



**WESTFALIA**

**WAVE**

SKYLIGHT, POPTOP, SRT

**2025 Owner's Manual**

**REVISION DATE: 01/09/2025**

# IMPORTANT

## First Time Owners

Please report immediately if you did not receive a satisfactory walk around presentation of how to operate your new Westfalia Wave RV at the point you took retail delivery.

Email:

[salesupport@roadtrekinc.com](mailto:salesupport@roadtrekinc.com)

Please provide the following:

### VEHICLE INFO:

Your Selling Dealer's Name:

---

Motorhome Model:

---

Your Vehicle Identification No. (VIN):

---

Actual Date of Retail Delivery:

---

# CONTENTS

Consumer Information .....	6	Exterior Ladder (if equipped) .....	13
Dealer's Responsibilities.....	6	Bicycle Rack (if equipped) .....	14
Consumer's Responsibilities .....	6	Before Using the Ladder .....	14
Change of Address or Ownership .....	7	Roof Rack (if equipped) .....	14
Vehicle Identification Labels.....	7	Pre-delivery Inspection .....	14
How to Obtain Assistance .....	7	Before Driving .....	14
Suggestions for Obtaining Service .....	8	Front Wheel Alignment .....	14
Prepare for the Appointment: .....	8	Headlight Alignment .....	14
Prepare a List: .....	8	Service and Assistance .....	14
Be Reasonable with your Requests:.....	8	Reporting Safety Defects.....	15
Do Not Expect Access to the Service Area: ..	8	Occupant and Cargo Carrying Capacity Labels.	15
Inspect the work Performed: .....	8	.....	15
Emergency Weekend or After Business Hours		Explanation of Data .....	16
Warranty Repair Assistance.....	8	Vehicle Certification Label .....	16
Obtaining Service Repair at a Westfalia Dealer		specifications and capacities .....	17
.....	8	owner and vehicle information and capacities	18
Replacement Parts .....	9	Roadside Emergency .....	19
Introduction to your Westfalia Wave.....	10	If You Get a Flat Tire .....	19
 DISCLAIMER.....	10	Do's and Don'ts.....	20
 COPYRIGHT .....	10	Symbol Legend.....	20
Driving Your Westfalia Wave .....	11	Regulatory Warnings.....	20
Factory Climate Controls .....	11	Information, Cautions and Warnings.....	21
Flat Tire on Moving Vehicle.....	11	Before You Head Out .....	23
Changing a Flat Tire.....	11	Coming Home .....	23
Pre-Delivery Inspection.....	11	Interior Living Space.....	23
Before Driving.....	11	Cabinets .....	23
Service and Assistance.....	11	Galley Cabinets .....	25
Reporting of Safety Defects .....	11	Lights .....	26
Child Passenger safety .....	12	Table Set Up .....	27
Sumo Spring Package .....	13	Captain's Seats .....	28
Transporting Pets .....	13	Window Treatments .....	28
 WARNING .....	13	Ventilation .....	29
		Optional Loft Ventilation.....	29
		Sleeping Facilities .....	29
		KING BED.....	29

Folding Bed.....	30	Propane Sender .....	44
Bathroom Facilities .....	30	Slam Shut Valve.....	44
Using the Toilet .....	30	About Propane.....	45
Pop Top Sleeping Area .....	31	Regulatory Concerns.....	45
.....	31	Electrical System.....	45
Shower .....	32	Chassis Battery .....	45
Appliances .....	33	Further Information .....	46
Refrigerator.....	33	Battery Care.....	46
Microwave Oven .....	33	Chassis Battery .....	47
Propane Cooktop.....	33	Circuit Breakers and Fuses .....	47
TRUMA COMBI.....	34	Battery Voltage.....	47
Outside Your WestFalia Wave .....	34	AGM .....	47
Awning.....	34	Lithium .....	47
Garage Shower.....	37	What Charges Your Batteries .....	48
Side Doorstep.....	37	Inverter Charger .....	48
Rear Door Screen.....	38	Under-hood Generator .....	48
Side Door Screen.....	39	Solar .....	48
Utilities .....	39	Battery Disconnect Switch .....	49
Fresh Water .....	39	Turning on the Batteries.....	49
City Water .....	39	Normal Operation Mode – Charging and Discharging .....	49
Water Pump.....	40	Low Temperature Operation – Charging and Discharging .....	49
Wastewater.....	40	Sleep Mode .....	50
Gray Tank .....	40	To Wake Battery Up When Voltage Is 5V - 12V .....	50
Cassette Toilet .....	40	.....	50
Indicators.....	40	To Wake Battery Up When Voltage Is Below 5V .....	50
Gate Valves and Hose Location.....	41	Off-Season Storage .....	51
Heating and Cooling .....	42	Using the Smart BMS App to Monitor the Battery.....	51
Air Conditioning.....	42	Warranty .....	51
Truma Combi Heat Propane/Electric Furnace .....	42	Microgreen Customer Support:.....	51
Propane System .....	42	For Proper Maintenance of the AGM Auxiliary Batteries: .....	51
Main Shutoff Valve.....	43	Do .....	51
Propane Tank Filling .....	44		
Propane Relief Valve.....	44		

Don't.....	51	At Least Twice a Year .....	59
On Board 120 Volt AC Power .....	52	At Least Once a Year .....	59
Standard 3000W Inverter .....	52	Other Maintenance Checks .....	59
Shore Power .....	52	Seal Maintenance .....	60
Outlets .....	52	Cabinet Latches and Hinges .....	60
Monitor Panel .....	53	Combustion (LPG) Systems.....	60
Location.....	53	Tire Service Kit .....	60
Power Sources.....	53	Jacking Instructions .....	60
12 Volt DC Power .....	53	Jacking the rear of the coach.....	63
Shore Power .....	53	Winterizing the Wave .....	65
Other Switches.....	53	Roadtrek Inc. Two (2) year limited Warranty..	68
Distribution Panel.....	55	Appliance Warranty .....	69
AC Breaker .....	55	AGM Battery Warranty .....	69
12 Volt Fuse Panel .....	55	Warranty Intent.....	70
Alarms and Warnings.....	55	Defects vs. Damage .....	70
Propane and CO Monitor.....	55	Obtaining Service.....	70
Smoke Detector .....	55	Roadtrek Inc. Service information: .....	70
Low Battery Level .....	56	Specifications.....	70
Fire Extinguisher .....	56	RAM Customer Care .....	70
Maintenance .....	56	Explanation of Vehicle Weights and Ratings .....	70
Tires .....	57	Car or Trailer Towing.....	71
Cargo Carrying Capacity .....	57	Trailer Wiring Connector .....	72
Exterior Care .....	57	Towing Guidelines.....	73
Seals and Sealants.....	57	Gross Vehicle Weight Rating (GVWR) .....	73
Undercarriage.....	57	Gross Axle Weight Rating (GAWR) .....	73
Ground effects.....	57	Gross Combination Weight Rating (GCWR).....	73
Exterior Finish.....	58	Hitch Ratings.....	73
Washing .....	58	Roadside Assistance Plan .....	73
Polishing and Waxing.....	58	Aftermarket Disclaimer .....	74
Owner Maintenance Checks .....	58	Regulatory Notices.....	74
When You Stop for Fuel or Weekly.....	58	HOW TOs:.....	74
Every Other Week .....	58		
At Least Monthly .....	58		
At Least Every Three Months .....	58		

## CONSUMER INFORMATION

### Dealer's Responsibilities

Your selling dealer is responsible for inspecting both factory and dealer installed components for proper operation. This is referred to as a pre-delivery inspection (PDI)

Your selling dealer is required to provide a thorough and complete walk-through demonstration and perform a test drive with you. The demonstration should provide you with a good understanding of your new motorhome's operation, safety features, and maintenance requirements.

At the time of purchase, your selling dealer should discuss this Owner's Manual, the Owner's Packet, the vehicle manufacturer's owner's manual, and the Westfalia Warranty Guide, including Westfalia Limited Warranties. Their presentation should include assisting you with completing all warranty cards and registrations, and reviewing all component information, including warranty safety, operation, and maintenance information relating to your new motorhome.

Your selling dealer is required to complete and return the Westfalia Product Warranty Registration Form (located in the Westfalia Warranty Guide) to Roadtrek Inc. within 15 days of delivery of your motorhome to you. **The Westfalia Limited Warranty is activated on the date of delivery of the new motorhome to its new owner(s).**

NOTE: Failure to file the Product Warranty Registration Form with Westfalia will not affect your rights under the applicable Westfalia limited warranty as long as you can present proof of purchase and proof of delivery date to Westfalia, but it can cause delays in obtaining the benefits of the applicable Westfalia limited warranty, and it may inhibit any servicing facility's ability to provide proper repairs and/or parts replacement.

All agreements between your selling dealer and Westfalia are for the benefits of the selling dealer and Westfalia only. Third parties, including retail buyers of motorhomes, are not third beneficiaries of the Agreements, nor may they enforce the terms of the Agreements.

### Consumer's Responsibilities

You, as the owner/operator of the motorhome, are responsible for providing regular and proper service and maintenance of your motorhome as outlined in this Owner's Manual, the Westfalia Warranty Guide, the Owner's Packet, Westfalia's website, the vehicle manufacturer's owner's manual, and all individual component supplier's information. Be sure to have service performed in a timely manner to avoid possible situations caused by neglect or abuse that are not covered under warranty. Westfalia Warranties do not cover expenses incurred due to routine service and normal maintenance.

If you have questions regarding warranty coverage, contact Westfalia Customer Care at: 1-888-762-3873.

At the time of purchase:

1. Inspect the entire motorhome during the test drive and pre-delivery inspection (PDI) and not any issues in writing on the Westfalia Product Warranty Registration Form. Ask any questions you may have before leaving the selling dealership.
2. Read and indicate your acceptance of Westfalia's terms and conditions of the Westfalia Limited Warranty by signing, along with a representative of the dealership, the Westfalia Product Warranty Registration Form.
3. Complete and return all applicable component warranty cards and registrations.
4. Familiarize yourself with your new motorhome, its systems, features, and safe operational procedures. Follow all Westfalia, chassis instructions regarding safety, operation, and maintenance of their respective products.

Electronic copies of Westfalia Motor Coach's Owner's Manual and Limited Warranties applicable to your motorhome are available from

the Westfalia Motor Coach Website:  
<https://westfalia-americas.com/>

**NOTE:**

- Failure to properly maintain your motorhome could result in loss of warranty coverage.
- Your motorhome is not designed, nor intended, for permanent housing. Use of your motorhome for long term or permanent occupancy may lead to premature deterioration of its structure, interior finishes, fabrics, carpeting, and/or window treatments.
- Damage and/or deterioration due to long term occupancy is not considered normal and may under the terms of the warranty constitute misuse, abuse, or neglect, and therefore void certain warranty protections.

## Change of Address or Ownership

The 'National Traffic and Motor Vehicle Safety Act of 1966' in the United States, Transport Canada require manufacturers to be able to contact vehicle owners when a correction of a safety related defect or noncompliance issue become necessary.

To enable Westfalia to contact you, the current owner, with important vehicle product and safety updates, including vehicles with expired warranty coverage, please update your vehicle related ownership information by contacting Westfalia in writing by email or by fax (Attention: Registrations):

Email: [sales@roadtrekinc.com](mailto:sales@roadtrekinc.com)

Fax: 1-574-294-3618

You must include the following:

- Your legal name
- Your current mailing address (include your prior mailing address for change of address notifications)
- Your telephone number (home and/or cell)
- Your email address
- Your vehicle's 17-digit vehicle identification

number (VIN)

- Your vehicle's Westfalia serial number
- Legal proof of purchase (e.g., a legible copy of your bill of sale or insurance card)
- Current motorhome odometer reading.

## Vehicle Identification Labels

The vehicle identification number (VIN) and the Westfalia serial number is listed on a label affixed to the inside of the driver's door jamb. Please refer to the chassis manufacturer's owner's manual for the location of the 17-digit chassis VIN tag.

## How to Obtain Assistance

Should a question or concern arise regarding your motorhome, the first step is to contact your selling dealer. Their sales, service and parts professionals will be glad to assist you.

You can also contact a Westfalia Customer Care representative 24 hours a day, 7 days a week. Telephone (toll free):

1-844-515-4265

If you leave a voice message, please include your name, your telephone number, your VIN, and briefly describe the purpose of your inquiry. You will receive a returned phone call from a Westfalia Customer Care representative as soon as possible.

Your selling dealer and/or your Westfalia Customer Care representative should be able to solve any question or concern you have regarding your motorhome. However, if their combined efforts are not satisfactory, please send a letter describing the circumstances to:

Roadtrek Inc.  
20 Tyler Street  
Cambridge, Ontario N1T 0E4

Include the following:

- Your selling dealer's name, address, and phone number
- Your legal name, current mailing address, phone number, and email address
- Your vehicle's 17-digit vehicle identification

number (VIN)

- Your vehicle's Westfalia serial number
- Current motorhome odometer reading
- If applicable, include the individual component supplier's name, part description, model number, and serial number.

## **SUGGESTIONS FOR OBTAINING SERVICE**

The following suggestions will help ensure your selling dealer provides the level of service you expect.

Contact your dealer at once:

Service appointments are made based on each dealer's service schedule, so contact your dealer as soon as possible to have service or repairs performed.

### **Prepare for the Appointment:**

If warranty covered work is being performed, have the following documentation available:

- Westfalia Warranty Guide
- Applicable component warranties
- Component serial numbers
- Vehicle Identification number (VIN)
- Vehicle serial number

All work to be performed may not be covered by the Westfalia Limited Warranty or component manufacturer's warranties. Discuss warranties and possible service charges with the dealer's service professionals before authorizing service work.

### **Prepare a List:**

Provide your dealer with a written list of specific repairs needed. It is important that you provide the vehicle's repair history to the dealer's service professionals. Keep a maintenance and service log for your vehicle and have it available for your dealer to review.

### **Be Reasonable with your Requests:**

If you need your motorhome returned by a specific date and time, discuss the situation with the dealer's service professionals and list your repair items in order of priority. This may include

making a second appointment for work not completed or a list of parts that the dealer may need to obtain prior to performing service work.

## **Do Not Expect Access to the Service Area:**

Please do not be offended if you are not allowed in the service area while the service work is being performed. Some insurance requirements forbid admission of customers to service areas.

### **Inspect the work Performed:**

Along with the service manager or representative, inspect the service or repair work when you pick up your motorhome. Notify the dealer's service professionals immediately of any dissatisfaction with the performed service work. If you cannot return the vehicle immediately for repairs or corrections, make an appointment as soon as possible.

Please be aware that all service shops require notification of any issues with their repairs within a specified time limit. Make sure you are familiar with the repair facilities policies.

## **Emergency Weekend or After Business Hours Warranty Repair Assistance**

In an emergency, if an authorized Westfalia dealer is not located nearby, please contact your selling dealer for assistance. If your selling dealer is closed, contact Westfalia Customer Care at:

1-877-855-2867 (available 24/7)

For warranty pre-repair authorization and for emergency weekend or after business hours repair assistance, see How to Obtain Assistance in this section.

## **Obtaining Service Repair at a Westfalia Dealer**

- If it is determined after Dealer inspection and evaluation that the authorized Westfalia service facility is incapable of handling the repair required and Roadtrek Inc. pre-approves the unit to return to Roadtrek Inc.

for service the following guidelines will need to be followed:

- You, the current motorhome owner, or your referring dealer must make a confirmed appointment prior to dropping off your motorhome.
- You are responsible for all transportation costs and hotel accommodations; please be prepared accordingly.
- Unless prior approval has been obtained from the Roadtrek Inc. Factory Service Center, all personal items must be removed from the area where you are requesting service repair and the refrigerator emptied. Roadtrek Inc. is not responsible for any lost or stolen property, valuables, or loss and/or spoilage of food items.
- Your motorhome holding tanks must be emptied and rinsed.
- The propane system and all electrical systems must be shut down and turned OFF. Roadtrek Inc. is not responsible for discharged batteries or loss of propane.
- During the appropriate season, please ensure your motorhome is winterized.
- You must retake possession of your motorhome within 7 business days of Roadtrek Inc. Notifying you that the repairs have been completed; otherwise, unless a longer storage time has been previously agreed to, in writing by Roadtrek Inc., you may be liable for additional daily storage fees payable to Westfalia.

## **Replacement Parts**

Roadtrek Inc. does not sell retail parts directly to consumers. Please contact your selling dealer for assistance in obtaining replacement parts and/or accessories. If the original part is no longer available, Roadtrek Inc. will make every effort to suggest or provide an appropriate substitute.

## INTRODUCTION TO YOUR WESTFALIA WAVE

Congratulations on the purchase of your Westfalia Wave and welcome to the Westfalia family. The information in this manual is meant to help guide you with your vehicle so that you know how to properly use the many features and functions your Westfalia Wave has to offer. Please keep this manual in your vehicle as a reference for when you are travelling. If you have any questions or comments on the information found in this document, please contact us at <https://www.westfalia-america.com>.



### DISCLAIMER

The owner's manual was created to help owners with general use, maintenance, and care of their RV. Roadtrek Inc. conducts ongoing product development and uses photos from multiple models and vehicles to create these instructions. The included images may not reflect exact makes and/or models however, the information remains relevant and useful. These instructions are provided as general guidelines only, as certain add-ons or customization to an RV may change the manner these operations are performed.



### COPYRIGHT

Roadtrek Inc. reserves the right to make changes at any time, without notice in colors, materials, equipment, specifications, and models. The information contained in this manual is intended as a guide only, as continuous improvements are ongoing.

Please visit:

<https://www.westfalia-america.com> for the most up to date manuals available. **Some motorhomes may be shown with equipment that is optional. Accessories shown in any photographs may not be included.**

**In summary, you may:**

- Copy any portion of this manual in any form for personal use.
- Distribute this manual complete with all its original unmodified content.
- Modify this manual for your own personal, non-commercial use.

