



USER GUIDE

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01 | OVERVIEW

Thank you for purchasing the TrueVan Vision! The following guide includes the care and operation of the Vision and its systems.

ABOUT THIS USER GUIDE

This User Guide serves as a guide for operating the TrueVan Vision. Take time to review details carefully. The Vision was built on a Mercedes-Benz® Sprinter 4x4 chassis, but the model year may not correspond to the year the van was finished. Refer to the VIN number of your vehicle when working with Mercedes' dealer service.

We are periodically updating our manual. For the latest version, visit <http://www.truevan.com/product-manuals>

PRE-DELIVERY

TrueVan follows a detailed inspection process before vehicle delivery. Consult a TrueVan technician if you have any questions in regard to operation.

SAFETY

The TrueVan Vision is built on a high-power Lithium battery system with the voltage stepped up from 12V to 120V. Use a licensed electrician for any service and repair to avoid injury.

BEFORE OPERATING YOUR VEHICLE

Make sure you study and follow any local and state laws. Here is a recommended checklist to properly secure your vehicle before traveling. We are not responsible for any damages or injuries as a result of this list.

- Turn ON the Main battery switch located on the wall below the dinette table by rotating the switch clockwise.
- Turn ON the diesel heater and the home automation power switch located inside the 110V breaker box labeled "HEATER/HOME AUTOMATION". The diesel controller screen located above the control panel will turn on. This action will provide power to the DIESEL HEATER and the Home Automation System but to use them you must operate from the controller.
- Turn ON the inverter in the battery compartment next to the refrigerator under the bed panel by switching from OFF or CHARGE ONLY position to ON. Normally this should be left on at all times as it will automatically shut off when you turn off the battery main shut off switch.
- Before operating the Vision below freezing temperature, refer to Section 03 Winter Operation in this manual.
- Turn ON the main 30A/50A circuit breaker and all individual 20A breakers in the main breaker panel below the refrigerator. Push and release the top section followed by pulling to open the breaker cover. Make sure the microwave console is lit which indicates 110V is in operation. Normally all breakers are left ON at all times as they will automatically deactivate when the main battery switch is OFF.
- Charge your batteries if needed. Make sure the shore power circuit breaker is turned on, typically a metal box next to the shore power source in RV parks or use a home EV Nema 14-50 plug for charging. When there is power, a blue LED will illuminate at the Vision power inlet cover. The provided 50A/30A power cable is typically stored inside the compartment under the front side of the bed. For our 50A system, we recommend a Nema 14-50 electric vehicle shore power source that matches our power cable plug. Most RV parks have both the 50A and the 30A plugs. The batteries are fully charged when the voltage on top of the control panel displays approximately 14.2V while plugged in and 13.7V when disconnected. The status of the power can also be monitored using the Victron Connect App on your phone. You do not need to charge the batteries if you are going to be driving for

a long period, since the alternator will fill up the batteries while driving. In cold weather, if the inside compartment of the camper is below 24F, turn on the diesel air heater by following the heater section of this manual and warm up the batteries before charging.

- Turn ON the control panel computer screen above the sink by pushing the screen side button through the small opening on the right side of the screen. Wait 10-12 minutes for sensors to activate and connect.
- Return both swivel seats to their original positions and make sure the swivel bases are locked.
- Turn OFF all internal LED lights so they will not interfere with your driving.
- Securely lock the 3 bathroom door latches including the often forgotten one at the bottom between the doors by turning them counter clockwise while firmly pushing in the door.
- Turn OFF the ceiling Maxx fan by pressing the off button next to the fan and retracting the roof fan cover by pulling the knob downwards, then turn it clockwise. When you have arrived at your destination, reverse the process to open the cover before turning on the fan. You can increase the fan speed by pressing the ON button up to 3 times..
- Lift and fold the dinette table top, attach the strap hook to the catch above the window then pull the end of the strap down to tighten. Fold the two wing leg supports towards the wall and secure them by turning the T-latch to a horizontal position.
- Lift and fold the bed frame up, attach the strap hook to the catch above the window then pull the end of the strap down to tighten. If you wish to travel with the table or bed deployed, you may secure them by attaching the built-in gray strap to the floor anchor across the floor. If the table top and the bed board are not strapped down they may bounce during travel.
- Secure the refrigerator and freezer doors by pushing the latches upwards.
- Latch all cabinet doors. Push them all the way in until the latch handles are completely closed..

- Unplug all appliances and ensure that they are securely tightened.
- Close all windows and latch the side window behind the driver.
- Close all doors, including the sliding side door and rear doors. These open doors may be hidden when the window shade is down.
- Tighten or remove the Lagun table top latches. If removing, ensure that the table top is stored securely while avoiding the table top being scratched by a sharp object..

SAFETY DEFECTS

If there is a safety defect, contact us or the National Highway Safety Administration.

TrueVan | 714-464-9165 | <http://www.truevan.com>

Vehicle Safety Hotline | 1-888-327-4236 (toll-free) | <http://www.safercar.gov>.

Follow the Mercedes Sprinter weight capacity guidelines when loading your camper. It is the responsibility of the driver not to overload the vehicle. The GVWR of a TrueVan Vision curb weight is approximately 7,850 pounds depending on configuration and options. Avoid filling the camper up with too much fresh water or storing too much waste water in the tanks during travel.

