



**Rick March, General Manager
Customer Relations Group**

Greetings! I hope you all enjoyed your Summer. I can't believe how quickly it flew by and we are talking about Fall already! Unfortunately, next month I will be going over winterization and storage tips. But this month I want to discuss Lithium batteries. We have recently created a lithium battery package for travel trailers and I wanted to go over some of the components of this package. We get asked many questions about Lithium batteries and what are the benefits of using them. There are many, but the two main benefits are quicker charge rates and the ability to use 100% of the battery amps which is 100 amp hours if you are dry camping. Remember as we have discussed in previous articles that lead acid batteries do not want you to go beneath 50% of the amps which gives you 50 amp hours. When a lead acid battery is discharged beneath that 50% it starts to weaken the battery and over time loses some of its ability to be charged back to full capacity.

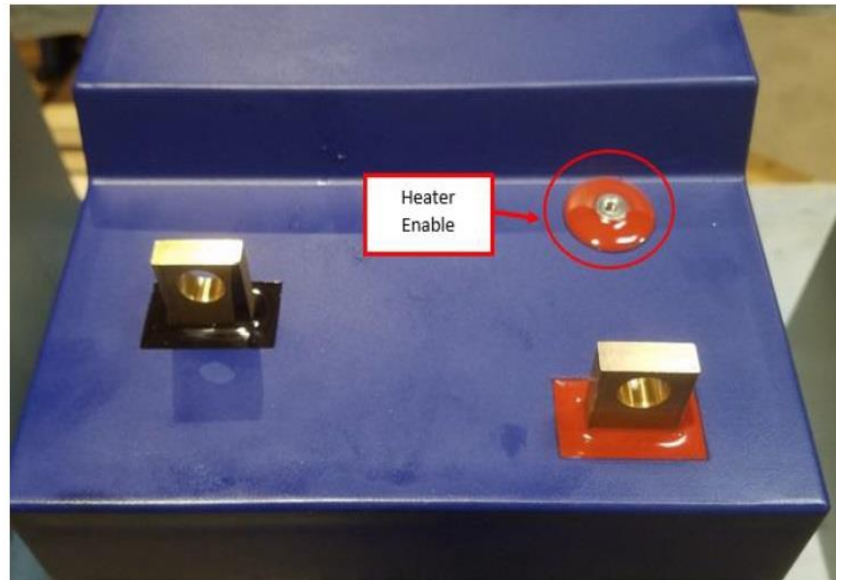
There are many factors to consider if you are thinking of replacing your batteries with Lithium. Mainly the convertor, and whether or not you trailer has solar charging capabilities, as the Lithium batteries will require more voltage for optimum use. I will do my best to explain them.

Lithium Batteries

Airstream uses Battle Born Lithium batteries for replacement of the lead acid models. The model number is BBGC2H. This is a 100 amp hour battery. It has a bulk rating charge of 14.2 to 14.6 volts with a max voltage of 14.7 and will stop charging if this voltage is exceeded. It will also shut off at a low voltage of 10 volts which means it will stop discharging at that point. The battery has a high temperature rating of 135 degrees and will not charge or discharge if this temperature is exceeded. The minimum temperature is 25 degrees and will not charge below this temperature. Each Battle Born battery has an internal heater that can be wired in if you decide to use your trailer in temperatures below 35 degrees. Remember if you wired the heater in and you decide to store the trailer in cold temperatures you will want to disconnect the heater as it will have a draw of roughly 250 milliamps. The batteries should be stored with at least a 50% charge in them. Below are pictures of the batteries and the heater connection.



Airstream Part Number 513862



AC to DC Converter

The converters that come standard in the travel trailers has a charge rate of 13.6 to 13.8 volts which is the maximum charge rate for lead acid batteries. If you decide to upgrade to Lithium batteries you will need to replace the converter to gain the charge rate needed for this type of battery.

If you have a 30 amp WFCO power center installed you can replace just the lower converter portion with WFCO WF-8950L2-MBA to give you the charging parameters needed. If you have a 50 amp system you will replace the converter with WFCO WF-9850L2. They are pictured below.



