



WORK INSTRUCTIONS

MODEL Z FIFTH WHEEL

OVERCURRENT PROTECTION

AND UNDERSIZE WIRE

RECALL #	900003: Z3610 Overcurrent Protection and Wire Size REV-A		
PRODUCT:	Model Z 3610 VIN 0001 - 1440		
DATE:	June 21 2024	LABOR RATE:	5.0 hours

Current Wiring Protection

Brinkley RV has determined that within the 12 volt DC system, there may be a lack of over current protection and undersized wire size. The following instructions provide wiring locations, connections and components to reconfigure the mini breakers. The model and VIN of the unit will dictate the appropriate kit for this service.

The VIN is required to order parts.

SAFETY:

Service, repair and installation instructions are written specifically for the use of professionally trained technicians, using proper tools in a shop environment. For safety, and to ensure the best results, **only professionally trained technicians** should perform the work described in this document.

Safety is, and should always be observed when performing any type of repair. ANSI (American National Standards Institute) has created a standardized labeling system for different levels of safety and danger. The labels below provide information regarding those levels of danger, and should be observed and adhered to at all times.

⚠ DANGER

The “DANGER” symbol above indicates an imminent hazard that, if not avoided or handled correctly, will result in death or serious injury.

⚠ WARNING

The “WARNING” symbol above is a sign that a procedure has a safety risk involved and may cause death, serious personal injury, severe product and/or property damage if not performed safely and within the parameters set forth in this document.

⚠ CAUTION

The “CAUTION” symbol above is a sign that a procedure has a safety risk involved and may cause personal injury, product and/or property damage if not performed safely and within the parameters set forth in this document.

+ NOTICE

The “NOTICE” banner above is used to address best practices that should be utilized and do not commonly result in injury but may lead to property damage if not careful.

ADVANCED CONTACT AND PRIOR AUTHORIZATION REQUIRED.

CLAIM REIMBURSEMENT PROCESSING:

All reimbursement requests with completed work orders, including any freight expenses, should be submitted via a claim in the Brinkley RV Dealer Portal. If you do not have access to our Portal, a claim can be emailed to Warranty@BrinkleyRV.com.

REQUIRED INFORMATION FOR IMMEDIATE REIMBURSEMENT PROCESSING INCLUDES:

1. The full 17 digit VIN;
2. The Retail Name if retail sold;
3. Dealer Name;
4. Dealer Address;
5. Dealer Phone Number;
6. Dealer Hourly Labor Rate;
7. Work Order detailing the work performed and labor time.
8. Photo of completed repair.

Reimbursement checks for claims submitted with all requested information are issued weekly.

Model Z Circuit Protection Parts Kit # K110811 (VIN 0001 - 1440)

Part Number	Description	Qty
101605	BREAKER 12V 50A RED AUTO RESET TYPE 1 W/BRACKET E518-50A	2
100468	BREAKER 12V 30A GREEN AUTO RESET TYPE 1 W/BACKET E518-30A	1
106328	BREAKER 12V 30A GREEN MANUAL RESET W/BRACKET E538-30A	1
101093	BREAKER 12V 15A BLUE AUTO RESET TYPEW/BRACKET E518-15A	1
100948	FASTENER NUT 10-32 ZINC HEX KEPS NUT	8
102274	TERMINAL BUS BAR 6 POSITION COPPER	1
100033	WIRE TEW 8 GREEN UL/CSA 105C 1000' REEL	0.667 LF
101656	TERMINAL RING 8GA #10 NYLON INSULATED STUD 50610N	3
100981	TERMINAL RIN 8GA 1/4" NYLON INSULATED STUD EL 50611N	1
100029	WIRE TEW 6 RED UL/CSA 105C 500' REEL	1
100979	TERMINAL RING 6GA #10 NYLON SULATED STUD EL 50615N	1
100975	TERMINAL RING 6GA 3/8"NYLON INSULATED STUD EL 50618	1
100067	WIRE RIP 14/2YELLOW/WHITE UL/CSA	70 LF
106327	WIRE RIP 8/2 GREEN/BLACK UL/CSA 500' REEL	70 LF
101645	TERMINAL RING 16-14GA #10 NYLON INSULATED STUD 50100N	2
100254	LIGHT BULLET 3/4"12V AMBER LENS SINGLE DIODE PC NO ORIENTATION	1
106821	CONNECTOR BUTT VYNIL INS 12-10GA HILTERM 20318 STEP DOWN	3
101917	CONNECTOR TRANSPARENT WAGO 2 LEVER 24-12 CONDUCTOR	2
109559	COVER CIRCUIT BREAKER BLACK SHORT STOP COVER	1
105866	FASTENER RIVET ALUMINUM 3/16" X .917 BLACK HIGH GLOSS .039-.354 16MM HEAD LARGE FLANGE (5M/BX)	5



Required Tools

1. Screw gun with #2 square drive bit
2. Flat head screw driver
3. Phillips head screw driver
4. Wire cutters
5. Wire strippers
6. 3/8" socket with extension
7. Mechanics creeper (optional)
8. Torque wrench (that measures in inch-lb)
9. 3/4" Butterfly drill bit
10. #11 Drill bit (not shown)
11. 11/64" Drill bit (not shown)
12. Rivet gun



⚠ WARNING

Make sure the battery disconnect switches are turned off and the unit is unplugged from shore power before beginning! Failure to do so may cause equipment damage and serious injury or death!

