

# MODE 4x4

ADVENTURE VAN SERIES

## USER GUIDE

RAD JOURNEYS AWAIT!





## WELCOME TO MODELife!

We know you have a lot of options available to you these days, so we are grateful you have chosen the Storyteller Overland MODE4x4™ adventure van as your preferred getaway vehicle for a more adventurous life out on the open road and beyond!

Before we discuss the key features and functions of your new vehicle, let's talk a little bit about the Core Values that drive the design, engineering, craftsmanship, and overall experience of the MODE4x4.

Our approach throughout the entire process of creating and manufacturing the MODE4x4 has been to deliver you an adventure-ready vehicle that is... **Safe, Simple, Fun, Flexible, Rugged, and Ready to Go at all times!**

What these core values mean to us is that we believe your experience with all things **MODELife** should be...

### SAFE

You and your passengers can rest in the knowledge that your MODE4x4 has been designed and engineered with seating and onboard power and mechanical systems that are fully tested and compliant with all relevant FMVSS, DOT, NHTSA safety regulations and has been manufactured in accordance with best practices for our industry to meet or exceed the rigorous RVIA certification and related OEM body builder standards.

### SIMPLE

Your MODE4x4 features an uncomplicated, uncluttered, intuitive design that makes it easy for you to get into whatever MODE of travel, camping, exploring, etc... you are going for with the fewest hassles possible.

### FUN

At its heart, the Storyteller Overland MODE4x4 is meant to provide you and your crew with endless hours and many years of pure enjoyment out on the open road and beyond.

### FLEXIBLE

The MODE4x4 is not a "one-trick pony"! We know our customers have demanding lives, and they need their vehicle to rise to the challenges that come along with being a daily driver, a weekend warrior, and a long-range traveler. Whether you are road tripping across the country with your family, camping off-grid in the wild with your crew, or just flying solo for a quick "urban adventuring" grocery store run across town... The MODE4x4 is meant to be your getaway vehicle of choice to help you flex between all aspects of a life fully lived.

### RUGGED

We know life on the open road and beyond can get a little messy at times. That's why we build the MODE4x4 on the infinitely capable Mercedes Benz Sprinter® 2500 4x4 144 chassis and then obsessively hand select only the highest quality components and materials for use in our vehicles to ensure that each one will fully withstand the rigors of the open road for years to come. The on-demand 4WD capabilities of the MB Sprinter 4x4 chassis can help carry you farther. The M-Power automotive-grade lithium power system (powered by Volta) can keep you off-grid for longer without the need for a noisy, smelly generator. And the thoughtful design, quality craftsmanship, and resilient materials incorporated throughout every aspect of your vehicle can endure just about anything you can put it through.

### READY TO GO

And finally, we feel that your MODE4x4 should be ready to perform and keep its promise for you out on the open road or in the wild on a moment's notice. So we have made every effort to ensure that all of our onboard systems and components are easy to maintain and are readily serviceable by qualified technicians. Furthermore, we have built out a nationwide dealer, service, and mobile support network to provide you expert care in the field if something does go wrong with your vehicle while you are traveling.

But we have even gone one step beyond that. To ensure that you feel completely confident in the full range of capabilities for your MODE4x4 vehicle at all times, we have developed an exclusive MODELife™ Customer Care App (Powered by RightRV) that gives you round the clock access to self-help tips & tricks, user guides, FAQs and a host of other helpful resources to guide you through the key features and functionality of your MODE4x4 at your own pace. You can also use the MODELife app to schedule a tech support or warranty conversation via text, talk, or video conference directly with our customer care and user experience team at a time that best suits your schedule.

So there you have it! These are the core values that drive our thinking in the development of each and every aspect of your MODE4x4. We are grateful that you have given us the opportunity to serve you and your crew, and we look forward to seeing you...

Live free, explore endlessly, and tell better stories out on the open road and beyond!

**Cheers to the road ahead!**

and your Storyteller Overland / MODELife family

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- SECTION 1 -

# INTRODUCTION



## SECTION 1 - INTRODUCTION

### Congratulations

Welcome to the family of Storyteller Overland owners, and the world of adventure that awaits your explorations in your Storyteller Overland MODE4x4. Before you begin your travels, please take some time to get to know your adventure van, its features, and how it works.

### About This User Guide

This MODE4x4™ User Guide is written to give you information on how to care for your new adventure van, how to operate many of its features and safety information that you will need to know to have the best experience possible. Please read through this guide completely to gain an understanding of how your adventure van works before you begin your travels.

Note: This User Guide and its contents are general in their coverage of the vehicle components and systems. Some of the exact equipment or functions may have been changed due to continuous product improvement programs. It is important to note that this information may differ to some degree with your vehicle, or that some information may not be included.

Storyteller Overland reserves the right to make changes to their products, without notice, and without obligation to install the same products previously manufactured.

In addition to this MODE4x4 User Guide, you will find a supplemental collection of all the manufacturer's user manuals for the various appliances and systems incorporated into your adventure van. Many of these systems are covered in the MODE4x4 User Guide, but some detailed information may only be found in the supplemental manufacturer's user manuals. Please keep all of these documents with your adventure van as an easy reference to this information should you have any questions. Additionally, many of the supplemental manuals, as well as answers to many frequently asked questions, can be found in the *MODElife* Customer Care App.

Your Storyteller Overland MODE4x4 has been built on an existing vehicle chassis. You will find references throughout this User Guide to the vehicle chassis and the vehicle chassis manual.

Please refer to the vehicle chassis manual for information regarding the operation, safety, and maintenance of the original vehicle chassis.

### Safety Messages Used in this User Guide

This User Guide is written as a guide and alerts you to common safety hazards. There are areas within this User Guide labeled with Danger, Warning, Caution, Notice, or Note. These are meant to alert you to potential safety hazards or other items to pay particular attention to.

**DANGER:** Indicates a hazardous situation which, if not avoided, will result in death or serious personal injury.

**WARNING:** Indicates a hazardous situation which, if not avoided, will result in death or serious personal injury.

**CAUTION:** Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

**NOTICE:** Used to address practices not related to personal injury.

**NOTE:** Used to point out recommendations or special information important for the use or care of an item. Be aware that operating any vehicle carries some level of inherent risk. Please use common sense and good judgment.

### Pre-Delivery Inspection

Storyteller Overland takes pride in the quality of the products we build. To that end, we inspect every vehicle before it ships. Additionally, your dealer is responsible for completing a pre-delivery inspection checking for, noting, 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 adventure van.

### Front Axle alignment

Once your Storyteller Overland adventure van is set up and loaded to meet your needs, you should take the vehicle in for an alignment. A loaded vehicle will have a more compressed suspension system and sit differently. This can affect the alignment of the vehicle and should be



corrected to avoid erratic steering. When loading the vehicle, consider the weight distribution, from front to back and side to side. Follow the Loading Your Vehicle section of this User Guide for more information.

### Service and Assistance

We are committed to our customers well after the purchase of a vehicle. Storyteller Overland has developed a mobile application, called the *MODElife* Customer Care App, to help answer questions, schedule time to talk with customer support and help in service scheduling. The application also contains a digital version of this manual, the supplementary manuals for the individual components used in your adventure van, and a frequently asked questions section.

Storyteller Overland has developed a network of dealers for assistance if you find yourself in need while traveling. Contact Storyteller Overland and we will help get you back on the road as quickly as possible.

### Reporting of Safety Defects

We strive to produce safe and reliable vehicles for you. If you feel there is a safety defect that could result in a crash, injury, or death, you should immediately contact the National Highway Safety Administration (NHTSA) as well as Storyteller Overland. If NHTSA receives similar reports, they may choose to open an investigation, and may choose to issue a safety recall and campaign to remedy issues.

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, D.C. 20590

### Occupant and Cargo Carrying Capacity

This label has been affixed to the vehicle in the passenger's door area. This label shows the total weight capacity allowed for all passengers and cargo, as well as the number of seatbelted riding positions.

MOTOR HOME OCCUPANT AND CARGO CARRYING CAPACITY VIN:  
THE COMBINED WEIGHT OF OCCUPANTS SAFETY BELT EQUIPPED  
AND CARGO SHOULD NEVER EXCEED: SEATING CAPACITY  
\_\_\_\_ OR \_\_\_\_\_ CAUTION: \_\_\_\_\_  
A FULL LOAD OF WATER EQUALS \_\_\_\_ OR \_\_\_\_ OF CARGO @ 1KGL (8.3 LB/GAL)  
AND THE TONGUE WEIGHT OF A TOWED TRAILER COUNTS AS CARGO.

*Note: Water and trailer tongue weight counts as cargo, and should be factored into your available cargo weight. A full load of water for the vehicle is provided on the label.*

If any additional accessories exceeding 100lbs. have been added to the vehicle after vehicle certification, and before the vehicle has been retail sold, a new label with corrected occupant and cargo carrying capacities should be affixed to the vehicle.

### Vehicle Certification Label

This label has been affixed to the vehicle in the driver door area. It contains the Vehicle Identification Number (VIN) label and contains important vehicle information.

### Vehicle Certification Data Explanation

1. Date of completed alterations by Storyteller Overland LLC.
2. Gross Vehicle Weight Rating
3. Gross Front Axle Weight Rating
4. Gross Rear Axle Weight Rating
5. Specified tire size for rating
6. Specified wheel size for rating
7. Vehicle Identification Number (VIN) of the chassis
8. Tire Pressure Rating
9. NHTSA designated usage classification for your motorhome. MPV signifies a Multi-purpose Passenger Vehicle.
10. Product serial number of the Storyteller Overland build

MANUFACTURED BY: STORYTELLER OVERLAND LLC. <sup>1</sup>	INCOMPLETE VEHICLE MANUFACTURED BY MERCEDES BENZ LLC. GVWR: <sup>2</sup>
GAWR: FRONT: <sup>3</sup> _____	SUITABLE TIRE AND WHEEL <sup>5</sup> <sup>6</sup> _____
REAR: <sup>4</sup> _____	COLD INFLATION PRESSURE <sup>8</sup> _____
THIS VEHICLE HAS BEEN COMPLETED IN ACCORDANCE WITH THE PRIOR MANUFACTURER'S IVD, WHERE APPLICABLE. THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE.	
SERIAL NO.: <sup>10</sup> _____	VIN: <sup>7</sup> _____ TYPE: <sup>9</sup> _____ COLOR: _____

## SPECIFICATIONS AND CAPACITIES

Chassis	Mercedes Benz Sprinter
Length	19' 5"
Exterior Height <sup>1</sup>	10' 6"
Exterior Width	7' 8"
Awning Width	10'
Awning Extension Maximum	7'
Interior Height	6' 3"
Interior Width	6' 7"
Freshwater Tank Capacity <sup>2</sup>	21 gal
Graywater Tank Capacity <sup>2</sup>	24 gal
Portable Toilet Capacity	4.75 gal
Water Heater Capacity <sup>3</sup>	Continuous
Wheelbase	144"
GVWR	9,050 lbs
GAWR - Front	4,410 lbs
GAWR - Rear	5,360 lbs
GCWR <sup>4</sup>	13,930 lbs
Fuel Capacity	24.5 gal

All information is based upon the most recent data available. Visit the Storyteller Overland web page – [www.storytelleroverland.com](http://www.storytelleroverland.com) – for the most current product information.

- 1 Exterior vehicle height is measured to the top of the tallest standard feature. The actual height of your vehicle may vary.
- 2 Capacities are based on measurements prior to tank installation. Slight capacity variation is common and results from a variety of factors.
- 3 This is a tankless water heating system with continuous capabilities at adjusted flow rates.
- 4 Actual towing capacity depends on your particular loading and towing circumstances, which includes the GVWR, GAWR, and GCWR, as well as adequate trailer brakes. Refer to the Sprinter Operator's Manual for further towing information.

## OWNER AND VEHICLE INFORMATION

### OWNER INFO

Owner's Name(s) \_\_\_\_\_  
 Address \_\_\_\_\_

### VEHICLE INFORMATION

Chassis Vehicle Identification Number (VIN) \_\_\_\_\_  
 Vehicle Mileage at Delivery \_\_\_\_\_  
 Selling Dealer Name \_\_\_\_\_  
 Address \_\_\_\_\_

### YOUR STORYTELLER OVERLAND DEALER / SERVICE CENTER

Name \_\_\_\_\_  
 Address \_\_\_\_\_  
 Contact \_\_\_\_\_  
 Phone \_\_\_\_\_

### CHASSIS SERVICE CENTER

Name \_\_\_\_\_  
 Address \_\_\_\_\_  
 Contact \_\_\_\_\_  
 Phone \_\_\_\_\_

### RV INSURANCE POLICY

Company Policy Number \_\_\_\_\_  
 Agent \_\_\_\_\_  
 Phone \_\_\_\_\_

## **SECOND OWNER INFORMATION**

### **SECOND OWNER INFO**

Owner's Name(s) \_\_\_\_\_

Address \_\_\_\_\_

### **SECOND OWNER STORYTELLER OVERLAND DEALER / SERVICE CENTER**

Name \_\_\_\_\_

Address \_\_\_\_\_

Contact \_\_\_\_\_

Phone \_\_\_\_\_

### **SECOND OWNER CHASSIS SERVICE CENTER**

Name \_\_\_\_\_

Address \_\_\_\_\_

Contact \_\_\_\_\_

Phone \_\_\_\_\_

### **SECOND OWNER RV INSURANCE POLICY**

Company Policy Number \_\_\_\_\_

Agent \_\_\_\_\_

Phone \_\_\_\_\_





- SECTION 2 -

# SAFETY & PRECAUTIONS

## SECTION 2 - SAFETY AND PRECAUTIONS

### General Warnings

All moveable or swiveling seats should be placed and locked in the travel position while the vehicle is moving.

All seats should be placed in the proper riding position as defined in the Sleeping and Seating Systems section of this User Guide.

While the vehicle is moving, passengers should only use seats with seatbelts.