#### **You may not:**

- Use this manual for any commercial use whatsoever.
- Modify this manual except as provided for in the full license and then distribute the resulting work.
- Charge for this manual other than reasonable media and shipping costs.

All images used in this manual remain the property of Roadtrek Inc. They are for illustrative purposes only and may or may not be representative of the upfits in your Westfalia Wave. Contact Roadtrek Inc. for alternate licensing arrangements if you want to use or distribute this manual commercially.

## DRIVING YOUR WESTFALIA WAVE

### CAUTION

Damage to interior door panels may result if seats are swiveled towards the doors. Do not turn driver seat counterclockwise, and do not turn passenger seat clockwise.

### Factory Climate Controls

Your Wave's dash climate controls are designed to heat and cool the front cabin area only, not the entire cabin. See your vehicle's Operating Instructions for details regarding dash A/C, heat, and defrost functions.

For details regarding Wave's heating and cooling systems for the cabin, see your Owner's Manual

### WARNING

Batteries produce flammable hydrogen gas during charging. Any spark—particularly from jumper cables—can ignite the gas and cause the battery to explode. Extreme caution should always be taken when jump-starting a battery.

### Flat Tire on Moving Vehicle

In the event you experience a flat tire while your Westfalia Wave RV is moving, do your best not to panic, stomp/slam on the brakes, or jerk your foot off the accelerator. Instead, slowly and gently ease back on the accelerator. The deflated tire will slow the vehicle.

Further, the RV may pull towards the side with the failed tire. Firmly grip the steering wheel, and if necessary, counter steer to compensate for the pull.

Let the vehicle coast to a stop, gently steering to a safe location. Then activate the hazard flashers before carefully exiting vehicle. Set out flares or other warning devices before inspecting the tire.

### Changing a Flat Tire

In the event of a flat tire or other roadside emergency, we recommend you seek the aid of a professional road service due to the weight and size of your vehicle.

If the situation requires you to change a flat tire yourself, be very careful and read the applicable information in your vehicle's Operating Instructions and see Jacking instructions in this manual.

TIP: Using an accurate tire gauge, check your tires for proper inflation before each trip, as well as at least once a month.

### CAUTION

Indicates a risk which may lead to minor injury and/or your vehicle being damaged.

### Pre-Delivery Inspection

Westfalia takes pride in the quality of the products we build. We inspect every vehicle closely before shipping. Your dealer is responsible for completing a comprehensive pre-delivery inspection and correcting any issues with the chassis or RV components prior to delivery.

### Before Driving

Familiarize yourself with all local and state laws as different areas may have laws that apply to your RV, but which vary between regions.

### Service and Assistance

We are committed to our customers well after the purchase of their vehicle. Should you need service or technical assistance, please reach out at <https://www.westfalia-america.com>. Under customer support for the fastest response or call 1-888-762-3873 We will gladly help you get back on the road as quickly as possible.

### Reporting of Safety Defects

At Westfalia, we strive to produce safe and reliable vehicles. If you feel there is a safety defect that could result in a crash, injury, or

death, you should immediately contact the National Highway Traffic Safety Administration (NHTSA), as well as RoadtrekInc. If the NHTSA receives similar reports, they may choose to open an investigation and/or issue a safety recall and campaign.

To Contact the NHTSA:

Call the vehicle safety hotline toll-free at 1-888-327-4236 (TTY 1-800-424-9153); go to [www.safecar.gov](http://www.safecar.gov); or write to Administrator, NHTSA, 1200 New Jersey Avenue S.E., Washington, DC 20590

## CHILD PASSENGER SAFETY



Never allow a passenger to hold a child on his or her lap while the motorhome is moving. You are required by law to use safety restraints for children in the United States and Canada.

If small children (generally children who are four years old or younger and weigh 40 lbs (18 kg) or less) ride in your motorhome you must put them in safety seats made especially for children.

Rear-facing child seats or infant carriers should never be placed in the front seats of the motorhome.



### WARNING

- Improper installation or failure to properly secure a child restraint can lead to failure of the restraint. The child could be severely injured or killed.
- Follow the child restraint manufacturer's directions exactly when installing an infant or child restraint.
- Never place a rear-facing child restraint in front of an airbag. A deploying passenger front airbag can cause death or severe injury to a child 12 years or younger, including a child in a rear-facing child restraint.
- Never install a child safety restraint in the front seat of a vehicle. Only use child safety restraints in the rear seats. If the vehicle does not have a rear seat that includes a safety

restraint belt or anchor that enables securing a child safety seat, do not transport children requiring child safety restraints in that vehicle.

- To ensure proper safety belt fit, always use booster seats for children who are size and age appropriate. Check the vehicle (van) manufacturer's safety information or governmental safety regulations for child sizing charts.
- Always follow the vehicle manufacturer's safety instructions, along with state, and federal regulations regarding the transporting of children and small adults.



### WARNING

Never leave a child or pet unattended in a parked vehicle. On hot days, the temperature inside the vehicle can rise very quickly. Exposure of people or animals to these high temperatures for even a short time can cause death or serious heat related injuries, including brain damage. Small children are particularly at risk.

A child or animal left in a parked car could inadvertently operate equipment or features that cause entrapment, cause the vehicle to move, or otherwise cause an unsafe condition.

Always follow the instructions and warnings that are included with any infant or child safety restraint system:

- If the child is the proper size, restrain the child in a safety seat. Children who are too large for child safety seats (as specified by your child safety seat manufacturer) should always wear seatbelts.
- If the shoulder belt portion of a combination lap and shoulder belt can be positioned so it does not cross or rest in front of the child's face or neck, the child should wear the lap and shoulder belt.
- Never use pillows, books, or other objects to boost a child, passenger, or pet.
- Refer to the vehicle (van) manufacturer's owner's manual for additional occupant safety information.

NOTE: Check with your local and state or provincial laws for specific requirements regarding the safe transport of children in your motorhome.

For additional information, refer to:

<http://www.nhtsa.gov/parents-and-caregivers>

or call 1-888-327-4236.

In Canada, refer to Transport Canada's website:

<https://tc.canada.ca/en/road-transportation/child-car-seat-safety>

## SUMO SPRING PACKAGE

Your Westfalia Wave is equipped with Sumo Springs on the rear for added comfort and stability. If you find the ride too harsh you can remove the black Spacer at the top of the spring.



## TRANSPORTING PETS

### WARNING

Unsecured and unrestrained animals can interfere with safe vehicle operation and may be thrown around in the vehicle in the event of an accident or sudden steering and braking maneuvers, injuring vehicle occupants and pets in the process.

- Never leave animals in the vehicle unattended.
- Always secure animals while the vehicle is in motion, using a suitable and secured animal harness or carrier.

Airbags deploying in the front seat could harm your pet. An unrestrained pet will be thrown about and possibly injured or injure a passenger during panic braking or in a collision.

Pets should be restrained in the rear seat (if equipped) in pet harnesses or pet carriers that are secured by seatbelts or other anchoring devices.

Refer to the chassis manufacturer's owner's manual for additional and important information regarding occupant and pet safety.

## EXTERIOR LADDER (IF EQUIPPED)



### CAUTION

**Never exceed the weight capacity of the ladder. Doing so can lead to ladder collapse and possible personal injury.**

**When ascending or descending the ladder, always face the ladder and use a firm two-handed grip.**

**Always wear shoes that provide good grip. Failure to comply can result in a fall, causing severe personal injury.**

**Follow the manufacturer's instructions for extending, securing, and collapsing the ladder.**

The ladder, if equipped with your vehicle, provides access to the roof for inspection and maintenance to the roof and roof mounted items. Ladder instructions are included in your Westfalia Owner's Packet.

- Remove the ladder from its storage location and extend the ladder. The ladder has locking mechanisms in each rung. These mechanisms **MUST** be locked in place before using the ladder.
- When ascending and descending the ladder,

ensure the ladder is clear of debris, such as water, ice and other slippery substances.

- Always wear shoes that provide good traction, and do not wear sandals or other types of slip-on footwear when ascending or descending the ladder.
- Always use both hands when ascending and descending the ladder
- Always face the motorhome when ascending and descending the ladder
- Be careful not to overreach when on the ladder. You could lose your balance, or footing, or fall off the ladder.
- When finished, detach the ladder from the magnetic ladder bracket, then collapse the ladder by pinching the locking mechanisms while sliding the support poles together.
- Stow and secure the ladder and magnetic ladder bracket inside the rear doors.

### **Bicycle Rack (if equipped)**

Your motorhome may be equipped with a bicycle rack attached to the rear door. This rack allows convenient and secure transportation of one or two bicycles. For operational instructions, refer to the manufacturer's owner's guide included in your Westfalia Owner's Packet.

NOTE: Additional information covering the operation and maintenance of exterior-mounted features and devices of your motorhome may be available through the online Westfalia Owner's Resource Information Service and Westfalia "How-to" videos:

<https://www.westfalia-america.com>

### **Before Using the Ladder**

- **Inspect the ladder** to make sure it is not damaged. Never use a damaged ladder.
- **Keep the rungs of the ladder clean and dry** while in use. Never use the ladder when it is raining, snowing or icy. The rungs can become slippery. Do not step onto the rungs if the rungs are wet, or if your shoes are wet or carry mud or debris that could result in a loss of footing.
- **Never ignore warning labels** or weight limits defined on your ladder.

### **Roof Rack (if equipped)**

Your Wave is equipped with a roof rack for stowing gear and accessories up to 80 lbs. It is not advised to walk or stand on the rack.

The roof rack can be accessed with the telescoping ladder.

### **PRE-DELIVERY INSPECTION**

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

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

### **BEFORE DRIVING**

Familiarize yourself with State/Province and local regulations before traveling. There are many local rules that may impact your travels.

### **FRONT WHEEL ALIGNMENT**

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

### **HEADLIGHT ALIGNMENT**

Headlights on this motorhome were aligned at the factory in a n unloaded state. We recommend you have the high and low beam alignment checked after fully loading the vehicle inspected periodically to maintain visibility.

### **SERVICE AND ASSISTANCE**

Your dealer will be glad to provide any additional information you need as well as answer any questions you might have about operating the equipment in your motorhome. When it comes to service, remember that your dealer knows your

vehicle best and is interested in your satisfaction. Your dealer will provide quality maintenance and any other assistance that you may require during your ownership of this vehicle. If you need warranty repairs while traveling, you may take your vehicle to any authorized dealership and request their assistance.

## REPORTING SAFETY DEFECTS

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

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer, or Roadtrek Inc.

To contact NHTSA, you may either call the Vehicle Safety Hotline toll-free at:

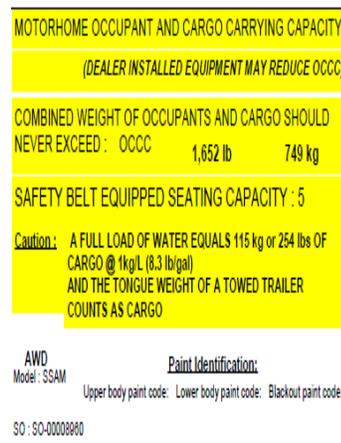
1-888-327-4236; (TTY: 1-800-424-9153) or go to <http://www.safercar.gov> or write to:

Administrator, NHTSA  
1200 New Jersey Avenue S.E.,  
Washington DC 205900

You can also obtain other information about motor vehicle safety at <http://www.safercar.gov>.

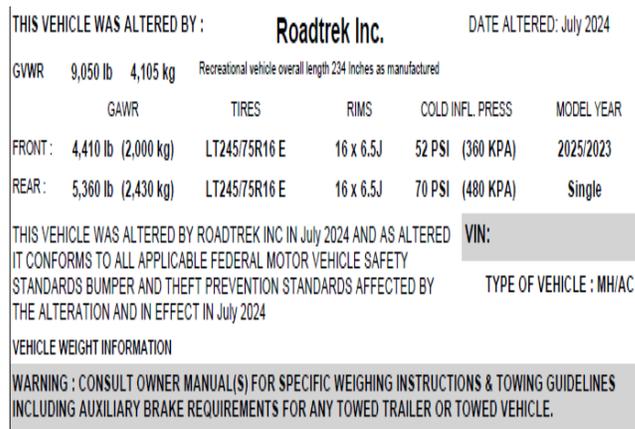
## OCCUPANT AND CARGO CARRYING CAPACITY LABELS.

The following labels are affixed on the driver's door jamb. The first label (picture 15.1) contains vehicle occupant and cargo carrying capacity along with the number of seat belt positions in the vehicle. The second label (picture 15.2) also provides the weight of a full load of water and advises that this weight, along with the tongue counts as cargo.



15.1

If any weight exceeding 45.4 kg (100 lbs) is added to your motorhome between final vehicle certification and first retail sale, the occupant and cargo carrying capacity must be corrected and a label like the one shown below will be affixed inside your motorhome.



15.2

## EXPLANATION OF DATA

1. Month and year vehicle was altered at Roadtrek Inc.
2. Month and year vehicle was completed by the chassis manufacturer.
3. Serial Number: This is the serial number assigned to the completed vehicle by Roadtrek Inc.
4. Vehicle Identification Number (VIN): This number identifies the chassis on which the motorhome is build. The 10th digit of the VIN designates the chassis model year (J=2018, K=2019, L=2020,). This information is useful when ordering chassis repair parts.
5. Type: State the NHTSA designated usage classification for your motorhome. MPV
6. signifies a Multi-purpose Passenger Vehicle
7. Color: Signifies the color code number of the decor used throughout the vehicle. This number is necessary for ordering replacement cushions, curtains, carpet, etc.
8. Westfalia model year and series/family name.
9. Model: Lists the Westfalia product model number of your vehicle.

## VEHICLE CERTIFICATION LABEL

This label (picture 16.1) is affixed to the C pillar and is visible when the sliding side door is opened.



16.1

## SPECIFICATIONS AND CAPACITIES

	WAVE SRT	WAVE SKYLIGHT	WAVE POPTOP
<b>CHASSIS</b>	<b>Ram ProMaster L4H2 3500</b>	<b>Ram ProMaster L5H2 3500</b>	<b>Ram ProMaster L5H2 3500</b>
<b>EXT LENGTH</b>	19-7"	20-9"	20-9"
<b>EXT HEIGHT</b>	9'5"	9'5"	9'5"
<b>EXT WIDTH</b>	6'11"	6'11"	6'11"
<b>AWNING LENGTH</b>	13'	13'	13'
<b>INTERIOR HEIGHT</b>	6'2"	6'2"	6'2"
<b>INTERIOR WIDTH</b>	6.37"	6.37"	6.37"
<b>FRESH TANK CAPACITY</b>	145L	145L	145L
<b>GREY TANK CAPACITY</b>	99L	99L	99L
<b>BLACK TANK CAPACITY</b>	18L	18L	18L
<b>WATER HEATER CAPACITY</b>	11.8L	11.8L	11.8L
<b>PROPANE CAPACITY</b>	20.5L	20.5L	20.5L
<b>WHEELBASE</b>	159"	159"	159"
<b>GVWR</b>	8900 lbs	9350 lbs	9350 lbs
<b>GAWR - FRONT</b>	4629 lbs	4629 lbs	4629 lbs
<b>GAWR - REAR</b>	5291 lbs	5291 lbs	5291 lbs
<b>GCWR</b>	11500 lbs	12000 lbs	12000 lbs
<b>FUEL CAPACITY</b>	110L	110L	110L

**Notes:**

All information is based upon the most recent data available. Visit the Westfalia Inc web page – <https://www.westfalia-americas.com> – for the most current product information.

<sup>1</sup> The height of each model is measured to the top of the tallest standard feature and is based on the curb weight of a typically equipped unit. The actual height of your vehicle may vary by several inches depending on chassis or equipment variations. Contact your dealer for further information.

<sup>2</sup> Capacities are based on measurements prior to tank installation. Slight capacity variations can result upon installation.

<sup>3</sup> Capacities shown are the tank manufacturer’s listed water capacity (W.C). Actual filled propane capacity is 80% of listing due to overfilling prevention device on tank.

<sup>4</sup> Actual towing capacity is dependent on your loading and towing circumstances which includes the GVWR, GAWR, and GCWR as well as adequate trailer brakes. Refer to the chassis operator’s manual of your motorhome for further towing information.

**OWNER AND VEHICLE INFORMATION**

**OWNER INFO:**

Owner’s Name(s): \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

**VEHICLE INFO:**

Motorhome Model Number: \_\_\_\_\_

Motorhome Serial Number: \_\_\_\_\_

Chassis Vehicle Identification No. (VIN): \_\_\_\_\_

Vehicle Mileage at Delivery: \_\_\_\_\_

Selling Dealer Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

**YOUR ROADTREK INC. DEALER/SERVICE CENTER:**

Name: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

Contact: \_\_\_\_\_ Phone: \_\_\_\_\_

**CHASSIS SERVICE CENTER:**

Name: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

Contact: \_\_\_\_\_ Phone: \_\_\_\_\_

**RV INSURANCE POLICY:**

Company: \_\_\_\_\_

Policy Number: \_\_\_\_\_

Agent: \_\_\_\_\_ Phone: \_\_\_\_\_

**ROADSIDE EMERGENCY**

Roadside Assistance: 1-844-515-4265

Because of the size and weight of this vehicle and its tires, and the possible complications involved in tire changing, we strongly advise obtaining professional road service to change a flat tire whenever possible. However, if an emergency requires you to change the tire yourself, please exercise extreme caution and read all tire changing information in the chassis manual. Never get beneath a vehicle that is held up by a jack only.