VEHICLE SPECIFICATIONS & CAPACITIES

CHASSIS	MERCEDES-BENZ SPRINTER
Length	19'5"

Exterior height	10'3"
Exterior width	7'8"
Interior height	6'3"
Interior width	6'6"
Fresh water tank capacity	26 gal
Gray water tank capacity	24 gal
Black water tank capacity when applicable	24 gal
Portable toilet capacity when applicable	5 gal
Wheelbase	144"
GVWR	9050 lbs
Fuel Capacity	24.5 gal

Owner's Name(s)

Address

Phone

Vehicle Information

Vehicle Identification Number (VIN)

Vehicle Mileage at Delivery

Owner's RV Insurance Policy

Company Policy Number

Agent

Phone

PERSONAL & VEHICLE INFORMATION

Owner Information

02 | SAFETY

SAFETY OVERVIEW

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.

DO NOT occupy a parked vehicle with the engine idled for prolonged periods of time. DO NOT run the engine in confined spaces for an extended period.

This motorhome has been designed, manufactured and tested with concern for the protection of its occupants.

Recommended safety inspection checklist 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.
- SEAT BELTS** – Direct passengers to designated seats, be certain swivel seats are locked into position, and require use of

seat belts. See operator’s manual for occupancy and weight restrictions.

- APPLIANCES** – Turn off appliances.
- DOORS** – Lock and latch doors.
- EXITS** – Inspect release mechanism on emergency exit window, test both locks on main entrance door for proper operation and inform passengers how to use the exits.

Other General Safety Warnings:

- Have the exhaust system inspected periodically by a qualified RV service center.
- DO NOT operate the engine if the exhaust system malfunctions.
- Inspect the fire extinguisher monthly and before each trip for proper charge and operating conditions.
- Passengers should never use the bed or dinette bench while the vehicle is in motion.
- All seats must be locked in the travel position while the vehicle is moving.
- Passengers must only use seats with seatbelts while the vehicle is moving.
- Never use a car seat in the front passenger seat.

SMOKE & CARBON MONOXIDE ALARM

TrueVan Vision is equipped with a smoke and carbon monoxide detector in your vehicle. It is located above the driver overhead cabinet/shelf. Test the system by pressing the Test/Reset button before usage.

TrueVan may not activate the smoke and carbon monoxide detector. It is the owner’s responsibility to make sure it is activated before the vehicle is in operation.

Avoid inhaling exhaust gas from the diesel engine and diesel air heater, as they contain carbon monoxide, which is a colorless, odorless, and poisonous gas that can cause injury or death.

FLAT TIRE CHANGE

In the event of a flat tire:

- The tire jack is located at the front passenger side step below the metal chair base. There are 2 plastic doors at the side of the chair, it is the lower door and not the top one. Open the door by pressing down on the 2 locking levers and pulling outwards. The wrench and spare tire removal tools are in different locations under the foot rest of the front passenger and the cover is secured by two flat head screws which can be opened with a coin. Use the provided six silver OEM 19mm head diameter lug bolts for the OEM Mercedes spare tire (DO NOT use the shorter black 17mm head diameter lug bolts which are meant only for the upgraded Method wheels). Failure to use the correct length lug bolts may cause the wheels to detach during travel, causing serious accidents. If your Vision comes with the upgraded Method wheels, DO NOT use the longer silver color OEM Mercedes lug bolts, which will not properly lock the Method wheels and will strip the wheel disc thread. Finally remove the spare tire located at the rear of the vehicle. Refer to the Mercedes Sprinter owner's manual for the removal process.

DRIVING PRECAUTIONS

- In the event of a flat tire, DO NOT panic and over turn the steering wheel.
 - 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 flat tire.
- DO NOT slam on the brake, ease back on the accelerator slowly and gently allow the vehicle to slow down. The deflated tire will slow the vehicle.
 - If you must change lanes to get to a safe stopping place, use your signals to warn other motorists and change lanes smoothly and carefully after you are certain the lane is clear.
 - Let the vehicle coast to a stop, gently steering to a safe stopping place away from moving traffic. Do not worry about damaging the tire or wheel rim by driving on it. A tire or wheel replacement is cheaper than damaging the vehicle or injuring yourself.
 - When you have come to a stop, activate your hazard warnings to warn other motorists, then exit the vehicle carefully.
 - Set out flares or other warning devices.

FIRE EXTINGUISHER

The fire extinguisher is located behind the driver seat. Make sure it is recharged or replaced annually for proper operation. DO NOT partially discharge the fire extinguisher, as it can cause pressure leakage, which would render the unit inoperative. When using the fire extinguisher, aim the spray at the base of the flame.

Familiarize yourself with the operating instructions on the fire extinguisher.

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.

When you replace the fire extinguisher, the replacement must be the same type and size as the one provided.

03 | DRIVING & CAMPING

CAMPER VAN USAGE

Your Mercedes Sprinter owner's manual may not have included some of the important functions for camper van usage.

When you lock your doors with your key fob before going to bed, the engine will not start until you unlock the doors with your key fob.

Press and release the Start Button to start the car. It is not necessary to hold the Start Button while stepping on the brake.

It is recommended that the DEF (diesel emission fluid) be topped off every 1,000–2,000 miles instead of waiting for 6,000 miles as recommended by the factory. When dried, DEF becomes a powdery mineral deposit that is a common cause of clogged fuel lines. The DEF fluid is critical to the operation of the diesel engine. Failure to fill this fluid will force the Sprinter into crawl mode at approximately 3mph.