For pregnant women: Never place the shoulder belt behind your back or under your arm. Adjust the lap belt across your hips/ pelvis and below your belly. Place the shoulder belt across your chest (between your breasts) and away from your neck.

Child restraints should be installed properly according to the manufacturer's instructions. See Child Restraints.

Never let passengers stand or kneel on seats while the vehicle is moving.

All movable or swiveling table tops should be stowed when the vehicle is moving.

Beds are not to be utilized while the vehicle is moving.

Inspect the fire extinguisher monthly for proper charge and operating condition. This should also be done before beginning a vacation or an extended trip.

Do not attempt to adjust the driver's seat while the vehicle is moving.

Do not adjust tilt steering in a moving vehicle.

### WARNING

This motorhome has been designed, manufactured and tested with concern for the protection of it's occupants. We recommend you perform the following inspections for your safety and the safety of your passengers before starting your vehicle.

1. WHEELS - Inspect for damage and check lug nuts for tightness.
2. TIRES - Inspect for wear and damage and check for recommended air pressure.
3. LIGHTING - Test for proper operation of all interior and exterior lights including dash lights, headlights, tail lights, brake lights, clearance lights, and turn signals.
4. SEAT BELTS - Direct passengers to designated seats, be certain swivel seats are locked into position, and require use of a seat belt. See operator's manual for occupancy and weight restrictions.
5. APPLIANCES - Turn off and latch or lock doors where provided.
6. LOOSE PARCELS - Store securely.
7. UTILITY SUPPLY LINES - Disconnect all electrical, sewer and water lines and secure properly.

Read your Sprinter Operator's Manual for further precautions.

Do not operate the cruise control on icy or extremely wet roads, winding roads, in heavy traffic, or in any other traffic situation where a constant speed cannot be maintained.

Use care when accelerating or decelerating on a slippery surface. Abrupt speed changes can cause skidding and loss of control.

Driving through water deep enough to wet the brakes may affect stopping distance or cause the vehicle to pull to one side. Check brake operation in a safe area to be sure they have not been affected. Never operate any vehicle if a difference in braking efficiency is noticeable.

Adverse weather conditions and extremes in terrain may affect the handling and/or performance of your vehicle. Refer to your chassis manual for complete and related information on driving your vehicle.

Verify all doors are shut and/or stowed and latched where applicable.

### Carbon Monoxide Warning

Combustion engines of motor vehicles produce carbon monoxide (CO). The best way to keep carbon monoxide out of the vehicle cabin is by maintaining the vehicle exhaust as well as the ventilation systems of the adventure van.

Have the exhaust system and vehicle body inspected from time to time by a qualified RV service center:

- When the vehicle is serviced
- If there is a change in the sound of the vehicle exhaust system.
- Whenever damage occurs to the exhaust underbody or rear of the vehicle.
- To allow for proper operation of the vehicle's ventilation system, keep front grill clear of snow, leaves, or other obstructions.

### **DO NOT OCCUPY A PARKED VEHICLE WITH ENGINE RUNNING FOR AN EXTENDED PERIOD.**

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

### WARNING

Avoid inhaling exhaust gases, as they contain carbon monoxide, which is a colorless, odorless, and poisonous gas. Death or serious injury can result.

## Smoke and Carbon Monoxide Alarm

Your MODE4x4 is equipped with a smoke and a carbon monoxide (CO) alarm designed to detect and alert you to the presence of smoke and carbon monoxide in your vehicle.

These detectors should be tested after the vehicle has been in storage, before each trip, and at least once per week during use by pressing the Test/Reset button on each of the alarms.

*NOTE:* The smoke and CO alarms are not activated by Storyteller Overland. The owner is responsible for activating the smoke and CO detectors before the vehicle is used for the first time.

For more information on the smoke and CO detectors, see the manufacturer user guides included with your vehicle.

## Smoke and Carbon Monoxide Alarm Replacement

When replacing this alarm, we recommend replacing only with the same model, or with one that is also listed for RV application from your Storyteller Overland dealer.

## Fire Extinguisher

A dry chemical fire extinguisher is located on the rear of the front passenger's seat. Familiarize yourself with the operating instructions on the fire extinguisher.

We recommend that you inspect the fire extinguisher for the proper charge at least once a month in accordance with the National Fire Protection Association (NFPA) recommendations, as stated on the label. If the extinguisher is past its expiration date or charge is insufficient, the fire extinguisher must be replaced.

If for any reason, you must replace the fire extinguisher, the replacement must be the same type and size. We recommend obtaining a replacement only from your Storyteller Overland dealer or a reliable RV parts supplier.

**! WARNING**

Test smoke alarm operation after the vehicle has been in storage, before each trip, and at least once per week during use. Failure to do so can result in death or serious injury.

**! WARNING**

Failure to replace this product by the REPLACE BY DATE printed on the alarm cover may result in death by Carbon Monoxide poisoning.

**! WARNING**

Do not test the fire extinguisher by discharging it. Partial discharge can cause leakage of pressure or contents, which would render the unit inoperative when needed. When using the fire extinguisher, aim the spray at the base of the fire.

## Electrical Cautions

Careless handling of electrical components can be fatal. Never touch or use electrical components or appliances while feet are bare, while hands are wet, or while standing in water or on wet ground.

Improper grounding of the vehicle can cause personal injury. Do not plug the utility power cord into an outlet that is not grounded and do not adapt or modify the plug to connect to a receptacle for which it is not designed.

Do not attach an extension cord to the shore power cord.

Be sure that all electrical appliances have 3-prong plugs for proper grounding.

Avoid overloading electrical circuits. Replace fuses or circuit breakers with those of the same size and amperage rating only. Never use a higher rated fuse or breaker.

Use caution when handling or working near energy storage systems and electrical components. Always remove any jewelry and wear protective clothing and eye covering. Avoid creating sparks.

## Loading

Store or secure all loose items inside the adventure van before traveling. Possible overlooked items such as canned goods or small appliances on the countertop, cooking pans on the range, or free-standing furniture items can become dangerous projectiles during a sudden stop.

Be aware of GVWR, GAWR, GCWR, and individual load limit on each tire.

Never load the motorhome in excess of the gross vehicle weight rating or the gross axle weight rating for either axle.

## Maintenance

Do not remove the radiator cap while the engine and radiator are still hot.

**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.



Never get beneath a vehicle that is held up by a jack only.

Do not mix different types of tires on the vehicle, such as radial, bias, or belted tires, as vehicle handling may be affected. Replace tires with the exact size, type, and load range.

Refer to the chassis manual for complete maintenance precautions and recommendations.

### Pinch Hazards

Any time items open and close, such as a door or cabinet, or move, such as a rotating or folding seat, there is the potential to create a pinch point. Avoid any moving areas of a mechanism to prevent injury.

### Formaldehyde Information

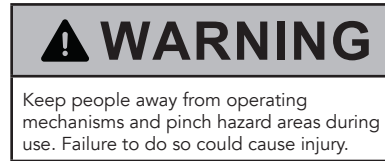
Like every home and building, some of the materials used in this recreational vehicle emit formaldehyde. Eye, nose, and throat irritation, headache, nausea, and a variety of asthma-like symptoms, including shortness of breath have been reported as a result of formaldehyde exposure. Reaction to formaldehyde exposure may vary among individuals. Elderly persons and young children, as well as anyone with a history of asthma, allergies, or lung problems, may be at greater risk. Research is continuing on the possible long-term effects of exposure to formaldehyde.

Inadequate ventilation may allow formaldehyde and other contaminants to accumulate in indoor air.

Ventilation to dilute the indoor air may be obtained from a passive or mechanical ventilation system. Always be sure to thoroughly ventilate your recreational vehicle before and during each use. High indoor temperatures and humidity may raise formaldehyde levels. When a recreational vehicle is in areas subject to high temperatures, an air conditioning system can be used to control indoor temperature levels. If you have any questions regarding the health effects of formaldehyde, consult your doctor or local health department.

### Mold - What It Is, What Causes It, and How to Avoid It

Mold is a fungus and a natural part of our environment. It plays an important role in helping to break down dead leaves and other organic matter into fertile soil. The very nature of your adventure van being outside will bring it into contact with mold. While mold growth is normal nearly everywhere on earth, indoor mold growth should be avoided.



To reduce mold growth, you need to reduce the things in your adventure van that allows mold to grow. Mold only needs small amounts of nutrients from food spills or grease, or could survive on as little as a fine layer of dirt or dust. Keep the inside of the vehicle as clean as possible.

Moisture plays a large part in mold growth, as well. Don't allow condensation to build up inside the vehicle and keep the interior humidity levels low. Proper ventilation helps remedy this, and using the air conditioner can help remove moisture from the air.

Avoid and repair leaks as they are a major contributing factor to mold growth. They can allow water into often unseen areas.

If mold develops, clean the area with soapy water followed by a bleach solution. If the items cannot be treated they will need to be removed.

We live in a world where mold is common and natural, but it can cause issues and irritation to some people, so do everything you can to mitigate it in your adventure van.

### Mold and Warranty Claims

If Storyteller Overland determines that mold in your adventure van was caused by a manufacturing defect that has been reported to Storyteller Overland within the limited warranty period, Storyteller Overland will clean the affected area(s) and /or replace items it deems necessary.

This is the only circumstance in which Storyteller Overland, will cover mold under its limited warranty.

Storyteller Overland will not assume responsibility for mold deemed to be a result of a user's lack of timely and appropriate action to mitigate circumstances should a problem occur.

### Roadside Emergency

Your adventure van is built to be rugged, but sometimes accidents happen, or things break. Due to the weight and size of the vehicles, it is advised that you seek professional road service to help in the event of a roadside emergency such as a flat tire.

If the situation requires you to change a flat tire yourself, be very careful and read all the information in your Sprinter Operator's Manual regarding the changing of a tire.

Never get under a vehicle that is held up by only a jack.

Check your tires for proper inflation before each trip, and at least once a month, using an accurate tire gauge.

### If You Get a Flat Tire

DO NOT panic.

Grip the steering wheel firmly and steer the vehicle as straight as possible. Avoid quick maneuvers. You may need to counter-steer to compensate for pull created by the failed tire.

DO NOT stomp/slam on the brakes. This abruptly shifts the vehicle's weight forward, making it nose-dive and pull toward the blown-out side.

DO NOT jerk your foot off the accelerator. Just ease back on the accelerator slowly and gently to continue the 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 after you are certain the lane is clear.

Let the vehicle coast to a stop, gently steering to a safe stopping place. Do not worry about damaging the tire or wheel by driving on it. A tire or wheel replacement is cheaper than damaging the vehicle or injuring yourself.

Once you have come to a stop, activate your hazard flashers, then exit the vehicle carefully.

Set out flares or other warning devices.

### Spare Tire

The wheels and tires supplied with your MODE4x4 are not the same sizes as the factory spare, but the difference is within the allowable range for an emergency. It is not recommended to use the spare tire for normal driving and should be used only in case of emergency.



Do not use the stylized lug bolts used with the stylized Storyteller Overland MODE4x4 wheels, when mounting the spare tire. You must use the six chassis supplied lug bolts located in the co-driver footwell compartment. The chassis supplied lug bolt hex is the correct size for the lug wrench.

Additionally, do not use the factory style lug bolts when attaching the stylized wheels. Use only the stylized lug bolts that were used to mount the stylized wheel.

### Recovery Towing

Due to the modified nature of an adventure van from its original chassis specifications, you should notify the operator of the towing service of the front axle weight of the vehicle as it may have an effect on how they choose to tow or recover the vehicle. This information can be found on the Vehicle Certification Label. Refer to the chassis manufacturer's manual for instructions on how the manufacturer requires the vehicle to be towed.

Storyteller Overland does not assume responsibility for damage incurred while towing this vehicle.

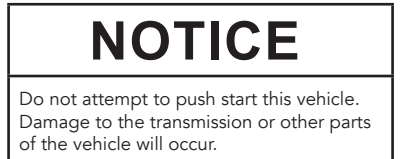
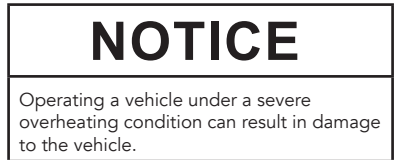
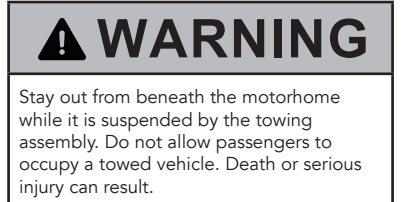
### Engine Overheating

If you see or hear steam escaping from the engine compartment or have any other reason to suspect an engine overheating condition, pull the vehicle over, stop the engine, and get passengers out of the vehicle.

For information on what to do in case of overheating, consult the Sprinter Operator's Manual.

### Jump-Starting

If you wish to try jump-starting the engine using another vehicle or booster system, see the Sprinter Operator's Manual for connecting jumper cables to the automotive chassis electrical system.





# - SECTION 3 - DRIVING YOUR ADVENTURE VAN



## SECTION 3 - DRIVING YOUR ADVENTURE VAN

This section refers to items in the factory cabin area, including the dash, front driver and passenger seats, and the safety functions of the rear bench seat.

See your chassis manual for information on the factory chassis systems, included items like driving controls, instrumentation, switches, cruise control, climate controls, gauges, wipers, lights, front seats, factory three-point safety belts, and other factory features.

### Front Seats

The front seats of your vehicle are adjustable to your preference.

See your Sprinter Operator's Manual for information on the factory seat adjustment.

Additionally, the front seats of your MODE4x4 can swivel around to become integrated into the living area of the cabin.

*NOTE: Damage to interior door panels will result if seats are swiveled toward the doors. Do not turn driver seat counterclockwise and do not turn passenger seat clockwise.*

*NOTE: When the vehicle is in motion, the driver and front passenger seat should be locked in the forward position.*

### Seat Belts

All designated seating positions have a seat belt with a shoulder belt and should be used at all times when the vehicle is in motion. Do not sit or lounge in other areas of the vehicle while the vehicle is in motion.