**If You Get a Flat Tire**

- DO NOT panic.
- Grip the steering wheel firmly and steer the vehicle as straight as possible. Avoid quick maneuvers. You may need to counter-steer to compensate for "pull" created by failed tire.
  - DO NOT stomp on the brake. This abruptly shifts the vehicle's weight forward, making it nose-dive and pull toward the blow-

- out side.
- DO NOT jerk your foot off the accelerator. Just ease back on the accelerator slowly and gently to continue momentum. The deflated tire will slow the vehicle.
- If you must change lanes to get to a safe stopping place, use your signals to warn other motorists and change lanes smoothly and carefully after you are certain the lane is clear.
- Let the vehicle coast to a stop, gently steering to a safe stopping place off the traffic lanes of the road. Do not worry about damaging the tire or wheel rim by driving on it. A tire or wheel replacement is cheaper than damaging the vehicle or injuring yourself.
- When you have come to a stop, activate your hazard flashers to warn other motorists, then exit the vehicle carefully.
- Set out flares or other warning devices.
- Check your tires for proper inflation before each trip and at least once a month with an accurate tire gauge.

## DO'S AND DON'TS

### Symbol Legend



Information: Useful information and knowledge.



Warning: Not following this instruction may lead to negative results.



Caution: You should follow this instruction.



Danger: Do NOT perform this action. Doing so may result in injury, severe damage or death.

### Regulatory Warnings

		Overfilling propane container(s) can result in uncontrolled propane flow which could lead to a fire or explosion and result in death or serious injury.
	<b>Danger</b>	<p>If you smell propane:</p> <ol style="list-style-type: none"> <li>1. Extinguish any open flames and all smoking materials.</li> <li>2. Shut off propane supply at the container valve(s) or propane supply connection.</li> <li>3. Do not touch electrical switches.</li> <li>4. Open doors and other ventilating openings.</li> <li>5. Leave the area until the odor clears.</li> <li>6. Have the propane system checked and leakage source corrected before using again.</li> <li>7. Ignition of flammable vapors could lead to a fire or explosion and result in death or serious injury.</li> </ol>
	<b>Danger</b>	<p>Vehicles and equipment powered by internal combustion engines and placed in recreational vehicles can cause carbon monoxide poisoning or asphyxiation, which could result in death or serious injury.</p> <ul style="list-style-type: none"> <li>• Do not store, transport, or dispense fuel inside this vehicle.</li> </ul>
	<b>Warning</b>	<p>Do not place propane cylinders inside the vehicle.</p> <ul style="list-style-type: none"> <li>• Propane cylinders are equipped with safety devices that relieve excessive pressure by discharging propane to the atmosphere.</li> <li>• Propane gas is highly flammable. This action can lead to fire or explosion and result in death or serious injury.</li> </ul>
	<b>Danger</b>	<p>Do not use gas cooking appliances for comfort heating.</p> <ul style="list-style-type: none"> <li>• Can lead to carbon monoxide poisoning, which can lead to death or serious injury.</li> </ul>

	<b>Warning</b>	Gas cooking appliances need fresh air for safe operation. <ul style="list-style-type: none"> <li>Open vents or windows slightly or turn on exhaust fan prior to using cooking appliances.</li> </ul> Gas flames consume oxygen, which should be replaced to ensure proper operation. Improper use can result in death or serious injury.
	<b>Caution</b>	Do not fill propane containers to more than 80% of their capacity. <ul style="list-style-type: none"> <li>A properly filled container contains approximately 80 percent of its volume as liquid propane.</li> </ul>

## Information, Cautions and Warnings

	<b>Seat Belts</b>	Use only seats equipped with factory installed seat belts while the vehicle is in motion. All passengers must be seated in these seats only, with the seat belts fastened while the vehicle is in motion.
	<b>Seating</b>	Never drive with the front bed setup
	<b>Seating</b>	Ensure that second row seat is locked on bench position before driving
	<b>Electrical</b>	It is recommended that a surge protector or EMS system is used to protect your electrical system from outside influences that could damage your inverter and other sensitive electronics.
	<b>Propane</b>	Do not store propane tanks inside your vehicle. Propane tanks are equipped with safety devices which relieve excessive pressure by discharging gas to the atmosphere.
	<b>Propane</b>	Do not refuel the propane tank to more than 80% of its capacity.
	<b>Propane</b>	The propane tank valve must be closed and all pilot lights, appliances and their igniters must be turned off during refueling of the motor fuel tank and/or the propane fuel tank. Only qualified personnel should refuel your propane tank.
	<b>Propane</b>	Purchase propane from a reputable propane facility. Contaminated propane is a common cause of system failure and is not covered under any warranty.
	<b>Propane</b>	The BBQ quick disconnect is regulated to 10 P.S.I. Please ensure that all devices connected to this are either rated for high "pressure" or have their own regulator. Many grills sold in North America are "low pressure" (½ PSI) and will require an added regulator to step the pressure down to a useable level. If hooked directly to the BBQ quick disconnect, they will be a severe fire hazard.
	<b>Propane Leak Detector</b>	Do not block the air circulation in the area where the Propane Leak Detector is located.
	<b>Propane Leak Detector</b>	Battery disconnect switch must be in the "ON" position for the propane detector to function.
	<b>Flammable Liquids and Gasses</b>	Do not store gasoline or other flammable liquids inside your vehicle.
	<b>Heating</b>	Never use cooking appliances or unvented propane heaters for space heating purposes. They need fresh air for safe operation.
	<b>Heating</b>	The heating furnace provides its own outside combustion air and exhausts to the outside.

	<b>Heating</b>	Portable fuel burning equipment, including wood, charcoal, and liquid fuel grills, and stoves, should not be used inside your vehicle. Use of this type of equipment inside your vehicle may cause a fire or asphyxiation.
	<b>Carbon Monoxide Leak Detector</b>	Do not block the air circulation in the area where the Carbon Monoxide Leak Detector is located.
	<b>Carbon Monoxide Leak Detector</b>	Battery disconnect switch must be in the "ON" position for the Carbon Monoxide Leak Detector to function.
	<b>110 V Electrical Servicing</b>	Prior to servicing any 110 V, ensure that the power sources are disconnected.
	<b>Exterior Access Doors</b>	Ensure the Sewer Drain hose is in its stored position and the Door is properly secured in the J hooks before the vehicle is put in motion.
	<b>Awning</b>	Close the sliding side door prior to opening or closing the awning.
	<b>Dining Table</b>	When storing the dining table, place it in the overhead storage area.
	<b>Extra Counter Space</b>	Make sure the stove is off and has cooled prior to lowering the stove cover.
	<b>Battery</b>	Battery acid can burn your skin and damage clothing. Protective eye wear and gloves should be worn when handling batteries. all Roadtrek Inc. installed batteries are sealed AGM batteries that do not require the addition of water.
	<b>Battery</b>	Disconnect the inverter/charger prior to disconnecting the auxiliary battery.
	<b>Generator</b>	The Westfalia Wave is supplied with a DC generator located underneath the engine. Never submerge the generator. Use a spotter when launching a boat or crossing streams.
	<b>Wastewater Storage and Dumping System</b>	Close the gray water gate valve before using the wastewater system.
	<b>Freezing</b>	Under moderate subfreezing conditions, antifreeze is required in the exterior freshwater tank and gray wastewater tank. Use RV antifreeze per the manufacturer's instructions.
	<b>Electrical Servicing</b>	This unit has a 12VDC, 110VAC and potentially 36-volt solar system. These systems need to be disconnected before working on them.

## BEFORE YOU HEAD OUT

Your new Westfalia Wave is ready to go with just a little bit of preparation. To prepare for your first trip, you should:

- Read this manual.
- Contact your dealer with any questions.
- Plan your trip.

Then use this quick checklist:

- The day before your trip:
  - Charge your batteries by plugging in overnight.
  - Cool your refrigerator by turning it on.
  - Chill any beverages in your home refrigerator.
  - Fill your freshwater tank with clean tap water.
- The day of the trip:
  - Load the refrigerator with cold food (from your home refrigerator).

## COMING HOME

When you come home, there are a few maintenance tasks you should do to get your Westfalia Wave ready to go for next time. Refer to other sections in this manual for the procedures listed here.

- On your way home, dump the gray tank and toilet cartridge at a convenient facility. Visit the owner's section of our website to read the How To: Wastewater Dumping Guide for a concise description of the procedure to do this. Some RV parks and gas stations will let you dump for a fee, some city wastewater plants will let you dump for free but there is no real pattern, so local knowledge is vital in finding dump stations. The website, <http://www.sanidumps.com> is a useful resource. The maps for each state and province are especially helpful: <http://www.sanidumps.com/maps/help.php>
- At home, flush the water tank and fill it with fresh chlorinated water if you will be using it in the next few days. Otherwise, drain the tank. Do not let water you are planning to use

sit in your tank for more than a week or so, and do not let any water sit in your tank for more than two weeks, whether you plan to use it or not. Over time, the chlorine goes away, and the microbes come out to play.

- To flush the tank, fill it using the fill port in the passenger side rear panel and open the freshwater tank drain located by the waste hose.
- Plug in overnight with inverter on to fully charge batteries. Turn off and clean out the refrigerator and prop the door open to let it air out. Turn off the battery disconnect switch to keep from draining your batteries.
- If you turn everything off and you have solar panels, the panels will keep your AGM coach batteries topped up while your Westfalia Wave is parked, if parked where sunlight is available (non-lithium version). If you do not have solar panels, it would be prudent to check your coach battery state of charge every month or so and charge them if necessary. If you do not turn everything off, even with solar panels, you will probably come back to dead batteries.
- Charge/discharge Lithium batteries to approximately 50% SOC. Then turn off and this will prep for storage up to 90 days.

## INTERIOR LIVING SPACE

### Cabinets

Your Westfalia Wave is equipped with cabinet latches which prevent the door from opening while the vehicle is in motion. The push buttons on the cabinet latches toggle from latched (button in) to openable (button out) by pressing the button. (pictures 24.1, 24.2)

To open a cabinet, press the button to pop the latch, pull gently on the latch, and the cabinet door will open.

To close a cabinet, make sure the latch is still open (button out), then close the door. Once the

cabinet door is closed, press the latch button in to lock the cabinet.



Do not attempt to close the cabinet doors while the latch button is pressed in. This will break the latch. Always make sure the button is out before attempting to close a cabinet door.

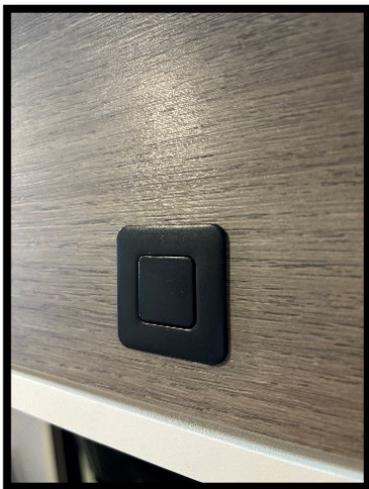


Weight in each cabinet should not exceed 50 lb. / 22.7 kg. Exceeding this weight could cause the cabinet to break or for the latch to not engage properly. Causing doors to open during travel.



It is not recommended to keep large, round, and/or heavy objects in a cabinet unsecured as they may roll around and apply excessive pressure to the inside of the cabinet doors as you drive. The objects may shift position with vehicle motion and cause injury when the cabinets are opened. For this reason, Roadtrek Inc. recommends that you are aware of the objects that you store in overhead cabinets.

If you load a large amount of weight into a cabinet, experience large swings in temperature or humidity, ride on bumpy roads at high speeds frequently, or sometimes as part of normal wear and tear, the cabinet hinges may go out of adjustment. You will know the cabinet is out of adjustment when it will not open with the button out, or not latch with the button in.



24.1

24.2



24.3

Turn screw clockwise to lower cabinet face (if it won't latch) and counterclockwise to raise it up (if it won't open)



24.4

Each cabinet has an adjustable arm to hold the door open

 **Do not force the door open by pulling or prying on it as you will break the latch**

The screw in the top part of the hinge nearest the Westfalia Wave point adjusts the vertical location of the door. Screw out to raise the door and fix stuck doors; screw in to lower the door and fix doors that will not stay shut when latched.

To adjust the door brake, use an Allen key to adjust the tension on the brake. Use caution when adjusting as too much tension increases the stress on the hinge when closing the door.

## Galley Cabinets



25.1

Galley



25.2

Drawers



25.3

Pots & Pans drawer

# LIGHTS

All the coach lights are controlled via the control panel (picture 26.1). **NOTE:** Lights must first be turned on with Firefly. If light is turned off manually it will stay off until manually turned back on, even after full shut down. These are LED lights and consume little electricity. The Westfalia Wave is equipped with under cabinet lighting (picture 26.2), these are turned on via the Firefly and the rear lighting control (picture 26.3) and can be dimmed via the switch (pictures 26.4 and 26.5)



26.1

Light Controls on Firefly



26.2

Under Cabinet Lighting



26.3

Rear Lighting Control



26.3

Dimmer Switch



26.4

Finger Touch Dimmer

## TABLE SET UP

Table should be stowed when the vehicle is in motion. The table stows in the overhead above the driver and passenger seats (picture 27.1) To assemble the table the leg must be assembled by inserting the tab into the receiver (picture 27.2). Release the gray locking tabs on the edge of the table (picture 27.3), Then place the table over the slide rail and lock the tab by pushing up from the underside. Insert the leg into the receiver on the table to complete setup.

To extend the table pull down on the black release knob (picture 27.4) and swing the lower section of the table into position.

Please Note: it has three (3) locking positions.



27.1

The Table Storage



27.2

Assemble the pieces of the leg



27.3

Gray Locking Tab (push down to release)



27.4

Locking Knob



27.5

Table Extended

## CAPTAIN'S SEATS

The two captain's seats in the front of your Westfalia Wave are adjustable fore-and-aft by pulling up on the bar under the front of the seat and will swivel when the inside corner is pulled up (picture 28.1). Always return the seats to the forward-facing position when driving. They will lock into this position and stay locked until the swivel tab is raised again.

To create a front lounge area (picture 28.2), first ensure that the seats are fully upright by loosening the recline adjustment and bringing the backs of the seats forward. Do not attempt to rotate a reclined seat. Use the fore-and-aft adjustment while rotating the seats to allow the sides of the chairs to clear the armrests on the vehicle doors, the engine cover, and other obstructions. Do not force the seats around. Swiveling the driver's seat may require you to loosen the tilt steering wheel adjustment and move the steering wheel as far forward and up as possible. Opening the front doors slightly will allow you to clear the door armrests easily.



28.1

To rotate the front seat, lift on the front inside corner



28.2

Lounge Area



The vehicle will not drive unless the front seats are locked and forward facing.

## WINDOW TREATMENTS

The nightshade curtain blocks airflow. (picture 29.1) If you leave the window open, then close the nightshade, close all other windows, and then close the side door, it is possible for the curtain to get blown out of the track. Always close the window prior to closing the nightshade.

The window curtains slide from top to bottom. The plastic clip is not a pull tab; it is a locking tab. Always pull on the aluminum bar. The curtains are configured so that the nightshade slide covers the window opening for added privacy.



29.1

The Side Window Screens

## VENTILATION

Your Westfalia Wave is equipped with a ceiling mounted Skylight (picture 29.3)



29.3

## Optional Loft Ventilation

Your Roadtrek Zion Slumber is equipped with a skylight. (Picture 19.1)

The skylight can be opened by pushing the button and pulling down and back on the bar. There are two positions to place the bar to vary the degree of opening. There is a built-in bug screen and shade in the skylight.

 Open the skylight, windows, and the nightshade slightly to allow for airflow.



Ensure the Skylight is completely shut before attempting to move the vehicle.



## SLEEPING FACILITIES

Your Westfalia Wave has beds that can be configured as a king bed or twin bed. Experiment with different configurations to find what works best for you.

## KING BED

Your coach is equipped with a Bed that can be joined together to create a King bed. The support board is stowed under the Forward bed board, to extend this lift the rear main rail so that it can pass over the bump stops. Extend the movable portion across the opening and secure it to the opposite cabinet. Please ensure that the main rail on the extended support is placed over the rubber stops.



29.4

King Bed



30.1

Folding Bed

## Folding Bed

To convert the second-row seat to a bed, the following steps are required:

- Remove the table
- Slide the driver's seat forward all the way
- Adjust the back of the seat to 90 degrees
- Rotate the seat using the lever on the corner of the seat
- Recline the driver's seat to the steering wheel
- Ensure that the arm rest is in the upright position
- Remove the heat rests from the rear seat and stow them in the overhead or under the bed once it has been fully opened
- Locate the "Pull" tab in between the seat base and the seat back and pull forward. This will release the clasp on the seat base allowing the bed to tilt forward
- Finish tilting the seat forward until the seat back rests on the front seat. While tilting the seat forward extend the attached mattress to the rear of the coach – it will rest on the support
- Reverse steps to return to normal seating
- Ensure seat base is securely latched and return seats to original position
- Seatbelts and headrests must be used when vehicle is in motion

## BATHROOM FACILITIES

### Using the Toilet

The enclosed bathroom in the Westfalia Wave has a cartridge toilet with a rotating bowl. To add water to the bowl, press the blue button (picture 30.1) found on wall behind the toilet, to flush the toilet, pull the lever located at the bottom of the front of the toilet bowl. (picture 30.3)



30.2

Water Flow Button



30.3

The Bowl Portion Rotates (to allow more leg room)

## Pop Top Sleeping Area

The ladder can be installed before raising the pop top to facilitate undoing the latches. Ensure the ladder is secured in both mounts by twisting the lock on the back of the ladder hooks. (Picture 22.5)

⚠ The ladder is designed to support up to 100kg or 220 lbs.

⚠ The ladder should only be used to access the pop top area and only when fully locked into the mounts.

To set up the pop top, begin by unclipping the two security clips (Picture 31.) and then proceed to unclip the front latch by unfolding and turning it counterclockwise. (Picture 22.7) Push up on the ceiling (ensuring not to press up on any part of the skylight) until the gas struts kick in to assist and the pop top is full extended.



