


# RECALL 24V774 / 2024-613 REMEDY INSTRUCTIONS

 <b>FOREST RIVER</b>	Make(s): RIVERSTONE Model(s): MANY, SEE BELOW Model Year(s): 2023 - 2024	Repair Code: RC-720-01-00-004618 Allotted Time: 6.00 HRS. Inspection Code: RC-720-05-00-004617 Allotted Time: .25 HRS.
	Concern: The solar panels may have been connected in "parallel" and not in "series".	Photo(s) Required: NO Prior Authorization Required: YES Part(s) Kit Number: F100669650 Part(s) Return: NO, FIELD DESTROY

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, cover all solar panels with opaque material to block sun load, 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.

## TOOLS AND MATERIALS:

- MULTIMETER (FOR TESTING VOLTAGE AND CONTINUITY)
- MC4 CONNECTOR DISCONNECT TOOL
- NEW GP-PP-CEP-25
- SEALANT OR ADHESIVE (COMPATIBLE WITH RV ROOFING MATERIAL)
- UTILITY KNIFE OR WIRE CUTTERS DRILL (IF ENLARGING HOLES)
- SCREWS (AS PER CEP INSTALLATION INSTRUCTIONS) SCREWDRIVER OR DRILL DRIVER

## INSPECTION:

STEP 1: ASSESS THE SOLAR PANEL WIRING;

- INSPECT 12V WIRES FOR ANY SIGNS OF MELTING;
- IDENTIFY THE POSITIVE AND NEGATIVE LEADS OF EACH SOLAR PANEL;
- PARALLEL WIRING, ALL POSITIVE TERMINALS OF THE PANELS WILL BE CONNECTED TOGETHER, AND ALL NEGATIVE TERMINALS WILL BE CONNECTED TOGETHER;
- SERIES WIRING, THE POSITIVE TERMINAL OF THE FIRST PANEL WILL CONNECT TO THE NEGATIVE TERMINAL OF THE SECOND PANEL, FORMING A CHAIN WITH ALL OTHER PANELS;
- IF THE PANELS ARE WIRED IN PARALLEL, PROCEED TO REMEDY;
- IF THE PANELS ARE WIRED IN SERIES, CLAIM INSPECTION CODE ONLY;

## REMEDY:

STEP 1: ACCESS THE CABLE ENTRY PLATE ("CEP");

- LOCATE THE CURRENTLY INSTALLED CEP ON THE ROOF. IT MAY BE SEALED WITH ADHESIVE OR SCREWS;
- CAREFULLY REMOVE THE CEP, CUTTING AWAY ANY SEALANT WITH A UTILITY KNIFE;
- BE CAUTIOUS NOT TO DAMAGE THE ROOF SURFACE WHILE REMOVING THE CEP;


STEP 2: PREPARE FOR WIRE PULLING;

- IDENTIFY WHERE THE WIRES FROM THE CEP ENTER THE RV AND LEAD TO THE SOLAR CHARGE CONTROLLER OR ELECTRICAL SYSTEM;
- PLAN YOUR PATH FOR THE NEW 10AWG WIRE. THE NEW CEP WILL HAVE ITS ENTRY POINT IN THE SAME LOCATION, MAKING IT EASIER TO PULL THE NEW WIRES THROUGH THE SAME HOLE;
- DISCONNECT THE OLD WIRES FROM THE CHARGE CONTROLLER OR OTHER ELECTRICAL COMPONENTS, LEAVING THEM FREE TO BE USED AS A PULLER;

STEP 3: PULL THE NEW 10AWG WIRE USING THE OLD WIRES;

- SECURE THE NEW 10AWG WIRE ON THE GP-PP-CEP-25 TO THE OLD WIRES;
- YOU CAN USE ELECTRICAL TAPE OR WIRE CONNECTORS TO SECURELY ATTACH THE NEW WIRE TO THE OLD WIRE, ENSURING THEY WON'T COME APART WHILE PULLING;
- CAREFULLY PULL THE OLD WIRES FROM THE SOLAR CONTROLLER LOCATION, USING THEM TO PULL THE NEW 10AWG WIRE ALONG THE SAME PATH;
- THIS SHOULD ROUTE THE NEW WIRE THROUGH THE ROOF, DOWN THE RV WALLS, AND TOWARD THE CHARGE CONTROLLER LOCATION;
- IF NEEDED, USE A FISH TAPE OR WIRE PULLER TO HELP GUIDE THE WIRE THROUGH TIGHT SPACES OR AROUND BENDS IN THE WALLS;

