

## Battery Merge Solenoid Replacement

<b>Bulletin Type:</b>	TSB Technical Service Bulletin
<b>Bulletin #:</b>	20-019
<b>Job Code:</b>	9803514A Inspect ONLY 9803514B Inspect & Repair
<b>Flat Rate:</b>	Inspect Only .2 Hour Inspect AND Repair 1 Hour

<b>Publication Date:</b>	August 2020
<b>Make(s):</b>	Entegra
<b>Model(s):</b>	Anthem / Cornerstone
<b>Model Year(s):</b>	2019

<b>Incident:</b>	Battery merge solenoid (black) may not connect to charge both banks of batteries, resulting in a no start condition.
<b>Affected Units:</b>	<b>Please see serial number listing at end of Instructions.</b>
<b>Parts:</b>	Inspection by current owner will confirm if a new solenoid is required. When new is necessary, the owner will obtain the correct solenoid prior to arrival to their service appointment.
<b>Misc. Tools &amp; Supplies:</b>	Screw gun with #2 square drive bit Wire strippers 3/8" wrench 1/2" wrench Crimpers 2 – butt connectors (16-14awg)
<b>Parts Return Information:</b>	<b><u>DO NOT RETURN THE OLD SOLENOID TO JAYCO OR FIREFLY</u></b>

## INSPECTION STEPS - Current Owner to complete

### **MANDATORY PRIOR TO INSPECTION**

- **TURN POWER OFF AT INVERTER #1 (Refer to Fig 2)**
- **TURN POWER OFF AT INVERTER #2 (Refer to Fig 2)**
- **TURN OFF THE 120A BREAKER AT THE DOOR SIDE REAR OF THE COACH.**
- **ENSURE THE GENERATOR IS NOT RUNNING.**
- **TURN OFF ALL 4 BREAKERS PICTURED IN FIG 2.**
- **ENSURE SHORE POWER IS DISCONNECTED FROM THE COACH.**



**120A BREAKER**



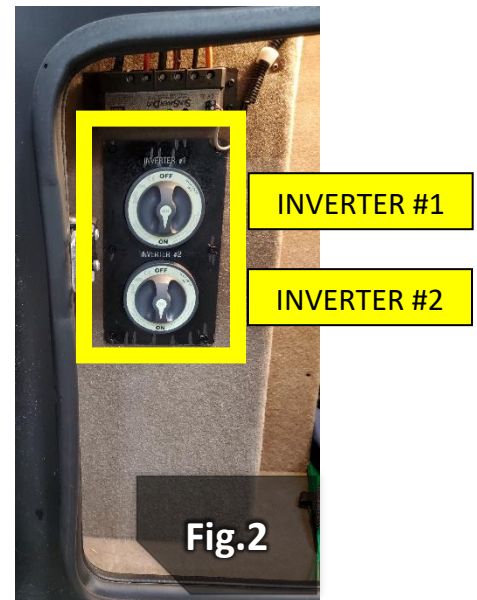
### **WARNING**

**FAILURE TO COMPLY WITH THE STEPS ABOVE PRIOR TO SERVICE MAY RESULT IN DAMAGE TO THE MOTORHOME, INJURY OR DEATH.**



**Fig.1**

**DCD PANEL**



**Fig.2**

#### **FIG 1:**

- Locate the DCD Panel on the coach.
- DCD Panel is located the fourth bay back from the entrance door.