Picture 31.

The pop top is not designed to store items. Blankets and sheets can be kept in the pop top if laid flat.

⚠ The formed shelf is meant for smaller items only, do not sit or stand on it. The storage shelf is not

designed to support any load above 20 kg or 44 lbs.



The Pop top has three window (two mesh, one plastic) that can be opened to allow in sunlight, see outside or closed for privacy. The two mesh windows can be opened for additional airflow.

To close the pop top, follow the above steps in reverse, start by pulling down on the black straps attached to the handles on ceiling (Picture 22.8), ensure the pop top canvas is neatly tucked in to avoid tearing the canvas. Next proceed to clip in the latch and locking it into place by turning the handle and folding it down in place. Lastly, clip

the safety straps to secure them,



removing slack, do not over tighten

Before latching the pop top in place, it is advised to walk around the vehicle ensuring the canvas is not visible from under the pop top as this can cause damage to the canvas.

Ensure the pop top is shut completely with both the latches and safety strap secured before attempting to move the vehicle.





32.1

The Lever is located on the front of the base



32.3

Shower Drain Plug

## SHOWER

Remove the shower drain plug (picture 31.2) Slide the bathroom door along its track to enclose the shower space. (picture 31.1) pull on the tap handle and adjust the water temperature as desired.

The shower head (picture 31.4) is adjustable up/down and side to side. Refasten the drain stopper to prevent the contents of the gray water tanks from sloshing up into the shower area while driving.

The bathroom light is dimmable by using the Firefly lighting controls.

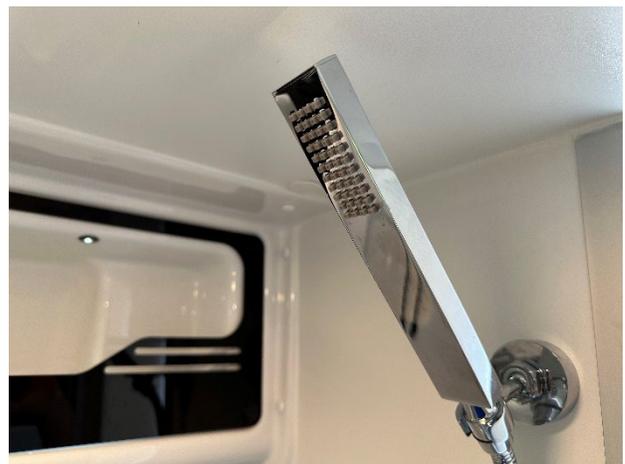


32.4

Close the vent when using shower



32.2



32.5

Showerhead

# APPLIANCES

## Refrigerator

The refrigerator is an electric compressor model that runs on 12-volt DC power. When shore power is available, the inverter charger provides enough power to run the fridge while charging the batteries.



33.1

Refrigerator



33.2

Freezer Open

## Microwave Oven

The oven is a standard microwave oven (picture 32.1). It works much the same as the microwave

at your house. It is probably lower powered, so cooking may take a bit longer.

The microwave will run from the batteries through the inverter for reheating purposes or other brief use. However, for extended microwave use, you must be connected to shore power or have the optional generator running.



Please be aware when using microwave stove there is a possibility of draining your batteries if not connected to shore power.



33.3

Microwave Oven

## Propane Cooktop

The propane cooktop (picture 33.4) needs fresh air for its safe operation. Make sure to open a window and open the vent for proper ventilation. The igniters are powered by 12-volt coach battery power, so turn the battery disconnect switch on before using the propane cooktop. For detailed information on this appliance consult the cooktop Owner's manual.



33.4

Propane Cooktop

## TRUMA COMBI

The Truma Combi is a combination forced air heating system with an indirect water heater. When the appliance is switched on, the burner starts automatically to heat up the 3-gallon water capacity of the tank. There are 2 controllers it is important to note if the CP controller located at the back is active you will see a “Caution Triangle with Truma display busy” The Firefly controls all functions of the Truma Combi. You have multiple options. It is important to note that the *last* status remains in memory, If the water heater is left on “Hot” “Gas” next time the system is activated this is the state that it will be returned to. If the propane is off, you will get an error after attempting to ignite.



34.1

The Trauma CP Controller

Note: Truma Display Busy indicates the control is at the CP plus in the rear once the CP goes dark the control is returned to the Firefly display

## OUTSIDE YOUR WESTFALIA WAVE

### Awning

Your Westfalia Wave has a roll up awning. (picture 34.2 and 34.3) The awning is controlled by the Firefly interface, simply press the touch screen switch to extend or retract. (picture 33.3) The awning has two support struts that must be used to support the awning. (picture 35.2) These are secured to the two attachment points on the side of the Westfalia Wave. Refer to the awning manual for the proper way of securing the awning supports to the attachments. To stow the

awning, detach the supports, stow them in the awning housing, and retract the awning.



34.2



Awnings are susceptible to damage from wind and rain, for this reason should never be left extended when you are away from the vehicle. If a thunderstorm or other windy weather is imminent, stow your awning until the wind calms down.



34.3



35.1



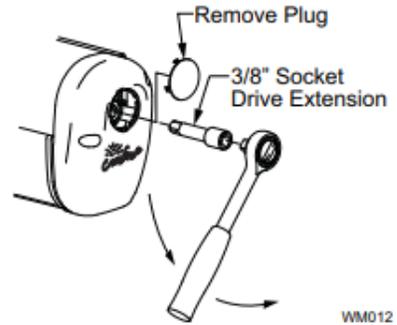
35.2

## **MANUAL OVERRIDE**

If power to the vehicle is not available, the awning can be safely retracted using the manual override located on the idler (right) end of the case.

**NOTE:** This procedure cannot be used to extend the awning.

1. Remove the plug from the right endcap and save.
2. Insert a 3/8" socket drive extension and handle into the square drive hole inside the endcap.
3. Turn the handle counterclockwise until the awning is retracted.
4. Replace the plug.



WM012

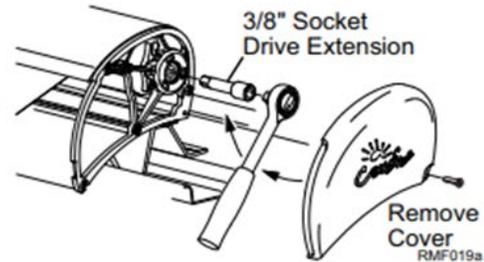
**NOTICE** After closing the awning with the manual override, the lead rail may move out from the case 1/4" - 1/2". This is normal and the awning is secure for travel until power is restored or repairs are completed. Do not attempt to force the lead rail in with the override, serious damage can occur to the awning.

## **MANUAL OVERRIDE (MOTORIZED AWNINGS)**

If power to the vehicle is not available, the awning can be safely retracted using the manual override located on the idler (right) end of the case.

**NOTE:** This procedure cannot be used to extend the awning.

1. Remove the right outer endcap and save.
2. Insert a 3/8" socket drive extension and handle into the square drive hole inside the inner end cap.
3. Turn the handle clockwise until the awning is retracted.
4. Replace the outer cap.



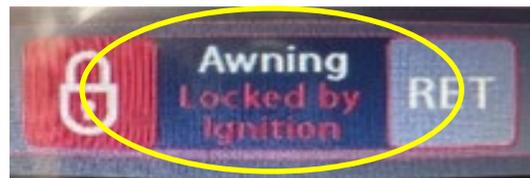
**NOTICE** After closing the awning with the manual override, the lead rail may move out from the case 1/4" - 1/2". This is normal and the awning is secure for travel until power is restored or repairs are completed. Do not attempt to force the lead rail in with the override, serious damage can occur to the awning.



Please Note: These procedures cannot be used to extend the awning.



If the van is turned on, then the awning controls on the Firefly will lock. Turn off the ignition to retract awning.



## GARAGE SHOWER

The outside shower hose attaches to the faucet inside the rearmost passenger side storage compartment, behind the rear wheel. This faucet provides hot and cold running water from the same sources as your inside faucets. When finished, disconnect, and store the shower hose and nozzle. The garage shower (picture 35.1) is found on the passenger side, in the rear cabinet.



37.1



37.2

## Side Doorstep

Your Westfalia Wave is equipped with a step that automatically extends when the side door is opened (picture 37.2) or easy entry and exit out of your vehicle. The switch is located to the right of the Firefly screen. With the step switch on (picture 35.3), the step will extend once when the door is open and remain extended even if the door is closed. With the switch off, the step will extend and retract every time the door is opened and closed.



37.3

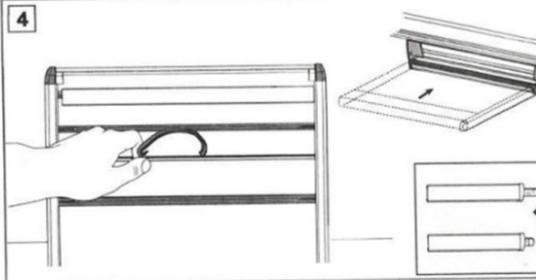
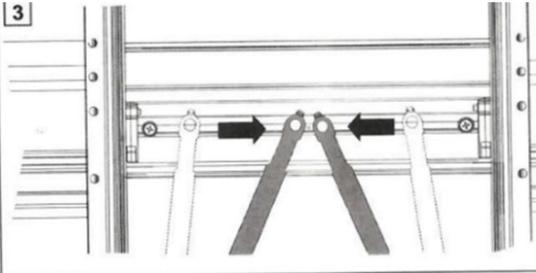
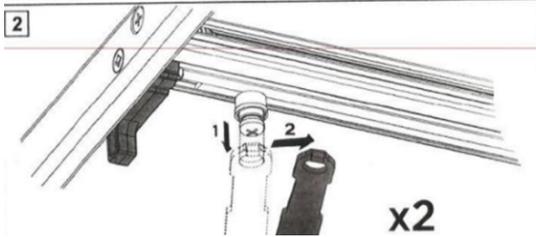
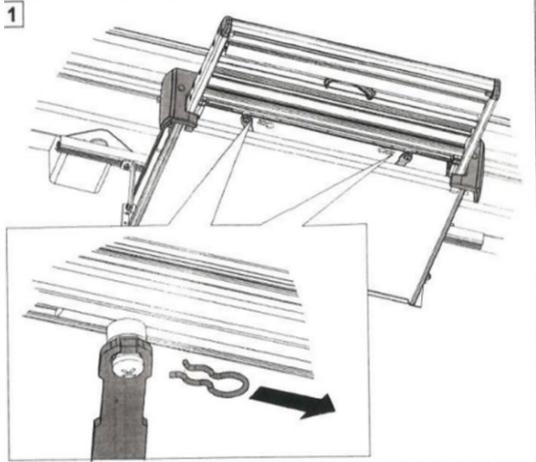


For safety reasons the step will automatically retract when the ignition is turned on even if the step switch is on



Included is an illustrated Manual retraction process. For full details on the process, please see the owner's manual located at: [www.westfalia-americas.com](http://www.westfalia-americas.com)

MANUAL RELEASE



## Rear Door Screen

The Westfalia Wave has a rear screen which allows you to open the rear doors to get fresh air and a better view, without bugs coming in or (attended) pets going out. (picture 38.3) The screen is attached to the rear door frame and cargo area floor. Along the bottom of the screen, you can find three large pockets that can be used to store a range of different items. In addition to the bug screen, there is a built-in privacy blind that can be easily zipped up to provide full privacy.



38.3



Emergency exit screens are attached by heavy duty Velcro. Pull on both straps to detach screen in an emergency.



## Side Door Screen

In addition to the rear door screen, there is also a side door screen which will allow you to keep the side door open for ventilation without admitting insects.



39.1

Side screen closed



39.2

Side Screen Open



While sturdy enough to keep insects out, neither this screen nor the rear screen is designed to resist repeated and persistent attempts by pets to get out of the vehicle. Do not leave your pets unattended with the screen in place and the door open. They could take themselves for a walk.

## UTILITIES

Just like your house, your Westfalia has fresh water, electricity, wastewater disposal, heating, and cooling systems. In the Westfalia, these systems are self-contained and travel with you.

Your vehicle should be reasonably level to allow normal operation of the system.

### Fresh Water

Your freshwater tank uses 2 methods to fill. Gravity fill system, Westfalia vans provide maximum fresh water holding capacity. The tank is uniquely concealed behind left rear bed and is not visible inside the vehicle. You can fill the freshwater tanks from a convenient water spigot, located in the garage portion of the coach.

To fill the tanks with fresh water, open the rear door of the coach, remove the black cap located on the passenger side cabinet. (picture 39.3) Fill until water comes out the hole.



39.3

Gravity Fill

### City Water

The city water connection is in the rear, underneath the rear bumper on the passenger's side. (picture 40) Unscrew the plastic protective cap and connect your clean hose to the water faucet and this connection point. Turn the faucet on and check for leaks, tightening the connections, as necessary.

 There is a pressure regulator in the connection.



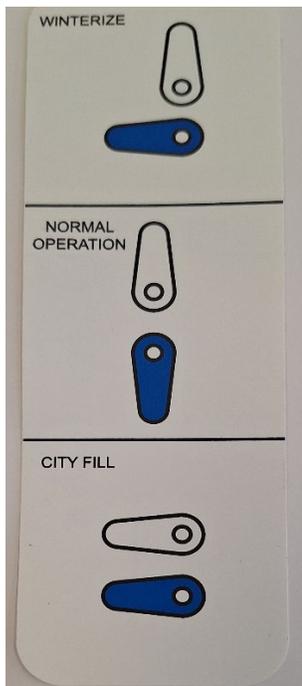
40.1

## Water Pump

To use the water in the tank, you need to turn on the water pump using the Firefly Control Panel. (picture 38.3)



40.3



40.2

 To use city water to fill your freshwater tank, you need to set the valves (picture 40.2) to the positions outlined on the label. Monitor the tank level and stop filling once 100% is reached. To use the pump after filling the tank Set valves to normal operation

## Wastewater

### Gray Tank

Galley sink, bathroom sink, and shower drain water drains into the gray water tank. The shower and sink have traps to prevent tank odors from entering the living space. Be sure to replace the screw-in plug in the shower floor after use to prevent gray water from sloshing up into the shower pan from the gray water tank while driving.

### Cassette Toilet

The Cartridge toilet is removed from the coach by Unlocking the Door and releasing the Cartridge retainer (Blue) Once this is done the cartridge can be pulled out for emptying into an approved waste receptacle.

## Indicators

The tank level indicators found on the firefly control panel will give you an approximate indicator of your tank levels. The levels are represented in thirds. (picture 38.4) When the gray water tank is full, water will no longer drain down the shower and sink drains, and you need to dump the tank before running any more water.



41.1



41.2

Fold Down Access Door

 Ensure that the grey water gate valve is closed before using the wastewater system. It is possible for the valve to open slightly especially after extensive driving. Grey water dump valve is accessed through the driver side storage door.

 Debris, minerals, and moisture will affect readings. Periodically cleaning the tanks will be needed for proper readings.



41.3

Gate Valves

## GATE VALVES AND HOSE LOCATION

The wastewater holding tank gate valve and hose is found on the driver side of the van just forward of the rear tire behind a fold down access door (picture 39.1). To access the area, place a hand in each of the molded hand pulls and lift the door slightly to release it from the magnets and track and fold the door downward.

Once open you will find:

- 1.5" Gate valve for grey water holding tank (left arrow in picture 39.2)
- Locking storage compartment for flexible macerator hose and nozzle assembly (picture 39.3 and 39.4)
- ¼ turn Brass valve for freshwater tank drain (right arrow in picture 39.2)



41.4

Locking Compartment for Flexible Hose

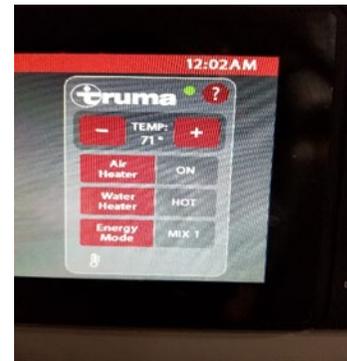


42.1

Flexible Hose



Temperature Sensor



## HEATING AND COOLING

### Air Conditioning

The Truma Aventa air conditioner (AC) provides cooling for your Westfalia using electric shore power or the under-hood generator. The AC can be operated normally when you are plugged in to shore power.

### Truma Combi Heat

#### Propane/Electric Furnace

The furnace is controlled by the thermostat located by the firefly unit. The furnace requires propane and 12-volt power for operation on gas and requires 120v power to be operated on ELE. The furnace can be used without shore power or generator use.

Do not block the Furnace vents in the aisle way.

The Truma Combi has many settings available in the energy mode, you can use gas or electric, or a combination of these. You have Gas, Ele1, Ele2, Mix1 and Mix2.

Caution If you have the Truma Combi on Electrical /Mix and are using the batteries and inverter you will be using significant amounts of power and notice a significant impact on battery life. If you are Boon Docking, ensure that the system is set to "GAS".

## PROPANE SYSTEM

The propane tank is located on the passenger side of the van, just forward of the rear tire (picture 43.1). The access door is hinged at the top and held closed magnetically. Grab the bottom of the door and swing it upwards to access the propane tank (picture 43.2).



Ensure the propane system and their respective appliances are turned off before filling the propane tank.

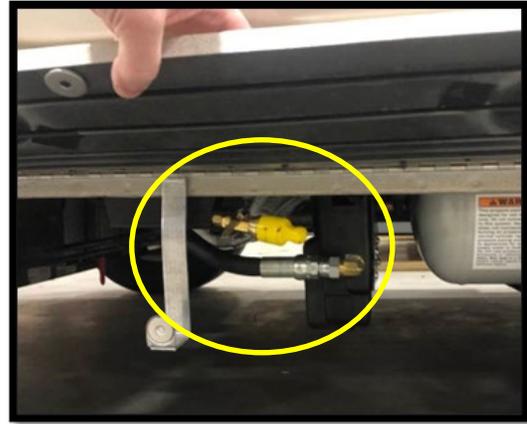
To turn the propane, supply off, locate the "Vapor" supply valve, and turn it clockwise to close it once the propane system has been filled.

