Alltrek User Manual

2023-2024 Models

VANCRAFT

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ABOUT THIS USER GUIDE

This User Guide has information on how to operate and care for your Campervan as well as general safety information to help you have the best experience possible.

NOTE: This User Guide is general in coverage of the vehicle components and systems. Some of the exact equipment or functions may have been changed due to continuous product improvement. Your vehicle might differ slightly from the information included herein. Descriptions, images, and specifications were correct at the time of printing, but VanCraft LLC reserves the right to make changes, without notice, and without obligation to install the same products previously manufactured. In addition to this User Guide, your Camprervan came with the manufacturer's user manuals for various appliances and systems in your Campervan. Many of these systems are covered in this User Guide, but some information may only be found in the manufacturer's manuals. Please keep these documents handy should you have questions

Your VanCraft Campervan was built on a Mercedes-Benz® Sprinter chassis. You will find references throughout this User Guide to the Sprinter chassis and Sprinter operating instructions provided with the vehicle. Please refer to the Sprinter operating instructions for information regarding the operation, safety, and maintenance of the original vehicle chassis.

SAFETY MESSAGES USED IN THIS USER GUIDE

This User Guide alerts you to common safety or vehicle hazards using the following labels:

WARNING

Indicates a hazard that may endanger your health or life, or the health or life of others.

Pre-Delivery Inspection: VanCraft Campervans takes pride in providing a high quality campervan product. Our team inspects every Campervan closely before delivery. Our team is responsible for completing a comprehensive pre-delivery inspection and correcting any issues with the chassis or Campervan components prior to delivery. Before driving, familiarize yourself with all local and state laws as different areas may have laws that apply to your Campervan.

GENERAL WARNINGS

- All seats should be locked in the travel position while the vehicle is moving. Passengers should only use seats with seatbelts while the vehicle is moving.
- Child restraints should be installed properly according to the manufacturer's instructions.
- Never let passengers stand or kneel on seats while the vehicle is moving.
- All tables should be stowed when the vehicle is moving.
- Verify doors and drawers are shut and latched, where applicable, when the vehicle is moving.
- Passengers should never use the beds while the vehicle is moving.
- Inspect the fire extinguisher monthly and before each trip for proper charge and operating condition.
- Adverse weather conditions and extremes in terrain may affect the handling and/or performance of your vehicle. Refer to your Sprinter Manual for more information.

WARNING

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

Pregnant Women never place a 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.

WARNING

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

WHEELS - Inspect for damage and check lug nuts for tightness.

TIRES – Inspect for wear and damage and check for recommended air pressure.

LIGHTING – Test for proper operation of all interior and exterior lights including dash lights, headlights, and turn signals.

EXITS – Test both locks on the main entrance door for ease of operation and instruct passengers how to use both means of exit.

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.

APPLIANCES – Turn off and latch or lock doors where provided.

LOOSE PARCELS – Store securely.

CARBON MONOXIDE WARNING

WARNING

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

Combustion engines emit carbon monoxide (CO), which can be harmful or potentially deadly.

Keep CO out of the cabin by maintaining the vehicle exhaust and the ventilation systems. Have the exhaust system inspected from time to time by a qualified RV service center:

- When the vehicle is serviced
- If the sound of the vehicle exhaust system changes
- When damage occurs to the exhaust, underbody, or rear of the vehicle

To allow for proper operation of the vehicle's ventilation system, keep the front grill clear of snow, leaves, or other obstructions.

WARNING

Do not occupy a parked vehicle with the engine running for an extended period. Do not run the engine in confined areas, such as a garage, except to move the vehicle in or out of the area.

SMOKE AND CARBON MONOXIDE ALARM

Your campervan is equipped with an alarm that will sound if it detects smoke or carbon monoxide in your vehicle. This system 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.

WARNING

Test combination smoke / carbon monoxide 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.

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.

PINCH HAZARDS

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

FORMALDEHYDE INFORMATION

Like in every home and building, some materials in this Campervan may emit formaldehyde. Eye, nose, and throat irritation, headache, nausea, and asthma-like symptoms, including shortness of breath have been reported as a result of formaldehyde exposure. Reaction to formaldehyde exposure may vary among individuals and 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. Ventilate your RV before and during each use using the windows, exhaust fan or air conditioning system. If you have any questions regarding formaldehyde, consult your doctor.

MOLD

Mold is a natural part of our environment. It plays an important role in helping break down dead leaves and organic matter into fertile soil. The very nature of your RV being outside will bring it into contact with mold, but indoor mold growth should be avoided.

To reduce mold growth, reduce the things in your RV that could allow mold to grow. Mold only needs small amounts of moisture and nutrients from food spills or grease, or it could survive on as little as a fine layer of dirt or dust.

Keep the inside of the vehicle as clean and dry as possible. Moisture plays a large part in mold growth. Don't allow condensation to build up inside the vehicle and keep the interior humidity levels low. Proper ventilation helps and using the air conditioner and or the auxiliary heater can remove excess moisture from the air.

Avoid and repair leaks immediately as they are a major contributing factor to mold growth. If mold develops, clean the area with soapy water followed by a bleach solution. If the items cannot be treated, they should be removed and replaced.

MOLD AND WARRANTY CLAIMS

If VanCraft determines that mold in your campervan was caused by a manufacturing defect reported to VanCraft within the warranty period, VanCraft will clean the affected area(s) and /or replace items it deems necessary. This is the only circumstance in which VanCraft will cover mold under its limited warranty.

VanCraft LLC 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.

CONDENSATION

When it is humid in the van, condensation can develop inside the windows which can lead to damage if not properly addressed. It is best to keep moisture low with proper ventilation, but under certain circumstances ice can form if excessive condensation gets trapped between a window shade and the glass. If the ice or excessive sweating is not addressed and dried properly, it can melt and drip into the dashboard, electronics, upholstery or other areas that

water may damage. Do not allow water to enter sensitive areas by carefully removing ice and drying the moisture to prevent damage.