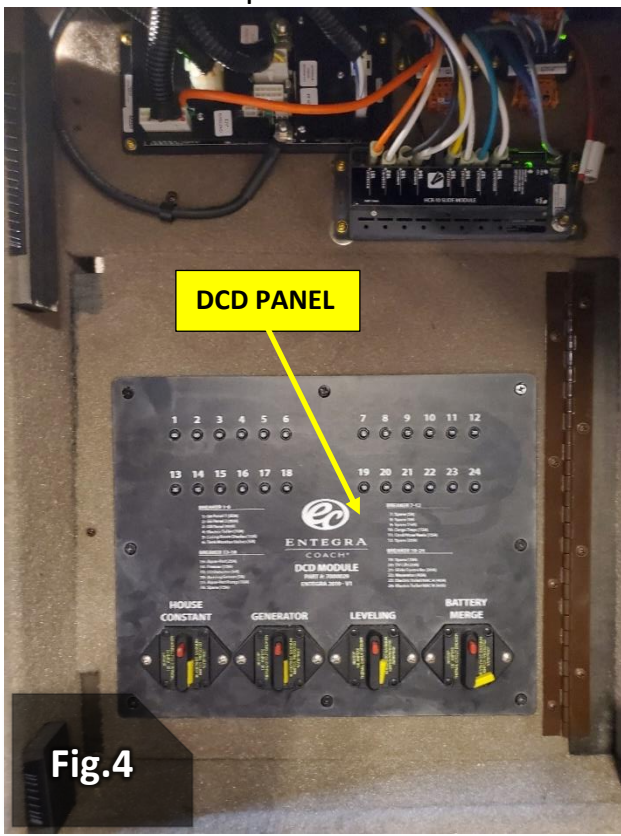
#### **FIG 2:**

- Inverter shutoff switches and breakers are located in the same bay as the DCD Panel.



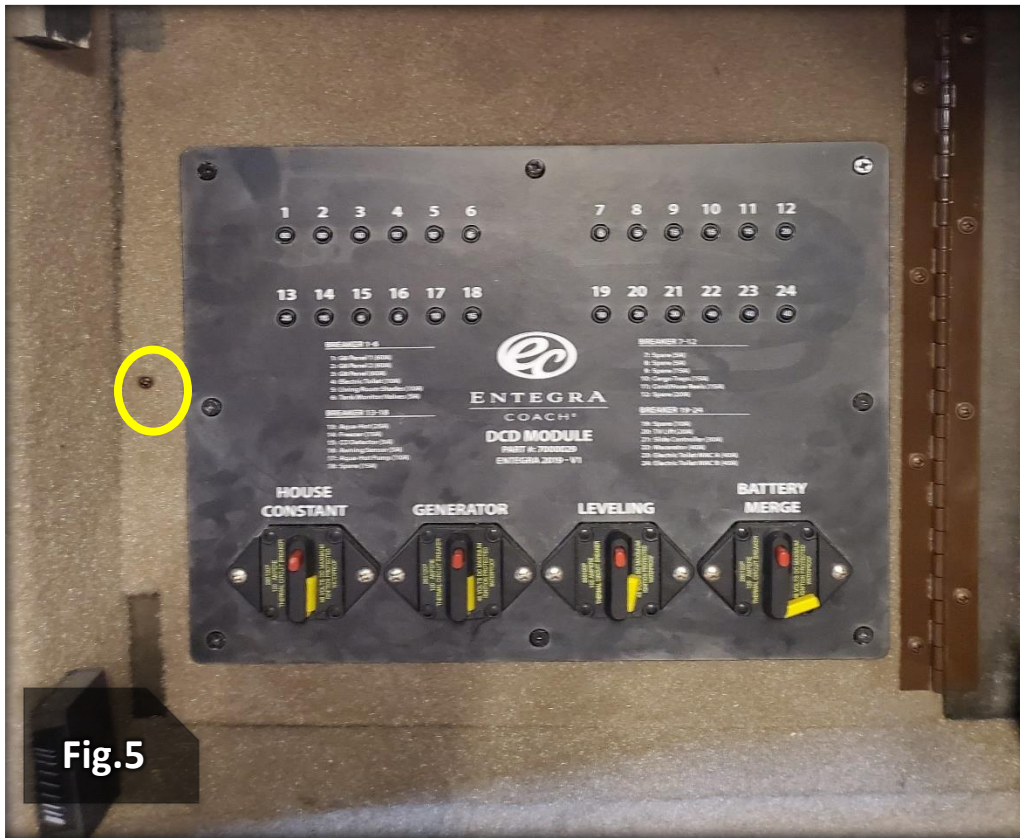
**FIG 3:**

- **DISCONNECT POWER BEFORE CONTINUING!**
- The DCD Panel is located behind a false-carpeted panel.
- The false panel is secured with velcro, simply pull it away to remove.