Do not forget to turn the valve back on to resume normal operations.

The external BBQ connection is also located in this area (picture 41.2), while this is not a full tank pressure it is considered a high-pressure connection.

 Any BBQ connected to this **must** have their own built-in regulators, remove the yellow protective cap to access the connection.

 The connection required is **not** a 1/4 inch quick connect, it is a special fitting called a Cast product male 829000.



43.3

External BBQ Connection

### Main Shutoff Valve



43.1

Propane Tank Location



43.2

Propane Tank



Propane bleed valve (left) and Fill valve (right)

## Propane Tank Filling

To fill the tank, first turn off all propane appliances, then turn off the tank shutoff valve.

We recommend that you find a qualified LPG technician to fill the tank. The following is an outline of the process to help you understand and not intended to be complete, nor to substitute for formal training or instruction.



Do not attempt to fill the tank unless you have had proper training. Reading this manual does not constitute sufficient training to safely fill propane. If you overfill the tank, propane will vent uncontrollably out of the relief valve.

Attach the fill hose to the fill valve, open the bleeder valve slightly, and fill the tank to 80% capacity. The stop-fill valve should automatically stop the filling process. You may also see liquid propane spit out of the bleeder valve. Stop filling immediately and close the bleeder valve.



We recommend that you use only propane from certified LPG retailers.

## Propane Relief Valve

There is a pressure relief valve on the tank. It is not easily visible on the Wave.

Under no circumstances should anyone fill the tank to more than 80% capacity; doing so can cause liquid propane to flow into the regulators. If this happens the regulators will have to be replaced. The relief valve with the blue plastic cover will automatically vent propane if the tank is overfilled or overheats. This is not a user-serviceable item; never attempt to remove the cover, test, or otherwise interfere with the operation of this valve. Sometimes an overfilled tank will not start venting until the temperature rises. If this valve should open, it is best to remove all sources of ignition and expeditiously leave the area until propane odor is no longer detectable. Venting unburned propane is a slightly more advantageous situation than a tank explosion, which is what this valve is designed to prevent.

## Propane Sender

The propane tank has a level indicator with a remote sender to the Monitor Panel. Both the three-light system on the monitor panel and the gauge on the tank will give you a rough idea of your propane level; you will get a more accurate indication when you fill up. Note the amount it takes to fill your tank. The seven-gallon tank in your Westfalia Wave will hold 5.9 gallons / 22 liters when completely empty and filled to the correct 80% full level. Subtract the amount you buy from this number, and you will know how much was in the tank when you filled it. You may find that the gauge will read one light when you still have a considerable reserve, or you may find that empty means empty, and you would be wise to refill as soon as it goes down to one light. It depends on the characteristics of your individual propane system.

## Slam Shut Valve

The propane system is equipped with a slam-shut valve. If this valve detects a sudden increase in flow (as if from a ruptured line) or a shock (as if from an accident) the valve will shut down the propane system. The slam shut valve can also be triggered by a sudden high demand, for example turning on both burners and the furnace. If you detect weak or no propane flow, and you have checked that you have propane in the tank, shut off all appliances and the main valve.

Turn on one burner on the stove and light it. Let it burn out completely.

Slowly turn on the propane, turning the main valve very slowly, until the valve is open. Check for propane smell as you turn on the valve. You may hear a click as the slam shut valve resets.

Once the valve is open, turn on the stove and try to light it. If air entered the line, it may take a short time to purge the air out of the line. It may take a few tries to reset the slam shut valve.

If you still have no propane at the stove, and you detect no propane smell, have a qualified technician check the system.

## About Propane

Propane fuel is colorless, heavier than air and smells like garlic or rotten eggs. The odor is added by the distributor so propane may smell differently as you travel and purchase propane from various distributors. Being heavier than air it will collect in low spots and along the floor of your vehicle.

If you smell propane or your propane detector sounds, immediately get all occupants out of the vehicle, and turn the manual shutoff valve off. Wait for the propane to dissipate. Once the smell is gone, take the vehicle to a qualified repair facility to find and fix the problem before using the propane system again. If closing the manual shutoff valve does not stop the propane leak and you still smell propane, do not try to start, drive, occupy or otherwise use the vehicle in the presence of a propane smell.

 Propane tanks must not be placed or stored inside your vehicle. Propane tanks are equipped with safety devices which relieve excessive pressure by discharging gas to the atmosphere. The Westfalia Wave's propane tank is mounted outside the vehicle and will vent propane where it can dissipate; any tank inside the vehicle will vent into the passenger compartment, creating an explosive propane-air mixture inside the enclosed space, which also contains many potential sources of ignition.

 To reduce the danger of fire or explosion do not store gasoline or other flammable liquids inside your vehicle. In a moving vehicle, containers get tipped over or jostled and leak, and flammable vapors will create an explosive air-vapor mixture inside your passenger compartment, which also contains many potential sources of ignition.

 Purchase propane from a reputable propane facility. Contaminated propane is a common cause of system failure.

## Regulatory Concerns

Many jurisdictions place restrictions on propane on highways, in tunnels, on ferries, and on bridges. Please follow all local restrictions in all the jurisdictions along your trip. Some bridges/tunnels/ferries require you to have your main tank valve closed. This valve must be closed whenever the vehicle is in motion in any case, not just in certain areas. Other bridge/tunnels/ferries ban vehicles with propane tanks entirely. Plan and take an alternate route if passing through areas where vehicles with propane are prohibited.

## ELECTRICAL SYSTEM

 It is recommended that a surge protector or EMS system is used to protect your electrical system from outside influences that could damage your inverter and other sensitive electronics.

### CAUTION

Do not remove the batteries. Batteries are heavy and require under coach access. Take to dealer/service center to avoid personal injury.

## Chassis Battery

The chassis (starting) battery (picture 46.1) is located between the driver and Passenger Seat under the floor mat.

### NOTICE

Disconnect batteries before connecting external charging equipment to avoid damage to sensitive electronic components.



46.1

Chassis Battery

## Further Information

See the chassis manual provided in your Manual Bag for details on access and servicing.

## Battery Care

Absorbed Glass Matt (AGM) type batteries are electro-chemical devices for storing and releasing electrical charge. As such, they are simply an electrical reservoir, not an electrical source. As soon as energy is removed from the battery, it should be replaced by the engine alternator or the motorhome charging system.

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

### WARNING

This vehicle, like other vehicles, may contain small amounts of one or more substances which are listed by the state of California for causing cancer or reproductive toxicity.

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

## The two best defenses against sulfating and

### WARNING

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

### insufficient charge are to:

1. Turn off the House/Coach Battery Disconnect switch to avoid parasitic discharge (the trickle discharge caused by directly connected components like propane gas detectors or digital clock displays, etc.,)
2. Check the battery recharge as necessary at least once a month during long storage periods. Plug the motorhome into shore

### WARNING

To prevent wiring damage, it is essential when replacing the cables on the battery, or when using a “booster” battery, that the positive post and the positive cable be attached, and the negative post and negative cable be attached. The posts are marked (+) plus and (-) minus.

If a booster charger is used while battery is in the motorhome, disconnect both battery cables before connecting the charger to avoid damage to engine electronic components.

Never attempt to charge or boost a frozen battery. An explosion can occur resulting in personal injury.

power and turn on the battery disconnect switch allowing the converter to charge the coach batteries.

**Note:** Do not leave the shoreline plugged in during storage. Follow regular battery inspection and maintenance.

Further precautions are:

- Check the state of charge periodically to

### WARNING

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

avoid discharge or sulfating.

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

- Make sure the batteries always remain securely clamped in the battery tray.
- Make sure battery cable clamps are tight on the terminal posts and are free of corrosion.

### Chassis Battery

If your motorhome is going to be unoccupied for two weeks or more, Westfalia Inc recommends disconnecting the chassis battery in your motorhome to avoid battery discharge. The battery disconnect (picture 47.1) is located in the seat base.



### Circuit Breakers and Fuses

All 12-volt circuits and equipment in the motorhome area of the motorhome are protected by the Firefly system or Resettable Breakers. When a circuit is overloaded or short develops in any part of the system, The Firefly or breaker will shut down that circuit. If this happens, turn off all affected lights or appliances and reset the breaker or reduce the load on the Firefly.

### Battery Voltage

Battery voltage is displayed on the Firefly "home page".

**Batteries – the system is made up of:**

### AGM

Your Westfalia has a sealed AGM (absorbed glass mat) battery. Do not try to open it. There is no user maintenance possible on this battery except keeping them charged - you never have to add water to them.



Battery maintenance, i.e., keeping the battery charged, is the responsibility of the dealer while the vehicle is unsold, and the responsibility of the owner once sold. Westfalia does not cover warranty replacement of the batteries for lack of maintenance.

### Lithium

Each lithium battery has its own control in the lower right corner of the firefly screen.

Pressing "Battery 1" and "Battery 2" turns on the bank. In normal operation this switch should always be on. This powers the battery

management system, which manages all functions of the lithium battery system, including charging, voltage protection, and the battery heaters when it gets cold.

The battery management system will turn off the batteries when they are run down to near empty. The system will still accept charge but will no longer provide power.



## What Charges Your Batteries

### Inverter Charger

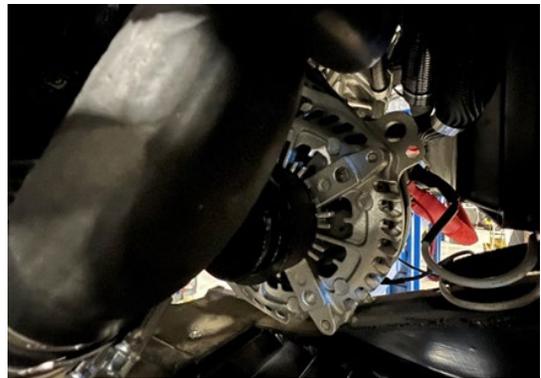
Your Westfalia Wave is equipped with a 3000-watt inverter-charger which converts 120-volt AC (household current) to 12 volts DC when you are connected to shore power. This 120-volt power is used to power your 12-volt DC appliances as well as charge your batteries.

### Under-hood Generator

With the engine generator, you typically have all the electricity you can use driving down the road because the engine generator is producing electrical power. However, once stopped, and particularly after sunset when the solar panel is not producing electricity, turning off electrical items when not in use will make the charge in your batteries last for a longer period.

**The engine generator is mounted on the vehicle engine and is operated by idling the vehicle engine. If your coach batteries are low, simply start the vehicle engine and let it idle until the batteries are sufficiently charged. Usually, 30 minutes of idling are enough to restore moderately depleted coach batteries to a useful level of charge.**

As with a conventional generator, always close the rear windows of the vehicle and turn off the roof ventilation fan when the engine generator is charging the batteries to avoid exhaust entering the vehicle's interior. The engine generator is charging the coach batteries whenever the vehicle's engine is in operation, which means you are charging them as you drive. You will arrive at your camping destination with fully charged coach batteries. There is no required maintenance for the engine generator. Note, however, that your vehicle's serpentine belt (the belt which drives the vehicle's alternator, water pump, power steering, etc.) will be different than the one for similar vehicles without the engine generator, so carrying a spare belt may be prudent in case you have a serpentine belt failure while traveling. We recommend you also have your belts inspected during every oil change.



### Solar

The provided solar panels (picture 49.1) will charge your batteries when sufficient sunlight is available. The solar charge controller (picture 49.2) is installed at the factory for the type of panels and batteries installed on your vehicle, and Westfalia strongly recommends that you make no adjustments or changes to the charge controller or its programming. If equipped with a display, the charge controller usually displays either system voltage or amperes generated by the panels.



49.1



49.2

## Battery Disconnect Switch

The battery disconnect switch (picture 46.4) provides power to all 12-volt appliances, such as the water pump, the refrigerator, the Firefly control panel and so forth. This switch should be off when you are not using your Westfalia Wave.



49.3

## Turning on the Batteries

Turn on Lithium Batteries with the Firefly screen. There are two batteries in your RV, and each battery will need to be turned on individually. The Firefly screen will display BATTERY 1 and BATTERY 2 icons, which are used for turning each battery ON and OFF. Turn on each battery by tapping the icon on the screen.

Note: Your RV comes with batteries charged to less than 100%. If you would like to operate heavy load appliances, such as air

conditioning or heating, without any power interruptions, we recommend first charging the batteries to at least 80%.

## Normal Operation Mode – Charging and Discharging

During normal operation, the batteries will work automatically after they have been turned on. When a charging source is available (shore power, solar power, or under-hood generator) the batteries will charge automatically. Charging time will vary depending on the state of charge in the batteries when charging begins, and how much charging power is provided. You can continue to use your electrical appliances while the batteries are being charged, but it may take longer to charge the batteries.

The batteries will automatically discharge to power the house bank system when needed. Battery runtime will vary depending on how much power is being used. High-power appliances like air conditioners or microwaves will drain batteries faster. Use the Smart BMS app to monitor the state of charge of the batteries.

## Low Temperature Operation – Charging and Discharging

The Smart BMS app displays the battery temperatures.

Please be aware that in colder temperatures your battery runtime will be shorter. This is due to the inherent properties of all lithium batteries. In low-temperature conditions, you may need to charge your batteries more often by running your engine to charge via the under-hood generator or connecting to shore power.

The Lithium Batteries include an internal heater to preheat the battery before charging at temperatures below 5°C. There will be a delay from the start of charging to the time

the Lithium Battery begins storing energy while the battery is being warmed up. During this time, you can see the temperature rising in the Smart BMS app, but the state of charge may not be increasing yet. Once the battery temperature rises above 8°C, the heater will turn off and the battery will start to charge more quickly.

## **Sleep Mode**

The battery will enter sleep mode when its voltage falls below the required level to fully power the BMS. In sleep mode, the battery ID in the Smart BMS app will be greyed out and the click function on that battery ID will be disabled. You will not be able to view detailed information about that battery.

## **To Wake Battery Up When Voltage Is 5V - 12V**

Wake up/Turn ON the battery by tapping the battery icon twice on the Firefly screen. Each battery will need to be woken up/turned ON separately.

Read the voltage from the Smart BMS app on your phone.

If the voltage is above 5V, you have two options to charge the battery:

Option 1: turn on the engine of your RV within 1 minute. Once the engine is running, the batteries will automatically be charged by the under-hood generator.

Option 2: connect the charge port to any available shore power within 1 minute.

We recommend charging the batteries to at least 14V if possible.

## **To Wake Battery Up When Voltage Is Below 5V**

Open the Smart BMS app.

Turn each battery OFF, and then wake it up by tapping the battery icon twice on the Firefly screen.

If the Battery ID remains greyed out in the Smart BMS app after toggling the battery OFF and ON in Firefly, this indicates the battery voltage is below 5V.

**Plug the 12V emergency charge cable** into the 12V outlet (cigarette lighter / 12V) in the RV's dashboard.

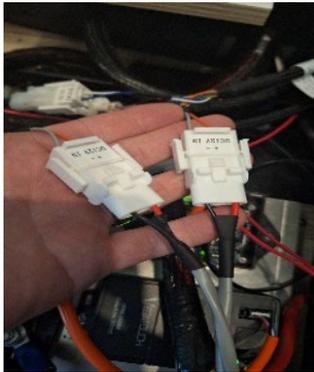
Turn the engine on, which will start trickle charging the batteries. Leave the engine running. If the engine is off when using the emergency charge cable, the lithium batteries will charge by draining the RV's starter battery and you may not be able to start your engine afterward.

After 15 minutes of charging, check the Smart BMS app. If the battery IDs are still greyed out, turn the batteries OFF and "wake up" again in the Firefly screen. The grey IDs should change to black – if they remain grey, wait another 15 minutes and turn the batteries OFF, then wake them up by tapping the battery icon twice on the Firefly screen.

Once the Battery IDs change to black, you can disconnect the emergency charge cable and the batteries will continue to charge from the under-hood generator. Leave the engine running to continue charging the batteries.

We recommend charging the batteries to at least 14V if possible.

You may also use shore power to charge the battery if available.



## Off-Season Storage

1. Use the Firefly system to turn the Lithium Batteries OFF for long term storage (>1 week). This will avoid draining the batteries.
2. Recommended state of charge for long-term storage: 50%.
3. Recommended storage temperature: 15°C to 35°C.
4. Warranty-approved storage temperature: -30°C to 45°C.
5. Recommended storage humidity: 45% to 75 % relative humidity.
6. The battery should be charged at least once every six months, to maintain 50% SOC.

It is NOT necessary to disconnect the battery terminals or remove the battery from the vehicle for storage; turning the battery off in the Firefly screen automatically disengages the battery from the terminals.

## Using the Smart BMS App to Monitor the Battery

Microgreen Lithium batteries come with an app that uses Bluetooth to monitor the voltage,

current, temperature and state of charge of your batteries.

Please scan the QR code to download the SMART BMS app to your smart phone.



iOS



Android

### Tips:

- Make sure the batteries are turned on before using the app.
- Keep the phone or tablet within 10 feet of the batteries.
- You may not get a strong enough signal inside of the vehicle. The signal is much stronger when standing beside the vehicle.

## Warranty

Each battery comes with a 2-year Limited Warranty. For complete details, please see the complete Operating manual available on our website. [www.westfalia-americas.com](http://www.westfalia-americas.com)

## Microgreen Customer Support:

Phone: +1-647-699-0460

Email: [rtservice@microgreen.ca](mailto:rtservice@microgreen.ca)

Online Support: [www.microgreen.ca](http://www.microgreen.ca)

## For Proper Maintenance of the AGM Auxiliary Batteries:

### Do

- Charge the battery to full charge after every full or partial use.
- Charge the battery through the inverter/charger or run the chassis engine till recharged.
- Always wear safety eye protection when inspecting or working on the battery.