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**STEP 4: INSTALL THE NEW CABLE ENTRY PLATE (CEP);**

- ONCE THE 10AWG WIRE IS SUCCESSFULLY ROUTED, FOLLOW THE PROVIDED INSTALLATION INSTRUCTIONS TO SECURE THE NEW CEP TO THE ROOF;

**STEP 5: CHECK WIRE CONTINUITY;**

- AFTER ROUTING THE NEW WIRES, USE A MULTIMETER TO CHECK FOR CONTINUITY IN THE NEW 10AWG WIRE. THIS WILL ENSURE THE WIRES WERE NOT DAMAGED DURING PULLING AND THAT THE CONNECTIONS ARE SOUND. THIS CAN BE DONE WITH A MULTIMETER AND A LONG PIECE OF WIRE TEMPORARILY CONNECTED ON THE SOLAR CONTROLLER SIDE AND ROUTED UP TO THE CEP AROUND THE OUTSIDE OF THE RV AND MEASURING FOR CONTINUITY;

**STEP 6: CONNECT THE NEW 10AWG WIRE TO THE SOLAR CHARGE CONTROLLER;**

- CONNECT THE POSITIVE AND NEGATIVE LEADS OF THE 10AWG WIRE TO THE APPROPRIATE TERMINALS ON THE SOLAR CHARGE CONTROLLER;
- ENSURE THAT CONNECTIONS ARE TIGHT AND PROPERLY SECURED;

**STEP 7: SECURE THE WIRE;**

- INSIDE THE RV, SECURE THE NEW WIRE ALONG ITS PATH USING CABLE CLAMPS OR TIES IF NECESSARY WHERE THE WIRE IS EXPOSED;
- ENSURE THAT IT WON'T MOVE OR CHAFE AGAINST ANY SHARP EDGES;
- MAKE SURE THE WIRE IS ROUTED IN SUCH A WAY THAT IT IS PROTECTED FROM WEAR AND TEAR;

**RECONFIGURE THE SOLAR ARRAY:**

**STEP 1: Disconnect the Solar Panels;**

- Cover all solar panels with opaque material to block all light from getting to the solar cells;
- Carefully disconnect the panels' positive and negative leads from the wiring by disconnecting the MC4 connectors. An MC4 disconnection tool may be required for this;

**STEP 2: RECONFIGURE THE WIRING IN "SERIES";**

- SERIES WIRING, THE POSITIVE TERMINAL OF THE FIRST PANEL WILL CONNECT TO THE NEGATIVE TERMINAL OF THE SECOND PANEL, FORMING A CHAIN WITH ALL OTHER PANELS;
- FOLLOW THIS PATTERN FOR ALL PANELS. FOR EXAMPLE:
  - PANEL 1: POSITIVE (OUTPUT) REMAINS DISCONNECTED FOR NOW;
  - PANEL 1: NEGATIVE CONNECTS TO PANEL 2 POSITIVE;
  - PANEL 2 NEGATIVE CONNECTS TO PANEL 3 POSITIVE, AND SO ON;

**STEP 3: CONNECT THE SOLAR PANELS TO THE CEP;**

- CONNECT THE FIRST PANEL'S POSITIVE CABLE TO THE POSITIVE SIDE OF THE NEW CABLE ENTRY PLATE;
- EXTENSION HARNESSES MAY BE NECESSARY FOR THE WIRE TO REACH;
- CONNECT THE LAST PANEL'S NEGATIVE TERMINAL TO THE CHARGE CONTROLLER'S SOLAR INPUT NEGATIVE TERMINAL;
- EXTENSION HARNESSES MAY BE NECESSARY FOR THE WIRE TO REACH;
- ENSURE MC4 CONNECTORS ARE FULLY MATED;

**STEP 4: SECURE THE WIRING**

- BUNDLE AND SECURE ANY LOOSE WIRES ON THE ROOF TO PREVENT THEM FROM MOVING AROUND WHILE DRIVING OR DURING WEATHER EXPOSURE;
- USE ZIP TIES OR CABLE MANAGEMENT CLIPS WHERE NECESSARY;