Always run the exhaust fan in the bathroom during and after using the toilet or shower.

<u>TIP</u>: When using window shades, position the shades as close to the glass as possible to prevent moisture build up. VanCraft, LLC does not assume responsibility for damage caused by water dripping into the dashboard, upholstery or other areas related to condensation or ice melting into those areas.

ELECTRICAL CAUTIONS

WARNING

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

Avoid overloading electrical circuits and only replace fuses or circuit breakers with those of the same size and amperage rating. 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 and avoid creating sparks.

GENERAL VEHICLE INFORMATION

LOADING THE RV

Before driving, always secure loose items which can become dangerous projectiles in sudden stops, quick maneuvers, and accidents. Distribute weight evenly to help vehicle handling. Never exceed the GVWR (Gross Vehicle Weight Rating) or the GAWR (Gross Axle Weight Rating). 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 the axle is rated for. The combined measured weight at the front wheels plus the measured rear wheel weight should never exceed GVWR. Additionally, never exceed the individual tire weight ratings. Never exceed the GCWR (Gross Combination Weight Rating), the maximum total weight of the vehicle and anything towed.

WEIGHING THE RV

Weigh your fully loaded van to determine the proper load distribution of cargo in your vehicle. Weigh fully loaded, including fuel, fresh water, food, bedding, passengers, gear and other items you will carry.

FINDING A SCALE

Commercial truck stops usually have scales, but there are other commercial scales around that may charge a small fee.

WEIGHING PROCEDURE

Measure the front axle weight, rear axle weight, total vehicle weight. To get a front axle weight, drive only the front wheels onto the scale. To get a total vehicle weight, drive all wheels onto the scale. To get a rear axle weight, drive the rear wheels only onto the scale. Compare these measurements to the GVWR, and the GAWR for the front and rear axles, found on the Vehicle Certification label inside the driver door area.

TOWING WITH YOUR VAN

The Sprinter is rated to tow 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, do not exceed the

GVWR, the rear axle GAWR, or the chassis GCWR by the combined loaded weight of the VanCraft Campervan and the towed item. Towing will affect vehicle handling, durability, and fuel economy. Exceeding any of the listed Gross Weight Ratings will result in unacceptable overall vehicle performance and, potentially, danger.

HITCH ASSEMBLY

If a towing brake system is required, we recommend use of a modulated braking device versus a surge-style system. The actual tongue weight should never exceed the stated hitch vertical load. This is typically defined as the tongue weight of a towed vehicle hitch, boat trailer tongue weight, or a receiver-mounted carrier rack.

ROADSIDE EMERGENCY

Due to the weight and size of the vehicle, we recommend 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 Operating Instructions regarding the changing of a tire. 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. You may need to counter-steer to compensate for pull created by the failed tire. Do not stomp/slam on the brakes. 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, then activate the hazard flashers and exit the vehicle carefully. Set out flares or other warning devices.

RECOVERY TOWING

Due to modifications of the RV from its original chassis specifications, notify the towing service of the height and weight of the RV (Height is 9 '+) as it may change how they recover the vehicle. This information is found on the Vehicle Certification Label. Refer to the Sprinter Operating Instructions on towing the Sprinter. VanCraft, LLC 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 reason to suspect an engine overheating condition, pull the vehicle over, stop the engine, get passengers out of the vehicle and consult the Sprinter Operating Instructions.

JUMP STARTING

If you wish to try jump-starting the engine, see the Sprinter Operating Instructions.

DRIVING YOUR CAMPERVAN

See your Sprinter Operating Instructions for information on items like driving controls, instrumentation, cruise control, climate controls, gauges, wipers, lights, safety belts, and other chassis related features.

FRONT SEATS

The front seats of your van are adjustable in various ways, the passenger seat also swivels to face the rear of the vehicle. See your Sprinter Operating Instructions for more information on front seat adjustments.

<u>NOTE</u>: Damage to interior door panels may result if seats are swiveled toward the doors. Do not turn the passenger seat clockwise, adjust the seat all the way toward the front of the van before spinning.

<u>NOTE</u>: When the vehicle is in motion, the driver and passenger seat must be locked in the forward position.

SEAT BELTS

All seating positions have seat belts which should be used anytime the vehicle is in motion.

WARNING

Never sit anywhere in the van that does not have a seatbelt while the vehicle is in motion.

<u>NOTE</u>: After any serious accident, all seat belts in use during the accident must be inspected and replaced if necessary.

SEAT BELT DISCLAIMER

VanCraft's bench seat belt system utilizes FMVSS certified lap belts; however, the lap seat belt system is not DOT certified and has not been crash tested. Please use the lap seat belt system at your own risk.

CHILD RESTRAINTS

When properly used, child restraint systems reduce the risk of injury in an accident or sudden maneuver. If installed or used incorrectly, child restraints can increase the risk of injury. Refer to your child restraint system's instructions for installation instructions.

<u>NOTE</u>: The rear bench seating does not have a ratcheting style belt retractor. Rear bench seating can be used with a child restraint system ONLY when it is designed for use with lap-only style seat belts. Car seats are to be used at the owner's sole discretion and VanCraft is not responsible for damages related to the seat belt systems in the campervan.

SEAT BELT DISCLAIMER

VanCraft's bench seat belt system utilizes FMVSS certified lap belts; however, the lap seat belt system is not DOT certified and has not been crash tested. Please use the lap seat belt system at your own risk.

FACTORY DASH CLIMATE CONTROLS

The Sprinter dash climate controls were designed to heat and cool the front cabin area only, not the entire cabin. See Sprinter Operating Instructions for details and instructions covering dash A/C, heat, and defrost functions. See the Cabin Climate Control System section of this User Guide for details regarding the VanCraft Campervan heating and cooling systems. Infotainment Systems and Driver Assist Features Consult the Sprinter Operating Instructions for information and operation instructions regarding your Sprinter infotainment, radio, navigation, Bluetooth, cameras, external sensors and the like.