After any serious accident, all seat belts in use during the accident must be inspected and replaced if necessary.

### Child Restraints

Properly installed and used child restraint systems have been shown to reduce the risk of injury to a child in the event of an accident or

### **⚠ WARNING**

Damage to interior door panels will result if seats are swiveled toward the doors. Do not turn driver seat counter clockwise and do not turn passenger seat clockwise.



sudden maneuver. If child restraint systems are used incorrectly, they may increase the risk of injury.

The rear bench seat can be used with a child restraint system if designed to be secured with lap-shoulder belt style seat belts. Refer to your child restraint system's instructions for installation compatibility and instructions.

*NOTE: The seat must be in the full upright position if a car seat is to be used.*

## Factory Dash Climate Controls

The factory dash climate controls are designed to heat and cool the front cabin area while the vehicle is running. However, the dash air conditioner and heat were not designed to heat or cool the entire cabin of the vehicle.

See factory chassis manual for details and instructions covering dash A/C, heat, and defrost functions.

See the Cabin Climate Control System section of this User Guide manual for details regarding the Storyteller Overland installed heating and cooling systems.

## Infotainment Systems and Driver Assist Features

Consult the factory chassis manual for information and operation instructions regarding your factory equipped infotainment systems including things like radio, navigation, Bluetooth, rear-facing camera, etc.

## Vehicle Maintenance

Your Storyteller Overland Vehicle is based on a vehicle manufacturer's existing chassis, and like any other vehicle requires routine maintenance and servicing. Please consult your factory chassis manual for information regarding your vehicle's maintenance and servicing requirements and intervals.

## Front Axle Alignment and Tire Balancing

Fully loading a vehicle can change the front end alignment. Once you have you know what you will be taking, take the vehicle in for an alignment.

The front suspension and steering system of this vehicle was factory aligned using highly accurate equipment prior to delivery to the dealership. However, alignment should be checked and adjusted after you have fully loaded the motorhome according to your personal needs. Thereafter, the alignment should be periodically inspected to help prevent uneven tire wear.

Any excessive or abnormal tire wear may indicate worn or misaligned suspension or steering, an unbalanced tire, or other tire/suspension problems.

Alignment can be affected by worn steering/ suspension parts or by incidents that happen during driving, such as hitting a curb, pothole, or railroad track, etc. Improper alignment can cause tires to roll at an angle and wear unevenly. It may also cause the vehicle to pull to the right or left. Have your dealer, or RV service technician, inspect your vehicle's suspension and steering components periodically for misalignment or wear.

Out-of-balance tires will not roll smoothly and can lead to vibrations and uneven tread wear, such as cupping and flat spots. Tires may need to be balanced if uneven wear is detected, or if ride comfort decreases noticeably.

Refer to the chassis manual provided with your vehicle for further information.

## Tires

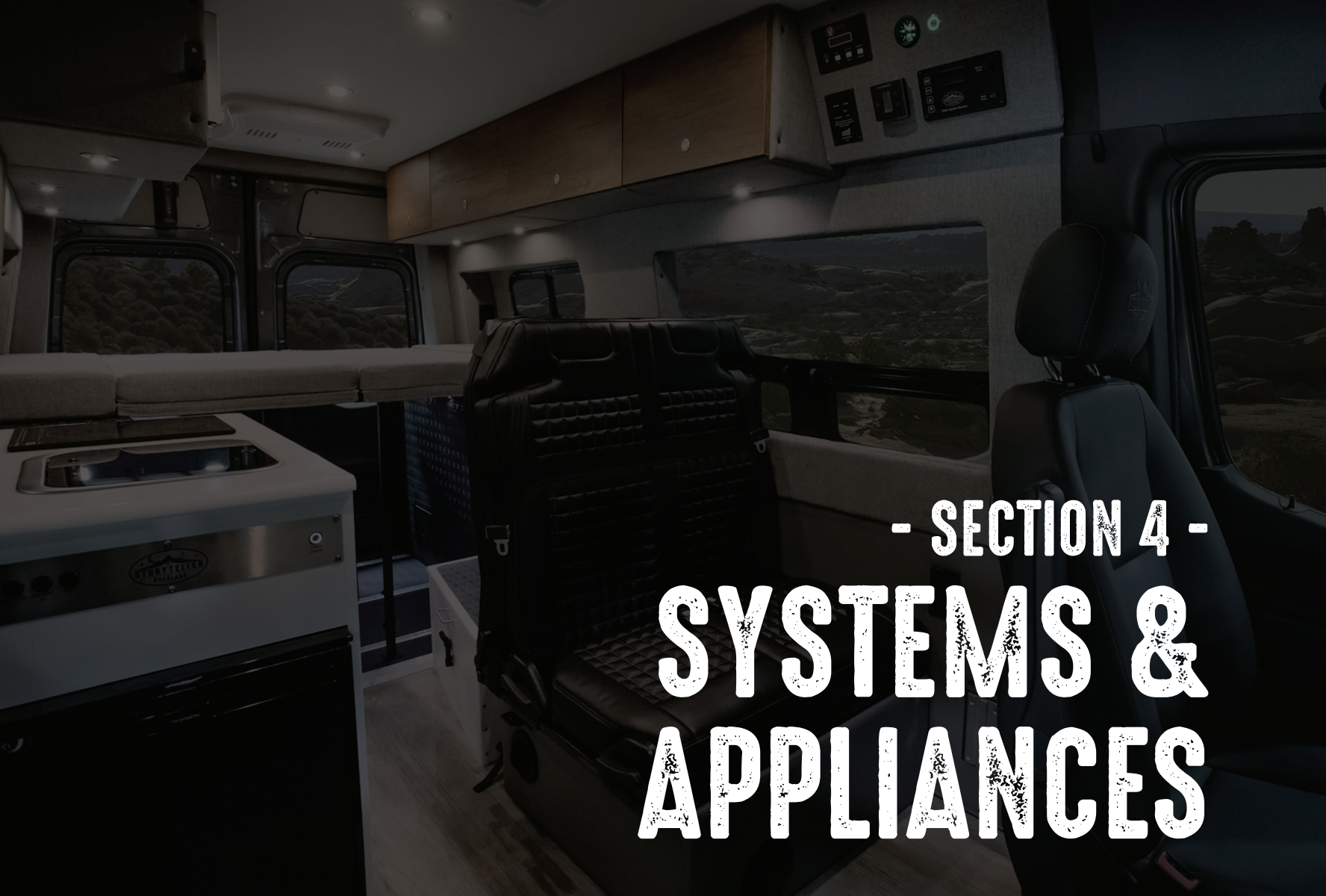
This vehicle is equipped with wheels and tires that are different than the original equipment. There is a modified tire and wheel label in the driver door area with information on the Storyteller Overland tire and wheel modifications. Refer to this label for information regarding the proper tire pressures.

Improper tire pressure can cause abnormal or premature wear, affect vehicle handling, and fuel economy.

## Control Panels and Functions

The MODE4x4 has cabin controls in two main areas of the vehicle. The main systems controls for monitoring and operating the M-Power Energy System, cabin climate controls, and water systems can be found on the Systems Monitor Panel on the wall above the GrooveLounge, behind the driver's seat. The secondary control location can be found on the forward face of the galley electric awning controls as well as the main cabin light switch. For more details, refer to the specific system section within this User Guide.





# - SECTION 4 - SYSTEMS & APPLIANCES

## SECTION 4 - SYSTEMS AND APPLIANCES

### M-Power™ 12kWh Energy Storage System (Powered by Volta©)

Your Storyteller Overland MODE4x4 is equipped with the M-Power 12kWh Energy Storage System, which is used to power the systems and accessories. The M-Power Energy Storage System is housed inside the power systems cabinet. The power systems cabinet is the large cabinet supporting the passenger side rear fold-out bed. The M-Power Energy Storage System is independent of the chassis electrical system and does not provide power to the vehicle's engine or chassis electrical accessories.

This electrical system is comprised of three voltage systems:

- 58V DC system
- 12V DC system
- 110V AC system

The electrical system can be charged in one of two ways:

- 30A shore power connection
- HD Auxiliary Alternator attached to the vehicle engine

See Charging the M-Power Energy Storage System section for detailed instructions.

The MODE4x4 is also equipped with solar panels that can add a supplemental amount of energy into the power system based on the availability of sunlight. The solar energy charger should not be thought of as an effective charging source for the M-Power Energy Storage System, but as a way to increase the time needed between system charges.

#### **Electrical Cautions:**

Careless handling of electrical components can be fatal. Never touch or use electrical components or appliances while feet are bare, while hands are wet, or while standing in water or on wet ground.

Improper grounding of the vehicle can cause personal injury. Do not plug the utility power cord into an outlet that is not grounded, and do not

adapt or modify the plug to connect to a receptacle for which it is not designed.

Only use an RV rated 30A extension cord, no longer than 50 feet in length. Never use a standard extension cord.

Be sure that all electrical appliances to be used contain 3-prong plugs for proper grounding.

Avoid overloading electrical circuits. Replace fuses or circuit breakers with those of the same size and amperage rating only. Never use a higher rated fuse or breaker.

Use caution when handling or working near the chassis battery or the M-Power Energy Storage System. Always remove any jewelry and wear protective clothing and eye covering. Avoid creating sparks.

### 58 Volt System and Components

The M-Power Energy Storage System is based around a 58V energy storage pack. The 58V portion of the system is not compatible with 12V electronics and accessories.

This system should never be modified, altered, or used in any way outside of how the system was designed by Storyteller Overland. Doing so may cause damage to the system, and lead to unsafe conditions.

*NOTE: The M-Power Energy Storage System Warranty may be voided if the system is altered or tampered with in any way.*

### 12 Volt System and Components

The 12V system is powered through the converter from the M-Power Energy Storage System's lithium-ion pack. This part of the power system provides power to the 12V outlets, interior lights, awning, system control panels, exhaust fans, refrigerator, heating system, and other small electrical components.

In order to run the 12V system, the M-Power Energy Storage System must be on. The converter will turn on and off automatically with the M-Power Energy Storage System.

The system inverter does not need to be on for the 12V system to operate. See the Turn On/Off the Inverter/Charger section for detailed information on how to turn the inverter off to save power.

### 12 Volt Fuse Panel

The 12V system has a fuse panel designed to protect the system. In the event too much power is drawn by a device plugged into the 12V system, a fuse will blow, and power will be cut off to that circuit. The blown fuses can be removed and replaced to restore power to the circuit.

*NOTE: Always replace fuses with fuses of the same size and amperage rating. Never replace with fuses of a higher amperage rating.*

The fuse panel is located at the rear of the vehicle behind an access hatch labeled Fuse Panel.

### Fuse Panel Layout

1	5	9
2	6	10
3	7	11
4	8	12

- 1 10A: Refrigerator
- 2 15A: Awning
- 3 15A: Under Cabinet and Cargo Lights
- 4 20A: 12V Outlet/Speaker
- 5 10A: Exhaust Fan
- 6 15A: Rixen Furnace
- 7 10A: Rixen Controls
- 8 10A: Water Monitor
- 9 10A: Overhead Cabin Lights
- 10 20A: AUX 1
- 11 15A: Water Pump
- 12 20A: Ink Pump

### 110V System and Components

The 110V system is powered through an inverter, either from the onboard energy storage pack or from a shore power connection.

This part of the power system supplies power to the household-style wall outlets, the appliances including the refrigerator, cooktop, rooftop air conditioner, and microwave.

To run the 110V system, the M-Power Energy Storage System and inverter must both be on. The inverter comes on automatically when the

M-Power Energy Storage System is turned on.

The inverter can be switched off, through the inverter/charger panel, while the M-Power Energy Storage System is on. This will help conserve power greatly, as the inverter uses a significant amount of standby power even while no load is drawn by the 110V system.

## 110 Volt Breakers

The 110V system has circuit breakers designed to protect the system. In the event too much power is drawn by a device plugged into the 110V system, a breaker will trip, and power will be cut off to that circuit. Tripped breakers can be reset to restore power to the circuit.

There are two breaker locations. The first is located inside the Branch Breaker box mounted on the power system cabinet in the rear passenger corner of the vehicle. The second is a set of push-button style breakers located on the rear of the inverter. The inverter is accessible through the upper access port on the rear of the power supply cabinet.

## GFI Circuits

The 110V system is protected by GFCI (Ground Fault Circuit Interrupter) built directly into the inverter. Additionally, some outlets near water are GFCI style outlets to further protect from the risk of electric shock. These outlets should be reset and tested monthly.

In addition to the GFCI outlets located throughout the MODE4x4, the inverter/charger has a built-in GFCI outlet that can be accessed through the Main Breakers access port at the rear of the electrical system cabinet.

## Chassis Battery

The chassis battery is used to power the vehicle engine, vehicle dash, and other factory chassis accessories. The chassis battery and the chassis electrical system are independent of the M-Power Energy Storage System.

Refer to your chassis manual for information on the chassis battery and chassis electrical systems.



## Operating the M-Power Energy Storage System

### Activating the M-Power Energy Storage System

Press in the main power switch located on the Systems Monitor Panel. The center of the power button should now be recessed into the switch bezel. After a few moments, the switch will light up green, and the State of Charge (SOC) gauge will light up and begin reading the current state of charge. The system will appear unresponsive for a few moments while it performs a number of systems check procedures before it powers on. This is normal.

*NOTE: Plugging the MODE4x4 into a shore power supply will automatically turn on the M-Power system regardless of the button position being pushed in or not.*

*NOTE: While charging, the M-Power Energy Storage System will be active even if the power button is in the off position (not pushed in). The 110V system will be active during this time even if the inverter is off.*

*NOTE: Do not rapidly cycle the M-Power system on and off. Wait at least 10 seconds before turning the system on or off.*

### Turning Off the M-Power Energy Storage System

Press the green illuminated main power switch. The center of the power button should be flush with the switch bezel. The system will appear unresponsive for a few moments while it performs a number of systems check procedures before turning off. Once the system is fully powered down, the green button light and the SOC gauge lights will turn off.

