Choosing a Travato Battery System:

Being new to Travato ownership, Battery systems often seem to be somewhat of a mystery. RV Salespeople tend to steer buyers to what is on the lot, what is the “latest and greatest”, and/or what will bring the best sale for them. Existing owners will likely tell you the benefits of the system THEY are familiar with (usually only ONE of the four following systems). To add to the confusion, different model years have different electrical features, every owner of every Travato has different needs and habits (dry camping, lot-dockers, Campground users, Weekenders, Fulltimers, RV Park users, Meet up attendees, etc), and while one battery system may suffice for one user, it may not work, or be overkill, for another. In addition, there are many options and add-ons that can be done to systems or to the way you use your van, to make life easier and more comfortable.

Following are summations from several owners, with 4 of the most popular battery systems for Travatos: Note that each owner has found a system that works for them, they all have “enough” power, and they are all happy.

1. Standard Travato with 2 AGM Batteries

(Original Battery Equipment on a Travato - No additional cost)

2. A Simple AGM to Lithium Battery SWAP

(As low as $2,000 if owner installed)
professionally, or owner-installed in a Standard Travato

3. A Hybrid aftermarket Lithium system with an inverter

($5,000 to $15,000 depending on options)
professionally, or owner-installed in a Standard Travato

4. The Volta Pure 3 Lithium System

($20,000 to $35,000 depending on # of batteries and discount)
installed by Winnebago in Travato KL and GL models.

1. Standard Travato with 2 AGM Batteries (from factory)

Scott Baldassari, 2016-G
STANDARD TRAVATO AGM BATTERY SYSTEM with GENERATOR

The batteries are maintenance-free, mine are still running strong in their seventh year, and have supplied our power needs with complete satisfaction. We dry camp almost exclusively and often don't even plug in when power is available at a site. Plugging in is just an extra thing to do at the campsite, opens the possibility of unstable power, or power surges from a campground pole, and is typically unneeded. I've often heard Lithium owners talking about owners without Lithium having to use the "noisy" generator to "top off" AGM batteries - In our case, we have NEVER, not once, needed to use the generator to charge or top off our batteries (We also upgraded to the 2800i generator which no longer should be described as "noisy"). When my Van is parked for storage, it is in a covered unheated building, and plugged in - I always leave my system power switch ON, before I had the building, I stored the rig outside and the batteries were always completely charged by the solar panels). That said, here are some possible "issues" one can have with an AGM system if they have a different "camping" style than we do:

- **Air Conditioning:** In order to run the roof air conditioner, the standard Travato needs to be plugged into electricity or have the generator running. The dash air keeps our van cool while driving during the day, and we usually tend to "camp" at places that are not so miserably hot that we can not sleep comfortably (Overnight temps are typically cooler than the daytime, and a couple of times, we have even resorted to driving up to higher (and cooler) elevations to sleep comfortably (Las Vegas comes to mind). We also do not typically "hang out" IN the Travato in the heat of the day. In short, we barely need AC and find we only turn it on a couple times a year.

- **Microwave**: My year model Travato requires running the genny (or being plugged in) to run the microwave. I added a small inverter on the chassis battery so we do not NEED to start the genny, but with the new, quiet generators, this really isn't an issue anymore anyway. Touch the generator start button, then run the microwave.

- Refrigeration: Our 2016 has a 3-way fridge and can run on AC power, DC Battery power while driving, OR LP Gas, so it alleviates any pull on the batteries as far as refrigeration goes. As far as I know, the 2021 model years and up have more efficient fridges, but some Travato years/models have different power requirements for fridges so this COULD be something to be aware of.