VEHICLE MAINTENANCE

The VanCraft Alltrek is built on a Sprinter chassis and requires routine maintenance and service outlined in the Sprinter Operating Instructions.

FRONT AXLE ALIGNMENT AND TIRE BALANCING

Once the campervan is fully loaded, get the alignment checked and adjusted, if necessary. After that, the alignment should be periodically inspected to help prevent uneven tire wear. Excessive or abnormal tire wear may indicate worn or misaligned suspension, an unbalanced tire, or other problems. Alignment can also be affected by incidents such as hitting a curb, pothole, or railroad track.

<u>NOTE</u>: Have a service technician inspect your vehicle's suspension and steering components periodically for misalignment or wear. Refer to the Sprinter Operating Instructions provided with your vehicle for further information.

TIRES

This vehicle came with tires different from the original Sprinter and has a modified tire label in the driver door area with information regarding proper tire pressures.

<u>NOTE</u>: Improper tire pressure can cause abnormal or premature wear, affect vehicle handling, and fuel economy. The wheel lug bolts needed to be checked and torqued periodically and any time the wheels were removed and reinstalled.

SPARE TIRE

Refer to the Sprinter factory manual for information on accessing the spare tire.

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ELECTRICAL SYSTEM OVERVIEW

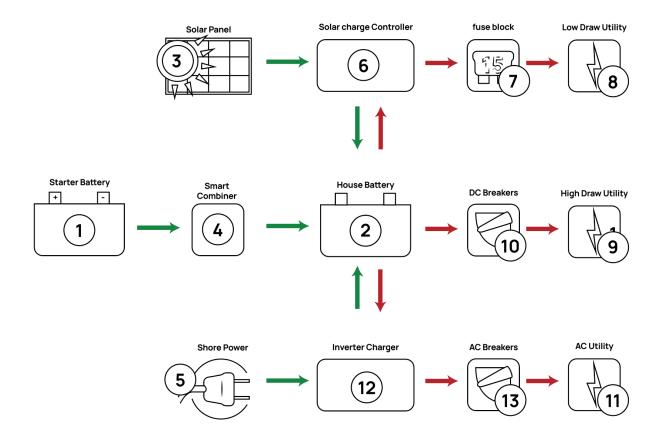
Our robust power system is designed to provide fully self-sustainable electricity for comfortable camping anywhere. This simple, maintenance-free system is made up of three main components: **Battery, Charge, and Utility.**

	BATTERIES
1	Starter Battery: The Mercedes factory battery that starts and operates your van. This battery is disconnected from the camper when the engine is turned off.
2	House Battery: This battery bank powers all electrical appliances in your conversion. Offered in 200, 400, and 500 amp/hr self-heated, lithium options (see your Purchase Order to identify your configuration).

3	Solar: Your roof mounted panel sends raw energy to the Solar controller(6). Your Solar Controller distributes DC power to charge your House Battery as well as directly to in-use Low-Draw Utilities(8). Expect ≥16 amps of charge in direct sunlight.	
4	Smart Combiner : Your vans engine alternator charges both Starter and House batteries while the engine is running. The Smart Combiner manages healthy power to charge your House Battery and disconnects power automatically when the engine is off. Expect between 20-130 amps of charge current depending on battery levels.	
5	 Shore power: By utilizing your van's Inverter-Charger (12) you can plug your van into a standard 15 amp, A/C power receptacle to charge your van's batteries. Your inverter charger will also send shore power directly to AC appliances (supplemented by battery power when necessary). Expect as much as 75 amps of charge current. 	

	UTILITY		
8	Low-Draw DC Utility: These circuits and devices are managed by the Solar Controller, allowing energy from the sun to power Low-Draw utilities directly. These utilities are protected by fuses located in the fuse block(7) in the under-garage utility storage box.		
9	9 High-Draw DC Utility These appliances are connected directly to your House Battery and protected by breaker switches (10) located behind your pull-out kitchen trash can.		
11	AC Utility Your vans 3000w Inverter-Charger(12) converts DC battery power to AC electricity providing power to AC receptacles and appliances throughout your van. AC circuits are protected by breaker switches(13) located under the rear bench seat.		

ELECTRICAL OVERVIEW DIAGRAM



USING YOUR ELECTRICAL SYSTEM

For the most part, your van's electrical system needs no management or attention to operate, keeping your camping experience as simple as possible. Here are some helpful tips for monitoring and running the major parts covered in the Electrical System Overview.

HOUSE BATTERY

Your self-heated Lithium Battery Bank comes equipped with an onboard battery management system OR *BMS*. This means your batteries need little to know management to stay healthy in all climates. Your batteries state of charge, incoming charge current, and outgoing utility draw can be viewed on the battery monitor screen. This screen is located on the *bench end cabinet* next to the side entry slider door. An extensive manual for both your battery and monitor screen can be found in the "helpful links" section of this manual.

Maximize your battery performance: To keep your battery as topped off as possible, Always use appliances in their most power efficient modes ("ecco" for air conditioning, "Low Speed" for your fridge). When not using appliances make sure they are turned off this is especially important for the Inverter-charger. Use High Draw appliances sparingly and strategically. Looking at the charge input/output on the battery monitor will help you to understand each device's draw in amps. Understand your charge inputs: Driving your van will charge the van 10X faster than the solar panel and 2.5X faster than your shore power plug.

SMART COMBINER RELAY

Your battery combiner operates on its own. Simply turn the vans engine on and a connection will be made between Starter and House Batteries. Charge current changes automatically to provide healthy charge to your House Battery. Incoming charge can be verified at the Battery Monitor Screen by viewing charge current shown in amps +/-.

SOLAR CHARGE SYSTEM

Your Solar controller is configured for your vans power system at the VanCraft factory. The Solar controller automatically distributes power to charge your House batteries as well as power your Low Draw Appliances. Power distribution is adjusted automatically to accommodate for change in temperature, solar gain, and battery state of charge. You can monitor the performance of your solar system using the Renogy Bluetooth app on your Smartphone. Find a link to download the app in the "helpful links" section of this manual.