The second button from left to right at the ceiling light control console must be carefully kept in a depressed position during camping. Failure to do so may drain out the AGM Mercedes house battery and not allow your car to start. Use the Vision LEDs for all your lighting needs and take advantage of TrueVan Vision's home automation by using your smart phone.

DO NOT use BioDegradable Diesel, which is commonly available in rural area gas stations. Doing so will cause improper combustion, especially at idle. If the engine dies at low idle, do not panic. At higher idle with foot on the gas paddle, drive to a nearby gas station and the Bio Degradable diesel can be slowly diluted with Diesel #2. At high idle you should be able to temporarily use the Bio Degradable fuel to drive until the tank is ready for new diesel.

The key fob lock/unlock can turn off the OEM lights quickly. Otherwise, it may take several minutes for lights to automatically shut off.

The Sprinter is equipped with an extremely sophisticated computer. If the van has trouble accelerating, is unable to drive or any Mercedes devices fail to work, you may need to stop and turn off the engine to reset the computer. This will often reset any errors..

If your 4 wheel drive is unable to engage

You can only engage and disengage from and to 4x4 mode in neutral gear. There are 2 buttons that control the 4x4 gear switching located on the control panel at the right side of the steering wheel. Put the car in neutral by tapping slightly on the gear shift. Press and release the left button until the red flashing LED becomes solid, press the right button to select high or low 4x4 gear. Reverse the process to disengage the 4x4 mode. If you are unable to disengage, try to turn off the engine and restart or press the low/high gear button on the right. It is important to disengage the 4x4 mode to the normal two wheel drive mode before putting your camper to park overnight. Failure to do so may cause the engine to disengage from the transfer case and you will not be able to drive without turning the engine on/off numerous times. For additional information refer to the Mercedes Sprinter owner's manual.

SPRINTER OPERATION

For Mercedes lights, driving controls, instrumentation, cruise control, climate controls, gauges, wipers, safety belts, and other related features, refer to the Mercedes Sprinter owner's manual. The Vision is delivered with a full tank of diesel fuel. The Mercedes fuel gauge bars can often be confusing at first when it is completely full. When full all bars will be completely lit in white color and when fuel is depleted the bars will be completely black.

FRONT SEATS

The front seats of your Vision are adjustable in a number of configurations, including swiveling to face the rear of the vehicle.

To swivel the front seat backwards:

- Push the steering wheel all the way forward by releasing the lever below the steering wheel.
- Move the seat backwards to allow you to reach the release latch below the front.
- Slide the release lever to the side while turning the seat very slightly (about one inch). This will release the lock and you will no longer need to hold the release lever.
- Move the seat and the seat back all the way forward, then rotate towards the center of the vehicle. This is best done while sitting down on the seat.
- After you have rotated the seat facing the rear of the camper, move the chair backward to allow leg room in the lounge area.

(To turn the seat back to driving position, reverse the process above)

WARNING: Damage to interior door panels may result if the seat and seat back are not pushed all the way forward before rotation. To set the driver seat back to driving position, turn it only in a counterclockwise direction. And for the passenger seat, turn it only in a clockwise direction to return it back to normal position..

WARNING: When the vehicle is in motion, the driver and passenger seat swivel bases must be locked in the original forward positions.

SEAT BELTS

Only seats equipped with seat belts should be used when the vehicle is in motion. Ensure that all passengers have seat belts fastened correctly and securely.

CHANGING SPARE TIRES WARNING!!!!

WHEN USING THE OEM MERCEDES SPRINTER SPARE TIRE

Make sure you use the Mercedes factory original lug bolts and lug bolt hex tool in the owner's kit. The Method wheels DO NOT share the same lug bolts as the Mercedes OEM spare tire wheel.

WHEN USING THE CUSTOM TRUEVAN VISION METHOD WHEELS

Make sure you use the black custom lug bolts. The TrueVan Vision may come with optional custom Method wheels, which use shorter black lug bolts that DO NOT fit the stock Mercedes Sprinter spare wheels.

WARNING: DO NOT use the stock Sprinter factory wheel lug bolts when attaching TrueVan's custom Method wheels. The Sprinter factory lug bolts are approximately ¼" too long and will not allow you to completely tighten the Sprinter stock wheel, which can result in the wheel detaching from the vehicle while driving, a very dangerous situation. Use only the shorter black custom lug bolts that came with the TrueVan custom Method wheels and the longer silver OEM lug bolts for the spare tire wheel.

WINTER OPERATION

DIESEL ANTI-GEL ADDITIVE

Diesel fuel freezes at **32°F**, so when operating below this temperature it may be necessary to add some anti gelling additive to the fuel tank. Consult a Mercedes dealership for the proper additive. Turn on the diesel air heater by following Section 04 and run the heater for approximately 15 minutes until the anti-gel additive has completely filled the external diesel fuel line. A frozen diesel line without anti-gel additive will cease or damage the diesel heater pump and may trigger an "E10" error message on the heater controller screen. Once the diesel air heater is working, make sure the cabin temperature is high enough so that the batteries will accept a charge, once its internal cell

temperature is raised above 24°F. As for discharging, the battery will be able to power your devices for normal operations even down to -4°F.