⚠ CAUTION

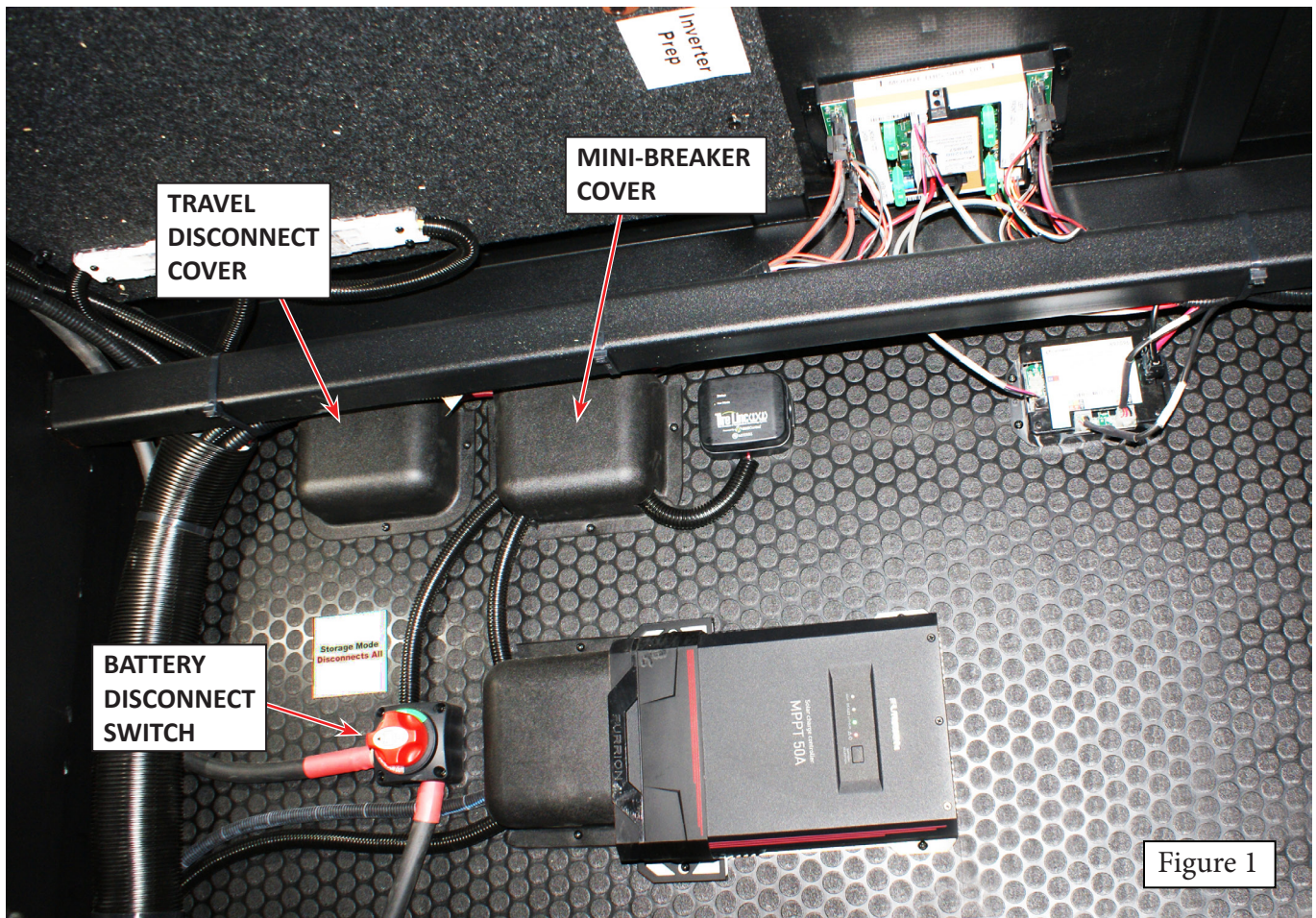
Always wear Personal Protection Equipment (PPE), such as eye protection, ear protection, gloves and possibly a full face shield depending on the nature of the task to be performed.

+ NOTICE

Retain all fasteners for reuse unless specifically stated in these instructions.

WORK INSTRUCTIONS:

1. READ AND UNDERSTAND ALL INSTRUCTIONS PRIOR TO BEGINNING WORK.
2. Make sure Battery Disconnect is turned off (Figure 1) and the RV is unplugged from shore power.



- Remove the wiring covers for the "Travel Disconnect" switch and the "Mini Breakers" (Figure 2a).
- Label all wires according to print attached (Figure 2b - see print provided).