*NOTE: The M-Power system will not turn off if the vehicle is running and/or the vehicle is plugged into shore power.*

### Inverter/Charger Panel

The inverter/charger panel allows you to control and monitor many of the features of the M-Power Energy Storage System, such as inverter status and charger current.

### Turn On/Off the Inverter/Charger

To show the inverter status, press the DISPLAY button to wake the inverter/charger panel. If the inverter is off, the panel will display DISABLED BY LCD on the lower line. If the inverter is on, the display will show the battery voltage.

To turn the inverter on or off, press the DISPLAY button on the inverter/charger panel to wake the panel, then press the ON/OFF button on the inverter/charger panel to toggle the inverter on or off.



*NOTE: The inverter status is displayed on the inverter/charger panel.*

### **Checking M-Power Energy Storage System Levels**

The M-Power Energy Storage System has a state of charge (SOC) gauge which indicates the percentage of usable energy in the system.

The gauge color indicates the following system levels and conditions.

**Green** - Charge levels approximately 20% or above, electrical system acting normally.

**Yellow** - System charging needed, state of charge levels low (between 10% approximately to 20% approximately), electrical system acting normally.

**Red** - System charging needed immediately, state of charge levels are critically low (below approximately 10% or less), electrical system acting normally.

**Blue Blinking** (every 5 seconds) - System is too cold to accept a charge, charging will automatically resume once the energy storage system's internal temperature reaches 45°F. Warming the interior of MODE will speed this process.

**Blue Blinking** (rapidly) - Internal fault - contact Storyteller Overland.

**Orange Blinking** (every 5 seconds) - System is too hot to accept a charge, charging will automatically resume once the energy storage system's internal temperature drops below 124°F. Cooling the interior of MODE4x4 will speed this process.

### **Charging**

This M-Power Energy Storage System is equipped with three charging methods: Shore Power charging; the auxiliary alternator; and a trickle solar charging system.

*NOTE: If the M-Power Energy Storage System is depleted, do not attempt to restart without following the system recovery procedure listed in this manual. It is important to recover the system within 24 hours of the M-Power system being fully depleted.*

### **Charging via Shore Power**

Plug the provided 30 amp rated shower power cord into the 110V 30A shore power port located on the driver side of the vehicle.

*NOTE: Any shore power cord used to charge the M-Power Energy Storage System, or to power the coach, must be 110V 30A rated, and must not exceed 50ft in length.*

When plugged into shore power, the inverter/charger is designed to automatically recognize and sample incoming power. Upon initial plugin, the system will sample incoming power for a few seconds to ensure uniformity requirements are met. If incoming power meets the requirements, the system will automatically feed power to the vehicle and begin charging the energy storage pack.

If the system does not transfer power and begin charging, the cause is likely poor quality incoming power, or the shore power cord is plugged into an electronic surge protector.

*NOTE: Many electronic or processor-based surge protectors may create a conflict with the M-Power's system causing the system to reject the power source.*

*NOTE: When connected to shore power, the system is designed to provide power to any coach accessories drawing power from the system first. The remaining current is then used to charge the system up to the limit set in the inverter/charger panel. See the Adjustable Charge Rate section below for details.*

### **Adjustable Charging Rate**

The inverter/charger has an adjustable charge rate. This function is controlled through the inverter/charger panel. If the shore power breakers trip while charging, the charge rate can be reduced in 5 amp increments.

To adjust the charge rate follow the steps below:

- 1) With the M-Power Energy Storage System on, press the DISPLAY button.
- 2) Press the INFO button to cycle the display to Branch Amps on the panel.
- 3) Press and hold the ENTER button until Settings Mode is displayed on the panel.
- 4) Press the NEXT button.
- 5) Press the ENTER button to show an S in the lower right corner of the display.
- 6) Press the NEXT button repeatedly until the desired charging rate is displayed.
- 7) Press the ENTER button to save the settings.

*NOTE: The charge rate should not be set to zero as this setting will not charge the system.*

*NOTE: If charging performance is poor, the charge rate may need to be adjusted. Set the charge rate to 5 amps below the breaker rating of the circuit you are plugged into. Example: If you are plugged into a 110V garage power source rated to 15A, the optimal*

setting would be 10A. An exception to this rule would be while connected to a dedicated 110V 30A power source, such as a campground. You can utilize the full 30A charge rate. If the circuit breakers are being tripped, however, reduce the charge rate by 5A increments until the breakers no longer trip.

### Charging via 8kWh HD Auxiliary Alternator

The HD Auxiliary Alternator is powered by the vehicle engine to charge the M-Power Energy Storage System while driving. Turn the vehicle engine on and drive the vehicle as you normally would, to raise the engine speed above 1500 RPMs.

*NOTE: The alternator will not charge the M-Power Energy Storage System unless the engine speed is above 1500 RPMs.*

**WARNING:** Due to exhaust fume hazards, do not run the vehicle engine inside an enclosed space.

### Charging via Solar

Your MODE4x4 comes standard with solar panels rated to a total of 90W. The solar panel system can be expanded to 600W. While the M-Power system is on, any energy captured by the solar system will go toward charging the power system.

*NOTE: The M-Power Energy Storage System requires more current to run than the standard equipped solar panels can generate. Using only the factory equipped panels will only extend the range of the M-Power Energy Storage System.*

### Recovery from a Depleted Power State (Zero State of Charge)

If the M-Power system's energy level reaches zero state of charge, the system will enter a protection mode. In this low power protection mode, the power system shuts off and is unavailable. The system will not recharge, and the system will not function while in low power protection mode.

While in the low power protection mode, do NOT restart the Volta system without applying a charging source. Doing so will only drain the system farther, and can endanger the system, requiring a professional service recovery.

### Zero State of Charge Recovery Procedures: Option 1

Turn off all appliances and system draws. Turn the M-Power Energy Storage System off. Plug the vehicle into shore power; recovery charging will begin automatically. Continue charging until at least 20 percent state of charge has been reached, and the SOC gauge turns green. It is recommended to fully charge the system at this time.

### Zero State of Charge Recovery Procedures: Option 2

Turn off all appliances and system draws. Turn the M-Power Energy Storage System off. Start the vehicle. Turn the M-Power Energy Storage System back on, and then immediately raise and hold the RPM's over 1500 for at least 5 minutes, and then Drive the vehicle to raise engine RPM above 1,500 to charge the batteries. Continue charging until at least 20 percent state of charge has been reached, and the SOC gauge turns green. It is recommended to fully charge the system as soon as possible.

*NOTE: The standard vehicle idle does not raise the RPMs of the engine enough to activate the HD Auxiliary Alternator and will not charge the system. The engine RPM must be above 1,500 for system charging to occur. Maximum charging is reached above 2,200 RPM.*

*NOTE: The solar charging method will not produce enough current to charge the system and can not be used to recover the system from zero state of charge.*

### Storage of your Vehicle: M-Power Energy Storage System Procedures

Whenever you are storing the vehicle, certain steps must be taken to ensure the M-Power Energy Storage System is properly maintained.

The storage procedures required will depend on how you intend to store your vehicle. Match your intended storage situation to the scenarios outlined. Follow the procedures outlined for your scenario.

*NOTE: Improper storage of your MODE4x4 may damage the system.*

### Storage Scenarios and Procedures

**Scenario 1** (Stored Indoors, with temperatures always above 45°F and shore power continuously connected.)

- If possible, determine the circuit breaker rating of the shore power connection.

- Set the charge rate for the correct range determined by the circuit it will be connected to. If unsure, set the charge current to 15A as a starting point. If the circuit breakers are tripped, you may need to lower the charge current by following the Adjustable Charge Rate instructions.

- Turn off all unnecessary electrical loads, both 12V and 110V, and turn off M-Power Energy Storage System, allowing the system to completely shut down.

- Connect the shore power cord to an appropriate outlet and secure to prevent accidental unplugging.
- The M-Power Energy Storage System will turn on when connected to shore power, even if the power button is not pressed in. This is normal.

*NOTE: It is advised to store the vehicle with the M-Power Energy Storage System off (power button NOT pressed in).*

- Store the coach above 45°F.
- Should the power be interrupted (and the M-Power Energy Storage System power button has not been pressed in) the system will automatically shut down.
- If the M-Power Energy Storage System power button is pressed in, the system will stay on if shore power is interrupted.

*NOTE: Only do this if the system is constantly monitored to ensure shore power is always present.*

- Check on the system often to be sure shore power is present.

#### **Scenario 2** (Stored outdoors, with shore power continuously connected.)

- If possible, determine the circuit breaker rating of the shore power connection.
- Set the charge rate for the correct range determined by the circuit it will be connected to. If unsure, set the charge current to 15 amps as a starting point. If the circuit breakers are tripped, you may need to lower the charge current by following the Adjustable Charge Rate instructions listed in this User Guide.
- Turn off all unnecessary electrical loads, both 12V and 110V, and turn off M-Power Energy Storage System, allowing the system to completely shut down.
- Connect the shore power cord to an appropriate outlet and secure to prevent accidental unplugging.
- The M-Power Energy Storage System will turn on when connected to shore power, even if the power button is not pressed in. This is normal.

*NOTE: It is advised to store the vehicle with the M-Power Energy Storage System off (power button NOT pressed in).*

- Should the power be interrupted (and the M-Power Energy Storage System power button has not been pressed in) the system will automatically shut down.

- The M-Power Energy Storage System power button must be in the Off or out position.

- Check on the system often to be sure shore power is present.

- If the system is below 45°F, and shore power is connected, the automatic heating system will maintain the M-Power Energy Storage System temperature down to 32°F.

- DO NOT STORE THE SYSTEM CONNECTED TO SHORE POWER BELOW 32°F. This may lead to a condition where the energy storage system gets too cold to charge, will fully exhaust the power, and possibly damage the system.

*NOTE: When the system is too cold to charge, it will not charge even when connected to shore power.*

#### **Scenario 3:** Stored without power connected

- Charge the M-Power Energy Storage System above 75% SOC.
- Turn off all electrical loads.
- Turn M-Power Energy Storage System off, insuring the button is out, and the system shuts down.
- Do NOT connect the shore power cord. It must remain disconnected for deep sleep mode.
- Check on the system every 30 days by briefly turning on the M-Power Energy Storage System to check the SOC is above 75% and then turning the M-Power Energy Storage System off to continue deep sleep storage.

#### **Waking the System from Deep Sleep Storage**

If the M-Power Energy Storage System has been exposed to temperatures below 45°F during storage, along the lines of Scenario 3, follow the procedure listed here.

- If possible, drive the coach to a shore power connection and plug the coach in. The M-Power Energy Storage System will turn on and begin to heat the energy storage pack.

- Monitor the SOC gauge to determine if the system is charging or if the system is communicating an error through the SOC gauge (likely due to a “too cold to charge” condition).

- Avoid using any unnecessary electrical loads until the system is warmed and fully charged.

- Do not leave the system unattended in this warming recovery until the system fully charges.

- If the energy storage pack does not accept a charge, contact Storyteller Overland for further assistance.

### Heater Operating Limits

The heater activates at 41°F and turns off when the internal pack temperature reaches 50°F. The heater will reactivate again when the pack reaches 41°F.

### High-Temperature Operation

The energy storage pack is designed with passive cooling. At temperatures above 140°F, the energy storage pack will enter a protection mode and turn off power to and from the system. Storage of the energy storage pack at elevated temperatures is not recommended as it will reduce the lifetime and capacity of the energy storage pack.

### SERVICE AND MAINTENANCE

Except for extended periods of storage, no specific maintenance is required for the service life of the energy storage pack. In the event that the energy storage pack has a breach of container integrity or has been submitted to abusive operating situations (crush, short circuit, overcharge, over-discharge, submersion, evidence of combustion, or exposure to fire, etc.), contact Storyteller Overland. Only approved technicians should service the energy storage and power distribution system.

## If M-Power Energy Storage System Fails to Operate

### Green Power Button Will Not Light Up

If the green ON/OFF Button light is not lit after following the activation procedure properly, the energy storage system may have detected a condition that could degrade the life or performance of the power system, or potentially create an unsafe condition.

*NOTE: Power may still be distributed via shore power through the inverter to the coach.*

To resolve the issue, follow the Recovery from a Depleted Power System: Zero State of Charge procedure outlined below:

#### Option 1

Turn off all appliances and system draws. Turn the M-Power Energy Storage System off. Plug the vehicle into shore power, recovery charging will begin automatically. Continue charging until at least 20 percent state of charge has been reached, and the SOC gauge turns green. It is recommended to fully charge the system at this time.

#### Option 2

Turn off all appliances and system draws. Turn the M-Power Energy Storage System off. Start the vehicle. Turn the M-Power system back on, and then immediately raise and hold the RPM's over 1500 for at least 5 minutes, and then drive the vehicle to raise engine RPM above 1,500 to charge the energy system. Continue charging until at least 20 percent state of charge has been reached, and the SOC gauge turns green. It is recommended to fully charge the system as soon as possible.

*NOTE: The standard vehicle idle does not raise the RPMs of the engine enough to activate the HD Auxiliary Alternator and will not charge the system. The engine RPM must be above 1,500 for system charging to occur. Maximum charging is above 2,200 RPM.*

*NOTE: The solar charging method will not produce enough current to charge the system and can not be used to recover the system from zero state of charge.*

If the condition persists, please contact Storyteller Overland for further diagnostic direction.

If the condition cannot be resolved by diagnostics, the pack will likely require repair. Only approved technicians are authorized to service the energy storage pack without voiding the warranty.



### **Green Power Button Is On, But No Power Is Present From The 12V System**

If the green ON/OFF button light is lit, but no 12V power is available, turn the system OFF disconnect any 12V devices you may have connected to the system, and wait 5 minutes before turning the system back on.

Check the fuse panel for blown fuses. A fuse panel diagram can be found in the Fuse Panel section of this User Guide.

If the problem persists, contact Storyteller Overland.

