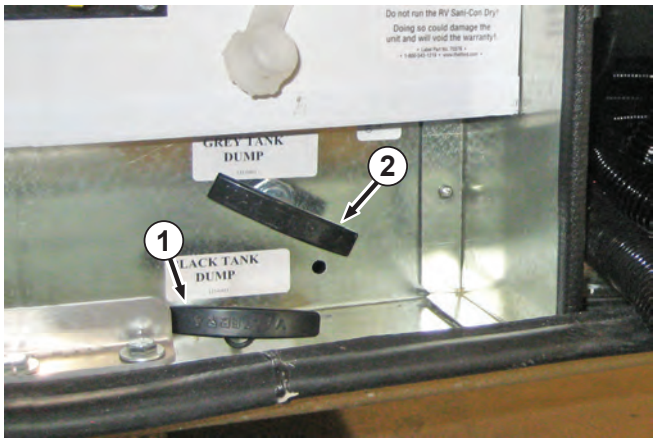


Dumping Holding Tanks

1. Connect the sewer hose (4) 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 (5) (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 (1) first, then pull the grey water tank dump valve handle (2). Push in the handles when you no longer hear or feel waste water flowing through the sewer 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 (3) located in the exterior utility center.
2. Open the black water tank dump valve (1).

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 (3).
5. Close the black water tank dump valve (4).

   NOTE: The black water tank flush line incorporates a non-return valve (5), 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

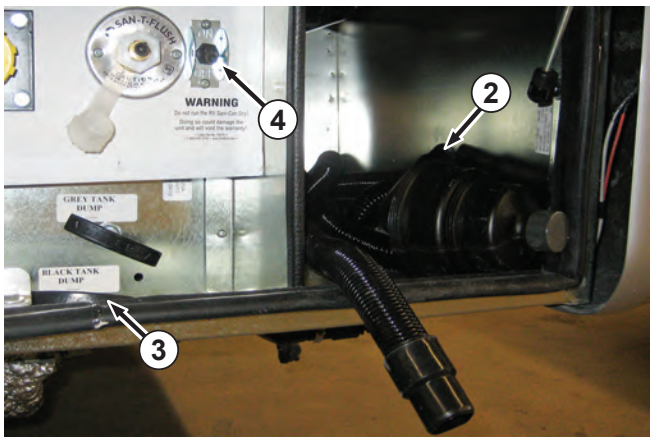
Your motorhome may be equipped with a macerator (1). The macerator breaks down the solid matter in the black water holding tank.

Operate the macerator as follows:

1. Extend the macerator waste hose (2) stored in the exterior utility center and connect to a sewer hook-up.
2. Open the black water tank dump valve (3).
3. Turn on the macerator pump switch (4).
4. Turn off the macerator pump switch (4) when the tank is empty.

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





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 travelling.

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 travelling 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

Operating Features

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.

Operation

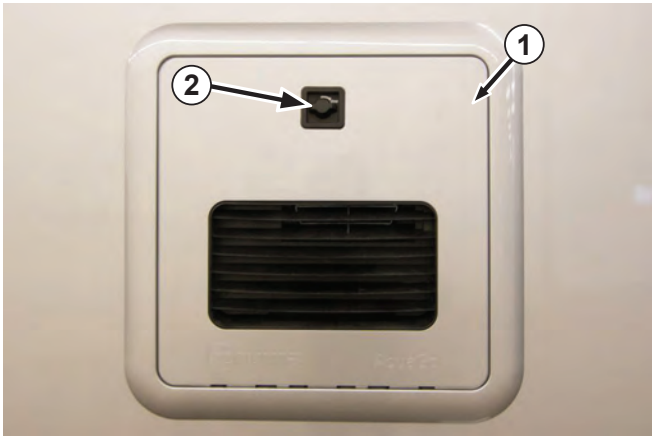
1. Remove the water heater exterior cover (1) by turning the latch (2) counter-clockwise.
2. Ensure the water heater pressure relief valve (3) is closed.
3. Turn the propane shut off switch (4) to ON.
4. Press the exterior water heater switch (5) to either Eco or Comfort ON position (refer to water heater operating instructions in the motorhome information kit for detailed instructions).
5. Insure the water heater valves (6) are in the position shown for normal operation.