MARINE ANTIFREEZE

When storing the camper in below freezing temperature, it is important to add marine antifreeze in the fresh tank and circulate it through the entire plumbing pipe system. Follow direction on the antifreeze additive, ensure it is marine grade and not the poisonous automotive grade which is normally used in engines and fill the fresh tank. Turn on the water pump and the kitchen faucet by placing the temperature control handle at the center between hot and cold. Turn on both the hot and cold knobs for the inside and outside shower, run the water for at least one minute. Keep on flushing the toilet for one minute and turn off all faucets when finished. Before using your camper we suggest you empty the fresh tank by turning on the water pump, all faucets, fill with fresh water and run the water for 3 minutes. It is very important to keep the internal cabin above **40°F** at all times to prevent pipes from freezing. Failure to follow the winterization and the operating procedures will void your warranty.

04 | BATTERIES & APPLIANCES

ELECTRICAL & BATTERIES

The TrueVan Vision is equipped with state-of-the-art lithium phosphate Battle Born Batteries that can cycle more than 5,000 times. It features a sophisticated battery management system (BMS) that protects the cells from overcharging, charging at freezing temperatures, and shorts. The batteries carry a 10 year warranty with 8 year no degradation charge.

To operate, turn on the main battery connect/disconnect switch located below the dinette table. You can verify that it's charging by monitoring the current in your Victron Connect App (see next section: Power Management & Inverter).

There are 3 charging systems that replenish the batteries' power: SHORE POWER, SOLAR POWER and SECOND ALTERNATOR

- **SHORE POWER** – The shore power operates only when the inverter switch is in ON or CHARGE ONLY position and will not charge in the OFF position. The main battery switch located below the dinette table must be ON. Plug the provided 30A power cord or the 50A (optional) power cord from the driver side of the vehicle into the shore 110V power port. (e.g. NEMA 14-50 plug at 50A used for your EV or one that is available in a RV park).

WARNING: Any shore power cord used to charge must be 110V 30A/50A rated and must not exceed 50ft in length.

When connected to shore power, the Victron inverter/charger will automatically charge and detect shore power and pass a maximum of 50A 110V current to all the Vision power plugs and appliances without using any battery power. You should monitor its progress to ensure it is charging by opening the Victron Connect application on your phone under "Current" in Amperage, "Power" in percentage or verifying that the voltage display on top of the control panel has been increased by approximately 0.5V. The charge current will drop off sharply when the battery is almost full and should not be mistaken as charge failure.

- **SOLAR POWER** – The Vision is equipped with 200Wh solar panels, however due to the flat angle on the roof, a setting sun and the 12V conversion process, it is typical to get half of the specified current. It would take approximately 3 weeks for the solar panels to charge up the large 1100A battery bank, so we

do not recommend relying solely on solar charging for the high power Vision system. Use the fast charging system from the alternator(s) by turning on the engine.

- **SECOND ALTERNATOR** – The Vision X is equipped with the state of the art Alternator-Charging-System that allows you to charge in almost complete silence with the engine running at idle. This is accomplished by using a second dedicated ALTERNATOR. No driving or noisy high idle is needed to charge the batteries, giving you unlimited power at any time, anywhere even when you are parked. While driving, the charge rate is approximately 2500Wh to 3000Wh and at idle the charge is virtually silent at a rate of approximately 2,000Wh. You may monitor the charging status by opening the Victron Connect application (see next section: Power Management & Inverter) on your phone under “Current”, “Power” displayed or verifying that the voltage display on top the control panel has increased by approximately 0.5V. The main battery switch located below the dinette table does not need to be ON in this charge mode. The charge current will drop off sharply when the battery is almost full and should not be mistaken as charge failure. There is also an alternative charging system in the Vision X called the ALTERNATOR ASSIST which utilizes the alternator from Mercedes. It is used for lower charging requirements at approximately 500Wh but however it can not coexist with the second alternator that charges at a different current.

POWER MANAGEMENT & INVERTER

The battery voltage can be monitored through the Victron Connect app on your phone or on the control panel LED display.

When the battery is full, the voltage is approximately at 13.6V with all charging sources disconnected or when the batteries are fully charged, at 14.4V when a high power charging source is connected and at about 12V under heavy load. When the battery is near empty, the voltage drops to approximately 12.5V without load. The inverter enters into a shut down mode at 12.2V without load and all the 110V plugs and appliances will cease to function. Under heavy load, it is normal for the voltage to go slightly below 12V even if the batteries are completely full. Do not be confused on the voltage reading as it is different with and without load. Even though the inverter shuts off, the 12V power plugs will continue to function until the voltage drops to 10.5V or below under no load. The water pump, LED lights, control console USB ports and the USB ports on the reading lights will remain operational, as they do not rely on the inverter 110V power source.

To monitor your power, use the Victron Connect smartphone application.