### Don't

- Allow the battery to remain in a discharged

state.

- Hook up any direct power draws.
- Over tighten battery terminals.

## On Board 120 Volt AC Power

### Standard 3000W Inverter

The standard configuration includes a 3000-watt inverter. This inverter provides 120-volt AC (household current) for the outlets in your Westfalia Wave, running the TV, microwave, air conditioner and the Truma Combi.

Turn off the inverter upon retiring at night or when the system is not in use, since the inverter produces a small but steady drain on the batteries even though none of the 120-volt electricity is being used.

Inverter switch locations: There are two switches for the inverter, one on the inverter itself and one on the firefly controller labeled "Inverter". The switch on the inverter should always be turned OFF! Use the touch screen to control the inverter. The inverter must be on to charge your batteries from shore power.

The inverter is configured at the factory for the batteries and power sources in your Westfalia Wave. Please do not change any settings without consulting the factory.



52.1

Charge Controller and solar panels



52.2

Inverter Switch

## Shore Power

The shore power connection is through the shore power cord, stored in the van. The switchover from shore power to inverter is automatic.

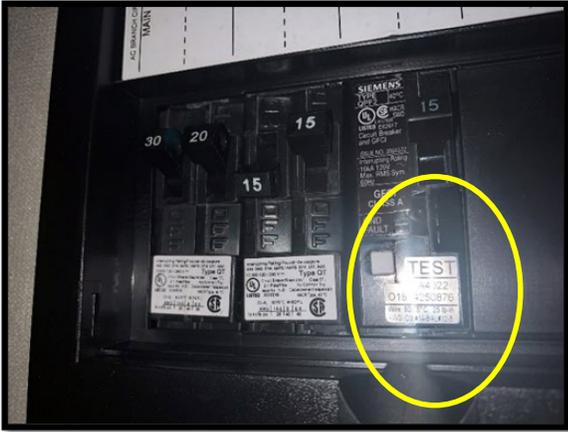
To connect to external (shore) power, open the side compartment and remove the power cord. Plug the power cord into the campsite 30-amp power source. This plug goes in only one way - find the prong with the right angle (L-shaped) on the cord end and on the socket and align them. Once the plug is pushed in all the way, turn it slightly clockwise to lock it into place and tighten the black plastic threaded ring around the outside of the socket. Visit the owner's section of our website to read the HOW TO: Shore Power guide on how to connect and disconnect to shore power.



Running certain appliances when plugged into less than 30 amps will result in component damage.

## Outlets

The outlets are operated through the shore power source or via system inverter. Further, the outlets are protected by GFCI. The GFCI is located at the rear driver's side at the distribution panel. The GFCI requires 120V to reset.



The Distribution panel is located at the rear Driver side

## Shore Power

Shore power is the name for power supplied by a utility company that you plug into to provide power to your Westfalia Wave. Please visit the owner's section of our website to read the HOW TO: Shore Power for a concise guide to plugging in and unplugging from shore power.

## Other Switches

An in-depth description of all other switches can be found in the Firefly Panel Manual found in the appendix section of this owner manual.

## Monitor Panel

### Location

The Firefly monitor panel is located inside the side door, on the side of the microwave cabinet, above the galley. (Picture 40.1). The battery disconnect switch must be in the on position for the Firefly control panel to function.

### Power Sources

The monitor panel controls 2 separate power sources: the 12-volt DC and the 120-volt AC power via the inverter, shore power, or under hood generator.

### 12 Volt DC Power

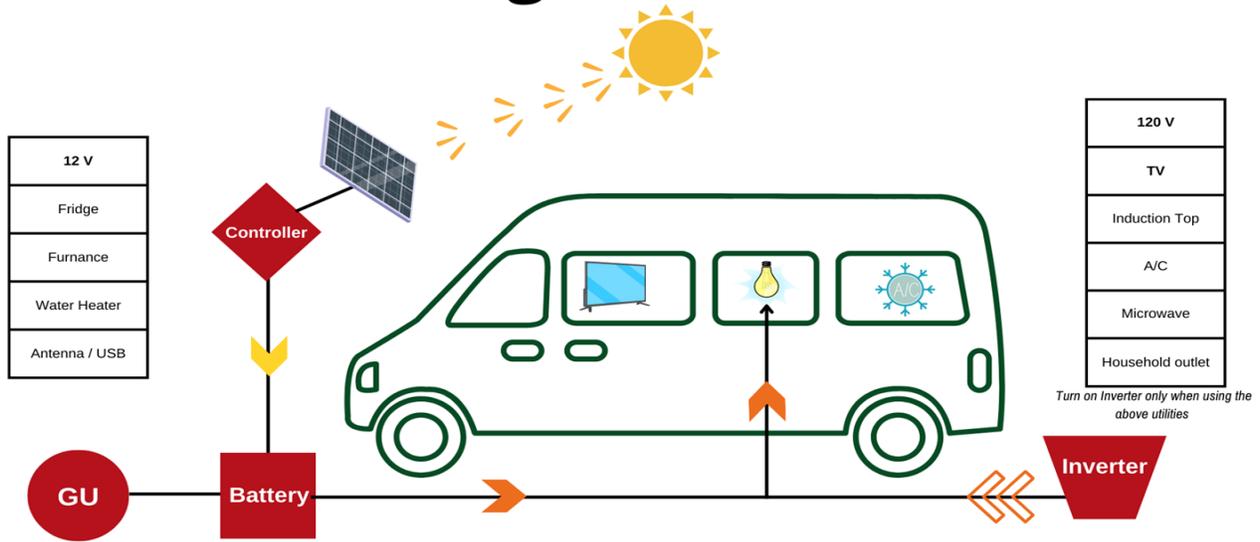
The power to the 12-volt DC outlets and appliances is controlled by the battery disconnect switch found next to the Firefly monitor. This switch must be on for any of the 12-volt electrical devices to work. Remember the inverter will turn off by turning off the battery disconnect switch.



53.1

Monitor Panel

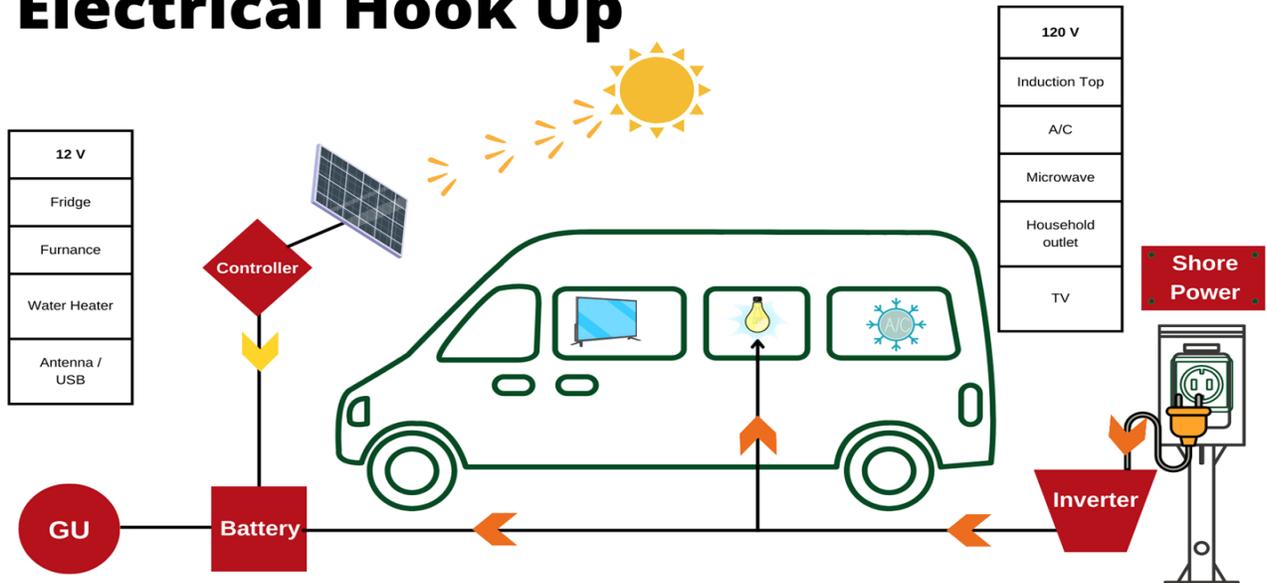
# Boondocking



**i** Please note that all 12-volt appliances run off the battery which is powered by the solar panels and GU.

**i** Please note that to run any 120-volt appliances the inverter must be turned on.

# Electrical Hook Up



 Please note that all 12- volt appliances run off the battery, which is powered by the solar panels and by the inverter when plugged into shore power.

 When plugged into shore power all appliances can be powered by the inverter.

## Distribution Panel

The distribution panel is at the rear of the van on the driver's side. The 120-volt AC breakers, GFCI breaker are behind a black plastic cover on the right side.

## AC Breaker

Flip the cover to the right and note the sticker under the cover with the identifying information on each breaker. (Picture 55.1) When storing your Westfalia Wave for the winter, turn off the battery disconnect switch, the inverter, and all circuit breakers in this panel.

## 12 Volt Fuse Panel

All 12v Circuits are electronically protected by the Firefly system. There are no 12V fuses.



55.1

Breaker and fuse access

 Please note that your breaker and fuse set up may differ depending on model.

## ALARMS AND WARNINGS

### Propane and CO Monitor

Your vehicle has been equipped with a combination propane leak and carbon monoxide detection device for your protection. It is found slightly above floor level next to the furnace and below the fridge.

Be sure the detector is working while using your vehicle. Do not block air circulation in the area where the propane leak detector is found. The detector runs on 12-volt power supplied by the coach batteries and is operational whenever the battery disconnect switch is on. For this reason, whenever the vehicle is occupied, particularly if you are asleep, the battery disconnect switch should be in the "on" position.



**Coach power on the Monitor Panel must be on for detector operation. Make sure your battery disconnect switch is on and the lithium batteries are on.**



**Do not disable, unplug, or otherwise hinder the operation of this detector or the smoke detector.**



**The detector has a useful service life, beyond which it needs to be replaced. See Manufacturer's Owner's Manual for other operating instructions or look for the sticker which is placed on the detector to see the replacement date.**



**The detector will chirp if the coach batteries are running low. It will sound at 10.5 volts.**

### Smoke Detector

The smoke detector is found to the left of the side door, above the passenger seat. It is powered by

a regular battery which needs periodic replacement. Refer to the smoke detector owner's manual for replacement interval for the battery and for the detector itself. The smoke detector is not connected to the RV battery bank.



Smoke alarm is shipped with battery reserved. Check battery installation if the smoke alarm does not work. Alarm will sound if battery falls below 10.5 volts.



Some aerosols and other products can set off detectors when near each other.

## Low Battery Level



Your system will sound an alarm whenever the system voltage is low. Low voltage is triggered at multiple readings and will send you to a low voltage screen.



If Lithium battery option is selected:

- @12.4V-12.3V the Buzzer (Ch.36) will be on for 15 Seconds One Time (Alarm1)
- @12.1V-12.0V the Buzzer (Ch.36) will be on for 30 Seconds One Time (Alarm2)
- @11.9v and Less the Buzzer (Ch.36) will be on for 45 seconds One Time (Alarm3)

The low voltage alarm does not mean that your batteries are dangerously low. This is an alert to make you aware that if you use a heavy electrical consumption, IE: air conditioner and microwave, this may cause the battery to dip below the cutoff point and the BMS will shut off the battery.

When below 12.4 volts it is recommended to charge the battery or run the engine while using high powered items: air conditioner, microwave, induction cook top.

## Fire Extinguisher

Your Westfalia Wave comes equipped with a dry chemical fire extinguisher suitable for all fires. (picture 56.1) Before every trip, check to see that the needle on the dial is in the green range. If not, replace the fire extinguisher.

**DO NOT** test your fire extinguisher by discharging it - total discharge time is 8 to 12 seconds, so it will become rapidly depleted if you test it this way.

Service life on fire extinguishers currently supplied is 12 years; replace the fire extinguisher if it is more than 12 years past the year of manufacture stamped on the base of the cylinder.



56.1

Fire Extinguisher (located behind passenger seat)

## MAINTENANCE



Westfalia recommends before every use, take the time to do a visual inspection of the coach and amenities.

During this inspection if you notice any visual concerns or obvious damage to your Vehicle, please consult your local Westfalia service facility or your chassis service provider. Westfalia encourages routine visits to your local service Dealer to inspect critical system components such as propane lines, water system, and electrical wiring. It is highly recommended that you review the complete list of items below and schedule service for those items that require a technician to ensure the continued enjoyment of your Westfalia Wave.

Refer to the maintenance plan on the following pages for the required maintenance intervals. More frequent maintenance may be needed in conditions, such as dusty areas and very short trip driving. In some extreme conditions,

additional maintenance not specified in the maintenance schedule may be required.

Routine Maintenance is excluded in your warranty.

Appliance owner's manuals are available for download at [www.westfalia-americas.com](http://www.westfalia-americas.com)

## Tires

See the automotive chassis manufacturer's owner's manual and documents for tire warranty information. Inflation pressure information is on a sticker found on the inside of the driver's side pillar. The current RAM ProMaster® manual recommends checking tire pressures regularly, at least every other week and before a long trip. Tire rotation intervals depend on wear and other factors, but tires should be rotated at least every maintenance interval, defined as every 40,000 km/24,000 miles. Follow the tire rotation pattern for dual rear wheel models in your ProMaster® owner's manual.

## Cargo Carrying Capacity

See the information labels attached to the driver door post.

## EXTERIOR CARE

### Seals and Sealants

Sealants are constantly exposed to damaging conditions from the elements and from forces applied by driving. Water intrusion can severely damage an RV. Frequent inspection should be performed on the seals and sealants and, if necessary, maintenance should be performed immediately to keep water out.

#### CAUTION

Avoid high pressure water when cleaning the undercarriage as there are many components and seals that can be damaged by pressure washing.

- Seals and sealants should be carefully inspected at least every six months.
- Inspect all exterior openings, attachments, and accessories – including the rooftop air conditioner, roof rack, exhaust fan, and all other ports.
- Inspect all seals around all doors and windows and if damaged in any way, have them replaced immediately.
- All seals should be inspected for cracks, gaps, peeling or adhesion issues, and/or any other signs of deterioration. Running a finger along seals to check for proper adhesion is a good practice. If damage or deterioration is found, replace the seals or sealants.
- Frequently inspect the roof for damage or leaks.
- Always use the same sealant that was originally used. Roadtrek Inc can provide the information and help arrange any service needed.
- If you notice water inside your van, immediately have it checked for leaks as this can cause considerable damage.

**Note:** Delaying repairs to seals/sealants can result in damage to the interior of the vehicle and is not covered by the Roadtrek Inc Warranty Policy.

### Undercarriage

Dirt, road grime, and mud will collect on the underside of the vehicle and should be frequently cleaned with low pressure water. Further, debris can hold moisture and possibly road salts against the body of the vehicle, increasing the risk of rust or corrosion. Pay extra attention to cavities, horizontal surfaces, and other areas that tend to collect deposits.

Note: Road salts and pebbles are often added to winter roads to help with traction and, if possible, should be avoided. If these conditions are encountered, the vehicle and undercarriage should be washed as soon as possible.

### Ground effects

The ground effects of your vehicle are ABS plastic and should be inspected for damage and wear.

If you discover any areas where the flare panel may be pulling away or separating from the vehicle body, cover the opening (e.g., with duct tape) until a repair can be completed.

## Exterior Finish

Automotive paint, glass, exterior cladding, and vinyl are all durable but still should be treated with care. Use common sense and follow the tips below to keep them looking their best.

- Refrain from parking under trees. First, branches can damage roof-mounted accessories. Second, sap, bird droppings, and bugs can damage the vehicle's exterior; these should be removed as soon as possible using soapy water.
- Driving on gravel roads and unpaved trails can result in damage to your vehicle. Be cautious of rocks and debris thrown by the RV's tires or by those of other vehicles.
- Automotive fluids – such as antifreeze, fuel and even window solution – should be cleaned immediately.

## Washing

It is advised to wash your Wave frequently, not only to remove damaging substances, but also to keep it looking its best.

- Commercial car wash facilities should be avoided. One, the RV is oversized and may not fit. Two, the high-pressure water and spinning brushes can damage the vehicle.
- Wash your Wave with cool water out of direct sunlight, and never when the vehicle is hot do not use strong soaps.
- Treat decals like other painted surfaces, washing with mild soap and water/
- Be careful with high pressure water on seals, decals, and other sensitive areas. These areas are resilient and do not need much special attention, but high-pressure water can damage them.
- Water should not be aimed toward intakes, electrical outlets, appliances, or the seals around any appliances or accessories.
- After washing, inspect sealants and vents for damage or separation. See Seals & Sealants at p. 55 for more details.

## Polishing and Waxing

Part of the maintenance of your vehicle should include polishing and waxing the exterior. This only needs to be done when water will not bead and run off easily, or when the paint surfaces begin to look dull.

Waxing and polishing also help protect the paint from oxidation.

## OWNER MAINTENANCE CHECKS

Listed below are vehicle maintenance checks and inspections that should be performed by the owner or qualified service technician at the indicated intervals. Any adverse conditions should be brought to the attention of your dealer or qualified service technician for expert service advice as soon as possible. The owner maintenance checks are generally not covered by warranties, and you may be charged for labor, parts and supplies used.

### When You Stop for Fuel or Weekly

- Check engine oil level.
- Look for low or underinflated tires.