- General Power Usage: Using appliances that have motors or require heat use a lot of power. Therefore we simply avoid the use of Electrical Appliances such as hair dryers, toasters, space heaters, and electric coffee makers. The regular AGM batteries give us plenty of power for overnight lights, casual computer use, phone charging, fans, pumps, music, etc. and quickly charge back up after only a couple of hours in sunlight (or even less when driving). We make our coffee in a french press on the stove, and toast on a skillet. If you REQUIRE items with heating elements (air fryers, insty pots, etc) you will need to be plugged in, run the generator, or upgrade your battery system.

2. A Simple AGM to Lithium SWAP
professionally, or owner-installed in a Standard Travato

If the standard AGM system does not furnish you with enough power, or your AGM batteries have died prematurely from overuse, you might want to consider the installation of Battle Born BB10012 or similar LiFePo4 batteries. This swap instantly (and rather simply), doubles the amount of power you are able to store and gives you the benefits of lithium (less weight, smaller size, more usable power, and better longevity)

Without an inverter to invert the DC power to AC, and only two batteries, there is still no battery-operated air conditioning, nor does changing the type of battery technology allow you to run AC appliances. Without the addition of a properly sized inverter, Microwaves (and other high-watt, short-runtime appliances) can not be used, but, with twice the available power, DC refrigeration should not be a problem on ANY year Travato, or ANY fridge.

Daniel Senie - 2019 G
Replaced AGM with 2 LiFePo4 Lithium Batteries
(retained genny and original Travato 1000 Watt inverter)
In our 2019 G Travato, we have somewhat more power draw than in our 2016 G. The biggest of these is the large, 12-volt compressor fridge. We love the fridge, but it can draw a bunch of power. Add to that the Truma working away on a cold night, and the power draw meant the AGMs were below 50% most every morning when we woke up. I should add that we also have computer networking gear running all the time (Peplink router and related equipment), and also charge two iPhones, an iPad, and AppleWatches daily. The combination took us below 50% on the AGM batteries quite frequently.

We replaced the AGM batteries with two Battleborn heated batteries that are the same physical size. These live under the van in the trays where the AGMs were. The goal was to give ourselves far more run time, since the LFP batteries are fine with deeper discharge, and keep the voltage at a better level (i.e. above 12 volts) which is better for our electronics. We did add a Victron BMV-712 to help us monitor consumption and state of charge. Batteries with integrated bluetooth would be a better solution, since the battery monitor cannot detect power consumed by the battery heaters.

For our use case, this simple replacement with two Battleborn batteries has addressed our needs.

Joni Bishop - 2018 G
Replaced AGM with 2 LiFePo4 (Lithium), retained generator
Note: Pre-2019 models did not include the 1k inverter as standard equipment

I replaced my AGMs with Lithium after 5 years of use and over 90,000 miles on my Travato. The AGMs had performed well for me but had begun degrading, and my upcoming trip to Alaska was the nudge I needed to replace them. I could have gone with new AGMs, but for me, the advantages of the Lithium were worth the extra money.

I dry camp the majority of the time and since my van does not have an inverter, I often wished I could plug in my coffee maker, toaster, etc. for just a few minutes without starting the generator. Several years ago, I purchased a Jackery 1000w portable power station. It supplies the AC power I need for small appliances and even a heated throw to warm my bed up on cold nights!

3. A Hybrid aftermarket Lithium system with Inverter, professionally, or owner-installed in a Standard Travato

There are many different possible configurations for this system; 2,4,6, or 8 batteries, different sized inverters, different controllers, monitors, autostart, etc. This system is highly customizable with power capabilities from a simple two-battery system, all the way up to the capabilities of the Volta Pure 3 system with autostart and bluetooth monitoring. Compared to the Volta Pure 3, this system retains the “standard” 12-volt electrical system of the Travato and is more easily serviced, it also retains the battery boost switch, the original Onan Generator as a backup, and it does NOT require an additional add-on alternator. One can simply “swap out” lithium for the original AGM’s (as above), and then LATER upgrade to better meters, charge controller, an inverter, an autostart function, and additional batteries for additional runtime, in phased installations. The addition of a larger inverter capable of running Air Conditioning increases costs.