- **Turn on your phone’s bluetooth**
- **Install and open the Victron Connect app**
- **Enter password “000000”**
- **Open app to monitor your power**

Unlike the Truevan Vision Home Automation (which runs on local Wifi), the Victron application runs on bluetooth, which works for up to a 20 feet radius and does not require internet connection or data usage. However, only one user is able to monitor at a time. The battery storage is measured in % and it is set up to automatically calibrate itself to 100% each time the battery is charged to full. The battery settings in Victron Connect are preset by TrueVan as follows:

- **BATTERY CAPACITY** – 1100Ah for Vision X / 600Ah for Vision Plus
- **CHARGED VOLTAGE** – 14.2V
- **DISCHARGE FLOOR** – 0%
- **TAIL CURRENT** – 4.00%
- **CHARGE DETECTION TIME** – 3m
- **PEUKERT EXPONENT** – 1.05

- **CHARGE EFFICIENCY FACTOR** – 99%
- **CURRENT THRESHOLD** – 0.10A
- **TIME-TO-GO AVERAGING PERIOD** – 3m
- **BATTERY STARTS SYNCHRONIZED** – On
- **STATE-OF-CHARGE** – Can be manually set but will recalibrate when batteries are fully charged

The inverter converts the 12V current from the battery to 110V, which powers the 110V wall outlets, refrigerator, cooktop, rooftop AC, water heater and microwave. To run the 110V when connected to shore power 30/50A, the inverter automatically passes through the current so that the inverter is no longer drawing from the batteries.

The inverter can be switched off when not needed. Keep in mind that the refrigerator uses 110V from the inverter, so it is good practice to keep your inverter on at all times during the entire camping trip. The main battery switch should be turned on only before starting your trip to avoid battery discharge. The inverter can be turned On/Off for troubleshooting by accessing the Inverter On/Off/Charge-only button through the round hole located above the bed and next to the refrigerator. Remove the round gray plastic cap by pulling it upwards, reach in with your finger and switch the 3 position rocker. Forward is ON, middle is OFF and backwards is CHARGE ONLY. It may be necessary to remove the entire battery cover the first time to see how the inverter rocker switch operates, thereafter you can use the small round opening to access the switch. The inverter consumes approximately 35Wh of power even when it is not in use, so carefully follow shutdown procedure to avoid draining the battery before you put your Vision into long term storage. The inverter is turned off automatically when you shut off the main battery switch, so there is no need to change the inverter rocker switch position and you can always leave it in the ON position during storage.

WARNING: DO NOT block the white inverter venting grill below the dinette table.

12 VOLT FUSE PANEL

The 12V system has a fuse panel that can be accessed by removing the magnetically attached panel around the microwave. If 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. Blown fuses can be removed and replaced to restore power to the circuit with the same amperage fuse.

WARNING: Always replace fuses with fuses of the same size and amperage rating. The first 12 fuses are in a fuse box located above the microwave.

- **REAR PANEL** – 20A
- **READING LED** – 15A
- **MAXX FAN** – 20A
- **TANK SENSORS** – 10A
- **AUTOMATION CPU** – 5A
- **CTR PANEL USB** – 20A
- **FRONT LED** – 10A
- **REAR LED** – 10A
- **OUTSIDE LED** – 5A
- **HEAT PADS** – 30A
- **WATER PUMP** – 15A
- **BATH LED** – 5A
- **DIESEL HEATER** – 20A (Fuse located under passenger seat)
- **DRIVING LIGHT** – 50A (Fuse located next to Victron inverter, not in the fuse box)

BREAKER PANEL (110V)

The 110V is supplied by the Victron inverter located beneath the bed. The circuit breaker panel for 110V is located below the refrigerator. The

breaker panel cover can be opened by pushing in then pulling out at the top edge. The main breaker is 50A for the Vision X is located at the right side of the panel. Each circuit is labeled on the panel of the area or appliance it controls.

PHYSICAL SWITCHES

Aside from the stock Sprinter interior lights, the switch for the main battery connect/disconnect is located below the dinette table. This switch must be ON in order to run the interior lights and the 110V power inverter.

- **WATER PUMP, DE-ICE, OUTSIDE, FRONT, REAR AND BATHROOM LIGHTS**—can be controlled from the control panel physical switches next to the kitchen counter or using the optional automated Home Assistant computer touch screen and smart phone HOME ASSISTANT application.
- **READING LIGHTS (UNDER CABINET)** – The under-cabinet reading lights are turned ON and OFF independently by pressing on the center of each light. Each reading light is equipped with a USB port and can charge your phone without the inverter being on. Press and release to turn ON and OFF the blue LED illumination button. Press again to turn on the light, press and hold to dim and press again to turn off. These lights are not controlled from the control panel.
- **BATHROOM LIGHT** – The bathroom light is located on the control panel (last button on the right).

Air Conditioning

The TrueVan Vision comes with a low profile Coleman Mach 10 ceiling AC. To operate, make sure the inverter is ON or that the camper is plugged into shore line power. To turn on, locate the ceiling AC above

the kitchen, and rotate its switch clockwise. The Cool Low or Cool High draw almost the same power. Only the speed of the fan changes. The AC can run from the inverter, but it needs to be managed with care, as it draws a tremendous amount of power. The Vision X comes with a third AC that is normally used for passengers at the rear section. It is extremely powerful and it is recommended that you use this AC to rapidly cool down the coach by briefly turning on the engine.

DIESEL HEATER

The Vision is equipped with a diesel heater that draws fuel from the main tank.