### **Green Power Button Light Is On, But No Power Is Present From The 110V System**

If the green power button light is lit, but no 110V power is available, it is likely that the inverter is off. Go to the inverter/controller panel to check the status of the inverter.

To show the inverter status, press the DISPLAY button to wake the inverter/charger panel. If the inverter is off, the panel will display DISABLED BY LCD on the lower line. If the inverter is on, the display will show the battery voltage.

To turn the inverter on or off, press the DISPLAY button on the inverter/charger panel to wake the panel. Press the ON/OFF button on the inverter/charger panel to toggle inverter on and off.

If the problem persists, contact Storyteller Overland.

### **Green Power Button Light Is On, And The System Is Plugged In, But The System Will Not Charge**

- Check the incoming power source for a tripped breaker or fuse.

- If the SOC gauge is blue (blinking every 5 seconds), the internal system temperature must be raised above 45°F.

- If the SOC gauge is orange (blinking every 5 seconds), the internal system temperature must be lowered below 124°F.

If the problem persists, contact Storyteller Overland.

## **Interior Lighting**

The MODE4x4 is equipped with a number of cabin features, including interior lighting.

*NOTE: All cabin electrical components are powered by the M-Power Energy Storage System. The M-Power Energy Storage System must be turned on the run these accessories. Refer to the M-Power Energy Storage System portion of this User Guide for instructions on operating the power system.*

The main interior lighting is divided into two zones: overhead ceiling lights and under-cabinet lights.

The overhead ceiling lights are controlled by the Cabin Lights switch on the galley.

The under-cabinet lights are independently turned on and off by pressing in on the center portion of each light.

To more easily load, unload and find your gear, the rear cargo storage area has its own lighting along the sides of the lower rear cabinets. These lights are controlled by a labeled switch on the rear of the right-hand cabinet.

## **Cabin Climate Control System**

### **Cooling System**

A roof-mounted air conditioning unit is installed toward the rear of the vehicle. The system is controlled by a thermostat located on the Systems Monitor Panel located on the wall behind the driver's seat. This thermostat has touch-sensitive buttons; you do not need to push in on the buttons. You only need to touch them to make them operate.

The M-Power Energy Storage System and the inverter must be on for the A/C system to work. For instructions refer to the perating the M-Power Energy Storage System section of this User Guide.

To operate the thermostat for A/C, follow the instructions below and continued to next page:

- Press the thermostat power/mode button to turn the system on
- Set the desired fan speed to either AUTO, HIGH, or LOW using the arrow keys.
- Use the mode button to navigate to the Cool mode.

- Use the arrows to set the desired temperature at which the A/C will turn on.
- To turn the A/C off, press the power/mode screen until you return to the Off screen.
- The Off screen is blank with off written in the lower right corner.

For further instructions, refer to the manufacturer's instructions included.

#### **Air Conditioner Filters**

The A/C system has integrated air filters. These should be checked and cleaned monthly. They are located on the underside of the air conditioning shroud and are serviceable from inside the vehicle.

For further instructions refer to the manufacturer's instructions included with your vehicle.

#### **Venting and Exhaust**

In addition to the roof-mounted air conditioner, there is a roof-mounted exhaust vent/fan. The M-Power Energy Storage System must be on and the vent cover must be open for the fan to turn on.

For more information refer to the manufacturer's instructions included with your vehicle.

### **Fuel Fired Heating System**

Your MODE4x4 is equipped with a Fuel Fired Heating System which provides heat for the cabin of your vehicle, supplies hot water, and keeps your plumbing systems operational in cold weather environments.

This heating system is a glycol-based hydronic heating system. It is based on a glycol heating loop that transfers heat to an air handler for heating cabin air, and a heat exchanger for creating hot water. This heating system uses a 17,100 BTU fuel-fired furnace and fuel from the vehicle's fuel tank as its primary source of heat. The heating system can also be supplemented by a heat exchanger that uses heat from the vehicle's engine.

#### **Activating the Heating System**

Check to ensure the M-Power Energy Storage System is on. If it is off, follow the Activating the M-Power Energy Storage System instructions in this User Guide to turn on the power system. The inverter does not need to be on to run the heating system.

Follow the instructions listed to use the heating system.

#### **To Activate the Hot Water:**

Turn the System switch on the 4 switch panel to the ON position  
Turn the Hot Water switch on the 4 switch panel to the ON position

#### **To Activate the Cabin Heat:**

Turn the System switch on the 4 switch panel to the ON position  
Turn the Furnace switch on the 4 switch panel to the ON position  
Turn the Fan switch on the 4 switch panel to the desired fan speed  
Set the thermostat by following the directions in the Using Cabin Heat section below

**WARNING:** Due to the risk of fire, turn off the heater before refueling.

**WARNING:** Due to exhaust fume hazards, do not run the vehicle engine inside an enclosed space.

*NOTE: Do not turn off the auxiliary power system if the furnace is on. Turn the Furnace switch to the off position first. Then wait for 3 to 5 minutes, or until there is no longer air being expelled from the furnace exhaust pipe, before switching off the heating system.*

*NOTE: The fuel-fired furnace will not operate with the vehicle fuel level under a ¼ tank to eliminate the possibility of depleting your vehicle's fuel supply.*

*NOTE: The glycol heating lines take a few minutes to reach operating temperature. Cabin and hot water will not be available until the glycol system reaches operating temperature.*

*NOTE: The furnace takes a few minutes to go through its startup cycle.*

*NOTE: The interior lights may flicker slightly while the furnace starts up due to the increased power draw. This is a normal condition.*

#### **Using the Cabin Heat**

The cabin heating system is controlled by the thermostat on the Systems Monitor Panel. The standard method for heating the cabin uses the fuel-fired furnace to heat the glycol system loop. An alternate method uses the heat produced by the running engine to power the cabin heating system.

### Using and setting the Thermostat for Cabin Heat

The thermostat controls the cabin temperature and has settings for both the air conditioning and the cabin heat.

To operate the thermostat for heat, follow the instructions below:

- Press the thermostat power/mode button to turn the system on.
- Set the desired fan speed to AUTO using the arrow keys.
- Use the mode button to navigate to the Heat mode.
- Use the arrows to set the desired temperature for the heating system to turn on.
- To turn the cabin heat off press the power/mode screen until you return to the off screen.
- The off screen is blank with off written in the lower right corner.

### Using the Engine Heat Exchanger

The engine heat exchanger allows the glycol heating loop of the Fuel-Fired Heating System to be heated by the vehicle's engine coolant system. This option can be used as a heat source for the Fuel-Fired Heating System, in place of the fuel-fired furnace, any time the vehicle's engine is running and at its normal operating temperature.

This is a more efficient method for heating the rear cabin of the vehicle or preventing the plumbing system for freezing in colder temperatures while driving down the road, as it uses heat already being generated by the engine rather than a separate heat source.

With the System switch in the ON position on the 4 switch panel, the user can turn the Furnace switch to the OFF position.

All other operation settings remain the same as normal operation.

### Troubleshooting the Heating System

The fuel-fired furnace monitors itself during operation. Whenever 'unexpected' conditions occur, the heater's electronic control unit (ECU) will record a 'Fault Code'. Any unsuccessful start of the heater will be followed by an automatic restart attempt. If that restart also fails, the heater will record a fault code and pause its operation. The user must 'reset' the furnace before it will try restarting again, by turning the furnace switch to off for 5 seconds then back on.

*NOTE: If the heater fails to start for 10 attempts, the ECU of the heater will be 'LOCKED,' and it will not turn on until the ECU is unlocked by erasing the diagnostic codes. See the Fuel Fired Furnace Diagnostic Codes and the Accessing the Diagnostic Codes and Clearing Diagnostic Codes sections below for detailed information.*

### Fuel-Fired Furnace Fails to Start

Check that all the appropriate switches and settings are correct based on the heating system instructions.

If all the above settings are met and the fuel-fired furnace fails to start twice, the user can re-attempt the start sequence by toggling the Furnace switch, located on the 4 switch panel, OFF then back ON again. This will reset the safety timeout function.

*NOTE: This process can only be repeated 5 times before the fuel-fired furnace turns on a safety lock and will be unable to start until the diagnostic codes are cleared.*

If your furnace continues to fail to start please contact Storyteller Overland for assistance.

### Fuel Fired Diagnostic Codes

Under normal operating conditions, there is no need to check for diagnostic codes. If the heater malfunctions or the heater fails to start, it will automatically store a Diagnostic code.

### Accessing the Diagnostic Codes and Clearing Diagnostic Codes

Locate the Espar Heater Control Panel under the seat cushion of the GrooveLounge.

Follow the instructions below to read and clear the trouble codes:

1. While holding the Blue button of the DM1000 Espar controller, set the System switch on the 4 switch panel to off.

The DM1000 will change screens several times before it shows the Diagnose Now prompt.

2. Push the Red button for YES.

The next screen will show you the codes.

After a few seconds, the screen will move on to the option to erase the codes.

- 3a. If you want to keep the fault codes you just saw, do nothing. The code reader will cycle back to the default screen and return to normal.



3b. If you want to clear the fault codes, press the Red button for Yes. The next screen will confirm the ECU reset, followed by a screen, which will give you the option to check for codes. After clearing codes, the code reader will cycle back to the default screen and return to normal.

## Plumbing System

The MODE4x4 uses a tank monitoring system to show the current levels of both the freshwater tank and the graywater tank. This tank monitoring system can alert you to when the freshwater levels are getting low, and when the graywater tank is getting full.

For details on how to use the system, refer to the tank monitor manufacturer's instructions provided.

## Freshwater System

The freshwater system provides water to the onboard water faucets and fixtures. The freshwater system can be operated through either the onboard freshwater tank and its electric water pump, or through an external freshwater source hooked to the MODE4x4 through the City Water port.

## Water Pressure and Water Regulators

A water pressure regulator is required when connecting the MODE4x4 to a pressurized water source.

Water Pressure regulators can be connected in-line, between the supply hose and the water fill inlets. The water pressure regulator must be set to prevent pressures greater than 50psi to avoid any potential damage to the freshwater system.

## Water Filtration Systems

The MODE4x4 is not equipped with an onboard water filtration system. Any time the MODE4x4 is connected to a water source, whether that is through the City Water Connection or the Freshwater Connection, an in-line style RV water filter should be used. This will ensure damaging particulates do not enter the RV plumbing system.

### NOTICE

City water connection pressures vary. High water pressures may damage the onboard plumbing system.

## City Water Connection

The plumbing system may be connected directly to a pressurized potable water supply using the City Water Connection where appropriate connections are available. This bypasses the freshwater tank and water pump.

1. Connect the freshwater supply hose to City Water Connection and turn on.

*NOTE: A properly set water regulator should be used, to prevent damage to the system.*

*NOTE: An inline water filter should be used to ensure debris does not enter the water system.*

## Disconnecting the City Water Supply

1. Turn off freshwater supply
2. Open a faucet in the coach to relieve line pressure.
3. Disconnect the water supply hose from the RV and replace the City Water Connection cap.

## Freshwater Tank Fill

The freshwater tank and water pump supply the MODE4x4 with water when city water connections are not available. The freshwater system should only be filled with appropriate potable water or purified water sources.

The MODE4x4 is equipped with a Freshwater Connection port the rear driver side of the vehicle. This connection supplies water to fill the freshwater tank.

## Pressure filling the Freshwater Tank

1. Connect the freshwater supply hose to Freshwater Connection.

*NOTE: A water regulator set to a 50psi or lower is required to prevent damage to the system.*

*NOTE: An inline water filter should be used to ensure debris does not enter the water system.*

2. Turn on the city water connection.

### ! WARNING

Potable water only. Sanitize, flush, and drain water tank before using. See specific section of this manual for instructions, care, and maintenance information. Failure to maintain tank can result in death or serious injury.

### NOTICE

Do not leave fresh water connection unattended when filling tank. Failure to comply may result in tank expansion and property damage.



3. Fill until the tank is full, and turn off freshwater supply hose. When the freshwater tank is full, water will overflow from the tank through the overflow pipe near the rear driver side corner. This is a normal condition.

## Freshwater Pump

The freshwater pump provides the appropriate water pressure when using water from the freshwater tank. This is not needed when connected to city water.

The pump cycles on and off based on demand. When the self-priming pump is turned on, it will cycle on for a few moments while it pressurizes the water lines, then turn itself off once it reaches the set water pressure.

*NOTE: If all water faucets are closed, and the pump continues to run, you are likely out of water in the freshwater tank.*

When a faucet is opened the pump will turn on and continue pumping as long as the faucet remains open. Once the faucet is closed, the pump will remain on for a few moments while it repressurizes the water lines, then turn itself off once it reaches the set water pressure.

For further information on the freshwater pump, refer to the manufacturer's user guide supplied with your vehicle.

## Freshwater Pump Location

The freshwater pump is located at the rear of the water supply cabinet in the driver's side rear of the cabinet. It can be accessed through the access port located on the driver's side of the water supply cabinet on the driver's side rear of the vehicle.

## Water Pump Strainer

This strainer is meant to catch any solids and large particles that may be present in the tank that might damage the water pump.

*NOTE: It is advised to clean and empty the strainer after each tankful of water for the first few uses.*

Clean and empty this water strainer yearly thereafter, and empty it before beginning the winterization process.

## Water Pump Strainer Location and Servicing

The water pump strainer is connected to the water pump, between the water pump and the freshwater tank. It can be accessed through the access hatch near the back of the water supply cabinet on the driver's side rear of the vehicle.

To clean and service:

1. Ensure the freshwater tank is empty, and the water pump switch is off.
2. Twist the bowl of the strainer off by turning it counterclockwise.
3. Remove the bowl and remove the filter screen. Rinse Clean.
4. Place strainer back into the bowl and screw back onto the strainer assembly.

## Water Pump Switch

The water pump switch is located on the Water System Monitor, on the Systems Monitor Panel, behind the driver's seat.