**FIG 4:**

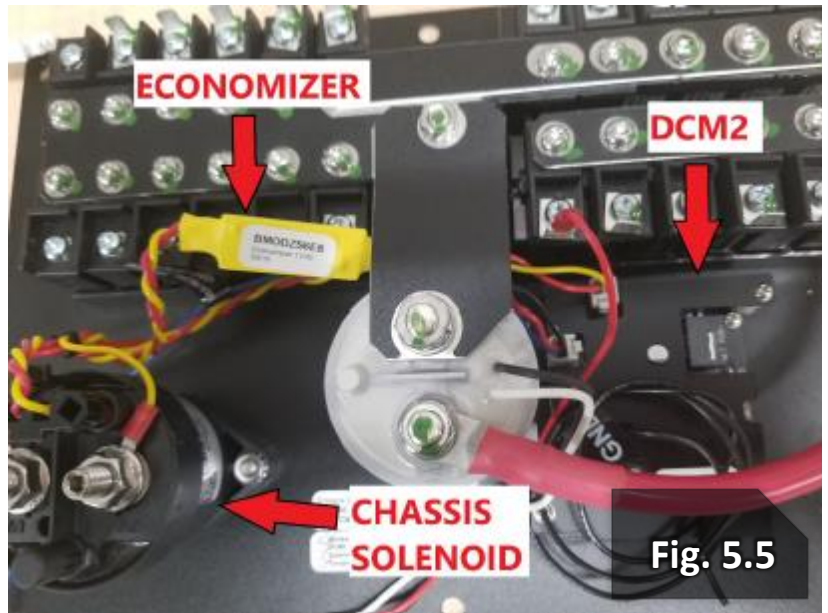
- DCD Panel with the cover removed.



**FIG 5:**

- Remove **ONLY** the single retaining screw (square bit) holding the DCD Panel door closed.
- The hinged panel swings out to allow access the backside.
- **DO NOT REMOVE ANY SCREWS HOLDING THE PANEL TO THE WALL.**
- Inspect the backside of the DCD panel to confirm what color of solenoid is present. Grey or white, Gigavac solenoids **DO NOT** require Replacment. NO further ACTION is required

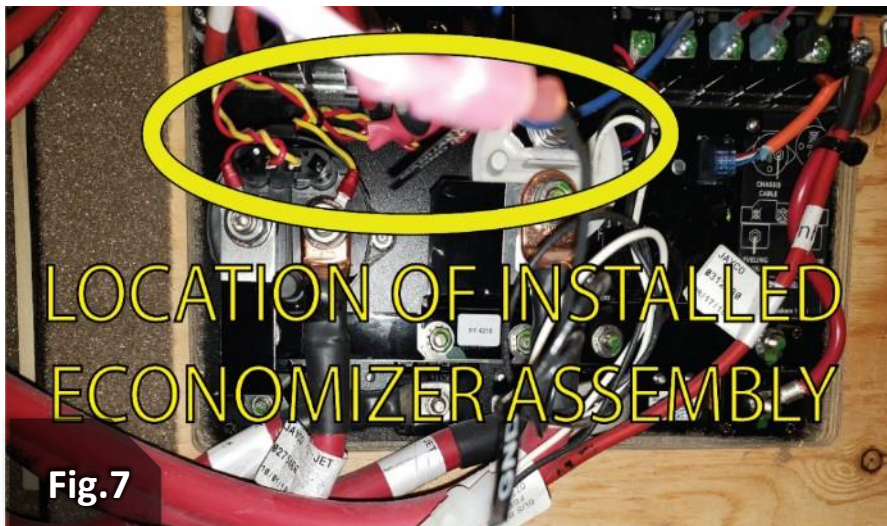
***A Black solenoid as shown in Fig 5.5 indicates a new solenoid is required.*** Retail owner will contact Firefly Integrations @ 574-825-4600 to order a new Gigavac Solenoid Part # RLY411718-E



## INSTALLATION OF NEW SOLENOID – Dealers ONLY

**FIG 6:**

- Locate the Gigavac Solenoid on the backside of the DCD Panel.
- Take note of cable and wire colors on the Gigavac Solenoid, as they will need to be removed and re-installed on the new Solenoid in the same positions further on in the instructions.



**FIG 7 & 7A:**

- Locate the Economizer assembly (**Fig 7 & 8**).
- Unplug the white connector (with Black, Red, Blue wires) from the DCD Panel (**Fig 7A**) (this connector will be re-installed later in the instructions)
- Unplug the black header from the top of the Gigavac Solenoid.