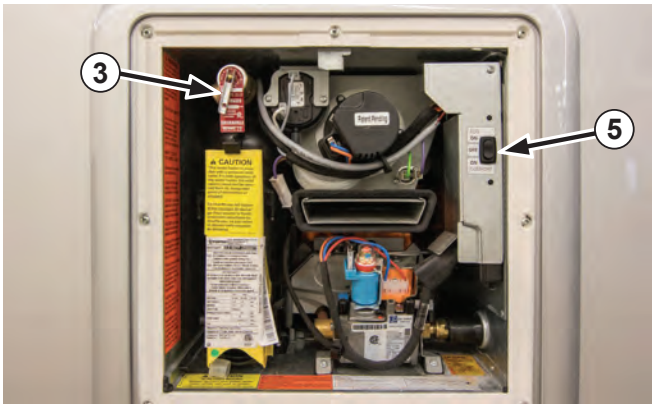
IMPORTANT

Always refer to the owner's manual for the water heater (included in your motorhome information kit).

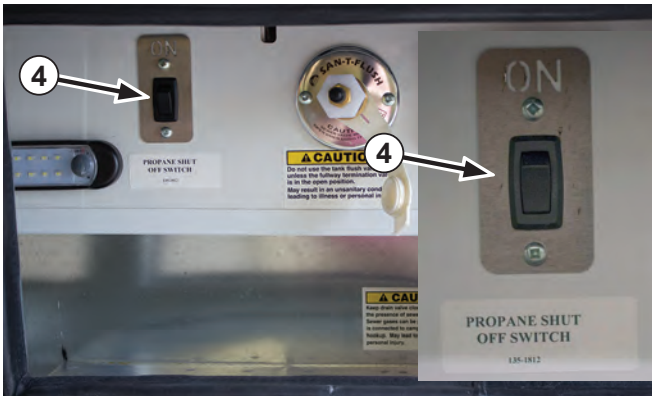
Winterizing

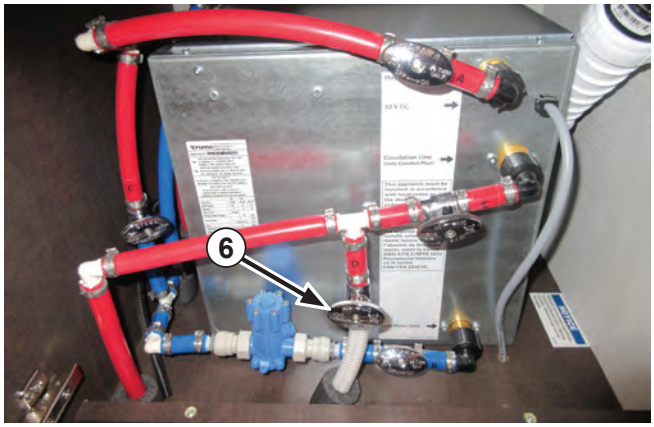
Refer to the water heater operating instructions located in the motorhome information kit for detailed winterizing procedures.





(Shown with exterior cover open)





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 (Murphy and Corner Bed Floor Plans)

Operating the Manual Flush Toilet

Push down the foot valve (1) 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.

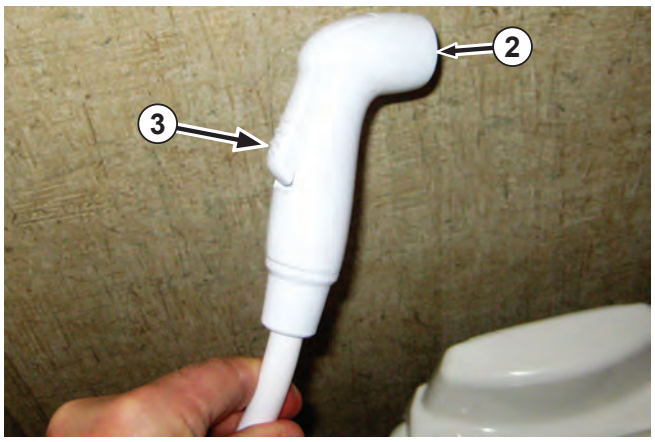


Spray Nozzle

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

Press the lever (3) to activate the spray nozzle.

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



Operating the Macerator Toilet (Twin and Island Bed Floor Plans)

Flush the macerator toilet (1) using the wall mounted control panel (2) as follows:

Water Saver Flush - Press and release button (3) to flush liquids.

Normal Flush - Press and release button (4) to flush solids and toilet paper.