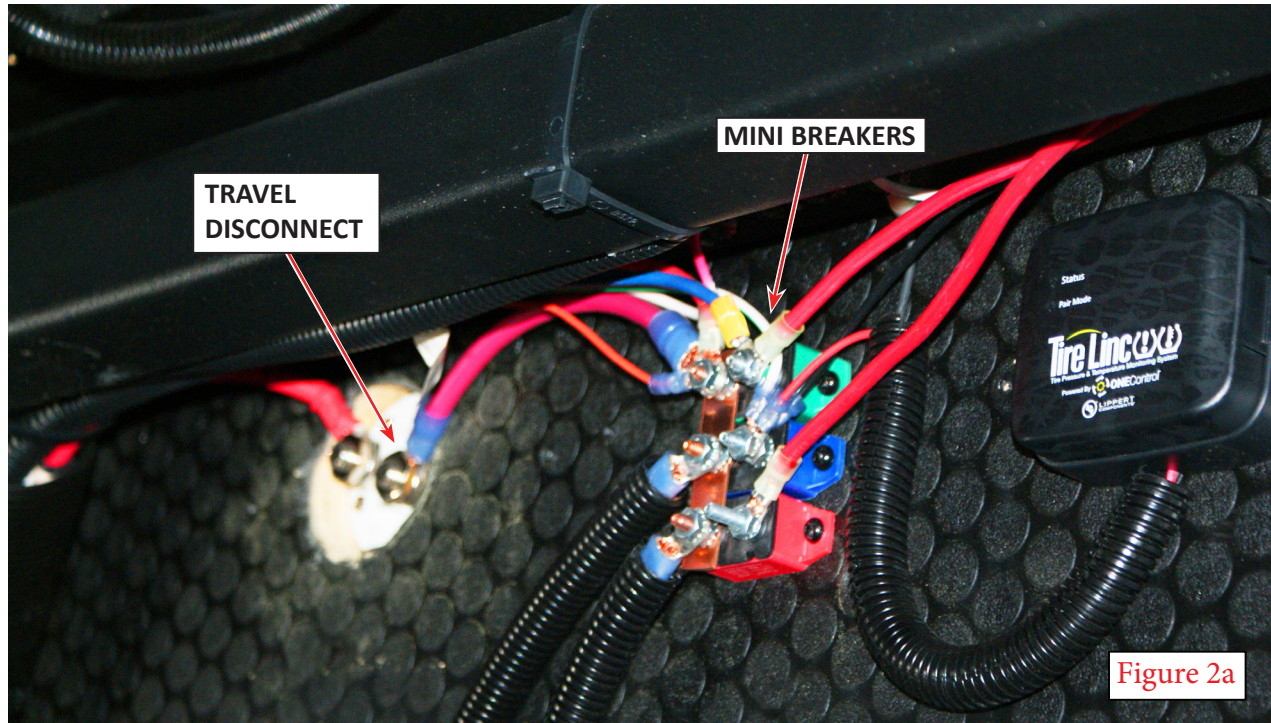


Figure 2a

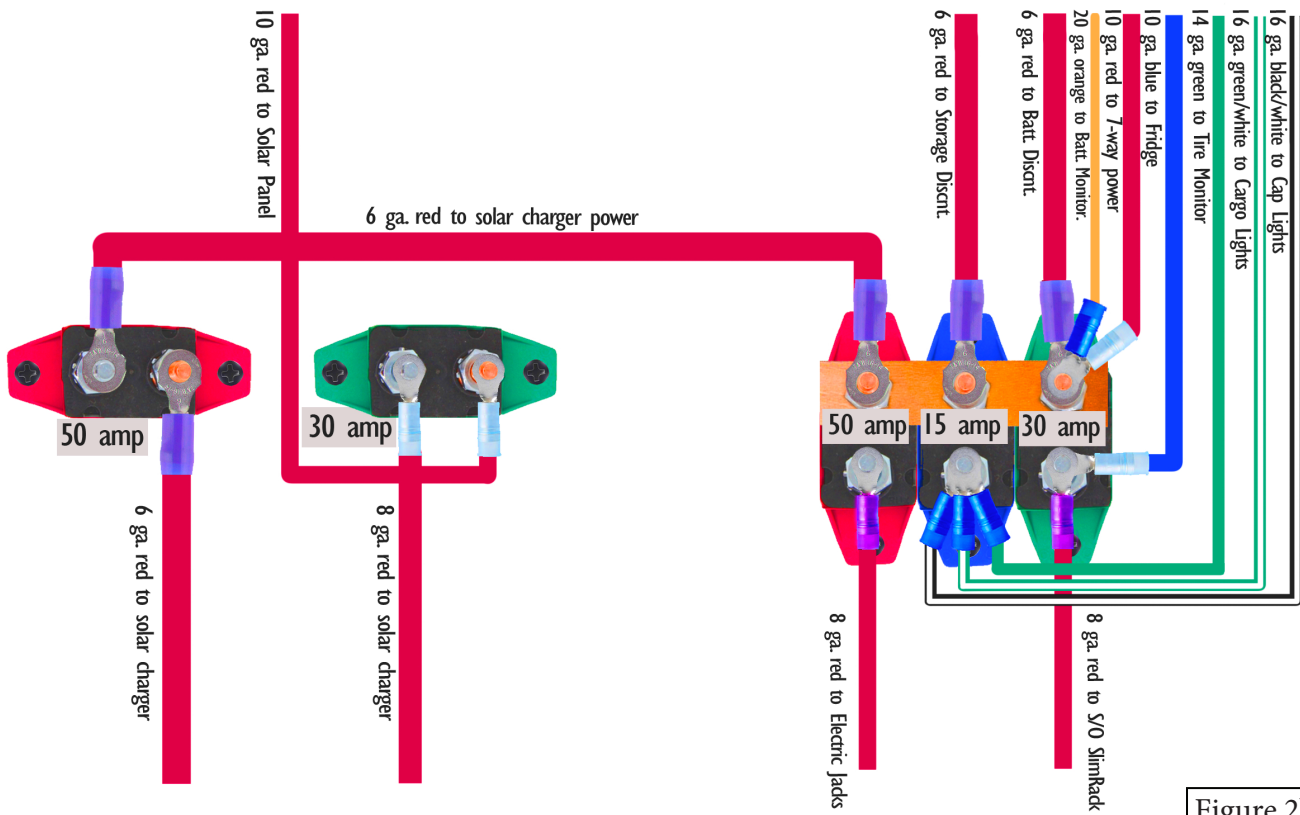
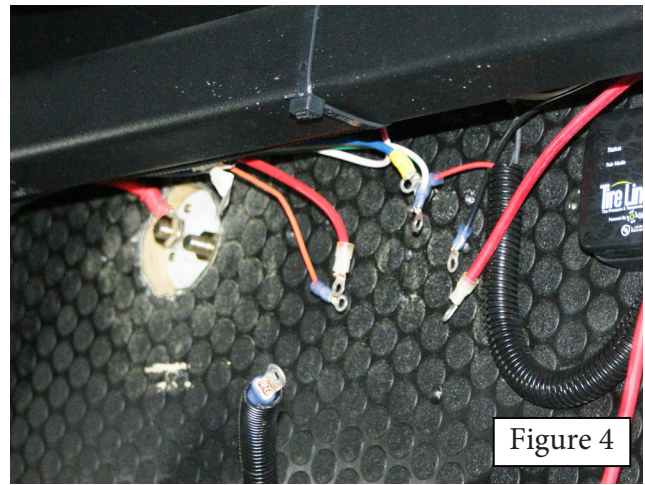
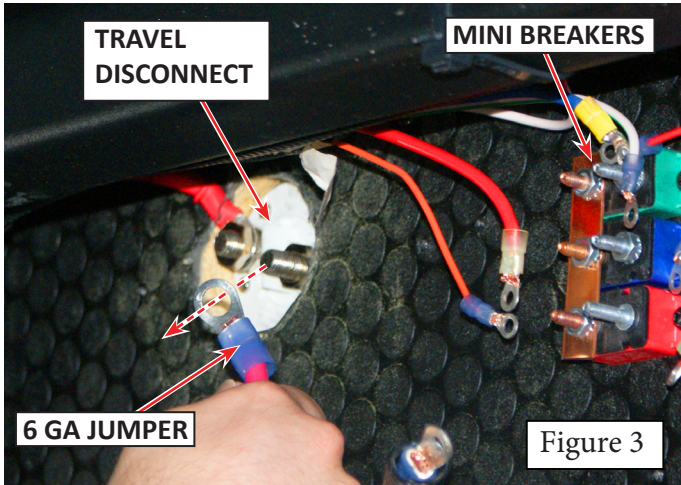
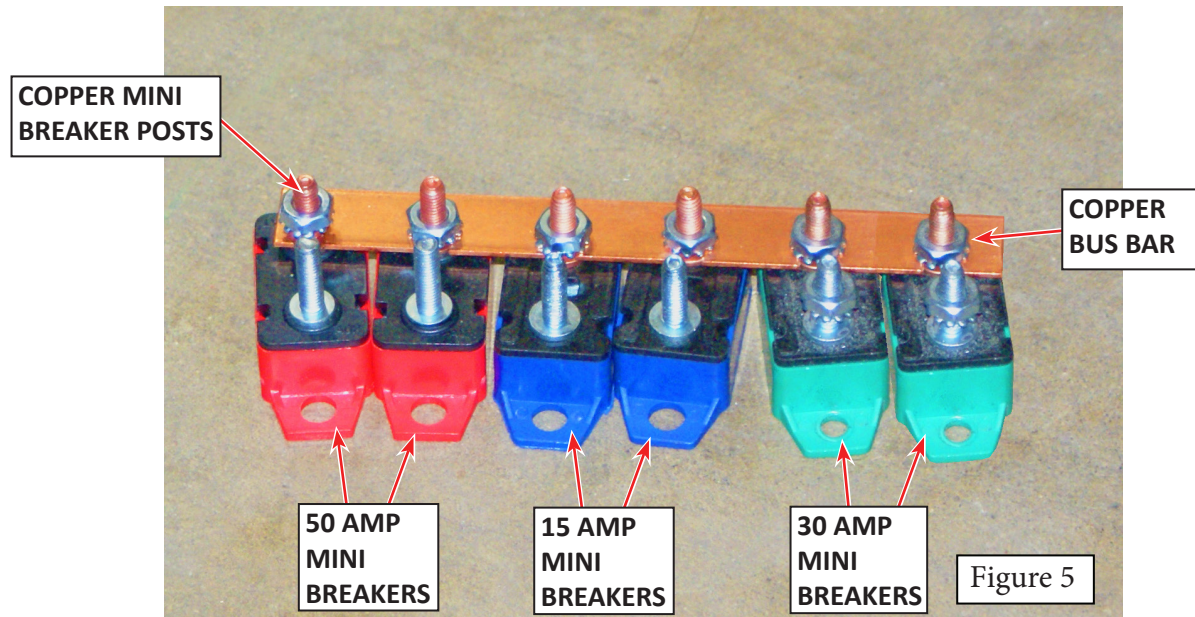