You can turn output to Low Draw utility on or off at any time by pressing the right arrow key on the face of the solar controller or by toggling the "Load output" radio button on the smartphone app. The complete manual for the Solar controller can be downloaded from the "helpful links" section at the end of this manual.

Warning: While using the smartphone app or viewing screen on the face of the controller DO NOT change system settings. Incorrect power settings could result in damage to your battery and power system.

INVERTER

Your 3000w inverter-charger can be turned On/Off using the switch on the inverter control panel located directly below the Battery Monitor Screen. When "on" the unit (located under the rear bench seating area) will beep and a green indicator light will illuminate on the control panel. 12V DC current is inverted to output 115V AC similar to the power found in your home. The inverter sends power to the 15 amp 110V GFCI protected wall outlets as well as the water heater.

To use AC power outlets or appliances, make sure the inverter is on and all AC breaker switches are turned on. The AC breaker switch panel is located on top of the passenger side rear wheel well cover located under the rear bench seat.

Refrain from leaving the Inverter charger on when not in use as it does draw power from the house battery when idle.

Location	Breaker name	Rating	
Bench End Cabinet Outlet	"Outlet"	15	
Garage Driver Side Pillar Outlet	"Outlet"	15 amps	
Kitchen Area Wall Outlet	"Stove"	15 amps (dedicated)	
Hot Water Heater	"Hot Water Heater"	15 amps (dedicated	

AC CIRCUIT LOCATIONS & RATINGS

Please refer to the Inverter's manufacturer specific manual for more information and safety warnings.

WARNING

The GFCI will not completely eliminate the risk of electrical shock. Infants and small children may still be affected.

SHORE POWER

To charge your batteries or provide extended power to AC devices without drawing from your House Battery you can plug in your vans shore power plug. First make sure to turn on the Inverter-charger using the switch on the bench end cabinet. Your plug is located on the outside of the van on the driver rear lower rocker panel. Using a 12 gauge, outdoor rated extension cord plug your van into an AC electrical receptacle with a minimum 15 amp dedicated circuit. Your battery charge current can be monitored on the Battery Monitor Screen.

Note: Your shore power input can provide up to 75 amps of DC power.

LIGHTING

The main ceiling lights are turned on and off using the dimmer switch located on the bench end-cabinet to the right of the sliding-door entrance.

The garage lights are turned on and off using the switch on the rear face of the utility box next to the shower pump switch.

Kitchen area lights are turned on by a small round switch located on the bottom left of the overhead cabinet above the refrigerator.

Reading lights in the bed area are turned on/off with a touch sensitive button on the face of the light fixture. Hold your finger on the switch to dim.

USB CHARGING

Keeping all of your devices charged on the road is made easy with the many USB outlets located in your van. It's helpful to know that all USB outlets are 12V DC so there is no need to run the Inverter to power them, this also makes them much more energy efficient.

Connection	location
USB Charging Bed Area	Bottom side of both reading lights
4x USB outlet	Bench end cabinet
USB-C Dashboard charging	Bottom center console area
USB-C Dashboard power and media connect	Top center dashboard

Note: All charge ports in the Mercedes Benz Sprinter cockpit area are USB-C and draw power from your starter battery.

RESOLVING CHARGE SYSTEM ISSUES

If you are experiencing unusually low battery levels, or your utilities stop working all together - work through these fixes in order.

STEP 1 [IF NO UTILITIES WORK]: Your "load output" has likely been shut off. Turn the solar controller "load output" On again using the Right Arrow key on the face of the controller located in the utility closet underneath the bed. This can also be achieved via APP control when your solar controller is connected via Bluetooth to the "Renogy solar BT" app on your smartphone.

<u>STEP 2</u>: Reset all DC power Breakers located behind the trash can. This will help reset any current system errors.

<u>STEP 3</u>: Verify that your battery-to-battery charge relay is functioning. Note the amperage charge level on your battery monitor with and without the vans engine running. At idle, your battery should see an incoming charge of 30-130 amps.

STEP 4: Check that inline fuses and breakers for the engine charge system are not blown or tripped. These can be found at both the starter battery and inside the kitchen base cabinet on the drivers side (refer to "**Fuse, Breaker and Power switch locations**" below.)

<u>STEP 5</u>: Lastly, inside the utility bay is the master utility shutoff switch - turn this switch off and wait 60 seconds before turning back on again (note: this will reset all stored settings for your campers 12V electrical appliances)

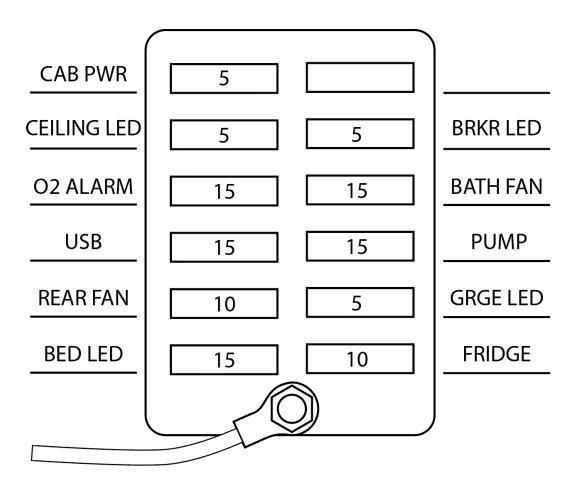
FUSE, BREAKER, AND POWER SWITCH LOCATIONS

FUSE BOXES

Mercedes install fuses in three major locations in the chassis. Refer to your Mercedes owners manual for detailed information about chassis fuse locations and accessibility.

VanCraft utilizes fuses for all 12v utilities that are controlled by the Solar Controller. These fuses are in a fuse box inside the utility bay in the garage area of the van.