Empty Bowl Flush - Press both buttons (3 & 4) simultaneously and release to empty the bowl and leave it dry for travel. Press either button once to return to normal use.

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 RV 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 RV toilets only.
2. Do not flush sanitary napkins or other non-dissolving items down the RV 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.

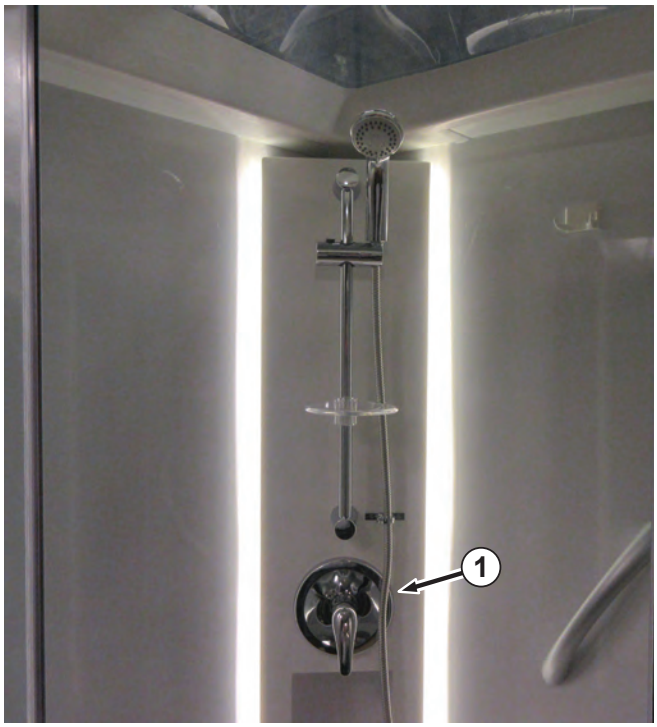
Cleaning the Toilet

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 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 Winterizing section of this manual for further details.

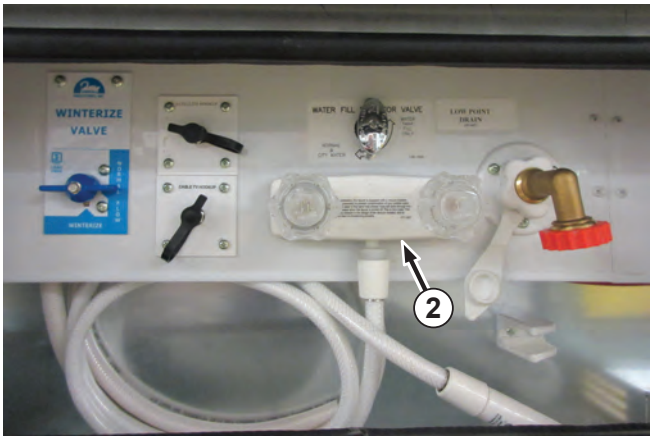
Interior Shower (1)

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



Exterior Shower (2)

Your motorhome is equipped with an exterior shower unit, it is located in the exterior utility center.



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.

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 range, oven, furnace, hot water heater, 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 an authorized Leisure Travel Vans Dealer service center.

LP Gas Control Valve (Utility Center)

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 regulation 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: tank overflow valves, LP gas detectors, and carbon monoxide (CO) detectors. In addition, 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 qualified personnel only.

⚠ Warning

Do not use natural gas in an LP gas system.



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

1. Familiarize yourself with the odor of LP gas. If you suspect a leak, immediately turn off the LP gas supply and have qualified service personnel 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.

Selecting Fuel Types

Butane burns at a much higher temperature than propane, but will not change from a liquid to a gas at temperatures below 32 °F (0 °C). Propane, however, burns at a lower temperature and will convert from liquid to gas at temperatures as low as -40 °F (-40 °C).

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.

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 properly.

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. See the 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 travelling. 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 contacts the liquid level at 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 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.

Travelling 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 a 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 outlet. 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 vehicle 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 vehicle. 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 vehicle. 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 vehicle from the confined area.
5. Use the vent or air conditioning fan to force fresh air into the vehicle 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 vehicle.

   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 vehicle 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 your Leisure Travel Vans dealer. 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 an authorized Leisure Travel Vans dealer service center.

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.

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.

Carpets

Refer to the carpet manufacturer's recommendations for carpet cleaning and care, and for information about stain removal.