When the pump is in the On position, it will keep the water lines pressurized and supply water to the faucets as needed.

It is recommended that the water pump switch is kept in the Off position while the plumbing system is not in use, as this will prevent draining the freshwater tank if small faucet leaks develop over time, or a faucet is accidentally left slightly open.

## Priming Water Lines for Use

When the water lines are being filled initially or refilled, it is important that the waterlines be primed, and have all air from the lines removed, to ensure smooth water flow.

- Close all drain valves (low point drains, tank drain, and graywater tank drain). Close all faucets (galley sink, rear shower, interior shower).
- Ensure the water pump switch is in the Off position.
- Fill the freshwater tank.
- Turn the water pump switch to the On position.
- Starting with the galley sink, open the sink valve slightly, on a medium temperature setting. Once the water stops sputtering, open the faucet fully on the cold setting. Wait for the faucet to stop sputtering on the cold side of the faucet. Repeat for hot setting on galley faucet. Turn off the galley sink faucet.
- Repeat process for Halo Shower, being careful to ensure shower head is directed into the shower pan. Turn off the Halo Shower.

- Repeat for hot and cold sides of the rear shower, being sure the showerhead is directed outside of the vehicle. Turn off the rear shower.
- Check that the water pump turns off shortly after all faucets are closed. If the pump fails to turn off a faucet or valve is open, or there may be a leak in the system.
- The freshwater tank and water pump are ready for normal use.

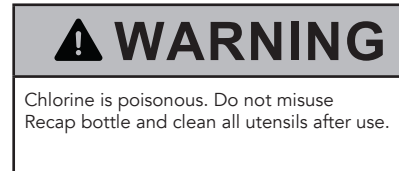
## Disinfecting the Freshwater System

All new freshwater plumbing systems, those that have not been used in a while, or ones that may have become contaminated must be disinfected. The following procedure is also recommended after long storage periods, such as over winter, if the MODE4x4 is not being used.

The best practice to disinfect your freshwater tank is through the use of a canister-style water filter in line with the freshwater supply hose.

*NOTE: If you do not have an inline canister style water filter an alternate method may be used. See the Alternate Freshwater Disinfection Methods section.*

1. Connect the inline filter to the supply hose to be used for filling the freshwater system. Connect the hose to the Freshwater Fill inlet.
2. Remove the filter from the inline filter canister. Pour a 1/2 cup of household chlorine bleach into the empty canister assembly. Screw the canister assembly back together.
3. Turn on freshwater supply and fill the tank completely. Turn off the water supply once the tank is full to avoid too much overflow from the tank, as it will dilute the chlorine to water ratio.
4. Turn the freshwater pump switch to the On position to pressurize the system.
5. Starting with the galley sink, open the sink valve slightly on a cold temperature. Once the chlorine can be smelled from the faucet, turn the faucet to the hot setting, while still on a low flow rate. Once chlorine can be smelled once again from the faucet, turn the galley sink off.
6. Repeat process for Halo Shower, being careful to ensure shower head is directed into the shower pan. Turn off the Halo Shower.
7. Repeat for hot and cold sides of the rear shower, being sure the showerhead is directed outside of the vehicle. Turn off the rear shower.
8. Turn off the water pump.
9. Let the system sit for at least 4 hours.
10. Drain the freshwater tank.
11. Replace water filter into filter canister assembly. Refill the freshwater tank with freshwater.
12. Turn on the water pump.
13. Open each faucet again as in steps 4 through 7.
14. Close each faucet once there is no longer an odor of chlorine coming from the faucets.



## Alternate Freshwater Disinfection Methods

If you do not have an inline canister filter, you may alternatively pour bleach directly into the supply hose.

1. Prepare a household bleach and water solution by mixing a ½ cup of bleach with one gallon of water.
2. Connect one end on the freshwater supply hose to the Freshwater Connection inlet.
3. Holding the free end upright, pour the household bleach solution into the hose using a funnel.
4. Carefully connect the free end to the water supply.
5. Turn on freshwater supply and fill the tank completely. Turn off the water supply once the tank is full to avoid too much overflow from the tank, as it will dilute the chlorine to water ratio.
6. Turn the freshwater pump switch to the On position to pressurize the system.
7. Starting with the galley sink, open the sink valve slightly on a cold temperature. Once the chlorine can be smelled from the faucet, turn the faucet to the on the hot setting, while still on a low flow rate. Once chlorine can be smelled from the faucet, turn the galley sink off.
8. Repeat process for Halo Shower, being careful to ensure shower head is directed into the shower pan. Turn off the Halo Shower.
9. Repeat for hot and cold sides of the rear shower, being sure the showerhead is directed outside of the vehicle. Turn off the rear shower.
10. Turn off the water pump.
11. Let the system sit for at least 4 hours.
12. Drain the freshwater tank.
13. Replace water filter into filter canister assembly. Refill the freshwater tank with freshwater.
14. Turn on the water pump.
15. Open each faucet again as in steps 7 through 9.
16. Close each faucet once there is no longer an odor of chlorine coming from the faucets.

## Water Fixtures and Faucets

### Shower Hose Vacuum Breaker

The shower may continue to drip water from the shower hose assembly. This is caused by the slow release of vacuum in the waterline allowing remaining water in the hose to drain. This is normal and does not indicate a leak or defect.

If the shower hoses are stored shortly after use, they may drip small amounts of water into the corresponding shower cabinet. This should be avoided.

## Halo Shower™

The Flex Space Shower can be assembled in under a minute by following a few simple steps.

1. Open the shower cabinet front panel.
2. Locate and release the lower cabinet panel screw latches to open the lower cabinet panel.
3. Release the shower curtain holding straps to release let the shower curtain out of the way.
4. Holding the shower hose out of the way, pull the shower curtain frame outward.
5. Place the shower hose and hose inside the shower curtain and hang on the shower head holder.

To fold away follow the steps below:

*NOTE: Although the shower curtain and shower areas are made from mold-resistant materials, it is advisable to dry the shower curtain and shower stall area before storing the fold away shower to prohibit mold growth.*

1. Snap the shower curtain strap ends to the upper shower wall if they are not already.
2. Pull the shower wand and hose outside of the shower curtain stall.
3. Push the shower curtain frame back into the shower cabinet.
4. Starting at the bottom, roll the shower curtain up to the shower curtain frame.
5. Tie the shower curtain and hose up using the shower curtain holding straps.
6. Fold the lower cabinet panel in place and secure it with the latches.
7. Fold down the front cabinet face.

## Rear Shower Operation

The rear shower is fully enclosed inside the shower box at the rear of the vehicle on the back of the water supply cabinet. The shower handle must be pulled out before the shower is turned on. Failure to do so will flood the water supply cabinet.

*NOTE: The hot and cold shower valves turn in opposite directions for On and Off.*

## Galley Sink

The galley sink should not be left running unattended. Your MODE4x4 uses a macerator pump to help dispose of gray water and any small

solids that may find their way into the galley sink drain. This pump does not allow the drain to flow freely to the graywater tank.

As you use the galley sink, you will need to periodically operate the macerator pump to keep the drain from backing up into the sink.

The macerator pump is actuated by a momentary switch labeled Sink Drain Pump located on the side of the galley near the galley drawers. The macerator pump will only stay on while the switch is pushed in.

*NOTE: This pump is not designed to run dry for extended periods of time. The macerator pump should only be used when there is water in the sink drain pipe. The macerator pump will make a noticeably different noise once the water has been pumped from the drainpipe, letting you know when it is time to stop using the pump.*

## Draining the Freshwater System

The freshwater system is drained by opening the freshwater tank, and a number of low point drains located throughout the vehicle. To open the valves turn the valves' handle counterclockwise. To close, turn the valves clockwise.

The freshwater tank drain is accessed through the access port at the rear of the water supply cabinet.

Two low point drains are located behind the galley drawers. To access them, pull out the lower drawer of the galley.

The third low point drain is located under the lower cushion of the GrooveLounge. To gain access to this open the access port at the front for the GrooveLounge base.

Remember to close all low point and tank drain valves once the system has been emptied.

## Drainage System

The MODE4x4 has an onboard graywater tank for capturing liquid wastewater from the shower and sink fixtures. This graywater tank has a capacity of 24 gallons and will need to be emptied into the appropriate RV cleanout station or similar appropriate disposal site.

To empty the tank, remove the cover cap from the graywater tank outlet, connect a 3" sewer hose to the graywater tank's 3" bayonet fitting connection onto the graywater tank outlet, and place the opposite end of the 3" sewer hose into the cleanout station. Be sure there are no sags or low spots in the hose for graywater to collect. Pull the handle of the graywater full-way valve to drain the tank. After emptying the

tank, it is advised to flush the tank and hose with clean water before storage. Close the valve and replace the cap.

*NOTE: A 3" sewer hose is not supplied with the vehicle.*

*NOTE: When connected to a campground sewage system, keep the graywater valve closed unless the tank is being emptied to prevent harmful sewer gases from coming through the plumbing system.*

*NOTE: It is advised to let the graywater tank fill up at least halfway before emptying; this will help to fully flush the graywater tank.*

## Portable Toilet

There is no black water tank on the MODE4x4. A small portable toilet has been utilized to allow for a more open floor plan. This portable toilet is housed inside the shower basin. For instructions on usage, follow the instructions on the portable toilet and in the manufacturer's instruction manual included with the vehicle.

## Drain Blockages

If the shower or sink drain begins to drain more slowly, it may be the result of a blockage. Both of these drain lines are equipped with a waterless drain trap to prevent sewer gases from escaping from the drainage system. The waterless drain traps will need to be removed before using any mechanical drain-cleaning device to prevent damage.

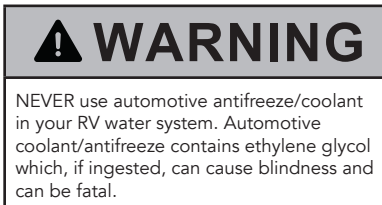
## Winterizing the Plumbing System

Preparing your MODE4x4 for winter storage and freezing conditions is an important part of maintaining your vehicle.

While your MODE4x4 is set up to handle 4 season weather conditions during use, it should not be stored overwinter or during prolonged freezing conditions with an unprotected plumbing system.

Winterizing involves pumping non-toxic RV water system antifreeze into the freshwater lines, and usually takes about 2-3 gallons to complete the procedure.

Your RV is equipped with a siphon tube and bypass valve and is accessible through the access port near the rear of the water supply cabinet.



## Winterizing the Freshwater Lines

1. Drain all water from the system by following the Draining the Freshwater System and Plumbing Drainage System procedures listed in this guide. Check to make sure all faucets and low point drain valves are closed.
2. Locate the winterization bypass valve and siphon tube. Turn the winterization bypass valve to divert water pump suction to the siphon tube.
3. Place the end of the siphon tube into a jug of non-toxic RV water system antifreeze.
4. Turn on the water pump to begin drawing antifreeze into the system.

*NOTE: Pay close attention to the antifreeze levels in the containers. Do not run the pump dry.*

5. Starting with the galley sink, open the sink valve slightly on a cold temperature. Once the antifreeze begins to flow, turn the faucet onto the hot setting, while still on a low flow rate. Once antifreeze begins to flow from the faucet again, turn the galley sink off.
6. Repeat the process for the Halo Shower, being careful to ensure the showerhead is directed into the shower pan. Turn off the Halo Shower.
7. Repeat for the hot and cold sides of the rear shower, being sure the showerhead is directed outside of the vehicle. Turn off the rear shower.

## Winterizing the Galley Sink Drain Pump

1. Pour approximately one gallon of non-toxic RV water system antifreeze down the galley sink drain.
2. With the M-Power Energy Storage System on, run the Sink Drain Pump until the antifreeze is pumped through the line. The sink drain pump noise will change when this happens.
3. Pour approximately one more quart of non-toxic RV grade antifreeze down the sink drain.

## Winterizing P-Traps

The MODE4x4 does not use traditional 'P'-traps in its plumbing system, and instead uses waterless traps, which are not susceptible to freezing like a traditional trap. It is advised to pour approximately 1 cup of non-toxic RV water system antifreeze down the shower drain.

## APPLIANCES

Storyteller Overland only uses appliances and products from trusted manufacturers. All of these products meet or exceed applicable codes and standards. Please refer to and read the manufacturer's instructions for each appliance before using it.

### Refrigerator

The M-Power Energy Storage System must be powered on for the refrigerator to run. It is capable of operating on either 110V AC or 12V DC current depending on how the electrical system is being used. If the AC inverter is powered on, the refrigerator will draw power from the 110V AC power supply. If the AC inverter is off, the refrigerator will draw power from the 12V DC power supply.

#### Basic Refrigerator Operation:

Turn the power on and it set to the desired setting. Allow the refrigerator to cool down to the desired temperature before placing food inside.

*NOTE: The refrigerator will retain temperature more efficiently if food is cold before placing it inside.*

To turn off the refrigerator, press the power button inside the refrigerator.

From time to time, the refrigerator and/or freezer may form ice inside and will need to be defrosted. The refrigerator and freezer will automatically defrost anytime the M-Power Energy Storage System is off. Follow the instructions below for the defrosting procedure.

- 1) Empty the refrigerator.
- 2) Remove drain plug (if installed).
- 3) Turn off the refrigerator.
- 4) Keep the door fully open until all ice is melted.
- 5) Wipe up any excess moisture left inside the refrigerator.

*NOTE: If the drain hole is plugged, water from the defrosting process may flow into the vehicle, potentially damaging components in the vehicle. This damage will not be warranted under the Storyteller Overland Supplemental New Vehicle Limited Warranty.*

### WARNING

Do not let children play inside the motorhome unattended. Unlike your home refrigerator/freezer that one could push open the door from the inside, your motorhome refrigerator has a travel latch and when engaged would trap a child inside resulting in suffocation leading to death or serious injury.

*NOTE: The refrigerator drain plug is not installed from the factory to prevent accidental damage during the defrost procedure. It is stored in the refrigerator door.*

*NOTE: The refrigerator will be run more efficiently with the drain plug in place.*

Refer to the manufacturer's user guide provided with your vehicle for complete operating instructions, safety precautions, and maintenance information.