Airstream Part Number 513889



Airstream Part Number 513890

Solar Charge Controllers

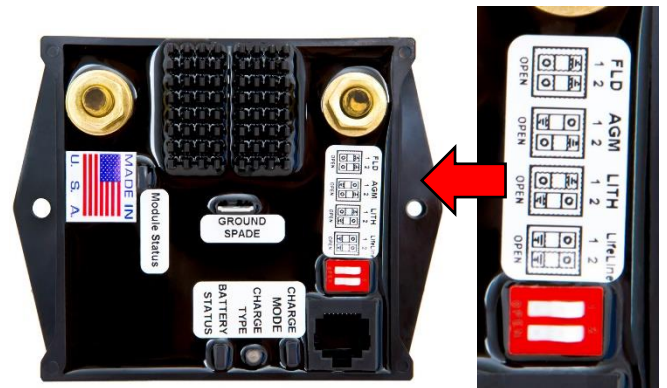
If you have solar panels installed on your trailer you may have to change the solar charge controller and possibly the display depending on the year and model of solar controller, you have. This can get a little more complicated so I will explain. In 2021 model year Airstream switched the solar charging system to the Victron charger and display. This 3 stage charger has a dial indicator on the side that can be switched to position 7 for Lithium batteries. Nothing will need to be replaced.



If you have a 2017 to 2020 model year trailer, Airstream installed the 40 amp Sun Explorer controller and display. In this scenario the controller would have to be replaced with a model that has the option to choose the battery type. Airstream part number for the updated controller is 51186-102. You can use the current display.



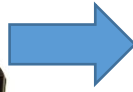
Current Controller and Display



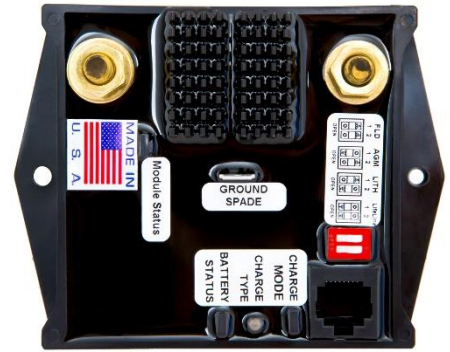
Updated Controller with Battery Choice

If you have a 2016 or older trailer and it had factory solar installed, then both the controller and display will need to be replaced.

Current 25 Amp Display and Controller



New 40 Amp Display and Controller



**Display Part Number
513247-100**

**Controller Part Number
511846-102**

Battery Storage Box

Another point to consider is the Airstream installed steel battery storage box on the front of the trailers. In 2016 model year we changed the depth of the battery storage box to 12 inches deep. At that time many owners were switching the batteries over to 6 volt batteries so the deeper box allowed them to fit. The Battle Born Lithium batteries will also fit in this box. Prior to 2016 model year the battery box measures 8 ¼ inches deep so the battery box would need to be replaced to fit the larger Lithium batteries.



Prior to 2016 Model Year



2016 Model Year and Newer

Lithium Charging Notice

The last point I will bring up is safety. If you decide to upgrade your system to the Lithium batteries, we recommend that you put a **Notice** sticker directly on the batteries. This will ensure that anyone who comes in contact with your batteries can be made aware that the charging system has been upgraded and only Lithium batteries can be installed. With the higher voltage converter, you can damage lead acid or AGM batteries.

Notice:

This charging system has been optimized for Lithium batteries.
Lithium Iron Phosphate (LiFePO4) batteries accept a higher charge rate than Lead acid.
Lead Acid batteries including GEL +AGM will be damaged by this higher charge rate.

DO NOT REPLACE WITH LEAD ACID BATTERIES OF ANY TYPE.

NO SERVICEABLE COMPONENT IN THIS LITHIUM BATTERY

For assistance or questions call: Battle Born customer service at 855-292-2831,
Airstream customer service at 937-596-6111, or the nearest Airstream Dealer.

Part Number 386433

I would love to hear from you and if you have a suggestion or topic you would like to see covered in a future article, or have a question just drop me a line at rmarch@airstream.com .

Have a great month!

Rick March