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 the stain from spreading, start from the outside of the stain and work towards 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/Convention 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

1. Fill the motorhome fuel tank to reduce excessive moisture buildup.
2. 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.
3. Change the engine oil to the recommended viscosity to aid with cold weather starting.
4. Park the motorhome as level as possible.
5. Ensure the battery has a full charge, then disconnect both the chassis and coach batteries using the battery disconnect switch. Charge the batteries monthly.
6. Wash the motorhome. If exposed to road salts, thoroughly wash and flush the exterior and undercarriage.
7. Remove all perishable items and anything that can freeze (canned goods, medicine, etc). Leave the refrigerator door ajar. Ensure all controls are turned off.
8. Ventilate the living area by opening drawers, cabinets, closets, etc.
9. Drain the grey and black water holding tanks, toilet, and living area water system. Deodorize and allow to dry. Turn off the water heater. Drain the fresh water tank and water heater. Refer to the Cold Temperature Storage section in this manual for winterizing procedures.
10. Turn off the LP gas tank valve switch (1).



Cold Temperature Storage

Water System Winterization - Draining

1. Drain the fresh water tank by opening the fresh water tank drain valve (1). Refer to the “Water and Plumbing System” chapter for location details.
2. When the fresh water tank is completely empty, run the water pump for 1 minute to drain out any water remaining in the pump.
3. Remove the water filter screen (2) and clean. Re-install the clean screen.
4. Drain the water heater by relieving the pressure at the pressure relief valve (3).
5. Un-clip the Easy-Open drain lever and remove filter screen.
6. Attach the blow out plug to the city water hookup in the utility center.
7. Connect a compressed air line to the blow out plug.
8. Open all hot and cold water faucets, including the exterior shower, and blow out all water.

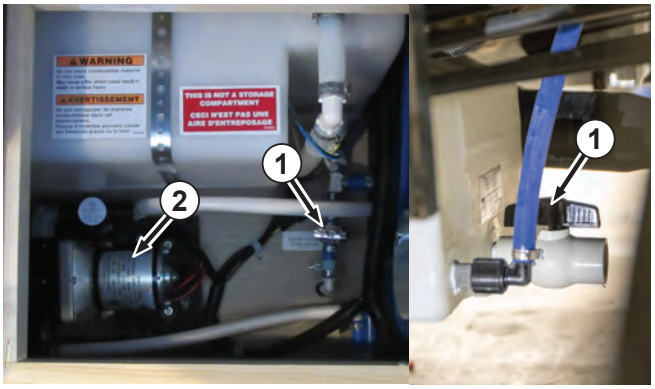
NOTE: Place filter/screen in a secure location during the storage period.

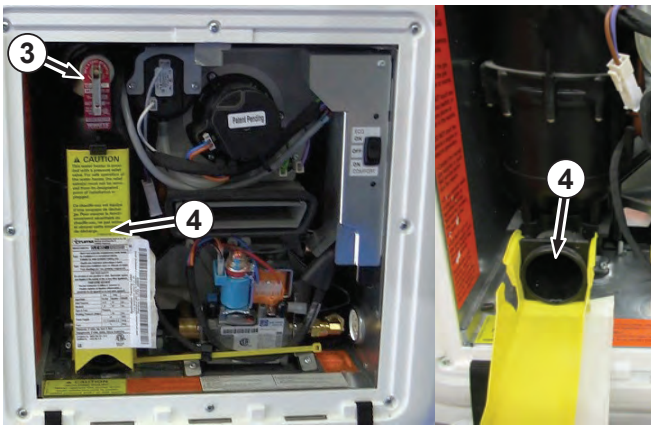
NOTE: Unity U24TB and U24IB models only - Flush macerator toilet. DO NOT FLUSH NON-MACERATOR TOILETS AT THIS TIME.

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.

9. Disconnect the compressed air line, and remove the blow out plug. Release air pressure by opening all faucets.
10. For **Unity U24TB and U24IB 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.