To use the diesel heater:

- At the top of the control panel you will find a diesel air heater controller. Press the center power button located on the left side of the controller and “ON” will flash and display for 3 seconds. The fan behind the passenger seat will begin to blow cool air. Fan icon blades on the display will rotate and the green/red LEDs below will blink.
WARNING: To prevent overheating, DO NOT block the heat vent behind the passenger seat near the sliding door entrance.
- Adjust Hertz Temperature setting to a min of 1.0 Hz or a maximum of 3.0 Hz by pressing the up/down key next to the power button.
- Wait 5 min for hot air to start.
- Before shutting off the heater, it is recommended to periodically increase temperature to 3.0 Hz and run heater for 3 min to clear any carbon deposits inside the heat chamber.
- Press and hold the Power Button to shut down, while paying attention to the display which will flash “OFF” for 3 seconds. Auto shutdown will begin. The red/yellow/green bars on the lower screen represent the heat chamber temperature.

- Wait for the temperature to slowly reduce down to one green bar (internal combustion temperature) on the heater controller screen, which indicates that shutdown is complete.

WARNING: DO NOT turn off the diesel battery switch located inside the 110V breaker panel, as the diesel heat chamber must be cooled down with the fan on.

FRESH WATER SYSTEM

The fresh water system provides water to the kitchen sink and showers, either through a water storage tank or through pressurized water from the City Water Connection. TrueVan Vision comes with a built-in pressure regulator that protects you from irregular water pressure in RV parks or any shore water with pressure. There is a one way valve that prevents the city water from entering the fresh water storage tank. The water filtration filter is coarse and sometimes if the water contains fine mineral deposits, it can clog up the kitchen sink faucet.

No water coming out of the faucet

If water is not coming out of the faucet, then most likely the water pump is not turned on or the filter at the kitchen faucet head is clogged. Turn on the pump, shut off the water and twist the faucet head counter-clockwise to detach it. You should test to see if water comes out without the faucet head. Flush any sediments off the faucet head screen with some water, then replace the head by aligning the thread to the flex pipe in a straight line and slowly reattaching by turning it clockwise.

WATER FILL

There are 2 ways to refill your water: Gravity Water Fill or City Water Connection.

Gravity Water Fill

The gravity water fill that feeds water into the water storage tank is located above the diesel fill inlet.

- Open the driver's side diesel fill inlet cover and locate the fill hole above the diesel fill.
- Engage the blue rubber funnel by aligning it sideways at 9 o'clock position and rotating it clockwise.
- Pour water in slowly and monitor the fill using your phone Home Assistant app or by watching the control panel display. There is also a peak slotted hole to view the fresh tank under the second row passenger seat. To maximize the fresh water storage, the Vision has twin fresh water tanks that are connected with several pipes. Allow the water level to balance to obtain an accurate water level reading. To completely top off the fresh water tank, wait approximately 30-50 seconds for the water level to balance before continuing filling.
- You may use the Home Automation system with the Home Assistants app in your smartphone to monitor the water level.

City Water Connection

The second way to obtain water is by connecting the camper to a pressurized city water source. The city water inlet is located at the driver's side rear wheel well above the rear tire labeled "CITY WATER".

Disconnecting City Water

- Turn off city water supply.
- Open the sink faucet to relieve the water pressure.
- Disconnect the city water hose from the RV.

FRESH WATER PUMP

You can pump the water stored from the fresh water tanks. The pump switch is located on the control panel. This pump contains a pressure sensor that automatically shuts off when the faucet is turned off, and is

not required to operate while you are connected to city water. The pump may continue to run if the water storage tank is empty. The fresh water tank level can be monitored on the screen and at 0% you will have approximately 15% on reserve. It is recommended to turn the pump off when not in use for a prolonged time.

WARNING: DO NOT run the water storage tank dry for extended time periods, as this may damage the pump.

BLACK & GRAY WATER SYSTEM

Black Water Tank

The black water tank is used to store waste water from the toilet. It is recommended to use toilet treatments to reduce odors in the black tank. Read the label carefully, as enzyme packs often contain acid, which will chemically react with bleach and release a toxic film. Avoid using excessive tissue paper which may clog the water level sensor. If the sensor becomes inaccurate, fill the black tank to full and drive the camper around to shake debris loose.

Emptying the Black Water Tank

- Find a nearby RV dump station: <https://www.rvdumps.com/>
- Locate the black water release valve (on the driver's side).
- Connect the drain hose from the black water drain outlet located at the driver side below the power inlet (on one side of the hose) to the dump station hole (on the other side of the hose).
- Pull the latch valve next to the drain outlet outwards to drain.
- After the tank has been emptied, connect a garden hose to the flush inlet located at the rear wheel well at the front of the rear tire labeled "TANK FLUSH."
- When finished, push in to close the valve and detach the hose.

WARNING: DO NOT flush excessive toilet paper or non biodegradable pads in the toilet.

Gray Water Tank

The gray water tank is used to store waste water from the sink and the shower. Its tank level is displayed at the control panel above the sink.

Emptying the Gray Water Tank

- Find a nearby RV dump station: <https://www.rvdumps.com/>
- Locate the gray water release valve (on the passenger's side).
- Connect the drain hose from the gray water drain outlet located at the passenger side behind the sliding door (on one side of the hose) to the dump station hole (on the other side of the hose).
- Pull the latch valve next to the drain outlet outwards to drain.
- When finished, close the valve and detach the hose.