### Every Other Week

- Check tire pressure on all tires and your spare.

### At Least Monthly

- Check coolant level in the coolant recovery reservoir.
- Check windshield washer fluid, brake fluid and power steering fluid levels.
- Check operation of all exterior lamps, including brake lamps, turn signals and hazard warning flashers.

### At Least Every Three Months

- Flush water to the toilet. Use a hose or bucket to fill the tank through the toilet and dump. Flush gray water holding tank. Use a hose or bucket to fill the tank through the galley sink and dump.
- Flush and sanitize freshwater tank. To flush the tank:
  - Fill it completely using the city fill and

drain using the freshwater tank drain underneath the tank.

- Sanitize by adding 1/2 cup chlorine bleach to the tank, fill with water, let sit for at least two hours, and drain. 1/2 cup vinegar added to the next tankful, which will also be drained before filling with fresh water for use, will help dissipate the chlorine smell.
- Visually inspect the generator unit belt and the proximity of the rad hoses to the generator unit.
- At every oil change, have the under-hood generator belt inspected for wear, alignment, and clearance to hoses.
- Clean the Thule Step and maintain as per the owner's manual.

Refer to other sections in this manual for drain and fill locations.

### **At Least Twice a Year**

- Check windshield wiper operation.  
Clean wiper blades with clean cloth dampened with washer fluid.
  - Wiper blades should be replaced at least once a year.
  - Check radiator, heater and air-conditioning hoses for leaks or damage.
- Check for worn tires and loose wheel lug nuts.
- Check parking brake system and put the brake on and see if it will hold on a moderate hill. If not, get it repaired.
- Check head lamp alignment.
  - Shine your low beam headlights on a wall. The light patterns should be the same height. Measure headlight height at the vehicle with a yardstick and the light patterns should be the almost same height or slightly less with your vehicle level. If not, get the headlights aligned.
- Check lap and shoulder belts for wear and function. Replace any belts with frayed spots or that do not smoothly retract into their holders.
- Inspect appliance vents to ensure they are free from dirt, insects, spider webs and/or nests.

- Inspect gray water tank vent and remove any debris or other obstructions. The gray water tank vent is on the roof, passenger side and in the bathroom area.
- Clean air conditioner filter. See air conditioner manual for details.
- Thoroughly clean and wax the roof of the van.
  - To wash the solar panel, use a garden hose to rinse dirt off the panel.
  - Do not scrub it with a brush or otherwise apply any abrasive material to the solar panel surface.
  - Rinsing the panel two or three times a year to remove excess dirt is all you need to do to keep the panel operating at full output.
  - Inspect sealants for shrinking or cracking.
- With the tank empty, add one cup of mineral oil and one cup of hot water to the gray tank and black tank.

### **At Least Once a Year**

- Lubricate all door hinges, retracting steps, locks, and latches, especially the exposed hinges on exterior doors. These will freeze up and cause damage to the doors if neglected.
- Have appliances tested and cleaned.
- Wax and polish and protect exterior surfaces. The wheels are coated aluminum and there is no bare aluminum on the vehicle, so do not use aluminum polish on any surface of your Westfalia Wave.



To prevent water from entering your vehicle, avoid spraying water directly into exterior vents or grills. Do not use a power washer to clean your Westfalia because damage to the paint, removal of decals and water leaks will result. Hand washing or commercial car washes accommodating large vehicles are the best way to keep your Westfalia clean and shiny.

### **Other Maintenance Checks**

Follow the maintenance for your appliances as per the appliance's manufacturer's manual.

## Seal Maintenance

Due to the nature of the sealants used in the RV industry and the ability for the RV to be used in many different conditions. We do not recommend a specific time frame for inspection. Please be aware that the following conditions will impact the requirement for inspection and maintenance of these products, inspect accordingly. UV intensity, weather conditions and the terrain the coach is utilize in.

## Cabinet Latches and Hinges

These should be inspected regularly these items will require attention that varies significantly based on conditions.

## Combustion (LPG) Systems

These types of devises should be inspected at a minimum of annually by a professional. Before each use by the user, check for obstructions dirt, webs, bugs, and pet hair along with other potential interference or physical damages, if any of issues have been identified have the appliance serviced professionally.

All Maintenance routines in the manual are suggestions. The actual intensity of inspection and maintenance varies with your use of the coach and the conditions it is utilized in. We are aware that many of our customers choose the Class B motor home for the flexibility it offers and ability to go off the beaten path, for your continued enjoyment please adjust your maintenance schedule accordingly.



Routine vehicle maintenance inspection and adjustments are considered essential to overall product reliability and good performance.

## Tire Service Kit

Small punctures up to 1/4 inch (6 mm) in the tire tread can be sealed with Tire Service Kit. Foreign objects (e.g., screws or nails) should not be removed from the tire. Tire Service Kit can be used in outside temperatures down to approximately -4°F (-20°C). This kit will provide a temporary tire seal, allowing you to drive your

vehicle up to 100 miles (160 km) with a maximum speed of 50 mph (80 km/h). The tire service kit is found under the passenger seat. Full instructions for the use of the kit can be found on page 206 of your RAM ProMaster® Owner's manual.



You can also use the tire service kit pump to inflate balls, air mattresses and other inflatables. You will find adapters in a compartment on the bottom of the unit.

## Jacking Instructions

Roadtrek Vehicles come with an Inflation and repair kit. For full details and instructions See your RAM manual IN CASE OF EMERGENCY SECTION Tire Service kit

Tools included in the Jack Kit



Ram Jack Kit



ROADTREK Adapter

**(Copied from the Ram Manual)**

Do not attempt to change a tire on the side of the vehicle close to moving traffic. Pull far enough off the road to avoid the danger of being hit when operating the jack or changing the wheel.

· Being under a jacked-up vehicle is dangerous. The vehicle could slip off the jack and fall on you. You could be crushed. Never put any part of your body under a vehicle that is on a jack. If you need to get under a raised vehicle, take it to a service center where it can be raised on a lift.

· Never start or run the engine while the vehicle is on a jack.

· The jack is designed to be used as a tool for changing tires only. The jack should not be used to lift the vehicle for service purposes. The vehicle should be jacked on a firm level surface only. Avoid ice or slippery areas.

**PREPARATIONS FOR JACKING**

1. Park the vehicle on a firm, level surface. Avoid ice or slippery areas.

**WARNING!**

Do not attempt to change a tire on the side of the vehicle close to moving traffic. Pull far enough off the road to avoid being hit when operating the jack or changing the wheel.

2. Turn on the Hazard Warning Flashers.

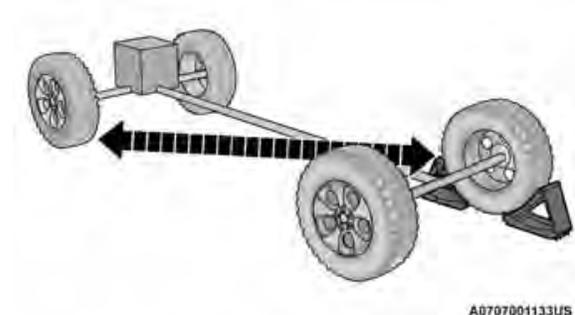
3. Apply the parking brake firmly.

4. Place the transmission in PARK (P) or REVERSE (R) for manual transmission.

5. Turn the ignition OFF.

6. Block both front and rear of the wheel diagonally opposite of the jacking position. For example, if the driver's front wheel is being changed, block the passengers rear wheel.

Wheel Blocked Example.



**NOTE:**

Passengers should not remain in the vehicle when the vehicle is being lifted or raised.

## JACK AND TOOLS LOCATION

Depending on vehicle trim level, the jack and tools are stored under the front passenger seat in a box or strapped behind the driver seat in a tool bag. Tools may vary.



0606052044

### WARNING

Carefully follow these tire changing warnings to help prevent personal injury or damage to your vehicle:

- Always Park on a firm, level surface as far from the edge of the roadway as possible before raising the vehicle.
- Turn on the Hazard Warning Flashers.
- Apply the parking brake firmly and place an automatic transmission in PARK; a manual transmission in REVERSE.
- Block the wheel diagonally opposite of the wheel that is to be raised.
- Never start or run the engine with the vehicle on a jack.
- Do not let anyone sit in the vehicle when it is on a jack.
- Do not get under the vehicle when it is on a jack. If you need to get under a raised vehicle, take it to a service center where it can be raised on a lift.

- Only use the jack in the positions indicated and for lifting this vehicle during a tire change.
- If working on or near a roadway, be extremely careful of motor traffic.
- To assure that spare tires, flat or inflated, are securely stowed, spares must be stowed



A0707000555US

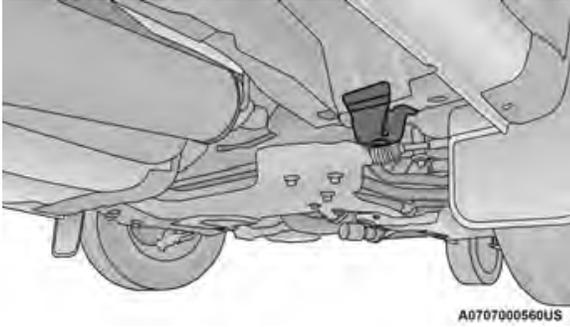
Assembled Jack

1. Loosen (but do not remove) the wheel lug bolts by turning them counterclockwise one turn while the wheel is still on the ground.
2. There are two jack engagement locations on each side of the vehicle body. The length of the jack engagement brackets may differ on gas and BEV vehicles.

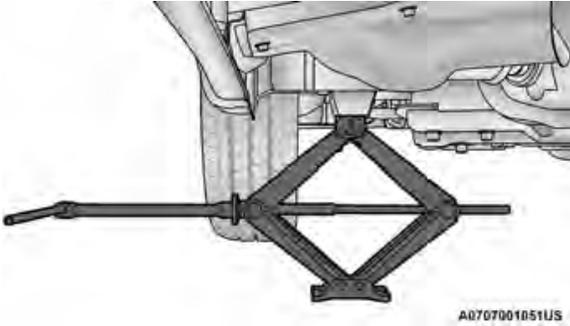
### Jacking Points

#### NOTE:

The front jacking location is located behind the front tire and in front of the driver/passenger door.



A0707000560US



A0707001051US

Front Jacking location

**NOTE:**

Due to the location of the Motorhome components the use of the Jack adapter PN#### is required, The Ram supplied Jacking point is inaccessible.

The rear jacking location is in front of the rear tire using the leaf spring "Eye".



Jack adapter RT PN 206000999 For use on Rear Spring Front eye.

## Jacking the rear of the coach



Rear Jacking location

**Step 1:**

New jacking locations are ahead the rear wheels on the rear spring curved surface.

Ensure the van is secured on a flat surface and have the van in park with the emergency brake activated during the process.

**Step 2:**

Jack Block to be attached to jack, the whole component will be positioned behind the rear wheels, the curved surface of the rear spring will serve as guide for the correct positioning of the jack block

Use jacking kit and jack block attachment that comes with Promaster van to jack up the vehicle.

**Step 3:**

Place wheel block to secure associated wheel shown in jack diagram attached. (ex: Rear Passenger Side wheel being jacked needs block on Front Driver Side wheel)

**Step 4:**

Use the jack Block Attachment and place it on the jack, the hole on the Jack block should match the extrusion of the jack.



Block Placed on Jack

Step 5:

Raise up the jack with the jack block attachment in position to match the curvature of the rear springs (located ahead the rear wheels).

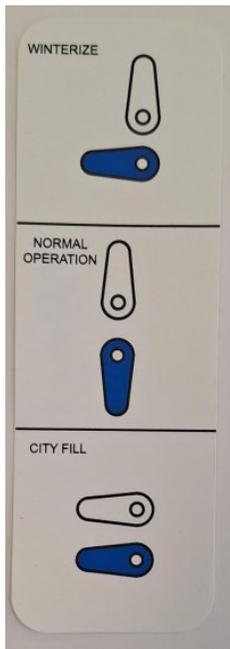
Rotate the jack and/or the attachment as required.

Step 6:

Follow the proper procedure for removing and replacing the wheel.

When completed store the jack and attachment appropriately.

## Winterizing the Wave



Winterize – This uses the pump to draw Winterizing fluid into the pump and add it to the tank.

Normal Operation – Use this to operate the items in the coach. When on city water connection the pressure is directed to the taps and toilet. When not connected the Pump is used and draws water from the Fresh Tank.

City Fill – This is used when Connected to City water (Garden Hose) to fill the freshwater tank. You will have to switch to Normal Operation to use the water pump to pressurize the system

Preparation,

You will need 4 gallons of Winterization fluid.

Paper towel or Rags

Ensure that the grey tank is empty

Ensure that the cartridge toilet is emptied and well rinsed

The valves Set to Normal

Mineral oil

### **Step 1: Draining the fresh water from the system**

You can drain the water from the system 2 ways.

Drain the water on the ground using the ¼ turn Valve at the rear of the coach. And the 2, ¼ turn valves located under the Wastewater access panel.

Or using the water pump run water into the grey tank, ensure that the plug is out of the drain open the tap and let the run into the grey tank. Extend the grey tank drain hose to a location that you can dump the fresh water to the ground, open the gate valve.

Drain the remaining water on the ground using the ¼ turn Valve at the rear of the coach. And the 2, ¼ turn valves located under the Wastewater access panel.

Located under the bed on the step up you will lift the floor and the remove the Bottom of the storage box, this will reveal the valves for the Truma Combi. There are 2 valves The 1.4 turn brass valve should be rotated so that it is at 90 degrees to the water line. The large red handled valve should be In line with the Brass valve.

In the same compartment you will see a brass fitting with a yellow toggle it should be positioned so that the yellow handle is in line with the fitting body. This sets the Combi to bypass and drains the water heater portion leave these valves in this position for the winter.

### **Step 2: Running winterization fluid through the coach.**

Ensure the grey tank valve is closed, return the discharge hose to the storage box

Set the valves located in the garage to winterize position.

From the garage area lift the bed, remove the access cover located in the passenger side compartment, fish out the winterization hose route it so you can set the bed down and have access in the garage. Or add Winterization fluid to the tank using the gravity fill.

Remove the black cap from the hose and place the hose in the bottle of winterization fluid.

Close the ¼ turn valve located at the city water connection.

From the Firefly screen turn on the water pump Draw in 3 gallons of Winterization fluid.

Switch the valves to Normal operation, replace the black cap on the Suction line and return to its storage location.

Close the Valve at the City water connection

Start the pump it should build pressure then stop. Once the pump has pressurized.

Starting in the washroom open the faucets Cold first then hot, run fluid through until it runs pink

Do the same for the Shower faucet, the hose has an anti-siphon feature.

The toilet must be winterized as well, it is imperative to ensure that an adequate supply of winterization fluid has passed through the Water valve. Ensure that the fluid in the bowl resembles the color of the fluid in the jug.

Located in the garage area is the additional shower, connect the hose to the faucet and run the winterization fluid through this system cold, then hot. Remove the hose and stow for winter.

Open the ¼ turn valve by the city fill connection it may be pressurized. if so, let it run until pink flows. close the valve.

Open the Low point drain valve located in the waste compartment to allow Winterization fluid through.

Turn off the pump.

Open the Fresh water tank drain valve until pink run through.

### **Step 3: Drains**

In each drain pour 2 Cups of winterization fluid

Drain any winterization fluid from the toilet bowl into the cartridge, wipe down with the rags or paper towel and add a small amount of mineral oil to the bowl just cover the valve.

Wipe down any sink basins and the shower base, install sink plugs.

#### **Step 4: House battery preparation for storage**

The Lithium batteries in your Wave come with an app that uses Bluetooth to monitor the voltage, current, temperature and state of charge of your batteries.

Please scan the QR code to download the *SMART BMS* app to your smart phone.



1. Use the Firefly system to turn the Lithium Batteries OFF for long term storage (>1 week). This will avoid draining the batteries.
2. Recommended state of charge for long-term storage: 50%.
3. Recommended storage temperature: 15°C to 35°C.
4. Warranty-approved storage temperature: -30°C to 45°C.
5. Recommended storage humidity: 45% to 75% relative humidity.
6. The battery should be charged at least once every six months, to maintain 50% SOC.

It is NOT necessary to disconnect the battery terminals or remove the battery from the vehicle for storage; turning the battery off in the Firefly screen automatically disengages the battery from the terminals.

Ensure the AGM battery is fully charged prior to putting the coach away for the winter.

#### **Step 5: Chassis Battery disconnect**

The starting battery is located in the floor between the front seats.

Remove the floor mat, using a key or other flat object, turn the tabs on the floorboard ¼ turn releasing the hatch, lift the hatch to gain access to the battery.

Close all the doors and using the power lock feature lock the doors

Using the Ram supplied Quick connect on the Negative battery terminal disconnect the chassis battery

Close and lock the driver side door with the KEY.

## ROADTREK INC. TWO (2) YEAR LIMITED WARRANTY

Roadtrek Inc. warrants to the Purchaser that the Motorhome is free from defects in material and workmanship on the portion manufactured by Roadtrek Inc., under normal use and service, for two (2) years, from date of purchase by the first Purchaser or the date the Motorhome was first put into service (for example, as a demo or rental), whichever is earlier.

This non-transferable warranty shall be fulfilled at a Roadtrek Inc. Dealer or authorized Roadtrek Inc. repair facility. For in transit emergency repairs, you may choose to deal with a non-authorized RV service facility. However, all warranty repairs at non-authorized RV service facilities must be preauthorized by Roadtrek Inc. Roadtrek Inc. will, at its option, replace or repair free of charge (including related labor) any defective part, about which the Purchaser shall notify their Westfalia Dealer within the warranty period. The obligation of Roadtrek Inc. under this warranty is expressly limited to such replacement or repair.