**NOTE:** The Economizer assembly may have a different color shrink-wrap that what is pictured in **Fig 8**.

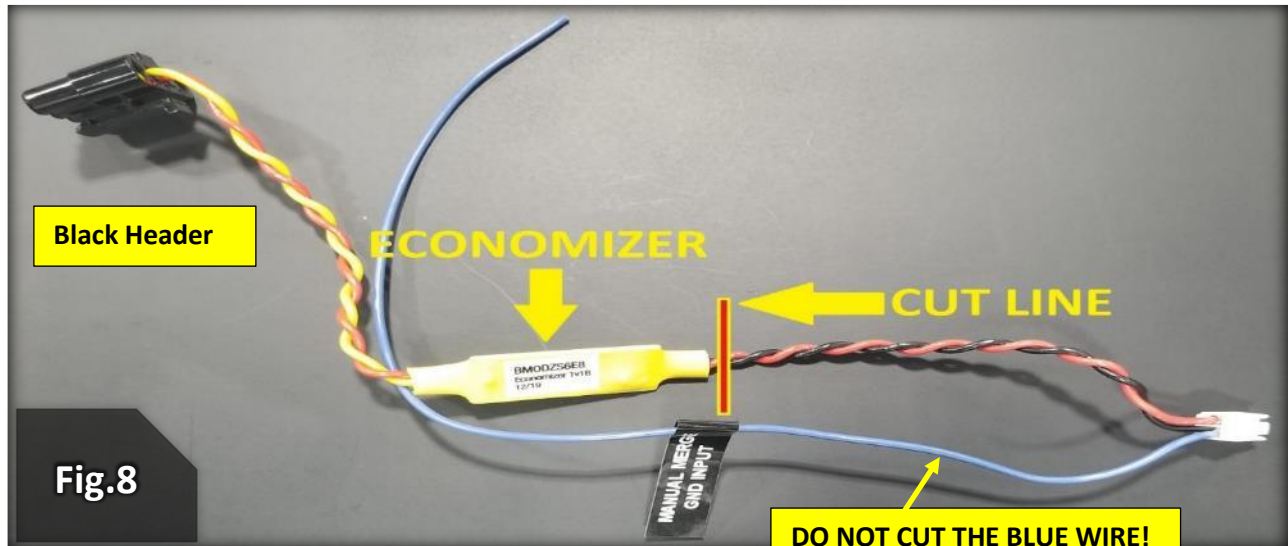


Fig.8

**FIG 8:**

- On the opposite side of the black header, cut the Red and Black twisted pair of wires (**DO NOT CUT THE BLUE WIRE!**).
- Ensure the cut is as close to the Economizer as possible to allow maximum wire length.
- The black header with the Economizer attached may be discarded.

**FIG 9:**

- **ENSURE CIRCUIT BREAKERS ARE TURNED OFF BEFORE THIS STEP!**
- Mark and then remove Chassis and House sense wires (Red & Yellow wires) from the top of the Gigavac Solenoid.
- Mark and remove Chassis and House battery cables.
- Discard the nuts previously used to secure the House and Chassis terminals (Fig 9).

