

1st Generation Travato Pure3/Volta Auto-Start Instructions

by Graham Smith 2/12/2020

This document is a companion to “Understanding the 1st Generation Travato Pure3/Volta System”. Please read that document for information on the whole Pure3/Volta system. The 1st Generation are the 2019’s and the first half of 2020. Models newer than this can be quickly distinguished outside by a wider running board with "W" stamped on it and tie loops on the ends, and inside by the addition of baskets and Ram tracks under the cabinets. See Notes for the differences in some parameters.

High-Idle Recharge (Auto-Start)

The Pure3/Volta system is equipped with a High-Idle recharge capability. This can be activated either manually or automatically - both methods do the same thing, initiate a 1 hour cycle, and charge exactly the same way. To use this, you must first “arm” the system by putting it into Monitor Mode (my term for this). This can be done using the ignition key or via the key fob. The Silver Auto-Start button is on the dash below and to the left of the steering wheel.

Ignition Key (Stealth) Monitor Mode Engage

1. Ensure parking brake is engaged and hood closed
2. Turn key in ignition to run position and press Silver Auto-Start button 2-3 seconds to engage
No horn or lights flash
Silver Auto-Start button will turn Red
3. Turn the ignition off and remove the key – the dash will stay illuminated for 20-30 seconds then go off

Key-Fob Monitor Mode Engage

1. Ensure parking brake is engaged and hood closed
2. Press (middle) Lock button 3 times to engage
Horn will sound and headlights will flash
Silver Auto-Start button will turn Red

At this point, regardless of which method chosen to arm the system, you may exit the vehicle and lock it if desired. The system will remain in monitor mode.

Monitor Mode Disengage

1. Key Fob - Press (top) Unlock button 3 times to disengage
2. Cab - Press Silver Auto-Start for 2 seconds (light goes out) to disengage
3. Monitor mode will not disengage if you start the engine.

Manual Start to Recharge

1. To begin a recharge cycle manually, put the system in Recharge Monitor Mode then press the Silver auto-start button 3 times.
2. While in recharge mode, all electrical systems (including the Inverter) will continue to operate. However, the higher the load the longer it will take to fully charge.
3. Recharge mode will continue until one of the following occurs:
 - a. 60 min has elapsed (approximately 1.3 gal/hr gasoline)
 - b. Battery charge reaches 90%
 - c. Engine coolant reaches 219F
 - d. Gas tank falls below 25%

4. Press the Silver auto-start button 3 times to stop charging sooner if you want. High-Idle recharge and monitoring MUST be stopped before attempting to start the vehicle. Stepping on the brake while a recharge is running will shut the engine off for 5 minutes to prevent a driveaway.

Manual Start and Lock to Recharge

If you want to start a manual recharge then lock the vehicle so you can leave, follow a modified version of the above procedure. Be certain that all doors are closed then from the driver seat, press the lock button on the center console to lock all doors (the red light should come on). Place the system in Recharge Monitor Mode as above. Get out of the cab on the driver side and leave the driver door open. Reach in and press the Silver auto-start button 3 times to start the charge cycle. Immediately close the driver door and quickly press the key-fob lock button 2-3 times. If it doesn't lock, you didn't do it quickly enough.

Auto-Start to Recharge

1. In Monitor Mode, if the battery charge gets down to 25%, the engine will start in high-idle to recharge the battery. The exact percent can vary depending on the load on the system.
2. Recharge will operate the same as it does with a manual start.
3. As long as Monitor Mode remains on and there is at least ¼ tank of gas, the system will continue to auto-start to recharge if the charge drops to 25%.

Using Auto-Start to Recharge a “Dead” System

If the power pack is so low that the system has shut down and you don't have shore power available, you may be able to use auto-start to bring the system back up.

1. Make sure that the power button next to the SoC dial is not depressed (you can tell by feel)
2. Make sure that all switches are off, including the A/C.
3. Use one of the two methods outlined above to arm the auto-start system and put it in monitor mode.
4. Press the System On button. The SoC and the button should light and the auto-start should immediately engage and run a one-hour recharge.
5. This method will not work if the power pack is too cold to charge.

Notes:

1. The length of charge and percent increase can vary depending on whether you have an unmodified 1st Generation or a modified 1st Generation. The 1st Generation are the 2019 and early 2020 models while the modified 1st Generation models have a updated Auto-Start module and Alternator Control Module. The SoC (speedometer) gauge also changed after the 2019 models. Older models have a gauge with a color overlay and 100% represents the total capacity of the power pack (10,100 Watt) while on the newer models 100% is the usable capacity (8700W). Because of this, percentages mean different things. In the older models, Auto-Start will typically engage at 25% while in the newer models that may not occur until around 10%. There isn't an exact point because the system is also monitoring rate of discharge. If the power pack is discharging rapidly, Auto-Start may engage sooner.

2. Those with a modified 1st Generation may find that a charge cycle stops before 1hr is up but it will normally run the full hour. The amount of recharge you get in that time may vary somewhat depending on upgrades. An unmodified 1st Generation may only see a 10%-12% increase while a modified version should see about a 15% gain.

3. If, at the end of a recharge, you feel you need an additional charge and are still below 80%, then you can manually start another cycle. It is advisable to wait at least 30 min between cycles to give the power pack a chance to “settle down” as the temperature does go up during a charge. It's also possible for the SoC to continue to rise during this “settle down” period so take that into consideration. This second charge may not last very long if the first charge cut off prior to 1hr.