12V FUSE BLOCK DIAGRAM



NOTE: Always replace fuses with fuses of the same size and amperage rating.

Fuses can also be found here:

- The starter battery connection below the driver footwell for the battery-to-battery charge system.
- In the house battery box for the optional air conditioner.
- In the driver's seat base main fuse bay for the optional audio system, bumper mounted light pods, and the diesel heater.

DC BREAKERS

Breaker switches protect power leaving the battery compartment to larger draw utilities in the van. In the kitchen base cabinet (behind the trash can drawer) are three breakers for:

- 1. Power inverter/Charger
- 2. Solar controller
- 3. Battery-to-battery charge relay

These breakers trip if they are overloaded. If they are tripped in the open position, they should be closed to be reset. If the breaker continues to trip open, their corresponding device is pulling too many amps due to misuse or internal failure.

CABIN CLIMATE CONTROL

OPTIONAL AIR CONDITIONING

Before using the air conditioner, first familiarize yourself with its included instruction manual. Your air conditioner is designed for off-grid style 12V DC power systems. It accomplishes this with its included "ECCO" run mode. While off-grid camping, use "ECCO" mode for the best experience.

While driving or connected to shore power, use "AUTO" mode.

Using window covers and deploying the optional awning will help ade the air conditioner.

USING THE EXHAUST FANS

Vans without a roof air conditioner have an exhaust fan above the bed. All Alltrek conversions have an exhaust vent in the front of the van as well as a mini fan in the bathroom. Use these fans to prevent harmful gasses from building up inside the living quarters of the van, remove cooking odor from the van, and draw cool or hot air from the vans dashboard HVAC system to the rear of the van.

Only open the roof vent a quarter of the way while the van is in motion. Use the lock when closed.

DIESEL CABIN HEATER

Before using the cabin diesel heater, first read the included instruction manual. The heating system uses diesel from the Sprinter's primary fuel tank to fire a small furnace for heating cabin air. The heater can be run with the van's engine off and the inverter does not need to be on. Follow instructions in the heater manual to turn the unit on and off and adjust cabin temperature.

NOTE: The diesel-fired furnace will not operate if the vehicle's fuel tank level is under 1/8 tank.

<u>NOTE</u>: Do NOT turn off the 12V power system system if the furnace is on. This includes breakers, fuses, master power disconnect switch, and the solar controller itself. Turn the furnace switch to OFF on the heater controller only, then wait at least 10 minutes for the furnace to shut down properly.

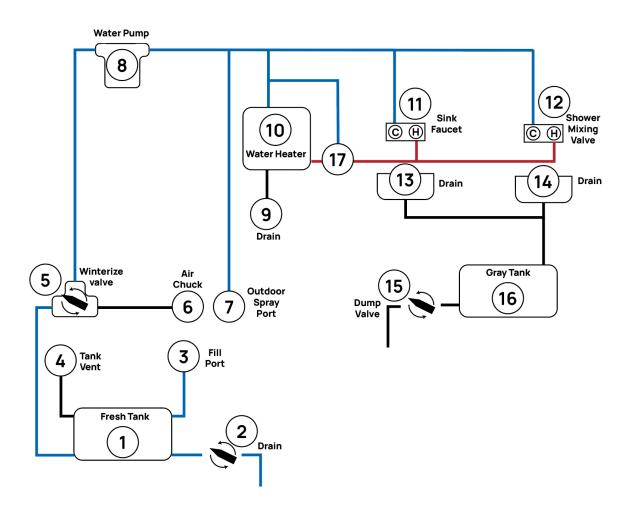
TROUBLESHOOTING THE DIESEL HEATER

Troubleshooting steps can be found in the heaters instruction manual. If you are having a tough time starting the heater check that:

- The diesel tank is above 1/8 full
- The battery system is sufficiently charged (12.5V minimum)
- You're operating the heater below 14,000 feet of elevation.

WATER SYSTEMS

Your van comes equipped with a complete water system. Your 40 gallon Fresh Water Tank (1) Distributes water throughout your van with a 3 GPM water pump (8). Water is fed to your outside Spray Port (7), Water Heater (10), Kitchen Sink (11), and Inside Shower (12). Drained water is collected in an exterior mounted, 18 gallon Gray water tank (16).



FRESH WATER TANK (1)

The 40-gallon water tank is housed inside the utility cabinet in the rear of the van, under the bed. The tank can be drained using the drain valve (2). The shower drain valve is mounted to the floor inside the utility cabinet. Open the access door on the rear face of the utility cabinet under the bed and look down to the floor. Water level for the freshwater tank can be viewed at the gauge directly above the water fill port, or inside the van on the hot water control panel (located on the kitchen overhead cab).

FILLING THE WATER TANK

The water-fill port is located on the top left of the water control panel on the front face of the Utility box (under the bed).

- Unscrew the cap on the fill-port.
- Using a standard garden hose (it is helpful to have a spray nozzle attached), press the hose into the fill port opening and then begin the flow of water to fill the tank.
- As the tank fills, the tank fill gauge will read its level. If it is difficult to read the gauge, turn on the garage lights to illuminate the gauge.
- When the tank gauge reads full, turn off water flow from the hose and screw the fill port cap back on.

<u>NOTE</u>: It is important to clean up any spilled water immediately to avoid damage to the campervan's cabinets, flooring, and other systems..

CLEANING THE TANK

- Fill the water tank half way and mix in % cup of household bleach into the tank before completely filling the tank with freshwater.
- Let the full tank sit for 4 to 8 hours.
- Drain the tank.
- Refill the water tank with fresh water and drain several times to flush the system.

GRAY WATER TANK (16)

The 18 gallon gray water tank is located underneath the van on the front driver side. This tank collects water from the kitchen sink (13) and indoor shower drains (14). The tank can be dumped by pulling the gray water dump valve (15) under the van just behind the driver door. It is recommended to clean your gray water tank periodically using standard gray water tank treatment solution to prevent odor. Your gray water tank's fill level can be monitored on the dual level gauge on the water control panel above the sink.