### Cooktop

The induction cooktop runs on 110V AC electricity. The M-Power Energy Storage System and the AC inverter must be powered on to use this cooktop.

*NOTE: Induction compatible cookware is required for the induction cooktop to function.*

Refer to the manufacturer's user guide provided for complete operating instructions, safety precautions, and maintenance information.

### Microwave

The microwave runs on 110V AC electricity. The M-Power Energy Storage System and the AC inverter must be powered on to use the microwave.

Refer to the manufacturer's user guide provided for complete operating instructions, safety precautions, and maintenance information.

### Asphyxiation Risks

Storyteller Overland strives to build the safest and easiest to use products on the road, and have selected products to further that goal. Your vehicle does not use a fuel-burning stove, but if you choose to use one, please note that adequate ventilation is extremely important. Due to the small size of the vehicle, there is a much smaller oxygen supply, and proper ventilation when using cooking appliances avoids the dangers of asphyxiation.

Fuel-burning cooking appliances should not be used to heat the cabin of the vehicle, as the danger of asphyxiation is greater when the appliance is used for long periods of time.

### WARNING

Portable fuel-burning equipment including wood and charcoal grills and stoves, shall not be used inside the recreational vehicle. The use of this equipment inside the recreational vehicle can cause fires or asphyxiation. Failure to comply could result in death or serious injury.



## SLEEPING AND SEATING SYSTEMS

### Dreamweaver™ Bed System / Convertible Work Surface

The Dreamweaver Bed System, in the rear of the vehicle, is a fold away bed system that can also be set up as a work surface.

*NOTE: While the Dreamweaver Bed System can be set up in either its sleeping, desk, or stored configurations while the vehicle is in motion, it should not be used while the vehicle is in motion.*

*NOTE: The bed has a maximum load rating of 400 lbs per side. The work surface has a maximum load rating of 400 lbs.*

#### Setting up the Dreamweaver Bed System

1. Beginning with the driver's side bed, open the support legs so that they are perpendicular to the driver's side bed frame.
2. Release tension on the driver side frame strap. Unhook the strap and slowly let the bed down. Do NOT let the bed drop down on its own.

*NOTE: Letting the bed system down without the support of the legs will damage the bed system.*

3. Align the legs so that they drop into the recesses located in the floor. This will ensure the legs cannot fold in while the bed is in use.
4. Release tension on the passenger side frame strap. Unhook the strap to slowly let the bed down. Do NOT let the bed drop down on its own.
5. Place the secondary cushions between the main cushions and the flares of the vehicle.

#### To set up the Dreamweaver Bed System as a desk, follow the instruction below:

1. Beginning with the driver's side bed, open the support legs so that they are perpendicular to the driver's side bed frame.
2. Release tension on the driver side frame strap. Unhook the strap and slowly let the bed down. Do NOT let the bed drop down on its own.

*NOTE: Letting the bed system down without the support of the legs will damage the bed system.*

3. Align the legs so that they drop into the recesses located in the floor. This will ensure the legs cannot fold in while the bed is in use.
4. Remove the main bed cushion from the driver's side bed frame by unhooking the velcro along the short sides of the cushion.

### GrooveLounge™ 2 seater / 2 sleeper Convertible Sofa Bed

Your vehicle is equipped with a patented rear bench seat, known as the GrooveLounge, which has two over-the-shoulder style seat belts. This bench seat converts into a secondary sleeping surface when the vehicle is stationary.

The GrooveLounge cushions lock into various angles to allow for unlimited versatility and options on how to relax.

*NOTE: This rear bench seat should be ridden in only if the seat is set up in the standard riding configuration.*

#### To orient the Groove Lounge into the sleeping configuration, follow the steps below:

1. While lifting up on the handle at the front of the base seat cushion, Lift up on the base seat cushion and rotate it forward.
2. While rotating the lower back cushion handle counterclockwise, rotate the lower back cushion forward into the place previously taken by the base cushion.
3. While rotating the rear back cushion handle clockwise, rotate the rear back cushion toward the rear of the vehicle.

*NOTE: The rear back cushion should be lowered into position by hand. Do not let the rear bed drop under its own weight. Doing so can damage the internal components.*

### Dinette Table

The MODE4x4 has a removable dinette table. This table is designed to mount to the driver side wall in front of the GrooveLounge.

The table system has 4 parts:

1. A wall bracket mounted to the vehicle
2. A vertical arm to set the height of the table
3. A horizontal arm which allows the table to swing out of the way.
4. A tabletop with mount

*NOTE: The table can support up to 15 lbs. Do not rest against or lean on the table. It is important not to overload the table.*

*NOTE: The table should never be left in the assembled position while the vehicle is in motion. The table should be stored behind the Groove Lounge while the vehicle is in motion.*

*NOTE: Do not over tighten the table hardware. The horizontal arm is not designed to keep the table from rotating or swinging. Attempting to tighten the hardware to prevent this movement can damage the table.*

## Fold-Out Exterior Table

The MODE4x4 is equipped with a fold-out table on the side of the galley. This self-supporting table can be opened when the vehicle door is open to help expand the living area to the outside.

*NOTE: The table can support up to 15 lbs. Do not rest against or lean on the table. It is important not to overload the table.*

## Exterior Features

### Roof Rack and Ladder

Use extreme caution when using the ladder and roof rack. It can be extremely slippery, depending on environmental conditions. Water, mud, ice, or water may be present on the exterior features of the vehicle. Slipping or falling can cause severe injury or death. Use at your own risk.

While your vehicle is equipped with a roof rack for stowing gear and accessories, it is not advised to walk or stand on the roof rack. This roof rack is rated to hold 100 lbs. of gear, however, storing even small amounts of weight on the roof of the vehicle can greatly affect the center of gravity. This can affect the handling characteristics of the vehicle. High center of gravity vehicles have a higher risk of rollover. Be cautious of storing items on the roof of the vehicle.

### Awning

The Storyteller Overland MODE4x4 is equipped with lighted powered awnings.

*NOTE: The awning and awning lights are powered by the M-Power Energy Storage System. The M-Power Energy Storage System must be turned on the run these accessories, but the inverter does not need to be powered on. Refer to the M-Power Energy Storage System portion of this User Guide for instructions on operating the power system.*

*NOTE: The powered awning is equipped if a safety override to ensure the awning cannot be accidentally extended while the vehicle is in motion. To operate the awning, the vehicle's parking brake must be engaged if the engine is running. If the vehicle is started and the parking brake is not engaged the awning will automatically retract.*

To extend the awning, press and hold the AWNING OUT button. The power awning will automatically stop once it reaches its furthest extension.

*NOTE: The awning will slightly retract once the AWNING OUT button is released to correctly tension the awning. This is normal.*

To retract the awning press and hold the AWNING IN button. While holding the AWNING IN button, the power awning will automatically stop once it reaches its furthest extension.

The awning in and out functions can also be operated by an included remote control. Read the manufacturer's instruction manual included with your vehicle for more detailed instructions.

The powered awning is equipped with a wind sensor. During sustained high wind conditions, the awning will automatically retract.

*NOTE: Items should not be hung from or tied to the awning. Additional weight could damage the awning. Retraction or extension of the awning while items are tied to the awning may cause damage.*

The awning lights are controlled by the AWNING LIGHTS switch on the galley.

### Electrical Expandability - Auxiliary Electrical Circuit

Storyteller Overland MODE4x4 vehicles are equipped with an auxiliary power circuit for easy installation of additional electrical accessories.

*NOTE: The M-Power Energy Storage System must be turned on the run the Auxiliary Electrical Circuit accessories. Refer to the M-Power Energy Storage System portion of the user manual for instructions on operating the power system.*

*NOTE: This Auxiliary Power Circuit is a 12V DC circuit rated for 20A. Do not exceed 20A on the circuit. Do not connect 110V AC accessories to the circuit.*

The Auxiliary Power Circuit is a capped pre-wired circuit to the roof of the vehicle. The connection end is used to cap the circuit and pins are supplied with your vehicle to easily connect to your accessories.

The Auxiliary Power Circuit can be switched on and off by using the AUX 1 switch on the galley.

### Maintenance and Storage

For your Storyteller Overland MODE4x4 to operate as designed and provide years of enjoyment, some preventative maintenance and general inspections should be done to keep an eye out before anything comes up that could put a damper on your adventures.

## Exterior Care

### Seals and Sealant Inspection

Water intrusion is among a vehicle's most damaging concerns. To this end, diligent inspections and maintenance procedures should be done on the seals and sealants used to keep water out of the vehicle.

Sealants are constantly exposed to damaging conditions from sunlight exposure, freezing water, dirt, and forces applied by simply driving the vehicle.

- Seals and sealants should be inspected every six months, at least.
- Inspect around all exterior openings, attachments, and accessories.
- Be sure to inspect all seals around the doors and windows. Have them replaced immediately if they are damaged.
- All seals should be inspected for cracks, gaps, peeling or adhesion issues, and any other signs of deterioration. Running your finger along seals to check for proper adhesion is a must.

Replace any seals or sealants if damage or deterioration is found. Storyteller Overland can help you get the information and service you need to help maintain these areas.

Always use the same sealant that was originally used. If you notice water in your adventure van, immediately have it checked for leaks. Water leaks can cause major interior damage.

Delaying repairs to seals and sealant can result in damage to the interior of the vehicle and is not covered by the Storyteller Overland Limited Warranty Policy.

### Roof

Use extreme caution if storing items on the roof rack of your vehicle, as it is inherently dangerous to you from a risk of falling. Roof rack and ladder surfaces can be extremely slick. Do not store, attach, or secure items directly on or to roof surfaces, vents, air conditioning, solar panels, or other accessories on the roof of the vehicle.

Frequently inspect the roof for damage or leaks. Delaying repairs the roof, its seals, or sealant can result in damage to the interior of the vehicle and is not covered by the Storyteller Overland Limited Warranty Policy.

## Undercarriage

Dirt, road grime, and mud will collect on the underside of the vehicle if the undercarriage is not frequently cleaned. A buildup of this debris will hold moisture and possibly road salts against the body of the vehicle, increasing the risk of rust and corrosion.

The undercarriage of the vehicle should be cleaned by flushing it with water. Pay extra attention to cavities, horizontal surfaces, and other areas that tend to collect deposits.

*NOTE: Avoid high-pressure water as there are many components and seals that can be damaged by high-pressure water.*

## Exterior Finish

Automotive paint finishes, glass, and trim are fairly durable materials, but should be treated carefully. Follow the tips below to help keep them looking their best.

### Parking

- Refrain from parking under trees to avoid a number of conditions that can lead to issues. Low lying branches can cause damage to the roof-mounted accessories. Sap and bird droppings should be removed as soon as possible using soapy water.
- Avoid areas that expose your vehicle to salt spray.
- Avoid parking near industrial factories. Chemicals present in the exhaust and smoke from these facilities can damage the finish of your vehicle.

### Driving

- Driving on gravel roads and other trails can damage the vehicle. Be very cautious of rocks and debris that may be thrown by your vehicle's tires, or by other vehicle's tires. They can cause undercarriage damage.
- Automotive fluids such as antifreeze, fuel, and even window solution should be cleaned from plastics, decals, and other appliques by rinsing with water immediately.
- Bugs and bird droppings should be cleaned with soapy water daily.

*NOTE: Road salts and small pebbles are added to winter roads to help with traction and should be avoided if possible. The vehicle and underbody should be washed after encountering these conditions.*

### Washing

- It is recommended to wash the vehicle frequently to remove damaging substances.

- Don't use strong soaps to clean your adventure van.
- Wash your vehicle with cool water out of direct sunlight, and never when the vehicle is hot.
- Be careful with high pressure on seals and decals. These are resilient and don't need much special attention, but high-pressure water sources can cause them to loosen.

*NOTE: Water should not be aimed toward intakes, electrical outlets, appliances, or the seals around these appliances or accessories.*

- Commercial car wash facilities should be avoided. Your adventure van is an oversized vehicle and may not fit in these facilities. Additionally, the high-pressure water, spinning brushes, and detergents found in these facilities can cause damage to the vehicle.
- Treat decals like other painted surfaces, and wash with mild soap and water.
- After washing, inspect sealants and vents for damage, or separation. See the Seals and Sealant Inspection section for 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 won't bead and run off easily, or when the paint surfaces begin to look dull.

In addition to keeping your adventure van looking great, waxing and polishing also help protect the paint from oxidation and corrosive substances as it puts a protective layer between the vehicle paint and the world.

### **Fiberglass Inspection**

The side flares of your vehicle are made of fiberglass and should be inspected for damage and wear. Hairline cracks are a normal condition that may appear over time as a result of body flex caused by driving.

- Inspect for larger deep cracks or damage. Any cracks or damage that expose the inner glass weave should be repaired. Water damage, especially freezing water, can cause this type of damage to spread.
- Check for areas where the panel may be pulling away or separating from the vehicle body.
- Openings should be covered until a repair can be completed.

### **Interior Care**

Your adventure van is made of durable and high-quality materials. Some of these materials and fabrics have specific requirements for cleaning and care. Please read the sections below for suggested cleaning and caring methods for your vehicle's interior.

### **Interior Plastics**

Many of the interior panels may be hard plastics from the original vehicle chassis such as the dash and door panels, for care instructions of these parts, please refer to the chassis manual. As a general rule, it is best to use the mildest cleaners possible, such as soapy water, first.

### **Woven Fabric Covered Walls**

The woven wall materials naturally resist stains and dirt. It is also mildew resistant, non-allergenic, and static-resistant. We recommend soap and water for most stains and spills. Commercial cleaning agents can be used for removing oil-based or stubborn stains.

*NOTE: Due to the wide array of cleaning products on the market, we recommend testing any cleaning products on a small inconspicuous area before using the product in the intended area.*

### **Rear Bed Cushions**

The rear bed cushions are covered using the same woven fabric as the walls and can be cleaned in the same way, but before cleaning the cushions, it is advised that the covers be removed.