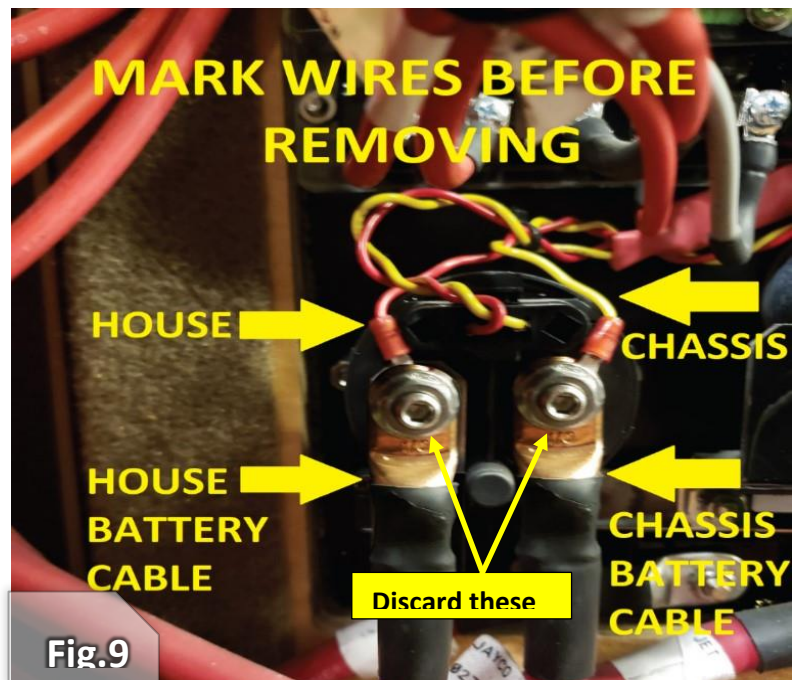
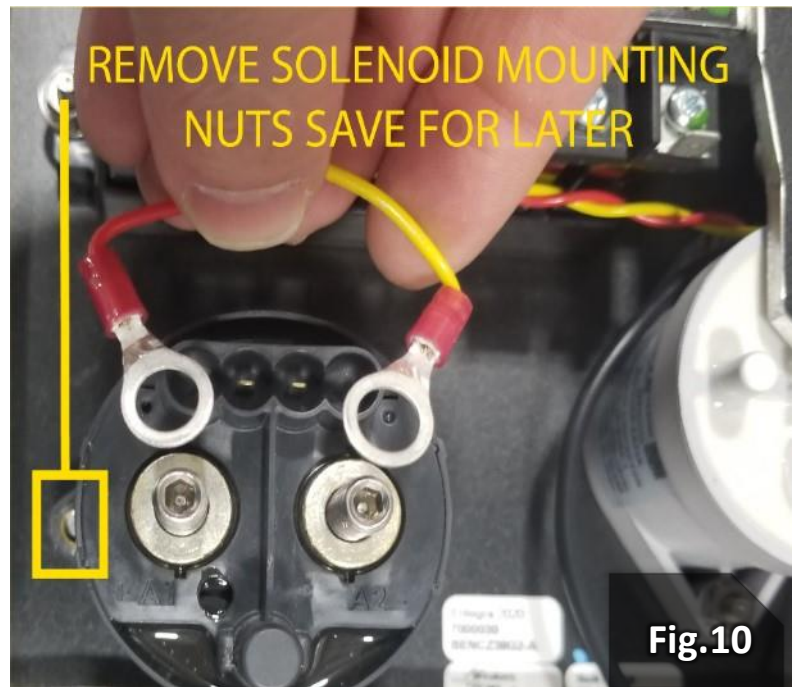


Fig.9

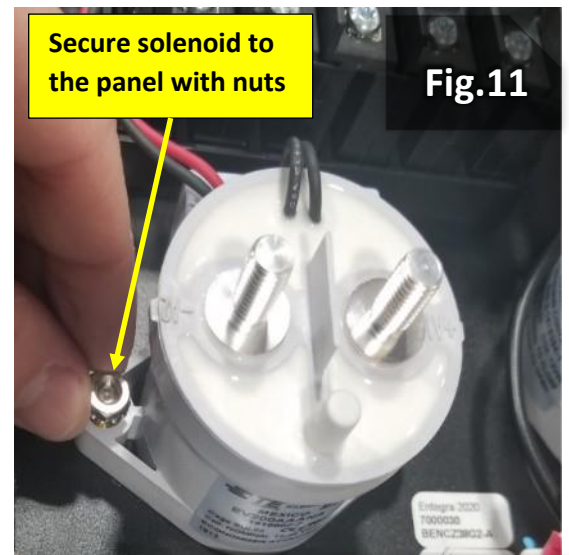
**FIG 10:**

- Remove the old Gigavac Solenoid from the panel. There are two nuts securing it to the panel. (Refer to rectangular box with yellow line pointing to one of the nuts)



