

TECHNICAL SERVICE BULLETIN



DEPARTMENT OF COMPLIANCE
VEHICLE SAFETY AND RECALL MANAGEMENT
BUILDING 11
423 N MAIN ST
MIDDLEBURY, INDIANA 46540-9218

Technical Service Bulletin: 215-1668

- o Integrity
- o Safety
- o Quality
- o Customer Service

<<VIN>>
<<OWNER NAME/DEALERNAME>>
<<ADDRESS>>
<<CITY>>, <<ST>> <<ZIP-XXX>>

August 2023

This Notice applies to your vehicle VIN listed above.

Dear Forest River Customer:

Forest River is alerting you to an issue involving certain 2023-2024 Coachmen Cross Trail Class C Recreational Vehicles. Please see the information below, which describes the issue and provides you with details on the steps you should take to have your vehicle repaired.

WHAT IS THE ISSUE?

If the "house" disconnect switch is left in the "ON" position, there is a chance the Renogy Rego Lithium system may drain, rendering the lithium battery(s) unable to maintain a charge.

OWNERS: WHAT SHOULD YOU DO?

Please contact your dealer immediately and request a service appointment to schedule the free repair. The vehicle Owner is responsible for arranging to have the work completed. Please state you have been notified by Forest River of the issue and provide the TSB number (located at the top of this page) to the dealership. It is also helpful to give the dealership a copy of this letter when you take your vehicle in for the repair. You may visit <https://coachmenrv.com/dealer-locator> to search for dealer locations.

HOW LONG WILL THE REMEDY PROCESS TAKE?

The estimated time of repair is 1.0 hours. However, the dealership may need to keep your vehicle or schedule an appointment with you for a later date to fit into their regular service schedule.

DEALERS: WHAT SHOULD YOU DO?

Remedy Instructions can be found on Dealer Connect.

HELPFUL CONTACT INFORMATION:

CONTACT	PHONE
CUSTOMER SERVICE	(574) 825-8487

PHOTO REQUIREMENTS:

Photo of the switch turned to the "user" position (ref. Step number 2 of issue 1 - in the included instructions)

Photo of the red wire and black wire cut (ref. Step number 2 of issue 2 - in the included instructions)

Pictures are a condition of payment in which must be provided with a claim against the repair code(s).

DEALER REPAIR CODES: Dealer Connect

TSB NUMBER	REPAIR CODE	DESCRIPTION	ALLOWABLE HOUR(S)
215-1668	SB-386-05-00-004401	INSPECTION ONLY	.25 HRS
215-1668	SB-386-09-00-004402	INSPECTION AND REMEDY	1.0 HRS

WHAT IF YOU HAVE PREVIOUSLY PAID FOR REPAIRS TO YOUR VEHICLE FOR THIS PARTICULAR CONDITION?


If you have already paid for a repair that is within the scope of this service bulletin, you may be eligible for a refund of previously paid repairs. Refunds will only be provided within the scope of this Technical Service Bulletin. Please send the service invoice to the following address:

Coachmen Class C
423 N Main St.
Middlebury, IN 46540

Sincerely,

Forest River, Inc.
Office of Corporate Compliance

TECHNICAL SERVICE BULLETIN 215-1668 REMEDY INSTRUCTIONS

	Make(s): CROSS TRAIL Model(s): C2C20BH7A, C2C20XG7A & C2C21XG7A Model Year(s): 2023 - 2024	Repair Code: SB-386-09-00-004402 Allotted Time: 1.00 HRS. Inspection Code: SB-386-05-00-004401 Allotted Time: .25 HRS.
	Concern: If the "house" disconnect switch is left in the "ON" position, there is a chance the Renogy Rego Lithium system may drain, rendering the lithium battery(s) unable to maintain a charge.	Photo(s) Required: YES, SEE BELOW Prior Authorization Required: NO Part(s) Number: N/A Part(s) Return: N/A

Turn off LP Gas at LPG Tank(s). Disconnect the vehicles' battery Positive and Negative, disconnect any House battery(s) Positive and Negative, if equipped with a generator ensure it is off and lastly, ensure the vehicle is disconnected from shore power. Block any tires/wheels to prevent the vehicle from rolling. Failure to do so may result in electrocution, fire or other personal injury, property damage and/or death.

INSPECTION:

STEP 1: INSPECT FOR YELLOW BANDING ON THE CABLES AT THE BATTERIES.

IF YELLOW BANDING IS PRESENT, THE REPAIR HAS ALREADY BEEN COMPLETED, CLAIM INSPECTION CODE

IF YELLOW BANDING IS NOT PRESENT, MOVE ON TO THE REMEDY INSTRUCTIONS

FOR REMEDY - PLEASE SEE THE INCLUDED INSTRUCTIONS PROVIDED BY RENOGY

PHOTO REQUIREMENTS:

PHOTO OF THE SWITCH TURNED TO THE "USER" POSITION (REF. STEP NUMBER 2 OF ISSUE 1 - IN THE INCLUDED INSTRUCTIONS);

PHOTO OF THE RED WIRE AND BLACK WIRE CUT (REF. STEP NUMBER 2 OF ISSUE 2 - IN THE INCLUDED INSTRUCTIONS)

Title: REGO Over Discharge

Service Document

Date: 8/2/23

Issue

Over-discharge of the cells packs has been identified as an issue with the Coachmen Cross Trail Renogy REGO system. If the batteries are discharged and are found in a non-recoverable fault state in the field. There are two issues that have led to over-discharge of the batteries.