Below 27 F the batteries will continue to furnish power, but they will refuse to accept a charge in order to prevent damage; this can be rectified with heated batteries or if non-heated batteries are installed inside the Travato if you plan to use the rig in a cold climate often.

Sam Pellegrino (2017 K)
July 2021: Upgraded to 4 Battleborns (2 heated/undercarriage - 2 standard/under Driver Side head-of-bed) plus a Victron 3000 watt inverter (aka “Full Griepentrog”). In some ways, I feel this is “somewhat overbuilt,” but the cost at the time (with discounts) was favorable for 4 BBs. One issue I initially discovered was that the Victron’s fan was a bit noisy at night, and there was a significant amount of heat build-up in the underbed/ head-of-bed space (it was Summer). I created additional venting under and over the Victron, but this could be a factor for sleep/use of the Driver Side bed (I switched to sleeping on the Passenger Side), if you travel in two or have pets.

I also upgraded to the 2800i QG, which no longer makes generator operation intrusive to the T interior, and can rapidly replenish the batts for overnight AC operation. Depending upon your interior temp set-point, AC can “go long,” once the compressor begins cycling (NDQ with soft-start upgrade). The Battleborns recharge relatively quickly while driving, and the stock RAM alternator system modulates the recharge so as to not overload/ overheat the alternator. Scott G installed an “Auto-Gen-Start-Stop” accessory, and we added a “Circuit Timer” (thanks to Tom Thiesen) to allow control of when the Auto-Start would enable, or not. So in my case, you can control the upper and lower SOC values where the Auto-Start operates, and the Time-of-Day, in case of “Campground Generator Hours,” or other considerations.

NOTE: Scott Griepentrog has a full detailed technical document with installation instructions, schematics, recommended materials, material lists, and instructions on how to get a lithium “hybrid” system done, with many possible options and accessories here: Travato Lithium Upgrade

4. The Volta Pure 3 Lithium System installed by Winnebago in Travato KL and GL models.

Greg Schultz 2023 KL (among other Travatos) - with Volta Pure 3 48 volt system

The biggest benefit of the Volta system is that you have silent (no smell, no maintenance) 24/7/365 access to 30 amp 120v power. Depending on if you have the 3 or 4 cell battery pack, you can run air conditioning in warm, humid conditions for 8 – 12 hours without having to re-charge the pack, When you do need to recharge you can do so by driving, or an auto, or manual start of the chassis engine. You can "arm" the autostart system so when your battery pack is depleted the chassis engine will start and run a one-hour charge cycle without you having to keep an eye on anything. During periods of high battery usage (air conditioning) when you aren't driving, if you don't want to be awakened in the middle of the night by an "autostart", you can be proactive and run one or more one hour "manual start" cycles of the chassis engine before bedtime. In warm weather, you'll find that during a charge cycle, the chassis engine does put out a LOT of heat under the van.

There are "phantom draws" in the system so you can't just leave it in storage with the system ON and expect it to hold a charge forever. Those draws amount to close to 10% a day. So when in storage without access to shore power you should just go ahead and turn the system OFF. If you put it in storage with SOC of 80% or higher (as recommended) you can come back months later and the SOC will be the same.

There are some weather conditions that come into play. When the battery pack is "cold soaked", meaning the core temperatures of the battery packs are below about 42 degrees, the pack can be depleted but it won't accept a charge. 2019 – 2020.5 models provided a vent from the van to the battery pack to blow heated air into the battery compartment. 2020.5 – 2021 models added 120v heating pads for the battery pack. 2022 and newer models have 48-volt heaters embedded in the battery pack. In each case note that if you decide to use the system in cold weather, you need to make some accommodations or build some time into your plans to heat up the battery pack (and keep it heated).