Figure 2b

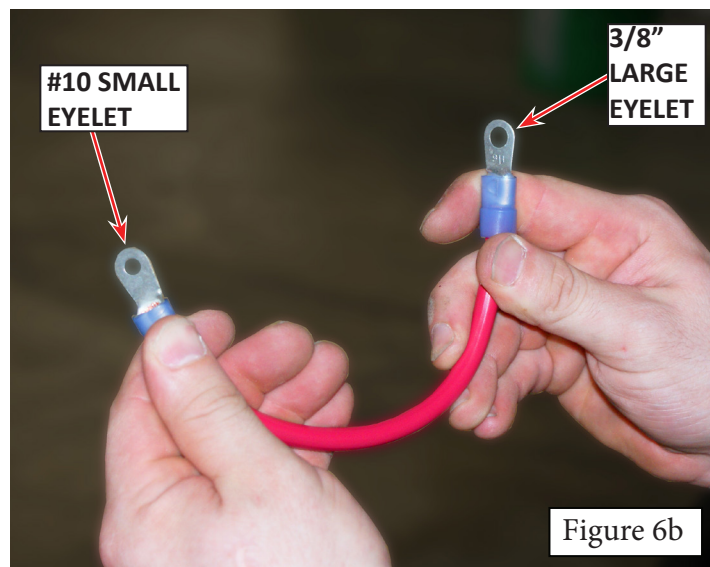
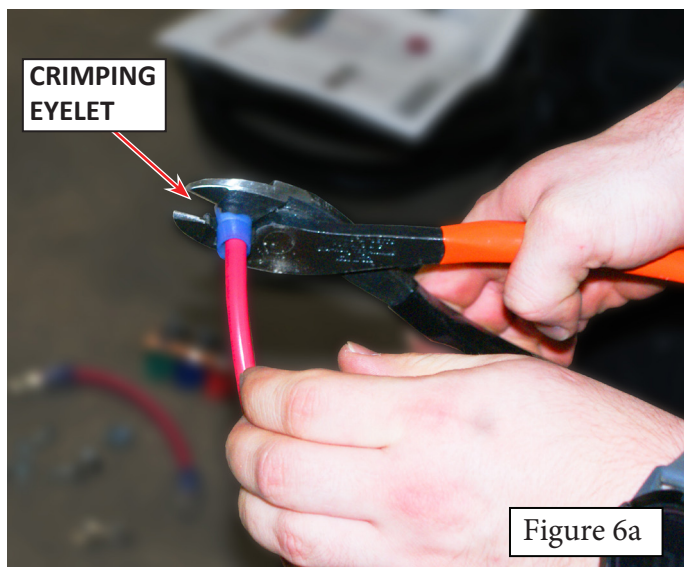
5. Remove red 6 GA Jumper from travel disconnect to mini breaker (Figure 3). Discard the jumper, but retain the lock washer and nut from Travel Disconnect.
6. Remove all wires from mini breakers after labeling and remove mini breaker stack (Figure 4). Retain all fasteners.