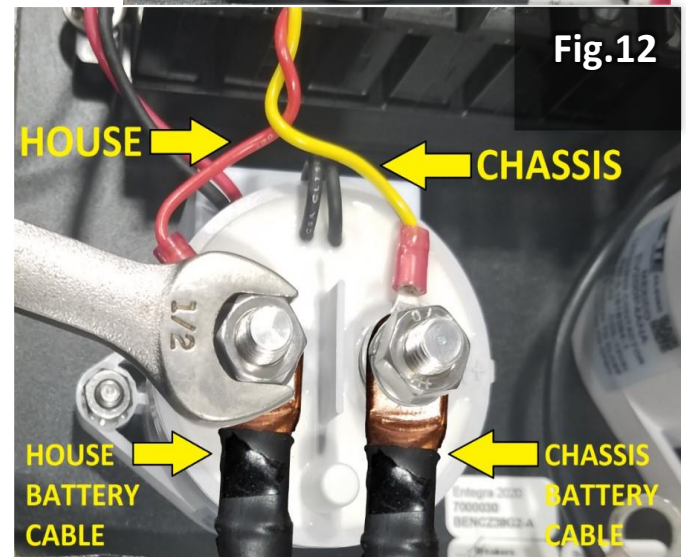
**FIG 11:**

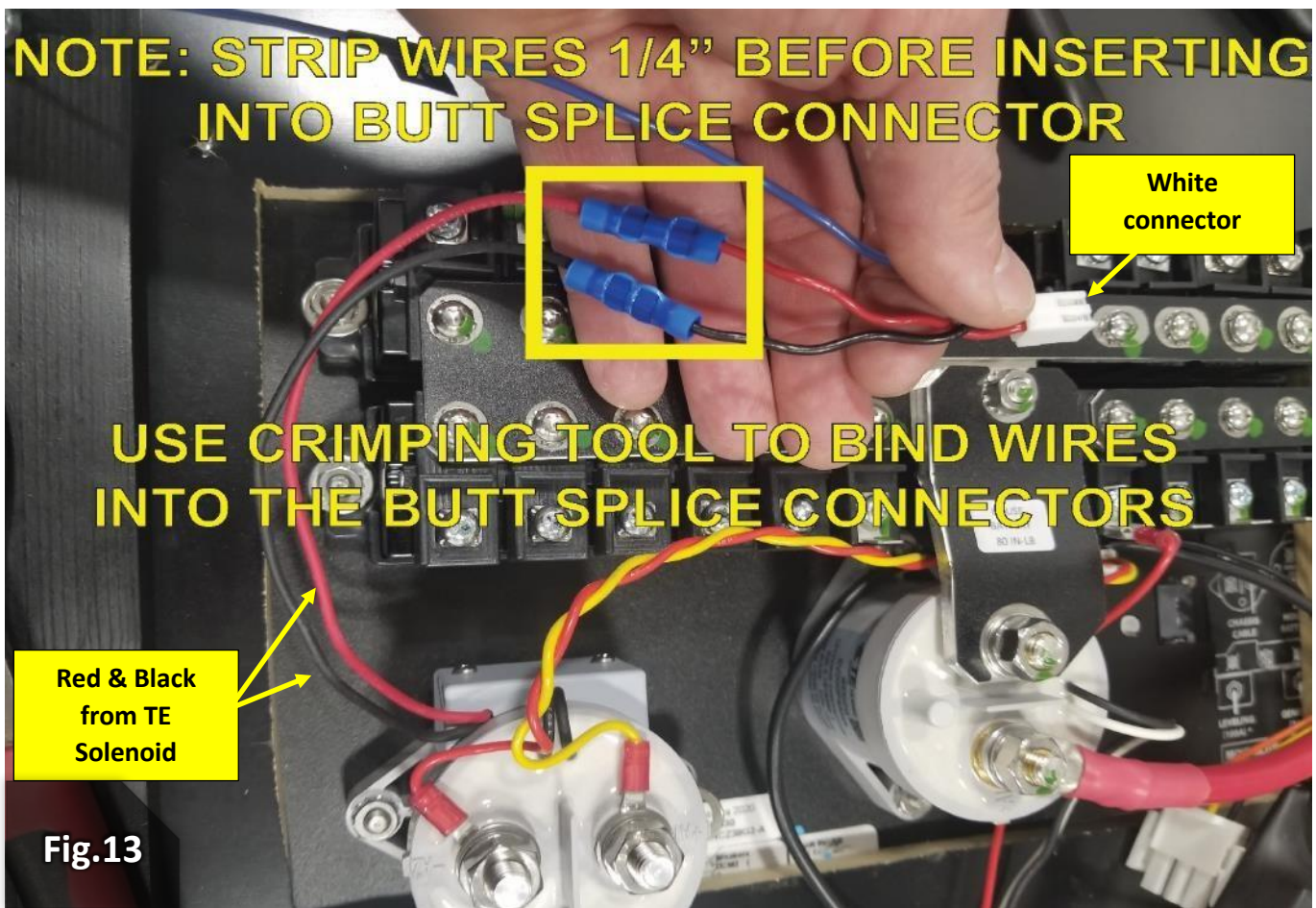
- Install the new TE Solenoid from the kit, and secure with nuts that were previously used to secure the Gigavac Solenoid to the panel.
- TE Solenoid should be installed exactly as shown with the two pairs of wires positioned at the top.