Always use sink and shower drain strainers to prevent foreign objects from draining into the gray water tank. Food scraps, hair, and litter will clog your drain and can cause damage to your gray dump valve.

It is also important to note that the gray water tank is mounted on the exterior of the van and is therefore susceptible to freeze damage as well as collision from rocks and off-road obstructions. Refer to the winterization instructions for information on preparing your van for freezing conditions. Always pay close attention to the driver front undercarriage when maneuvering the van over obstructions.

WATER PUMP (8)

Your van's water pump can be turned on and off using one of two water pump switches. The water pump is "on" ONLY when the switch LED indicator ring light is illuminated. Switch one is located on the plumbing control panel on the front face of the utility cabinet. Switch two is located on the hot water heater control panel on the front face of the kitchen overhead cabinet.

When the pump is on all water systems in the van are under pressure. Make sure all fixtures (faucets & shower heads) are closed before turning on the pump.

It is recommended to leave the water pump "off" when not in use.

ELECTRIC WATER HEATER (10)

Your vans on-board 3-gallon electric water heater is located under the rear bench seat. This hot water heater in combination with a hot water mixing valve (17) provides ample hot water for showering and clean-up.

To turn the water heater on:

- 1. Make sure the inverter-charger and "hot water heater" AC breaker are on.
- 2. Make sure the hot water heater is full of water (turn on the water pump and open the sink faucet on "hot" until water comes out).
- 3. Turn the 60-minute timer switch on. (located on the hot water heater control panel on the front face of the kitchen overhead cabinet).
- 4. The hot water heater will be hot in 20 minutes.

Note: The hot water heater uses a considerable amount of electricity while the water is heating. A timer switch is used to prevent the possibility of leaving the hot water heater on for extended periods of time unintentionally. To conserve house battery power while heating water, run the vans engine while the water heater is on, or plug in the Shore power plug.

OUTDOOR SPRAY PORT (7)

Located on the bottom front face of the utility cabinet, your spray port gives quick access to pressurized water for outdoor use. An included quick connect hose can be used for clean up of gear and equipment before storing in the vans garage. Pair this hose with an optional door mounted hot water heater for a heated outdoor shower. When connecting the hose to the quick connect port, make sure the pump is not on.

USING THE OUTDOOR SHOWER

Your optional outdoor hot water shower provides on-demand hot water for showering and cleanup from the exterior of your van. This device is mounted to the rear door of the van, and is intended to only ever be used with the door open so that exhaust fumes can easily escape and not enter the living space of the van.

WARNING

This accessory hot water shower is designed for use in areas with direct airflow to the outdoors. NEVER use the hot water heater with the rear cargo door closed. NEVER leave the low pressure propane canister connected while the water heater is not in use or unattended. ALWAYS turn the hot water heater igniter switch to the "OFF" position when not in use. And only ever connect the water supply hose to the water heater when in use, NEVER LEAVE THE WATER SUPPLY HOSE CONNECTED WHEN THE SHOWER IS NOT IN USE.

Please follow the steps below to operate your shower:

- 1. Connect propane to the low pressure regulator.
- 2. Turn on the water heater flame igniter (located on the bottom of the water heater).
- 3. With the water pump off, connect the supply hose to the hot water heater first, then connect the other end of the supply hose to the spray down port.
- 4. Turn on the water pump switch, water will then flow through the heater and out of the shower head. You can hear the igniter clicking before igniting flame visible through the three water droplet icons on the front face of the water heater.
- 5. Adjust water temperature using the control knobs on the face of the heater.

- 6. You can limit water flow or stop the flow of water completely using the flow adjustment on the shower head.
- 7. When done, turn the water pump switch OFF.
- 8. Open the shower head flow restrictor valve and release any residual water from the line by placing the shower head below the tank and shaking firmly.
- 9. Disconnect the spray down hose first from the heater and then from the spray port. Let the hose drain out completely before storing in the van.
- 10. Immediately wipe up any water that may have dripped inside the van.

<u>NOTE</u>: Always be sure to winterize your shower if you are camping or leaving your vehicle in freezing weather conditions.

Note: If an accessory is connected to the spray port and the water pump is turned on (from inside the van or from the utility cabinet) water will come out of the port. It is best practice to leave the spray port disconnected when not in use to prevent water accidentally spraying inside the van when the pump is turned on.

KITCHEN SINK (11)

The sink is pressurized by the water pump in the rear of the van. Press the water pump switch above the sink. The pump is on and the sink is ready to use when the switch is illuminated.

<u>NOTE</u>: Never leave the water pump on when not in use or when unattended. Always confirm the spray down port hose is DISCONNECTED before turning the pump on from inside the van.

KITCHEN SINK DRAIN (13)

Do not pour chemicals, food scraps, or other items harmful to the gray water tank down your sink drain.

<u>NOTE</u>: Always use the included sink strainer to protect the drain from items that may cause clogs.

INDOOR SHOWER & BATHROOM (12 & 14)

Your indoor shower and bathroom is an enclosure designed for showering and the use of a supplied portable cartridge toilet.

SHOWERING

For the best shower experience follow these steps:

- Before taking a shower, remove the toilet and wooden floor panels.
- For the best drain performance, park the van on level ground.
- Be sure the water heater has been heating for a minimum of 20 minutes.
- Be sure the water pump is on.
- Always use the exhaust fan while showering to prevent moisture damage.
- Be sure the toilet paper dispenser is in the closed position.
- While inside the shower make sure the shower door is closed completely to avoid water leaking out the shower enclosure.
- Conserve water by leaving the shower head off when not in use.

After showering check to make sure no water has leaked through the door and onto the floor. Make sure all water is wiped off of cabinets and the floor immediately to prevent water damage. Replace the wooden floor so you can use the bathroom and not get your feet wet.

USING THE CARTRIDGE TOILET

Your included Thetford cartridge toilet has its own manual. You can find a link to a digital copy of this manual in the helpful links section at the end of this manual.