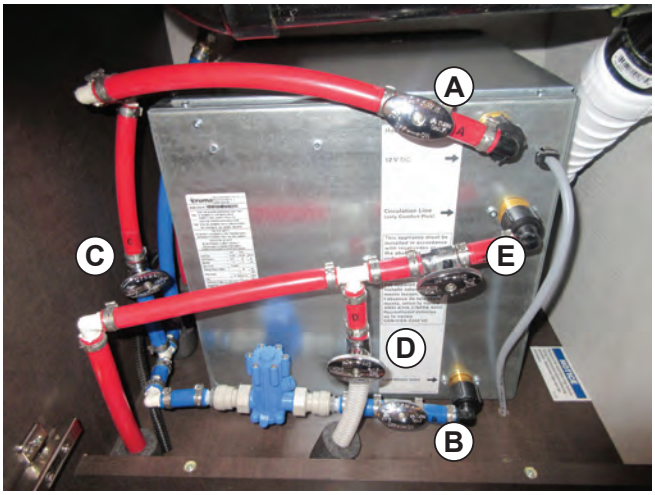


11. Remove the water filter canister, empty any remaining water, and reinstall the water filter canister.
12. Drain the black and grey waste holding tanks.
13. Add approximately 1 cup of non-toxic plumbing antifreeze to the kitchen sink, bathroom sink, shower drain, and toilet bowl.
14. For **Unity U24TB and U24IB models only:** With the termination valves closed, run the macerator (if equipped) for 10 seconds or until the tank is completely empty.

Water System Winterization

Adding Plumbing Non-toxic Antifreeze

1. Switch off the water pump inside (above the entrance door) and disconnect the garden hose at city water outside.
2. Switch off the water heater inside (above the entrance door) (if equipped); if not, then switch off outside at the water heater.
3. Switch off propane in the outside utility compartment.
4. Drain the fresh water tank (MB and FX fresh water tanks are below the floor outside the coach and TB, CB, and IB 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. Close valves (A), (B), and (E). (NO AIR PSI/ WINTERIZATION FLUID IS TO ENTER THE WATER HEATER)
7. Valve (D) should remain closed at this point.
8. Open valve (C).
9. 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.
10. 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.
11. 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.



12. 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.
13. Go inside and switch off the water pump. You can now open valve D 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 before reinstalling both components on the water pump.
14. Go outside and remove the screen from the city water fill connection, depress the center stem until no more fluid drains out (you mayor 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.
15. 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.)

16. 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.
17. 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.

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 bypass valve 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.

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 propane line purged by a authorized dealer. 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 travelling 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.

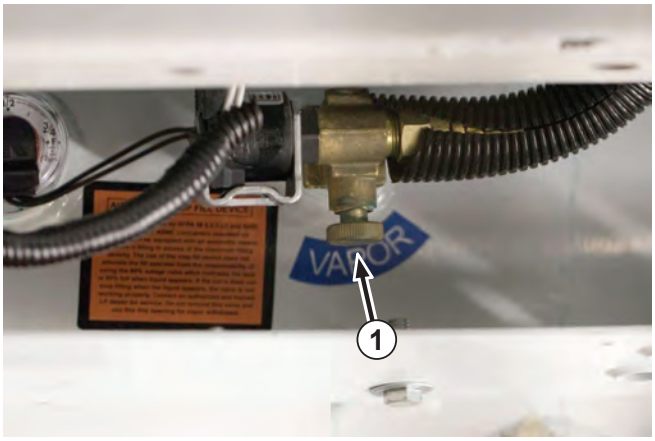
⚠ Warning

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

Maintenance and Servicing

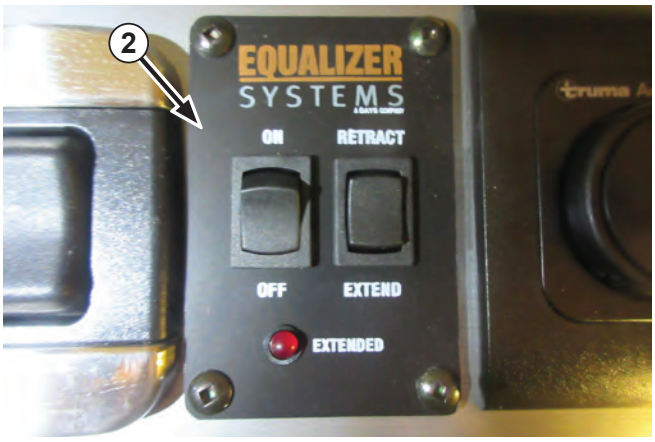
LP Gas Tank Valve

If the electrically operated LP gas valve (1) (located underneath the motorhome) fails to operate the LP gas tank, manually turn the valve clockwise to shut off the LP gas supply.