**FIG 12:**

- Install the House & Chassis battery cables first on the proper solenoid terminals.
- Then install the House (red wire) & Chassis sense (yellow wire) on the proper terminals.
- Use the new hardware provided with the new TE solenoid:
- Install the washers on the solenoid terminals.
- Install the nuts on the solenoid terminals.
- Tighten the nuts using the wrenches.





**FIG 13:**

- Strip the following wires 1/4":
- Red & Black wires from the TE Solenoid.
- Red & Black wires from the white connector (**From Fig 8**)
- Crimp the black wire from the TE solenoid to one end of a butt splice connector.
- Crimp the red wire from the TE solenoid to one end of a butt splice connector.
- Crimp the black wire from the white connector to the other end of the butt splice connector with the black wire attached.
- Crimp the red wire from the white connector to the other end of the butt splice connector with the red wire attached.
- Wires should be connected: black to black, and red to red (as shown).

**FIG 14:**

- Insert the white connector (with the Red, Blue, and Black wires) back into the header it was removed from in **Fig 8.** (circled in photo)
- Header is located next to the TE Solenoid. Make sure the connector is securely connected.
- Make sure the Manual Merge Ground Input (Blue wire) is still connected to ground.
- Secure any loose wires, close the DCD Panel and reinstall the retaining screw.
- Replace the false panel back over the DCD Panel.



## TESTING THE INSTALLATION

**FIG 15 & 16:**

- Turn power **ON** to the coach by performing the following steps.
- Open the last compartment on the entrance door side of the coach, there are two breakers (**Fig 15**).
- Turn both breakers **ON.** (120A and 150A) Breakers are shown **ON** in photo.
- Open the 4<sup>th</sup> bay back from the entrance door.
- Locate the row of 4 breakers (**Fig 16**).
- Turn **ON** the **BATTERY LINK** breaker which is circled in **Fig 16**.
- Turn the ignition **ON.**



**FIG 17, 18 & 19:**

- Locate the **BATTERY BOOST** switch to the left of the driver seat.
- Locate the chassis battery voltage indicator to the right of the RPM gauge on the digital instrument panel screen (**Fig 19**).
- Take note of the voltage shown on the gauge.
- After noting the voltage, press and hold the **BATTERY BOOST** button (**Fig 18**) for a minimum of 30 seconds to verify the battery voltage changes.
- If the voltage changes, the merge solenoid is working correctly.
- Turn ignition **OFF**.



*Jayco's sole obligation under our limited warranty is to repair or replace defective materials and/or workmanship deemed our responsibility as determined by Jayco at our sole discretion. Jayco reserves the right to use new and/or remanufactured parts or materials of similar quality to complete any work, and to make parts and/or design changes as appropriate without notice to anyone. Jayco designs and/or materials changes are done without obligation to incorporate such changes in previously manufactured product. Jayco makes every reasonable effort to ensure field remedies will not adversely affect performance and/or safety of the unit. This field remedy is not intended to extend to future performance of this RV, or any of its materials, components or parts beyond the standard warranty period. The RV owner's obligation to notify Jayco, or one of its independent, authorized dealers, of a claimed defect does not modify any obligation placed on the RV owner to contact Jayco directly when attempting to pursue remedies under state or federal law.*

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## TSB 20-019 Battery Merge Solenoid Affected Units

2019 Anthem	K14A8053	2019 Cornerstone	K16A8051
	K14A8054		K16A8053
	K14A8061		K16B8051
	K14A8063		K16B8082
	K14B8052		K16B8092
	K14F8102		K16B8093
	K14F8103		K16B8094
	K14F8109		K16B8095
	K14F8110		K16F8080
	K14F8111		K16F8081
	K14F8112		K16F8082
	K14F8114		K16F8083
	K14H8063		K16F8084
	K14H8064		K16F8085
	K14H8065		K16F8086
	K14H8066		K16W8084
	K14H8067		K16W8085
	K14W8055		K16W8086
	K14W8087		K16W8087
	K14W8090		K16W8088
	K14W8091		K16W8089
	K14W8092		K16W8090
	K14W8093		K16X8061
	K14W8094		K16Y8062
	K14W8095		
	K14W8096		
	K14W8097		