The toilet can become heavy when full. It is recommended to dump the toilet as often as possible to keep it lighter and easier to maneuver in and out of the van.

WINTERIZING YOUR WATER SYSTEM

Any time there is a chance of your van becoming exposed to below freezing temperatures, it is vital that you winterize your plumbing to avoid breakage. While this process can be an all-day project in most RVs, our plumbing system is designed for rapid transition in and out of *Winterization Mode*. Follow these steps in order to prepare your vans plumbing for freezing temps.

1. Drain your fresh water tank. Open the plumbing access door located on the rear face of the utility cabinet (below the water control panel). Inside you'll see a series of hoses and your water tank. Reach inside the cabinet and turn the drain valve (located on the floor, inside the utility cabinet). Leave the drain open.

- 2. Drain the Grey water tank. Open the dump valve on the gray water tank and leave it open.
- **3.** Activate Winterize valve. Turn your winterize valve so that it points to "Winterize". The winterize valve is located on the plumbing control panel on the rear face of the utility cabinet, under the bed.
- 4. Setup Outdoor Shower. Make sure the water pump is off. If your van is equipped with an out-door hot water heater, connect your spray down port hose to the water heater and make sure the shower head is turned off so that no water can come out.
- 5. Drain the Electric Hot Water Heater. With the water pump off, turn the hot water valve in the sink and shower on. On the water heater, turn the drain valve on (The drain valve is a gray spigot mounter on the bottom left face of the heater). Water should drain on the ground. Leave the drain open. Close the sink and shower valves.
- 6. Clear your lines. *Make sure the sink faucet, shower valves, and spray down port are in the off position.* Using a compressor with a minimum output of 45 PSI, equipped with a standard tire fill air chuck, connect the air chuck to the schrader valve on the bottom plumbing plate (located on the bottom face of the utility cabinet to the left of the outdoor spray down port) and apply compressed air to your system.
 - a. While the system is under pressure, open the shower cold water valve until water stops flowing, then close the valve.
 - b. Open the shower hot water valve until water stops flowing and then close the valve.
 - c. Open the sink cold water valve until water stops flowing, then close the valve.
 - d. Open the sink hot water valve until water stops flowing, then close the valve.
 - e. Open the hot water tank drain valve until water stops draining, then close the drain valve.
 - f. Open the outdoor shower head and turn the water flow adjustment (blue knob) to max. Turn off the shower head when water stops flowing.
- 7. Remove sink aerator. Grab the tip of the faucet and remove the faucet aerator by turning counter clockwise. Store the aerator somewhere safe and re-install when un-winterizing your system.

At this point there should be no water in your system and you should be clear for takeoff. In extreme and extended cold, it is recommended to poor RV antifreeze solution in both shower and sink drains to fill the P-traps. It is also possible to fill the entire system with antifreeze for added protection by connecting a hose to the schrader valve and inserting the hose into a bottle of antifreeze. Run the water pump and open all taps until antifreeze flows at each orifice. Flush the system with clean water to un-winterize.

WARNING

Standing water left unattended in the van can cause damage to cabinets, floor, electronics and other components found in your campervan. Always take immediate action to clean up water spills and fix leaks in plumbing systems. If a leak cannot be fixed, drain all holding tanks until your van can be brought to a qualified service station for repair.

Lastly, failure to winterize plumbing systems before the onset of below freezing temperatures can result in water leaks and subsequent water damage.

APPLIANCES

REFRIGERATOR

The refrigerator is located under the countertop on the left side of the kitchen base cabinets located on the driver side of the vehicle. To change fridge settings, access the control panel on the inside of the trash drawer. Make sure your fridge is set to "low speed" mode for best results.

Generally the fridge is left on while camping but it's recommended to turn it off during periods that the van is not in use. Simply unplug the refrigerator to turn it off (the plug is located next to the control screen).

REMOVING THE REFRIGERATOR

In order to clean the refrigerator, repair or send it in for warranty, or to access the Solar Battery Bank, the refrigerator will need to be removed.

- 1. Remove the hinge screws holding the refrigerator lid to the countertop.
- 2. Unplug the refrigerator (plug is located next to the control screen).
- 3. Remove fridge baskets and all food items.
- 4. Pull the refrigerator upward to remove.

INDUCTION STOVETOP

The VanCraft Alltrak comes standard with a portable 1800W single burner induction cooktop. The cooktop runs on 110V AC electricity, so the power inverter must be on to use the cooktop. Please monitor your batteries power consumption closely when using the cooktop, it consumes power quickly.

NOTE: Induction compatible cookware is required. (minimum 4" diameter, magnetic)

<u>NOTE</u>: Refer to the manufacturer's user guide provided for complete instructions.

SLEEPING AND SEATING SYSTEMS

SWIVEL SEAT

The front passenger seat has a seat-base swivel system, allowing it to rotate towards the rear of the van. Before rotating the seat, adjust it all the way forward to prevent it from rubbing or scratching the vehicle's door trim.

While standing next to the seat or outside the open passenger door, use the red lever, located below the front-center seat cushion, to rotate the seat counterclockwise. Use the lever again to unlock and rotate the seat further or back to the forward position.

<u>NOTE</u>: Never travel in the campervan with the seat facing backward. Never rotate the seat 360° to prevent the seat belt from twisting.

REAR BENCH

The rear bench-seat has room to seat two (4) passengers. There are type-1, lap-belt style seat belts installed for each passenger. When the van is in motion all passengers MUST wear seat belts.

The cushioned horizontal bench-back folds up to extend the sleeping area of the bed. Be conscious and attentive to make sure bedding is not pinched in the latch when engaging the bench-back to prevent damage to both the bench-back hardware and your bedding. Make sure both latches are engaged, by pushing down on the bench-back, before climbing up into bed.

Do not try to collapse the bench back from on top of the bed. First climb out the bed and stand on the ground while lowering the bench back. Release the latches by pushing upward on the latch triggers.