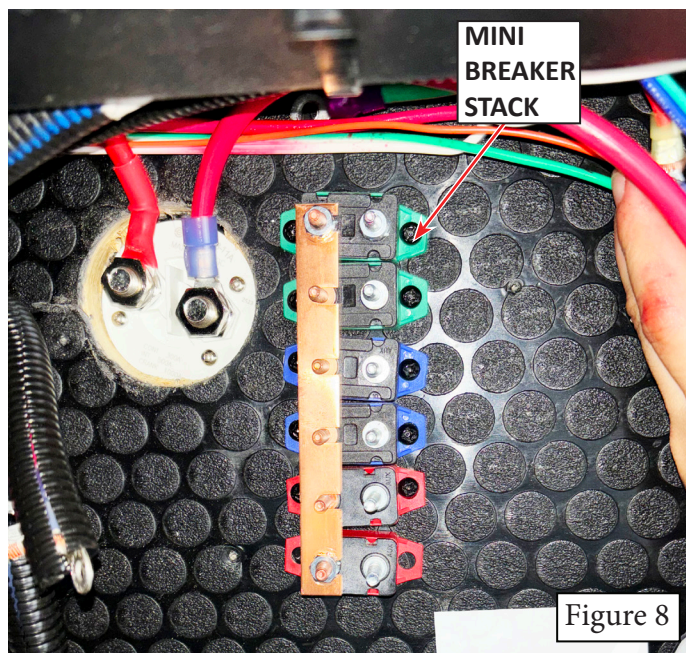
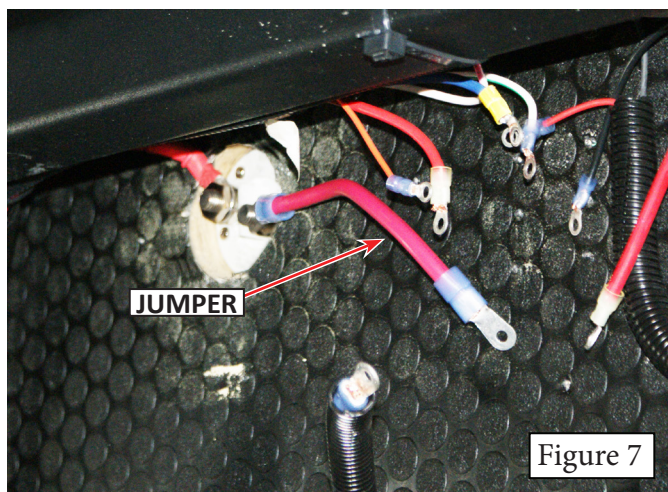
7. Combine the mini breakers by attaching them to the provided copper bus bar (P/N 102274); assemble them per diagram. Ensure the copper side of the mini breakers are attached to the copper bus bar (Figure 5):
 - Two (2) 30 AMP mini breaker (green)(P/N 100468)
 - Two (2) 15 AMP mini breakers (blue) (P/N 101093)
 - Two (2) 50 AMP mini breakers (red) (P/N101605)