Stabilizers

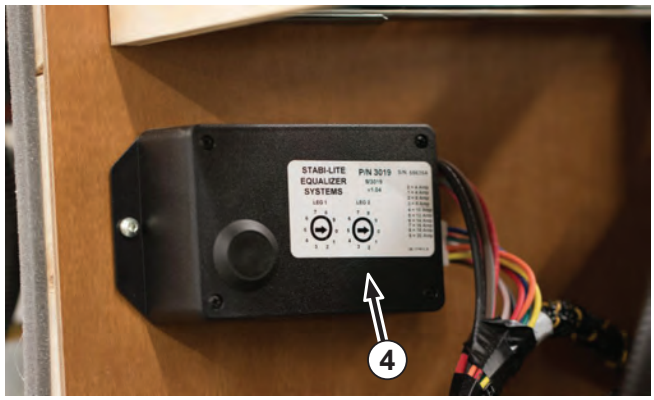
If the electrically operated stabilizers (2) fail to operate, manually operate the override coupler (3) (located underneath the motorhome) to raise or lower stabilizer units.

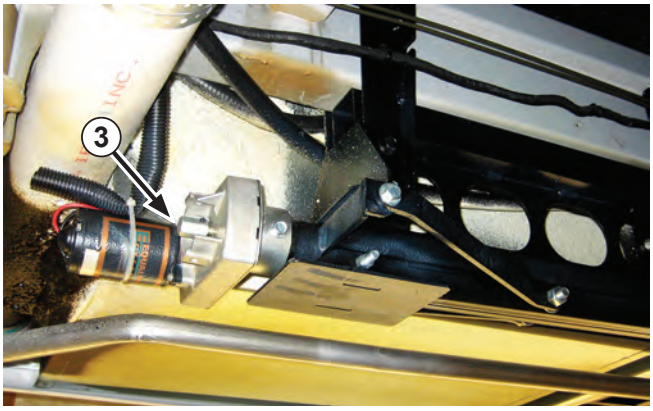


NOTICE

Refer to the detailed operating and safety instructions in the Motorhome Information Kit before performing the stabilizer override procedure.

Stabilizer force can be adjusted using the stabilizer control module (4) (location varies depending on floor plan) (U24IB/TB located under driver's side dinette, U24MB/CB located behind breaker panel.). Refer to the stabilizer installation guide located the Motorhome Information Kit for further details on adjustment and maintenance.





Winterizing AquaGo™ Comfort Plus

1. Ensure water heater is turned OFF, and valves A, B and E are open.
2. **If heater is hot**, leave pump and city supply pressure ON and proceed to step 3. **If heater is cold**, leave pump and city pressure OFF and proceed to step 5.
3. Open hot water faucet and wait for cold water to avoid risk of being scalded.
4. Shut off water supply, either city water or coach water pump.
5. Open hot water faucet to relieve line pressure.
6. Close valves A, B and E.