MAIN SLEEPING AREA

The elevated bed above the garage is designed to utilize the extension provided by the bench back when in the upright position. The recommended sleeping position is to place

your head towards the rear of the vehicle and your heels resting on the bench-back extension.

BENCH SLEEPING

There is enough room for a child under 4' tall to sleep horizontally on the rear bench seat. The L-bench offers an additional sleeping surface for children or an adult up to 6' tall. There is also an optional Bed-to-Bench conversion kit for the L-bench area.

Sleeping with your head under the bench-back when it is in the upright position is prohibited. It is important that if any passengers are sleeping on the bench that the bench back is first locked into place and tested for security to prevent the bench-back from falling on a passenger sleeping below.

EXTERIOR ACCESSORIES

FRONT BUMPER LIGHT PODS

Your campervan's two-stage LED light pod system is integrated into the front bumper and is turned on via two red switches (to the right of the steering column). If the switches are illuminated red, the lights are turned on.

The white lights are intended for low light conditions, while the yellow lights are designed to cut through fog and snow. Like all electrical systems in your van, prolonged use could result in a dead battery.

AWNING

To best learn to operate your awning, refer to the included Thule manual. A how to video can be viewed here:

https://www.youtube.com/watch?v=drN1j8AsiuA



The awning crank rod is stored under the bed on the driver-side wall. The awning pitch adjustment screws have been adjusted to avoid the awning form hitting the top of the slider door when in the open position.

LADDER

Your rear door ladder has a weight rating of 275lbs. Be careful when climbing up and down the ladder.

WARNING
DO NOT CLIMB ON THE LADDER WITH THE DOOR OPEN. Standing on the ladder with
the door open will damage the door and hardware.

CAMPERVAN REGULAR MAINTENANCE

BUTCHER BLOCK COUNTERTOPS

VanCraft campervans come standard with solid oak butcher block countertops. These beautiful countertops are chosen for their elegance, durable makeup, and ease of maintenance. They are treated before installation with a 3-day soak in our favorite butcher block oil to seal them from water and stain intrusion.

Over time, your countertops will encounter stains and normal wear-and-tear. Spot treating and refinishing the butcher block is a regular part of campervan ownership. Additionally, your countertops will need regular re-applications of a good butcher block oil to keep them sealed and protected.

We recommend applying a nice sealant layer of oil every 4-6 weeks, when used regularly. You can find butcher block oil at your local hardware store or at many online retailers. Simply apply with a cloth and let soak for 2-3 hours before wiping away with a clean cloth. For more intensive spot treatment and refinishing, sand the oil into the grain of the wood using 120-200 grit sandpaper.

ROOF SEALANT

Your van's roof accessories are sealed with a coating of "RV Lap Sealant" as an extra layer of protection from water intrusion, where fasteners penetrate the roof structure. Like all RV's this lap sealant should be inspected and re-coated every 3 years. This can take place at any RV service center or can be done easily yourself.

LATCH ADJUSTMENT

Your van's cabinet drawer and door latches may fall out of adjustment with time. Loading drawers with heavy cargo, off road driving, or a shift in climate can add to the misalignment of your latches. It is important to keep your latches adjusted properly so that your drawers, doors, and cargo stay put.

All latches have slotted screw holes so they can be aligned when necessary. Use a phillips screwdriver to gently loosen the latch and re-aline before tightening.

SHOWER CAULKING

All seams in your shower box are sealed with silicone type calking. It is important to pay close attention to the condition of these caulked joints and re-apply caulking when needed to prevent water damage to your van.

STORING YOUR VAN

If you're planning to store your van for an extended period of time, follow these steps to ensure your van is prepared for storage.

- Follow Mercedes Instructions for storing your van (see extended parking).
- Winterise your plumbing: there must be no water in your van.
- Disconnect utility from your solar controller (use the battery switch in the utility box)
- Turn off the charge relay breaker switch
- Turn off the solar breaker switch
- Turn off the Inverter-charger breaker switch

EXTERNAL LINKS

	1	1
Winterizing Your water System		
Resetting Your Vans Electrical System		
Lithium Batteries	<u>https://www.renogy.com/con</u> <u>tent/RBT100LFP12S-G1/LFP1</u> <u>00S-Manual.pdf</u>	
Battery Monitor	<u>https://www.renogy.com/con</u> <u>tent/RMS-LFPS/MSLFPS-Ma</u> <u>nual.pdf</u>	
Power Inverter	https://www.renogy.com/con tent/R-INVT-PCL1-30111S/R-I NVT-PCL1-30111S%20Manua I.pdf	
Solar Charge Controller	https://www.renogy.com/con tent/RNG-CTRL-RVR20/RVR 203040-Manual.pdf	
Air Conditioner (Optional)	https://epi.dometic.com/ext ernalassets/dometic-coolair -rtx-1000_9600028489_76 954.pdf?ref=1666669982	

Roof Vent Fan	https://www.airxcel.com/doc s/default-source/maxxair/fa ns/maxxfan-maxxfan-plus/1 1f90000k_maxxfanmini-max xfan-maxxfan-plus-install-0 1-2018.pdf?sfvrsn=a073076 b_6	
Diesel Heater controller	<u>https://drive.google.com/file</u> /d/1CbO3J35yhUr34ZhtxTvH DJ1Rkr3Bl_bN/view?usp=sh aring	
Diesel Heater repair/trouble- shooting	https://drive.google.com/file /d/1QbvgKqiMlonjEKOc2M72 hspRYTL0CdFd/view?usp=s haring	
Refrigerator	<u>https://www.whynter.com/w</u> <u>p-content/uploads/MANUAL</u> <u>-FM-45CAM.pdf</u>	
Induction Stove Top	https://wdbmedia.com/TRUE -INDUCTION/DOCUMENTS/S ingle_Burner_TI-1B_Manual. pdf	
Awning	https://www.etrailer.com/ins tructions.aspx?pn=TH6200 01	