Shaun Simpkins 2019 KL with Volta Pure 3 48 volt system

After 4 years of ownership of our 2019KL and thousands of miles, I'd say that it's pretty dang easy if you use your Pure 3 Travato in its sweet spot – as a touring coach, for road trips in high travel season, camping for 1-3 nights at each stop along the way. Under these conditions, the system's default settings are such that you can pretty much punch the Volta power button when you leave home, (check SOC from time to time) and enjoy the trip, and punch the Volta power button again when you return.

The huge power pack will let you camp 3-4 nights without A/C, or 1 night with, depending on the size of pack your RV came with. A couple hours on shore power or a 2 hour 50+ mph cruise will fully recharge the pack for the next stop. If it gets cold – pack temperature approaching 43 degrees - the system will kick on the power pack heaters to keep the pack at the right temperature to accept recharging.

The cost of this automation is idle power consumption – the system will burn about 250W just sitting there, primarily (200W) from the inverter. When you're driving or plugged in this isn't an issue, but when you're boondocking it most certainly is. Most folks (like us) don't make heavy use of the 110VAC, so will follow Volta/ Winnebago's recommendation to switch the inverter off unless using a 110VAC load. It's important to realize that when you do this, the pack heaters - which use 110VAC - are disabled, and YOU become the pack temperature monitor. You must periodically check the outside temperature (or better yet the actual pack temperature with your MyVoltaApp or the display screen) and turn the inverter back on a several degrees before the critical 43F.

The last parlor trick that the Pure 3 Travato can do is turn on the chassis engine and fast-idle it to recharge the pack via the Volta alternator if pack SOC drops dangerously low (you can also initiate a fast-idle charge manually). This feature must be manually armed; it's off by default. Since we don't tend to overstay the pack capacity when we make camp, we've never used this feature, but it's nice to know it's there. The system does let us know from time to time that it's functional: if you inadvertently press the keyfob lock button 3 times while setting up or breaking camp, this manually initiates a fast-idle charging cycle and the system will honk the horn and then start the engine. It can be quite startling, as the engine starts running at 1600 RPM, the same speed it runs when you're driving 55MPH.

The Volta system is frankly more than a little taciturn when it comes to telling you what it's doing. I got a bit frustrated sometimes that the system would tell me something had gone wrong in engineering jargon rather than warn me in plain English that things might be heading south soon. This made for a lot of the detective novels published on the TOAW page about failures of the early system; you had to have a very thorough knowledge of how the system worked to deduce the source of a problem from what the system grudgingly would admit. Pure 3 has gotten steadily better at being transparent. The MyVolta app was a big step forward, and the touch screen control panel in the newest Travatos is great. It's still good to have a logical mind if something goes wrong, but the present system interface is now far more compassionate. As well, Volta/

Winnebago have been quite successful at ironing out the bugs in the system. Are the Volta-equipped Travatos worth it? I think so, and I'd buy another one, especially if it has the new FLEX Pure 3 System in it (and if I could get another 30% discount on top of street price). I do think it's important to ignore the "killer-app" marketing surrounding the KL and the GL. They're neither better or worse than conventional Travatos – they just embody a different approach to the design of a great touring coach. If you understand that the strength of the KL and GL is their focus on convenience and at-home levels of power delivery – a glimpse into the almost-here generator-less future of the RV - then their worth is a completely personal judgement.

Editor's Note: The Volta is the most powerful option for an electrical system in a Travato and by simply turning an inverter on and off, one can use almost any 120v appliance. One important caveat is that the Volta is a proprietary 48 volt closed system, which allows for more efficient high energy draws, but also means that component failures could put the entire Travato electrical system down. Being a "closed" system, it is not "user serviceable". In most cases, RV dealers have little or no experience with it, and IF service IS required, it often entails phone calls to Volta support and/or a visit to Winnebago or Volta. That said, it is also the only factory installed lithium system by Winnebago. The battery pack is warranted for 8 years. The rest of the components are covered only by the standard Winnebago warranty.