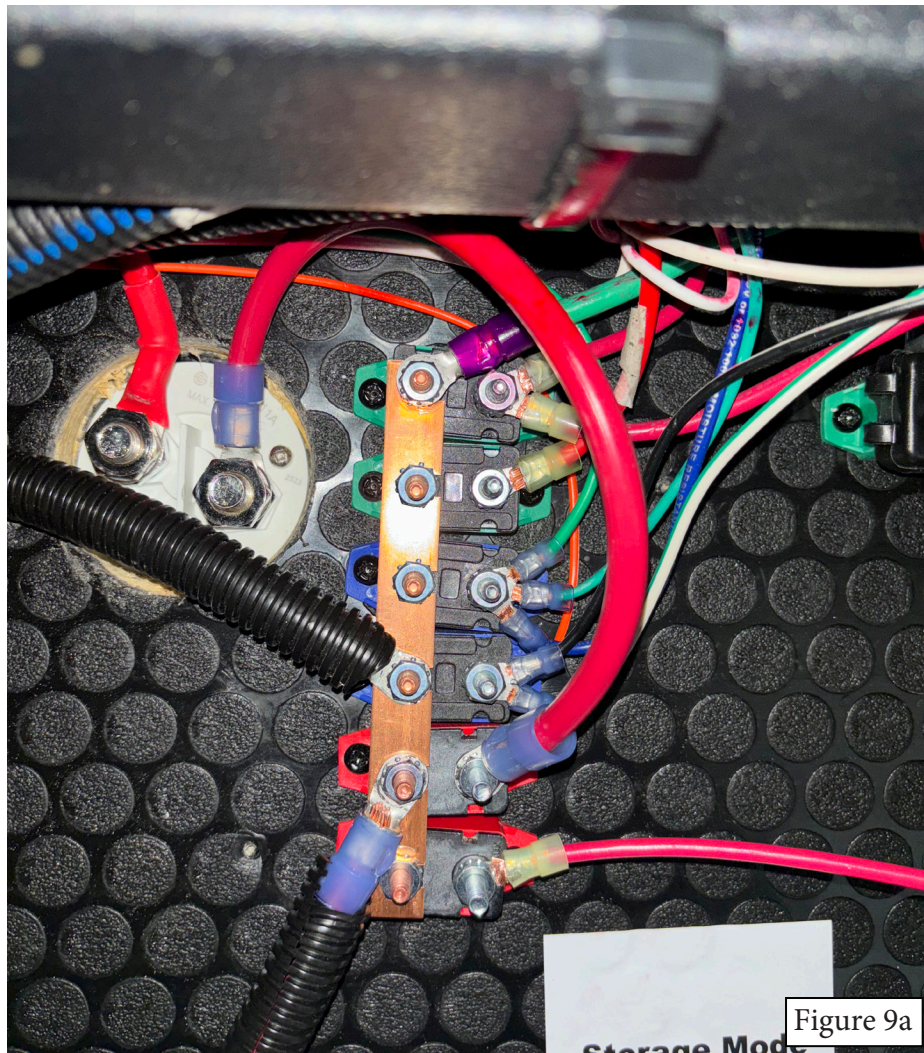
8. Make a new jumper for the travel disconnect to mini breaker connection using the provided length of 6 GA wire (P/N 100029). Install a #10 eyelet ring (P/N 100979) terminal on one end, and a large 3/8" eyelet ring terminal (P/N 100975) at the other end (Figure 6a and Figure 6b).



9. Attach the jumper end with the large eyelet terminal to the travel disconnect using the original fasteners (Figure 7).
10. Install the mini breaker stack on the back wall in the same location as the original, using the original fasteners (Figure 8). Torque the travel disconnect lug to 66 in-lbs.



11. Attach the wire terminals to the mini breakers per the attached print (Figure 9a and Figure 9b):
12. Run 6 GA red jumper assembly from travel disconnect to protected (silver) side of the bottom 50 amp mini breaker (if there are two (2) 50 amp mini breakers, install it on the second from the bottom).
13. Run 10 GA red from Slim Rack and 10 GA red from 7-way to protected (silver) side of top 30 amp mini breaker.
14. Run 10 GA red from second slim rack system to protected (silver) side of the lower 30 amp mini breaker.
15. Run 6 GA red from Solar Charger to power (copper) side of the upper 50 amp breaker (if two (2) exist).
16. Run 6 GA red from Battery Disconnect to power (copper) side of the lower 15 amp breaker.
- *Note: depending on placement, may need to replace 6 GA wire from Battery Disconnect to mini breaker.**
17. Run 16 GA black/white (cap lights) and green/white (cargo lights) to protected (silver) side of bottom 15 amp mini breaker. If included in the original install, reattach the blue 14 GA wire (relay power) to the silver (protected) side of the bottom 15 amp mini breaker.
18. Run 16 GA red tire monitor and 20 GA orange battery shunt to top 15 amp protected (silver) side of the mini breaker. ***NOTE: The color of the tire monitor wire may vary.**