Issue 1

The first issue is negative activation on the solar controller. Negative activation happens when devices or loads, such as the inverter-charger ON/OFF switch, or the House Disconnect Switch are left in the on position. This typically happens at the dealer level, as salesmen and customers will enter the unit, turning the aforementioned items on, leaving the unit in the "ON" state. Over time, the BMS activates the low voltage cut off, disconnecting the battery from use. During the day the solar panels start to conduct a positive (+) voltage and current, which the BMS uses to re-connect the battery to the system. When this happens, the loads or items that were previously left on; are energized, further discharging it to a lower level. Since the voltage will normalize, it will take some time before the BMS reads a low enough voltage to disconnect again, and when this happens; the battery will see the charge voltage once again, if present and re-active, leading to a cycle of over-discharge.

Solution

Move the battery type selector on the "MPPT" charge controller to the "USER" position. This will remove the "activation" feature from the solar controller and prevent the coach from over-discharge due to inadequate solar charge current. This is a simple solution, which can be performed by the end user or dealer technician.

Step 1

Locate the solar MPPT controller, it is under the rear dinette seat, or the sofa on the road side of the coach.

Step 2

Turn the programming knob to "user". See below:



Issue 2

Non-isolated ground path in the battery, a ground path via the CAN cabling. The battery has a negatively switched BMS, meaning that when the BMS interrupts the negative path of the circuit between the cells and the battery (-) terminal. Certain components can ground via the CAN PS- in the CAN cabling. This can happen when the battery shuts down in low voltage protect mode.

Solution

Modify the RVC cabling by cutting the PS(+) and PS(-) wires inside the connectors. This would immediately remove the potential for the parallel ground path through the RVC wiring, and allow the battery to correctly isolate itself from the loads, to prevent further over discharge.

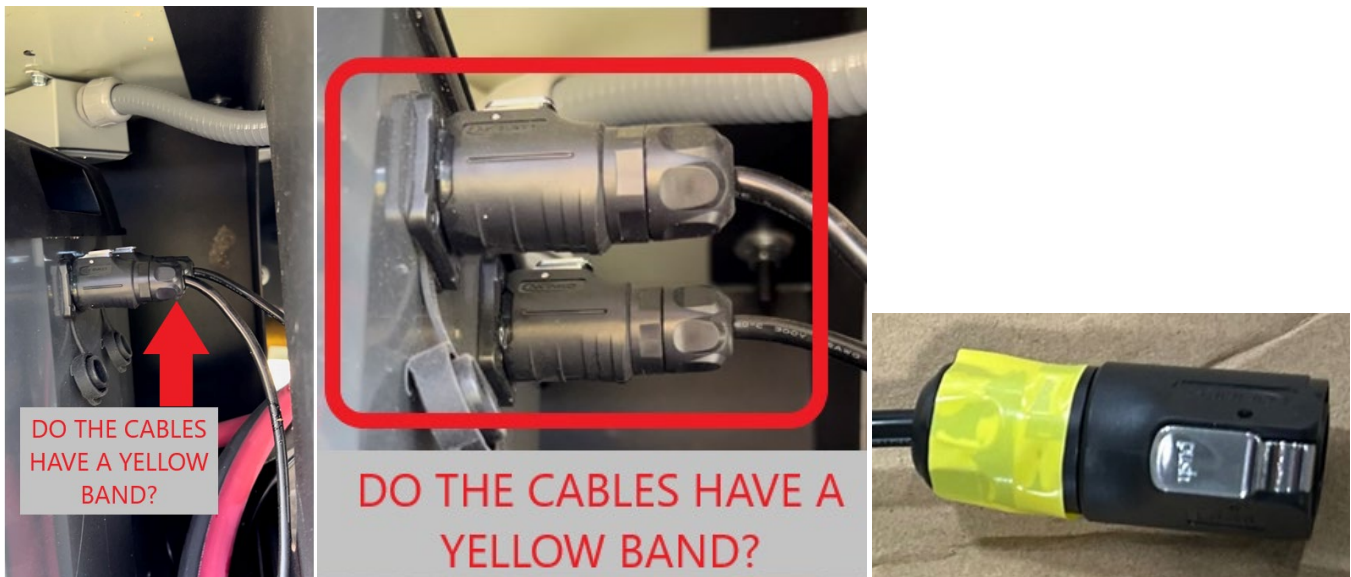
Step 1

Open the battery box, and examine the battery(s). If there is only one battery, then 2 cables need modified, if there are two batteries, then four cables need modified. Disconnect the 4/0 gray Anderson connections, the main connections at the battery(s).



Step 2

Identify the number of cables, if they have a yellow band, identifying them as correct. If the cables have a yellow band, disregard Issue 2 solution, as it has been completed.



Step 3

Disconnect the cables; and prepare to modify them. The back shell will need to be unscrewed, first the outer strain relief, then the inner core:



Step 4

Grab the connector with two hands and unscrew the outer strain relief and pull back about 18-20 inches so it is out of the way. Next carefully unscrew the inner core, counterclockwise. Turn both the housing and the inner core in opposite directions, so the cable doesn't wind up. See the grip below:



Step 5

Next push down on the locking tab and pull the connector face with wires out of the connector shell.



Step 6

Identify the red and black wires, they are the two pins are below, noted as 1 and 2.



Pin No.	COM1	COM2
1	Power	Power
2	GND	GND
3	/	/
4	/	/
5	Pack_CANH	Pack_CANH
6	/	/
7	Pack_CANL	Pack_CANL



The modification of the cables; Cut the red and black wires, stagger cut and trim them back then tape off the cut ends so they don't touch anything:



Step 7

Re-connect the 2 or 4 cables, then reconnect the 4/0 gray Anderson connections, the main connections at the battery:



Then power the system on, and retest the system.