MAIN SHOWER (IN BATHROOM)

The TrueVan Vision uses an electric water heater. To operate, press the 10 min or 15 min button on colder days and wait for 10 minutes before showering. This timer switch is located at the control panel next to the GFCI kitchen plugs. The power is automatically turned off by the time you set it to conserve energy or you can manually switch it off by pressing the button on its right. Next, press the water pump button located at the control panel next to the microwave. To properly mix hot and cold water, first turn on the hot water and wait until it gets hot, then turn on the cold water to mix to warm. If there is not enough hot water flow, the filter is likely clogged due to poor water quality. To unclog, twist the shower head off by rotating it counter clockwise while holding the flexible shower head pipe with your other hand. Spray some water to clear the clogged metal screen filter located at the inlet and reattach the head back by turning it clockwise.

The TrueVan Vision X is equipped with an expandable bathroom and a hybrid dry bath which allows you to dry off and get dressed in the privacy of your room outside the shower.

- Before entering, open the privacy bathroom door.
- Release and unfold the triple black acrylic panel door.
- Push and lock the door against the two refrigerator door locks.
- Close the curtain.
- Pull the shower rod outwards with both hands.
- Reverse the process after using the shower.

SECONDARY SHOWER (AT REAR)

The secondary shower, which can be used for outdoor showers, is enclosed inside the black shower box located at the rear of the camper. Pull the shower handle out and turn on the faucet handles. You may use the Home Automation system with the Home Assistants app in your smartphone to turn the water pump ON and OFF.

KITCHEN SINK FAUCET

To use the kitchen faucet, press the water pump button located on top of the control console next to the microwave. If hot water is required, press the 5 min water heater button located next to the GFCI kitchen wall plugs. Move the faucet lever outwards and adjust the temperature if needed. If there is inadequate water flow, the filter is likely clogged due to poor city water quality. To unclog, twist the spray nozzle head off by rotating it counter clockwise while holding the flexible pipe with your other hand. Spray water to clear the clogged metal screen filter located at the inlet and reattach the head back by turning it clockwise.

BEDROOM, OFFICE & GARAGE

TrueVan's 3-in-1 System converts between a bedroom, office and garage all in 15 seconds.

Bedroom (Trapezoid Bed)

The TrueVan trapezoid bed is a fold away system that is supported by two swing out leg supports on each side.

- Supports up to 1,000 pounds.
- Designed to accommodate the human form (wider at the shoulder and narrower at the feet).
- Near-queen size, at 57" width (at the shoulder) and 77" length (accommodates up to 6'5 in height).
- 4" memory foam mattress folds in thirds. The fabric is resistant to stains, water, UV, mold and bacteria.

To set up the bed:

- Unlatch the wing legs (on passenger's side) so that they are perpendicular to the dinette table top. There is a safety rubber bumper for each leg to prevent the table from setting up until the legs are completely deployed. The dinette top is protected by a pneumatic strut to prevent it from crashing down, but care should still be used.
- Unlatch and release the strap buckle for the bed frame (on driver's side).
- Fold the bed frame down slowly (the lighter side of the bed does not have a pneumatic strut, so take caution).
- Unfold the memory foam mattress.

WARNING: Letting the bed board and dinette table top down without the support of both legs will damage the bed system and may cause serious accidents.

Office (Dinette and Bench)

To set up the office:

- Unlatch the wing legs (on passenger's side) so that they are perpendicular to the dinette table top. The dinette top is protected by a pneumatic strut to prevent it from crashing down, but care should still be used.

- Unlatch the wing legs lever below the frame of the lower bench (on driver's side) and deploy so that they are perpendicular to the side camper wall. For safety the table and bench can not be deployed until the legs are fully deployed/.
- Drop down the bench board.
- Place the bench cushion on top.

ROOF RACK & LADDER

WARNING: Caution must be exercised when using the rear ladder and roof rack, as they can be extremely slippery from water, wet mud, or ice. Severe injuries can occur from falling or slipping. DO NOT stay on the roof when it is wet or while the vehicle is in motion.

05 | LONG TERM STORAGE

Properly preparing your TrueVan Vision for storage will protect your vehicle, batteries and appliances.

- Ensure the diesel air heater is turned OFF. The heater is off when the fan located below the rear of the front passenger seat is off. Refer to the shutdown procedure outlined in Section 4: Diesel Heater.
DO NOT shut off the diesel heater battery switch until you are absolutely certain that the diesel heater fan is off.
- Turn the main battery shut off switch located below the dinette table counterclockwise to OFF. This action will completely shut off all 110V outlets so there is no need to turn off the 110V breakers or the inverter.

- Turn the computer console OFF by pressing the button sideways towards the screen through the round opening on the right side of the computer LCD display. Next, select "SHUT DOWN" and press enter. Failure to shut the computer off will result in draining out the built-in computer battery which allows the display to keep the water level reading even though the main battery is shut off. Only after you have turned off the main battery shut off switch, the diesel heater battery shut off switch and the computer console, have you completely stopped all battery drain. The solar panels will continue to charge the batteries if they are exposed to sunlight, which acts as a fail safe system in case you have not completely shut everything off.
- Make sure the diesel heater fan icon on the diesel controller screen stops rotating and that no air is blowing out behind the front passenger seat. Turn OFF the diesel heater and the computer screen red power switch located on the 110V breaker box below the refrigerator.
- Securely lock the 3 bathroom door latches by turning them counter clockwise while firmly pushing in the door. The latches should be horizontally leveled.
- Empty the refrigerator, clean it with bleach if needed. Both the freezer and fridge doors should remain open until completely dry. With the doors open, the door latches can be in a closed position to prevent them from closing.
- Turn OFF the Maxx fan. Pull the latch knob downwards then turn it clockwise to close the top lid.
- Drain all black water, flush to clean followed by dumping the Gray water. We recommend using the Camco TST Ultra-Concentrate Orange Scent RV Treatment (can be purchased on Amazon) in both tanks before storage. Avoid using acid based enzymes, as they will react with bleach and release toxic fumes. The fresh water can be left in the tank for

a much longer period, however we recommend drinking only bottled water on camping trips.