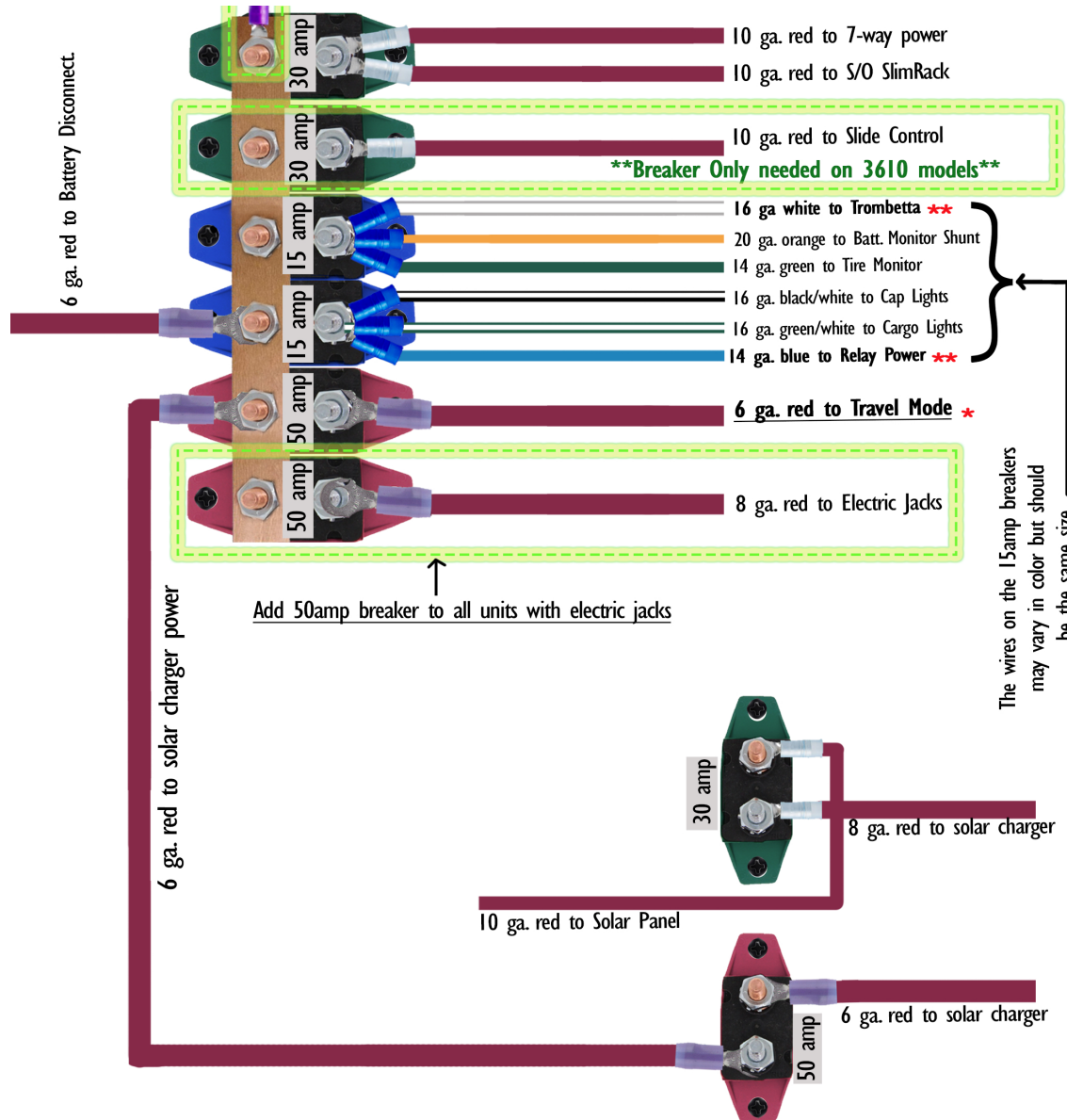


Figure 9b



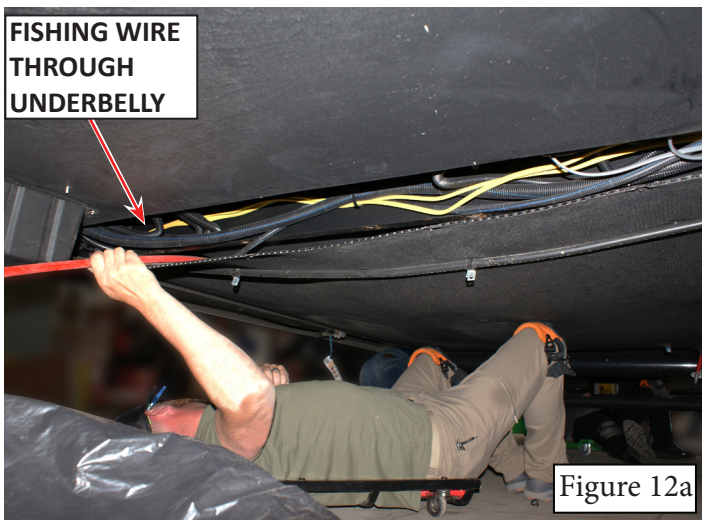
Before proceeding with the final circuit protection wiring, new larger 8ga (P/N 100067) and 14ga (P/N 106327) wires must be installed for the refrigerator power. The following procedure provides direction for that process.