*NOTE: Each cushion of the Dreamweaver Bed System is a different size; each cushion cover will only one cushion correctly.*

### **Soft Touch Vinyl - Headliner and Lower Walls**

This material has antimicrobial properties and is designed specifically for high mess areas for easy wipe down.

For general cleanup and stains such as make-up, crayons, food stains, and suntan lotion, wipe up the excess mess, then clean with soap and water, and dry soft clean cloth. For more stubborn stains commercial cleaners such as Formula 409 can be used, followed by rinsing with water and drying with a soft clean cloth.

*NOTE: Due to the wide array of cleaning products on the market, check the suitability of the cleaner to be used with acrylic fabrics. We also recommend testing any cleaning products on a small inconspicuous area before using the product in visible areas.*

For oil-based stains and disinfecting, use a 1:4 mixture of bleach and water, followed by rinsing with water and drying with a soft clean cloth.

*NOTE: Be careful when using bleach, contact with skin and eyes can cause injury. Avoid getting bleach or bleach solution on other materials as it may cause accidental damage.*

*NOTE: Be careful when using bleach, contact with skin and eyes can cause injury. Avoid getting bleach or bleach solution on other materials as*

it may cause accidental damage.

#### **Driver, Passenger, and Rear Bench GrooveLounge Covers**

These leather-like materials are easily wiped down for cleaning. You should only need to use mild soap and water. Never use citrus-based cleaners as they tend to dry out the material, causing damage to the material over time.

#### **Cabinet and Galley Laminates**

Clean with a soft cloth using water with mild soap. Do not use any cleaners containing alcohol, solvents, or abrasives.

#### **Solid Surface Countertop Material**

Your countertops are made of a high quality and durable material used in high-end kitchens. Normal cleaning only requires a damp cloth and a mild cleanser. Avoid abrasive cleaners as they may dull the finish in the area cleaned. Avoid using strong acidic cleansers (like those designed for drains, toilets, or ovens). A few common-sense precautions include not placing pans directly from the burner on your countertop. Although the countertop can withstand temperatures of up to 225°F, prolonged or extreme heat can cause yellowing. Troublesome spills and stains such as food dye, tea, and fruit drinks can be removed with full strength bleach followed by a general cleaner flushed with water. Be sure and not let the bleach remain on the surface for more than five minutes. If a lit cigarette should come in contact with your countertop, a nicotine stain or a scorch mark can occur. Use an abrasive cleaner or buff in a circular motion with a Scotch Brite® pad to remove.

*NOTE: Any use of abrasives to clean surface or remove stains will likely change the finish appearance of the cleaned area. The countertop surface can be repolished if necessary.*

#### **Flooring**

A neutral pH cleaner should be used to minimize damage to the finish and flooring underneath. Do not use cleaners like ammonia or bleach, as they can damage the finish. Even when diluted, these types of cleaners can, over time, break down the finish and cause damage or discoloration to the floor beneath. An acidic cleaner should also not be used for the same reasons. Always check with the manufacturer of your cleaning products to confirm the suitability of their product for vinyl flooring and vinyl flooring with an acrylic or urethane finish. They hold all warranties for their product's performance.

It is recommended that disinfectants should be as close to pH neutral as possible. Always verify the disinfectant's suitability for use with vinyl with the product's manufacturer.

*NOTE: Due to the wide array of cleaning products on the market, check the suitability of the cleaner to be used with acrylic fabrics. We also recommend testing any cleaning products on a small inconspicuous area before using the product in visible areas.*

## **Preparing Vehicle for Storage**

Properly preparing your vehicle for storage will lessen the possibility of damage to your vehicle. Prepare the adventure van for vacancy just as you would if you were leaving your house for an extended period.

### **Clean and Prep the MODE4x4 for Storage**

- Follow the instructions for the storage of the M-Power Energy Storage System.
- Remove all foods and items that may cause odors from cabinets and refrigerator.
- Clean and defrost the refrigerator. Prop the door open slightly to allow any odors to dissipate. Place an open box of baking soda inside the refrigerator to help absorb odors.
- Lubricate all door hinges and locks.
- Be sure the vehicle is up to date on all servicing and lubrication.
- Be sure the vehicle radiator antifreeze protection level is sufficient for the lowest anticipated temperatures.
- Follow any applicable procedures listed in your chassis manual for storing the vehicle for extended periods of time.
- Wash and wax the vehicle exterior.
- Inspect all seams and seals around doors, windows, vents, and any other joints. Replace or repair any that are damaged. Sealing materials and compounds can be purchased from your dealer, or you may contact Storyteller Overland for information on which sealants were used. Badly damaged weather seals may need to be replaced by your dealer or RV technician.
- Close all windows and roof vents. Protect all appliance vent openings from animals or insects (e.g. bird nest, wasp nests, etc.)
- Clean the interior of the vehicle. Dirt and stains are more easily removed soon after they have occurred. It will be harder to remove them when the vehicle comes out of storage.
- If you are storing your vehicle through the winter or in cold climates, be sure to follow the winterization procedures in this User Guide to prevent damage to the plumbing system during freezing temperatures.

### **Removing Vehicle from Storage**

- Completely air out the motorhome.
- Check window operation.
- Check cabinet and door hinges. Lubricate with penetrating oil, if necessary.
- Close all faucets and drain valves that are open.
- Add a few gallons of water to the freshwater tank and turn on the water pump to check for leaks, especially at fittings.
- Open all faucets following the instructions from the Priming Water Lines for Use section to release any trapped air. Check to be sure the faucet



washers have not hardened during storage.

- After washing accumulated winter/storage grime from the vehicle, it is important to carefully inspect the seams and sealants for separation or cracks that may have appeared around the window frames, vents, and any other joints. See Seals and Sealants Inspection section at the beginning of this section. Resealing is quite simple, and the material is quickly and easily applied. Appropriate compounds are available from your dealer, or you may contact Storyteller Overland for information on which sealants were used.
- Also, inspect weather seals around doors, etc. and have a dealer replace immediately if necessary.
- Following the Disinfecting the Freshwater System section of this User Guide, sanitize the freshwater system.
- Check the portable toilet for proper operation.
- Add water to the onboard graywater tank using the galley sink faucet and sink drain pump. Check to be sure the dump valve seals tightly.
- Check around all appliances for obstructions and ensure that all vent openings are clear.
- Start refrigerator and check for proper cooling.
- Clean wall and counter surfaces.
- Test smoke and CO detectors. Replace batteries, if necessary.
- Check out the electrical system to make sure all lights and electrical components operate.
- Check tires for proper cold inflation pressure. See Vehicle Certification Label located inside the driver's door area.

### Adventure Van Maintenance Chart

Use specified sections manufacturer's guide for further information	Before Each Use	Weekly	Monthly	Every 3 Months	Every 6 Months	Every Year	As Needed
<b>Electrical System</b>							
Check State of Charge (SOC) gauge	•		•				
Check 12V fuses and 110V breakers							•
Check GFCI receptacles			•				
<b>Plumbing System</b>							
Sanitize plumbing system							•
Winterize plumbing system							•
Clean water strainer filter						•	•
<b>Exterior</b>							
Clean roof and side walls				•			•
Clean windows							•
Flush underside of the vehicle				•			•
<b>Safety Equipment - Check operation of the following items</b>							
Headlights, taillights, and marker lights	•		•				
Turn signals	•		•				
Horn	•		•				

**Adventure Van Maintenance Chart Continued**

Use specified sections or manufacturer's guide for further information	Before Each Use	Weekly	Monthly	Every 3 Months	Every 6 Months	Every Year	As Needed
Hazard warning lights	•		•				
Windshield wipers and washer fluid	•		•				
Fire extinguisher- check charge indicator	•		•				
Smoke / CO alarm - test operation and replace batteries if needed	•		•				
<b>Appliances - Refer to manufacturer's guide or specified sections</b>							
<b>Refrigerator</b>							
See refrigerator manufacturer's maintenance guide							•
Inspect and clean exterior drain tube	•						•
<b>Furnace</b>							
See furnace manufacturer's maintenance guide							•
Inspect and clean exterior vent tube	•						•
<b>Cooktop</b>							
See cooktop manufacturer's maintenance guide							•
<b>Air Conditioner</b>							
See A/C manufacturer's maintenance guide							•
Inspect for exterior damage				•			•

**Adventure Van Maintenance Chart Continued**

Use specified sections or manufacturer's guide for further information	Before Each Use	Weekly	Monthly	Every 3 Months	Every 6 Months	Every Year	As Needed
Check and clean A/C filter			•				•
<b>Seals and Sealants</b>							
Inspect (See "Seals and Sealant Inspection Section")					•		•
Replace							•
<b>Frame and Chassis</b>							
Follow Sprinter Operator's Manual maintenance guide							•
Inspect hitch receiver (if towing)	•						
<b>Tires</b>							
Check and adjust air pressure	•						•
Check tread wear	•						•
Check front end alignment and adjust if needed							•
<b>Miscellaneous</b>							
Lubricate locks and hinges						•	•

These recommendations apply for normal recreational use. Heavy duty or full-time use may require more frequent maintenance intervals.

## Loading Your Vehicle

Before driving your adventure van down the road, be sure to store and secure any loose items. Some of the items that get forgotten are small appliances, cookware, or canned goods left on the countertop, as well as freestanding furniture items. These items become dangerous projectiles in sudden stops, quick maneuvers, and accidents.

It's a good idea to empty the gray water holding tank before traveling to reduce the weight your vehicle is required to carry.

It is important to remember that the load rating of your vehicle is determined by weight, not volume. Just because your gear fits inside, on top, or towed behind doesn't mean it's safe, or that your vehicle is rated to carry it.

GVWR, GAWR, GCWR, and individual tire weight ratings are important and should not be exceeded.

Distribute weight evenly to help vehicle handling characteristics. Do not exceed the GVWR (Gross Vehicle Weight Rating) or the GAWR (Gross Axle Weight Rating) of either the front or rear axle. The GVWR is the total allowable weight of the vehicle, including passengers, cargo (including water), and possible tongue weight of a towed trailer. The GAWR is the weight either the front axle or the rear axle is rated to carry. The combined measured weights at the front tires to the ground gives the weight being carried by the front axle. Similarly, the combined weights measured at the rear tires to the ground gives the weight being carried by the rear axle. The combined measures of the front and rear axle weights should not exceed the GVWR. Additionally, the weight measurement to consider is the weight at each tire to a ground point. This measurement should not exceed the individual weight ratings of the tires at that corner.

Lastly, consider the GCWR (Gross Combination Weight Rating). The GCWR is the maximum total weight of the vehicle and anything towed behind, such as a boat, trailer, or vehicle.

## Weighing your Loaded Adventure Van

You should weigh your loaded vehicle to determine the proper load distribution of cargo in your vehicle. Keep in mind the seating positions of your passengers. When weighing, it should be fully loaded, including a full fuel tank, freshwater tank, food, bedding, and any other items you will carry on your journey.

To check the weight of your fully-loaded vehicle, a commercial weighing scale will likely be needed.

## Finding a Scale

Commercial truck stops are the most common public access scales, but there are other commercial scales around that may charge a small fee.

## Weighing Procedure

You can collect three useful measurements at one of these scales, a front axle weight, a total vehicle weight, and a rear axle weight.

To get a front axle weight, drive onto the scale with your only front wheels. To get a total vehicle weight, pull forward onto the scale so that all wheels are on the scale. To get a rear axle weight, drive forward again until only the rear wheels remain on the scale.

You will be given a weight slip with the Front Gross Axle Weight, Rear Gross Axle Weight, and Gross Vehicle Weight.

You should compare these to the GVWR, and the GAWR for your front and rear axles to be sure you are not over the weight limits of your adventure van. The GVWR and GAWRs can be found on your Vehicle Certification label inside the driver door area.

## Getting Corner Weights

The most accurate measurement method to weigh your vehicle is to weigh the vehicle at each corner. In addition to knowing each corner weight to compare to your individual tire ratings, you can add the weights of these measurements to get the Front Gross Axle Weight, Rear Gross Axle Weight, Gross Vehicle Weight, and a side to side weight to see how well your weight is distributed left to right.

Scales capable of taking these measurements are harder to find but may be available in your area. Truck scales next to level ground may be acceptable for taking these measurements by pulling onto the scale so that only one side of the vehicle is measured. Follow the weighing procedure listed above, but for only one side at a time.

Individual wheel weights should not exceed half of the GAWR for their corresponding axle.

## Towing with Your Adventure Van

The factory-installed tow hitch on this vehicle is capable of pulling a maximum load of 5,000 lbs. Towing capacity may be less than the hitch rating based on the weight of your loaded vehicle.

When towing a trailer or vehicle, do not exceed either the GVWR, the rear axle GAWR, or the chassis GCWR by the combined loaded weight of the MODE4x4 and the towed item. See preceding sections the Loading the Vehicle and the Weighing Procedure for an 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 driver’s side door area 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.

### **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 adventure van’s 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 use of a surge brake 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 a receiver-mounted carrier rack.

### **Warranties and Coverage**

Your Storyteller Overland MODE4x4 and its components are covered under multiple warranty policies.

Your new MODE4x4 purchase is covered under the Storyteller Overland, LLC. Supplemental New Vehicle Limited Warranty. See the Storyteller Overland, LLC. Supplemental New Vehicle Limited Warranty sheet for details.

Extended Warranty Programs are available from your dealer.

The vehicle chassis is covered under the factory warranties. Refer to the chassis manufacturer’s warranty policy for details.

Many other appliances and components used in the vehicle are covered under their own manufacturer warranties, examples include but are not limited to the refrigerator, cooktop, microwave, A/C, heating system, and awning. Your vehicle was shipped from the factory with warranty information for many of these components. These warranty policies may vary in length and scope of coverage from the Storyteller Overland, LLC. Supplemental New Vehicle Limited Warranty.

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