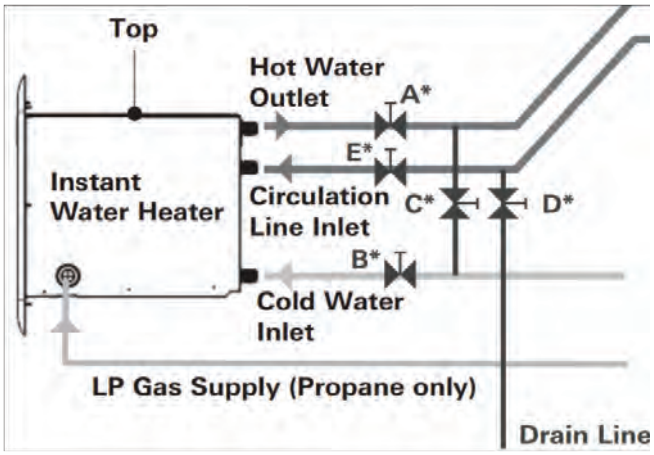
IMPORTANT

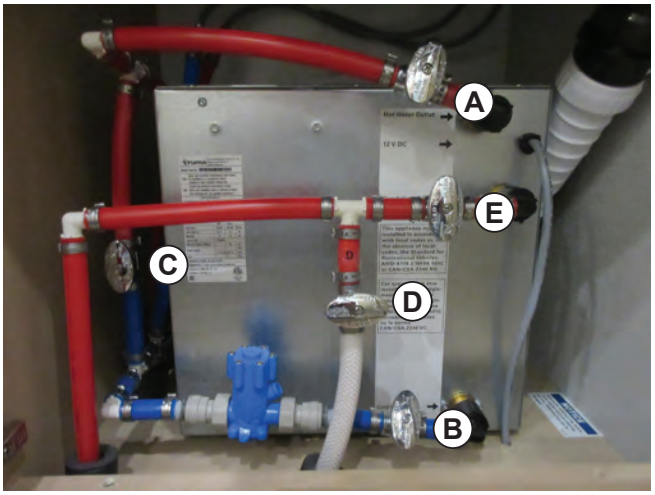
No Air PSI / Winterizing fluid is to enter water heater.

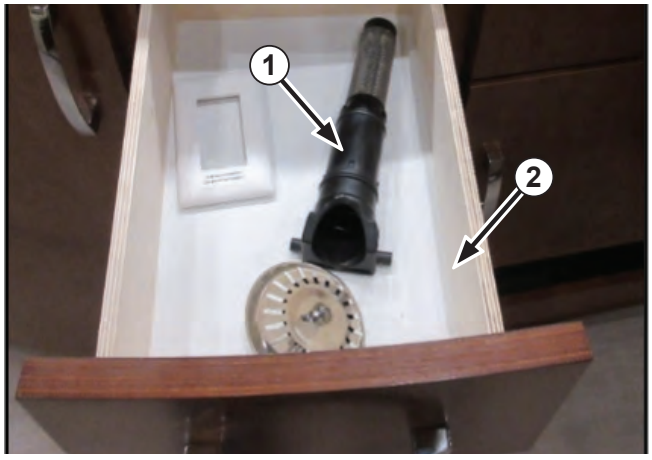
7. Make sure that valve D remains in the closed position.
8. Open valve C.
9. Drain the Truma AquaGo™ instant water heater and place filter (1) in drawer (2).
10. Close all faucets.
11. Flush the RV's water system with:

    Air blow with a chuck fitting through water supply inlet.

    Use suitable winterizing fluid according to supplier's or RV manufacturer's guidelines.
12. Open all fixtures one at a time including toilet flush and exterior shower (if so equipped) as air blows through.
13. Open valve D (leave valve open after On-line air blow).
14. Remove air supply chuck.
15. Wait until winterizing fluid is leaving the drain line. Collect escaping fluid in a suitable container.
16. Close valve D after winterizing fluid is seen.

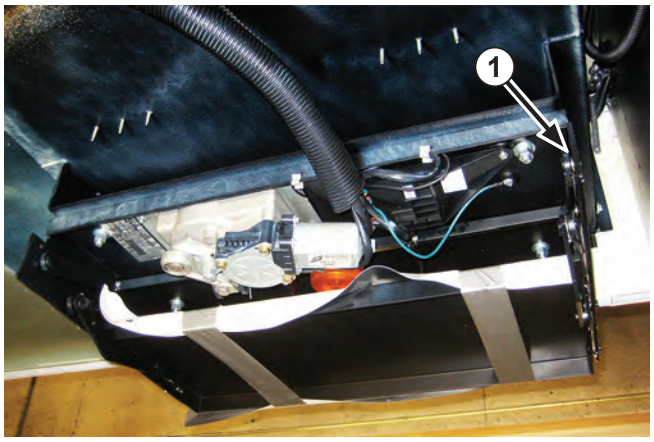






Electric Steps

Periodically lubricate the electric step mechanism (1). Refer to the electric step manual in the Motorhome Information Kit for details.



New Vehicle Limited Warranty

TRIPLE E CANADA LTD.
(Revised February 2013)

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

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

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

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

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

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

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

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

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

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

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

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

7. **Obtaining Warranty Repairs.**
To obtain warranty repairs, you must at your own cost present your motorhome to an authorized service center or dealer during normal business hours and provide a written list of claimed defects or items to be repaired. If requested, you may be required to provide records showing that the motorhome has been maintained as required or recommended by the Owner's Manual. As the owner, you are solely responsible for maintenance of the motorhome as required or recommended by the Owner's Manual and associated costs of that maintenance. Repairs necessitated by failure to maintain the motorhome as required or recommended are not covered by this Warranty.
8. If an authorized service center or dealer is unwilling or unable to make a warranty repair, Triple E RV may request the opportunity to cause those repairs to be made at another authorized service center or dealer.

Notes



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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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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