The provisions of this limited warranty shall not apply to the following:

1. Accident.
2. Unauthorized repairs or alterations.
3. Routine maintenance including, without limitation, caulking, re-caulking, and waxing of the body of the motorhome, tightening screws, latches, locks, combustion systems, changing fuses, or light bulbs, and maintaining the air conditioning and heating systems.
4. Wheel alignments are not covered by warranty as the vehicle is built to chassis specs. Loading of the vehicle may have an impact on alignment.
5. Changes made to other units manufactured after this Motorhome was manufactured. (This is not an engineer upgrade warranty.)
6. Incidental damages connected with the failure of the Motorhome such as lost time, inconvenience, loss of use of the Motorhome, cost of rental cars, gasoline,

telephone, travel, or lodging.

7. Damages caused by environmental factors including, but not limited to, hailstorms, tornadoes, sandstorms, stone chips, lightning, floods, earthquakes, airborne fallout, chemicals, tree sap, ocean spray, road hazards.
8. Damage or loss caused in whole or in part by the misuse, abuse, neglect, theft, vandalism, product modification, improper customer or dealer installation, improper stowing of equipment, overloading, or improper balancing of the load, low or high voltage, unauthorized repair, or failure to follow instructions supplied with the recreational vehicle.
9. Motorhome that has been declared a total loss by an insurance company (demolished) or a Motorhome whose title indicates that it is designated as "salvage", "junk", or "rebuilt" or words of similar impact.
10. There will be no allowance for emergency road repair, towing, labor, meals accommodations, etc. Such will not be accepted if claimed under warranty.
11. Aluminum wheels are not warranted against corrosion or damage that is a result of road salt, sea salt, cleaning chemicals or harsh driving conditions and excessive pressure from power washers.
12. Rust or corrosion due to the environment, or any broken glass damage.
13. Materials damaged using harsh chemicals or abrasive cleaners.

The provisions of this limited warranty shall not apply to deterioration due to wear and exposure beyond the following limitations:

1. For ninety (90) days after the "Quality Care" Pre-Delivery Report is completed by the dealer for appliance adjustments, door latch adjustments, light bulbs, fuses, battery in the smoke detector, window, and door screens. After 90 days these items are considered part of normal maintenance.

Roadtrek Inc. Limited Motorhome Warranty is void unless the following conditions are adhered to:

1. Warranty registration on the Motorhome must be completed by the Dealer and sent to Roadtrek Inc. within 48 hours of date of retail delivery. When warranty applications are made and Warranty Card is not on file at Roadtrek Inc., reimbursement of claim will be delayed until proof of original purchase is sent to Roadtrek Inc. Chassis warranty is activated by this process and may be impacted by any delays.
2. Warranty claims and authorization requests must be sent to Roadtrek Inc. Including the last 8 digits of the Vehicle Identification Number (V.I.N.) and odometer reading. All claims must be sent within 30 days of the date of repair.
3. Warranty work that will exceed \$200 must first be authorized by Roadtrek Inc. before proceeding with such work. The authorization number issued by Roadtrek Inc. must be noted on the warranty claim. See item #2 above.
4. Roadtrek Inc. reserves the right to inspect or request photographic evidence of defective parts that have been replaced under warranty. Dealer is expected to hold selected parts for a period of not to exceed 60 days. (See below).
5. Only parts and accessories and other material, available through Roadtrek Inc. and Authorized suppliers are to be used in the performance of warranty service. Express shipping costs are not covered by this warranty policy.
6. Warranty repairs performed a second time by a Dealer (due to incorrect or inadequate diagnosis, improper assembly or repair, or lack of proper testing when the original warranty repair was performed) are considered as shop comebacks and are not reimbursable. Costs of such repairs must be adsorbed by the dealer.
7. Purchasers are responsible for presenting their motorhome to a Westfalia Dealer as soon as a problem exists. The warranty repairs should be completed in a reasonable amount of time from date of authorization. Damage caused by failure to address warranty issues in a timely fashion will not be covered by this warranty, additional

expenses will be the responsibility of the owner.

8. This limited warranty is expressly in lieu of any other expressed or implied warranty, including any implied warranty of merchantability or fitness for a particular purpose and of any other obligations or liabilities on Roadtrek Inc. which neither assumes nor authorizes any other person to assume for it any other liability in connection with motorhome manufactured by it.

### **Appliance Warranty**

The following are not warranted by Roadtrek Inc., but are covered by individual warranties offered by their respective manufacturers to which terms both Purchaser and Dealer must comply:

- Antenna
- Awning
- Aluminum Rims
- Air conditioner
- Bug Screens
- Electrical inverter/charger/Separator
- Electronic equipment (TV)
- Engine Generator and Voltage regulator
- Furnace or other heating system
- Microwave oven
- Power Sofa
- Power steps
- Power/non-powered roof vents
- Propane regulators
- Refrigerator
- Stove
- Toilet
- Valves (Black and Gray Tanks)
- Water pump
- Macerator
- Water heater
- Smoke alarm/Carbon monoxide detector.
- Lithium modules

### **AGM Battery Warranty**

Batteries are warranted by the battery manufacturer for one year from the "In Service Date" of the Westfalia.

Warranty is voided if AGM batteries are tampered with, topped off with distilled water or allowed to sulfate or freeze due to lack of charge.

## Warranty Intent

The intent of this extended warranty is to ensure the new owner of a Westfalia that it is worry free from manufacturer caused defects (excluding the chassis) for the first two (2) years of use.

## Defects vs. Damage

Please note the distinction between “Defect” and “Damage.” “Defect” means the failure of the workmanship performed and/or materials used to conform with the design and manufacturing specifications and tolerances of Roadtrek Inc. Defects are covered because Roadtrek Inc. is responsible; on the other hand, Roadtrek Inc. has no control over “damage” caused by such things as collision, misuse, or lack of maintenance that occurs after the RV is delivered to the owner. Therefore, “Damage” for any reason which occurs after the motorhome is delivered is not covered under this warranty. Maintenance services are also excluded from the warranty because it is the owner’s responsibility to maintain the Motorhome.

## Obtaining Service

When your Westfalia needs service, determine if the issue is with the Westfalia upfits or the RAM ProMaster® chassis.

For Westfalia upfits, contact your dealer. Start with the service writer, then the service manager and finally, if you are unable to resolve your issues with the service department, contact the dealership managing partner or owner. Please keep notes of who you spoke with and dates.

For chassis-related issues, contact Dodge service. Advise the service writer that you have a RAM ProMaster®, rather than a motorhome. Some dealerships do not want to work on motorhomes, but most can service a 3/4-ton van. Again, start with the service writer, then the service manager and finally, if you are unable to resolve your issues with the service department, contact the dealership managing partner or

owner. If you cannot resolve your chassis related issues at the dealer level, contact Dodge factory service.



Roadtrek Inc. typically cannot initiate a case with the chassis manufacturer, the owner must do that.

Contact Roadtrek Inc. Service after you have exhausted the process above. Please provide as complete a record as you can so that your effort is not duplicated.

## Roadtrek Inc. Service information:

In the event your Westfalia Wave requires service or service support please contact your selling Dealer first. They are most familiar with your purchase and should have established a working relationship to take care of your needs. Should your travels have you distant from your selling Dealer you can use our Dealer Service Locator at <https://westfalia-americas.com/> to find a service center.

## Specifications

For general chassis specifications, please refer to the RAM ProMaster® manual. For specifications relating to your vehicle, including occupancy, weight rating, tire size, inflation and so on refer to the sticker on the driver’s side B pillar (right side of the door frame, near the latch). For specifications relating to the baseline Westfalia upfits, please visit our website at <https://westfalia-americas.com> Options and upgrades may change specifications.

## RAM Customer Care

Canada: 1-800-465-2001

US: 1-866-726-4636

## Explanation of Vehicle Weights and Ratings

**UVW** (Unloaded Vehicle Weight) is just the weight of the vehicle including a full tank of propane at 4.2 lbs. per US gal. Sprinter tanks are 16 US gal so 67.2 lbs. and ProMaster are 5.9 US gal so 25 lbs.

**Curb Weight** = UVW + fuel at 6 lbs. per US gal for gas and 7 lbs. per US gal for diesel

**Cargo Weight** includes passengers, cargo, optional equipment, and water at 8.3lbs per US gal.

**GVW** (Gross Vehicle Weight) is the Unloaded Vehicle Weight (including propane) plus occupants, cargo, and fluids. It is the actual weight of the RV completely loaded as it would be when travelling including a trailer tongue weight (but not the trailer weight)

**GVWR** (Gross Vehicle Weight Rating) is the maximum allowable weight of a fully loaded RV including the tongue weight of a trailer.

**GVW must never exceed the GVWR.**

**OCCC** (Occupant Cargo Carrying Capacity) is the GVWR - UVW

**GAWR Front** (Gross Axle Weight Rating front) is the Gross Axle Weight Rating of the front axle only.

**GAWR Rear** (Gross Axle Weight Rating Rear) is the Gross Axle Weight Rating of the rear axle only.

**GAW Front** (Gross Axle Weight Front) is the loading of the front axle.

**GAW Rear** (Gross Axle Weight Rear) is the loading of the rear axle including tongue weight of a trailer. With a minimally loaded vehicle and the trailer attached measure the weight of the front axle only on a scale and then weigh the vehicle but not the trailer. Then subtract the front axle weight from the total to arrive at the rear axle weight.

**GAW R = GVW – GAW Front** (Gross Axle Weight front) including the and this must not exceed the GAWR Front (Gross Axle Weight Rating Front). **the GAW Rear must not exceed the GAWR Rear** (Gross Axle Weight Rating Rear)

**GCW** (Gross Combined Weight) is the weight of the fully loaded RV plus the fully loaded trailer.

**GCW** = GVW (including propane) + cargo weight + water weight + passenger weight + trailer weight

**GCWR** (Gross Combined Weight Rating) is the maximum combined weight established by the manufacturer according to the chassis design.

**Towing Capacity** is the Maximum Trailer Weight which is the **GCWR – GVW** of a minimally loaded vehicle. Also be sure to stay under the limits of the vehicle trailer hitch and the manufacturers maximum tow capacity rating.

RV brakes are designed for the GVWR of the vehicle and does not include a trailer. Trailers must have their own supplemental braking systems. Do not use a load leveling hitch system since this is not attached to the frame of the vehicle and could cause damage to the vehicle.

## Car or Trailer Towing

### Hitch Capacity\*

**3500 lbs. max.**

### Tongue Weight\*

**350 lbs. max.**

The factory installed towing hitch on this motorhome is capable of pulling 3500 lbs. load (max.), however, the vertical (tongue) weight may vary according to chassis and model combinations (\*see label on hitch). Towing capacity may be less than hitch rating.

When towing a trailer or vehicle, do not exceed either the GVWR, the rear axle GAWR, or the chassis GCWR (the combined loaded weight of the motorhome and the towed vehicle).

*See preceding items “Loading the Vehicle” and “Weighing Your Loaded Vehicle” for explanation of weight ratings.*

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

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

When towing a vehicle behind your motorhome, the tow bar should be level or pointing slightly upward towards the tow vehicle.

When coupling the vehicle tow bar to the Factory Receiver Hitch using a “drop receiver” or conventional “ball mount” (commonly referred to as a “stinger” or a “draw bar”), do not exceed a 4” drop, nor one that the centerline of the hitch pin to the centerline of the ball exceeds 8”. See following Hitch Assembly illustration.



72.1  
Hitch Assembly

If a towing “brake system” is required, we recommend that a “modulated” towed vehicle braking device be installed. This means that when the motorhome brakes are applied, whether hard or soft, a mirror effect occurs in the braking of the towed vehicle. In other words, the more force applied to the motorhome brakes, the more force will be applied to the rear vehicle’s braking system.

We do not recommend the usage of a “surge-style” braking device. The usage of a surge brake (especially when coupled with a hitch ball located outside our recommended limits) places excessive stress on the hitch. This abuse of the ball mount and the hitch may cause premature hitch assembly failure.

Finally, do not forget to consider the actual tongue weight. This should not exceed the stated hitch vertical load for your vehicle. This weight is typically defined as the tongue weight of a towed vehicle hitch, boat trailer tongue weight, or receiver-mounted carrier rack.

Check state/provincial regulations on trailer weight and trailer brake requirements to be sure you select the right equipment before towing.

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

### **WARNING**

For safe towing and vehicle handling, maintain proper trailer weight distribution. The total weight of the motorhome and the vehicle towed must not exceed the Gross Combined Vehicle Weight rating. See the Specification Label located in the driver’s side door jam.

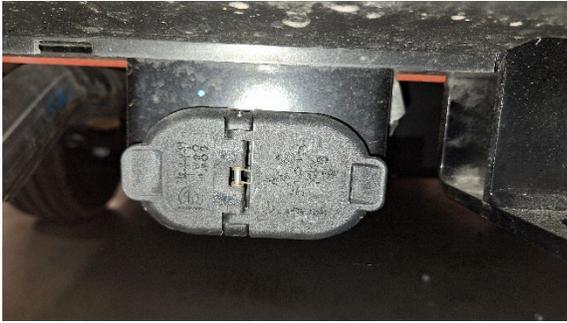
### **NOTICE**

Exceeding any of the recommended gross vehicle weight ratings may result in vehicle damage.

## **Trailer Wiring Connector**

Your motorhome is pre-wired for trailer or car towing lights with a 7-pin wiring connector.

The “pigtail” assembly with the (car/trailer end) connector plug should be wired by a qualified technician.



73.1

Trailer Wiring

#### Further Information

Refer to the chassis manufacturer's user guide provided in your InfoCase for further instructions.

## TOWING GUIDELINES

### Gross Vehicle Weight Rating (GVWR)

This is the maximum allowable weight of the fully loaded vehicle. Included are fuel, water, LP, passengers, cargo, tools, and optional equipment installed by the motorhome manufacturer, dealer, or owner. This value is found on the VIN label, typically placed near the driver position.

### Gross Axle Weight Rating (GAWR)

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

### Gross Combination Weight Rating (GCWR)

This is the maximum allowable weight of the motorhome and loaded trailer, including the items noted in GVWR above. For purposes of this definition, the "trailer" can be a trailer, a vehicle towed on a dolly, or a vehicle towed by means of a tow bar. GCWR is typically specified based on durability and performance of the tow vehicle drive train: engine and cooling systems, transmission, drive line, drive axle, and others.

The tow vehicle brakes may be rated for operation at GVWR, not GCWR.

NOTE: State or provincial laws/regulations may require the "trailer" to be equipped with brakes that are activated when the motorhome brakes are applied. **The user is responsible to know and understand the laws of the state or province being traveled.** The Department of Transportation in a given state or province should be able to provide specific information.

## Hitch Ratings

SAE Standard J684 defines:

- Class 1 trailers as "GVWR not to exceed 2000 lbs.
- Class 2 trailers as "GVWR over 2000 lbs. and not to exceed 3500 lbs. GVWR".
- Class 3 trailers as "GVWR over 3500 lbs. and not to exceed 5000 lbs. GVWR".
- Class 4 trailers as "GVWR over 5000 lbs. and not to exceed 10000 lbs. GVWR".

Hitches are to be permanently marked with "Maximum trailer GVWR to be drawn" and "Maximum vertical tongue weight to be imposed". The SAE standard does not specify a vertical load rating.

Traditionally, hitches are labeled 3500/350 as Class 2, 5000/500 as Class 3 and 10000/1000 as Class 4. The vertical tongue load value of 10 percent of drawn rating comes from the collective experience that 10 percent is the minimum value that provides stable towing of a trailer.

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

## Roadside Assistance Plan

You are enrolled in a 24/7 roadside assistance plan for the first 2 years of the limited warranty upon registration of your Westfalia. The roadside assistance plan is transferrable to subsequent owners within the 2-year coverage period. If your motorhome is disabled because of any nonconformity covered by this limited warranty or in certain other situations, our roadside

assistance provider will help by providing the following services: towing, mobile mechanic (where available), fuel delivery, tire change, battery jumpstart, lockout service and emergency fluids. To obtain roadside assistance, call 1-844-515-4265.

**PLEASE NOTE THAT THE ROADSIDE ASSISTANCE IS ONLY AVAILIABLE TO THE FIRST RETAIL OWNER AND IS NON-TRANSFERRABLE TO ANY SUBSEQUENT OWNERS.**

### **Aftermarket Disclaimer**

The compatibility of aftermarket systems and components should be researched thoroughly either with the dealer or manufacture as they may interfere with the performance of Roadtrek Inc. recreation vehicle systems and components, further affecting the warranty of the vehicle as designed.

### **Regulatory Notices**

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

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer, and/or RoadtrekInc.

To contact NHTSA, you may call the Auto Safety Hotline toll-free at 1-888-327-4236, (or 366-0123 in Washington, DC area) or write to:

NHTSA.  
U.S. Department of Transportation Washington,  
DC 20590

You can also obtain other information about motor vehicle safety from the NHTSA Hotline.

To report a safety concern relating to this vehicle Canadian customers can contact the Department of Transport as per the following.

Transport Canada - ASFAD  
330 Sparks Street  
Ottawa, ON K1A 0N5  
Tel: 1-819-994-3328 (Ottawa-Gatineau area or internationally)

Toll free: 1-800-333-0510 (in Canada)

<http://www.tc.gc.ca/recalls>

Transports Canada -ASFAD  
330, rue Sparks  
Ottawa (Ontario) K1A 0N5  
Tél : 819-994-3328 (dans la région de Ottawa-Gatineau et à l'extérieur du pays)

Sans français : 1-800-333-0510 (au Canada)

<http://www.tc.gc.ca/rappels>

### **HOW TOS:**

For access to more information on how to perform general functionalities of your Westfalia Wave, please go to:  
<https://www.westfalia.com/owners/#section-howto&FAQ>

# APPENDIX

## FIREFLY MONITOR PANEL USER MANUAL