- Close and lock all doors and windows.
- Avoid storing the Vision X lithium batteries longer than 8 months with 80% charge before long term storage. If you plan on storing them for up to a year, you can charge them to 100%. Never store the battery empty or they will be damaged, as all batteries will self discharge and bleed off over time.
- Avoid storing the house OEM Mercedes battery longer than 1 month without replenishing the charge. Due to the much shorter storage period of an AGM or lead acid battery, it may be a good idea to connect it to a small trickle charge solar panel with a good built-in charge controller.
- Refer to the Mercedes Sprinter owner's manual for other long term storage information.
- If needed, follow the winter storage procedure in Section 3 under Winter Operation.

06 | HOME AUTOMATION

Welcome to the new world of home automation in the RV industry, where you have full control of your camper's lighting and devices at the tips of your fingers. Truevan home automation is an optional feature, please skip this section if you have the standard iseries monitoring system. TrueVa has spent years of research to bring home

automation to life for Vision. Automation includes control of your lights and other devices through a smartphone using a local Wifi network with or without an internet connection.. It operates by connecting several micro processors to a central computer, The home automation comes with a local area network which operates at long range up to 100 feet and will support high bandwidth devices such as security cameras. There are 3 ways to control your lighting/devices and monitor your tank levels: Home Assistant on your smartphone, your onboard touch screen control panel and physical switches above the screen that will operate without the computer..

- **HOME ASSISTANT CONTROL ON YOUR SMARTPHONE** – Before launching Home Assistant, make sure you have installed the “Home Assistant” application in your phone. Turn on the illuminated red power button located on the right side of the 110V breakers below the refrigerator. Allow 15 minutes for the local Wifi Vision X to activate. Press and hold the Wifi icon tab located at top of the control screen, a QR code will appear, use your phone camera to scan it to activate the Vision X Wifi. Note that the Vision X Wifi may be automatically switched to your home Wifi or your hotspot Wifi2 depending on your phone settings and the strength of the Wifi signals, causing the system to deactivate. If you launch “Home Assistant” without first connecting to the “Vision X” Wifi, none of the buttons will be able to function. You will need to close the application and restart it after you have properly connected to Vision X Wifi. To close your Home Assistant from the home screen on older phones, double click on the home button and click on the X icon at the corner of the Home Assistant app. On newer phones, swipe up from the bottom of the screen and pause in the middle of the screen. Swipe right or left to find the Home Assistant app and swipe up to close it. See your smart phone manual on how to close an application properly before reconnecting to the Vision X Wifi. There are many convenient ways to use your smartphone to control your TrueVan Vision, including controlling inside and outside LEDs, turning on your

water pump for the outside shower and monitoring the fresh water fill.

- **TOUCH SCREEN CONTROL PANEL** – Make sure the touch screen is ON and find the button you wish to operate. Press and release the button and a yellow lightning bolt will appear when activated. Press again to turn off.
- **SCREEN BRIGHTNESS CONTROL** – Swipe down from the top of the middle screen, a gray bar with the time of day at the left corner will appear for 2 seconds. Immediately swipe again to access the brightness control button. Swipe left to dim and right to brighten the screen.
- **PHYSICAL SWITCHES** – There are 6 round push buttons located above the LCD screen at the control panel, which can be operated at any time, even when the computer is being restarted. Press and release the button you wish to control. A blue circular LED will illuminate when activated. Press and release to deactivate.
- **TANK MONITORING SYSTEM IN HOME AUTOMATION**– The Vision X optional home automation comes with the state of the art pressure sensor technology which requires no calibration. It provides more accurate reading of the tank level on unlevel ground compared to capacitance, button or ultrasound sensors.

HOME AUTOMATION SETUP

The home automation used in the Vision X local Wifi is based on the Home Assistant software. This system is extremely robust and well documented. There are a few things you will need in order to get

started. Your Vision X comes with its own local Wi-Fi, meaning it does not require an internet connection to connect to your home automation.

To add Home Assistant App on your smartphone:

- **Open your Wi-Fi settings and find the network named “Vision X***”**
- **Download and install the Home Assistant app to your smartphone by open your app store and searching for Home Assistant**
- **Once downloaded, open it while connected to your Vision X Wi-Fi. You can also scan the QRcode with your phone camera.**
- **Once installed and connected to your Vision X Wi-Fi, Open Home Assistant.**

Helpful Tips:

The Router: The WiFi Router is set up by Truevan with security and ease of use in mind. We ask that you avoid changing the provided set up, as this may cause issues with the sensors.

If your phone tells you there is no internet and asks if you want to switch networks, choose “stay connected.”

You will still have internet through your phone's mobile data while you are connected to the TrueVan Wi-Fi.