**STEP 5: UNCOVER SOLAR PANELS**

- REMOVE COVERS FROM SOLAR PANELS SO LIGHT CAN NOW GET TO THE SOLAR CELLS;

**STEP 6: REPLACE SOLAR CONTROLLER;**

- REFER TO INSTRUCTIONS FROM MASTER VOLT FOR REPLACEMENT AND CONFIGURATION OF SOLAR CONTROLLER;

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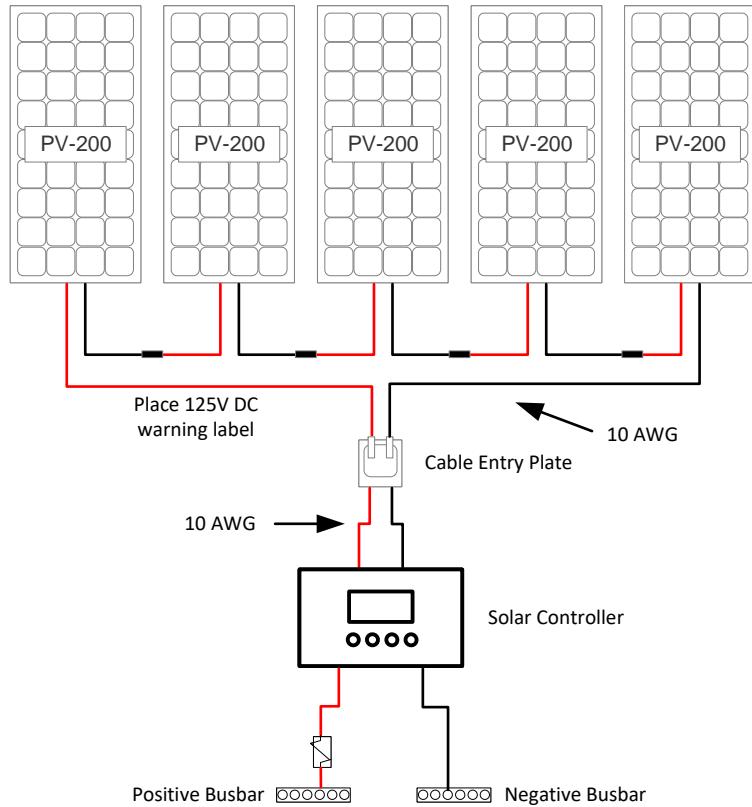
**STEP 7: TEST THE SYSTEM;**

- ONCE EVERYTHING IS POWERED ON, VERIFY THAT THE PANELS ARE CHARGING THE BATTERY CORRECTLY AND THAT THE SYSTEM IS WORKING AS EXPECTED;
- CHECK THE CHARGE CONTROLLER'S DISPLAY TO ENSURE PROPER POWER INPUT FROM THE NEWLY CONFIGURED SERIES SETUP;
- CHECK REPORTED SOLAR VOLTAGE ON SOLAR CONTROLLER AND VERIFY VOLTAGE IS BETWEEN 10V-12V WITH GOOD SUNLIGHT EXPOSURE;

**STEP 8: CLAIM REPAIR CODE.**

Rev	Description	Date	Author
A	First release	2024/10/04	VR

Solar Electrical Details		
	Per Panel	Total
Pmax (W)	200	1000
Vmp (V)	20.8	-
Imp (A)	9.62	-
Voc (V)	24.3	-
Isc (A)	10.09	-



### NOTES

- Over current protective device(s) to be located within 18" from the source of current to limit exposed unprotected conductors.
- All battery interconnects to be equal length and gauge, and be equal gauge or larger than connection to battery positive terminal.
- All busbar connections to external devices (inverter, converter, solar controller, etc.) to be equal length and gauge, sized according to RVIA standards or manufacturer installation instructions for each device with suitable over current protection.
- Wire lengths and over current protection based on single current carrying conductor, not bundled. For bundling of two or more current carrying conductors, refer to RVIA standards for correction factors.

**PROPRIETARY**  
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Title  
**Forest River  
5x200**

Original Specs By **MS** Date **2024/10/04**

Originally Drawn By **VR** Date **2024/10/04**

Checked By **ZZ** Date **YYYY/MM/DD**

Revision **A** Document Number **#** Sheet **1 OF 1**