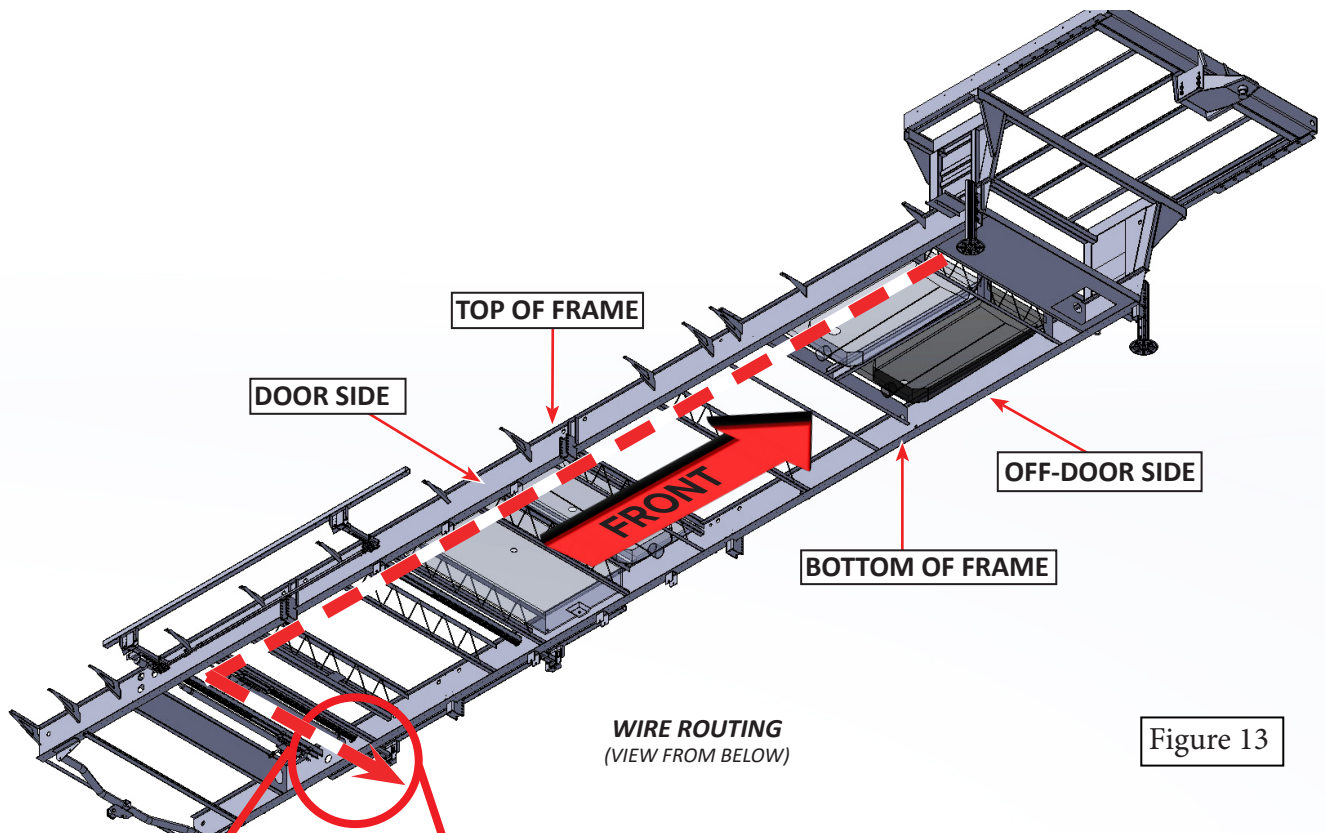
INSTALLING NEW REFRIGERATOR WIRING

19. Open up the underbelly at the front seam under (Figure 10) and rear side along the frame rail behind the axles (Figure 11) by removing self tapping screws. **DO NOT** remove the underbelly completely.



20. Using a sufficient length of plumbing pipe (PEX or other type of semi-rigid pipe, or wire puller), tape the wires to the pipe and fish them through underbelly on the door side (Figure 12a and Figure 12b) and pull them through the underbelly along the frame rail and out at the opening behind the door side rear axle.





WIRE ROUTING
(VIEW FROM BELOW)

Figure 13

21. Once the wires have been fished back behind the axles on the door side, pull the run of wire through, then fish it across the frame to the off-door side. Pull it through the hole in the frame at the rear of the off-door slide used for wiring to pass through (Figure 13 and Detail A).
22. Pull that run of wires through the hole and run it through the wire supports on the Flex Guard under the rear of the slide out (Figure 14).



Detail A

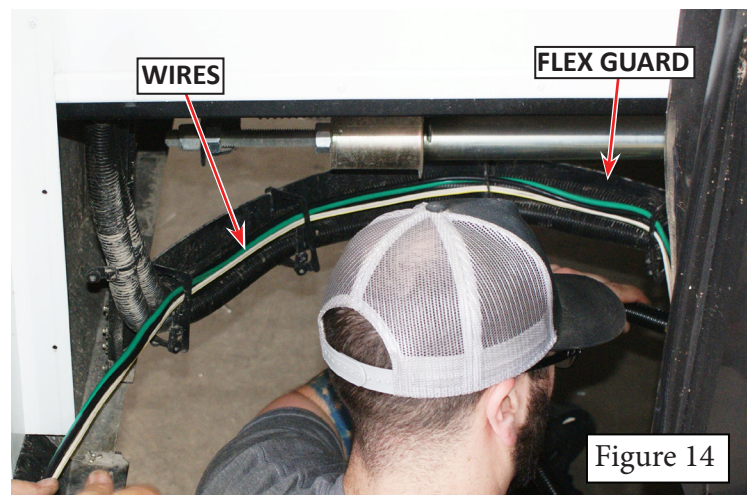
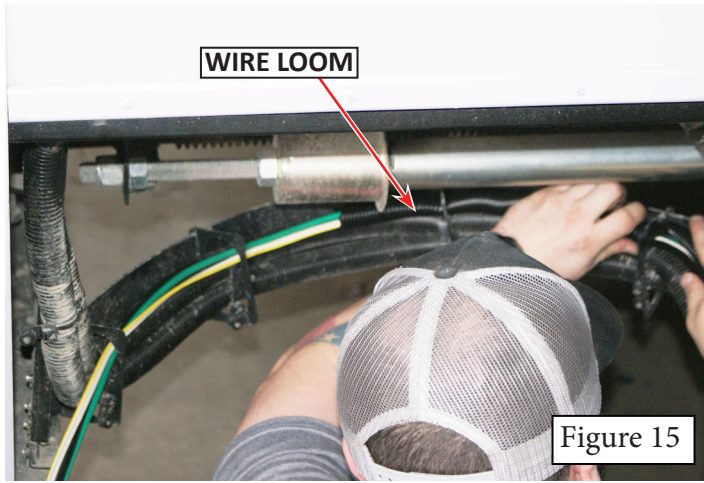
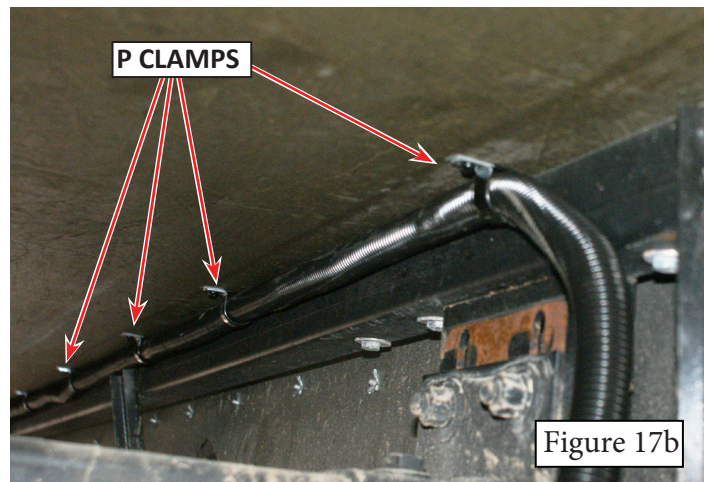
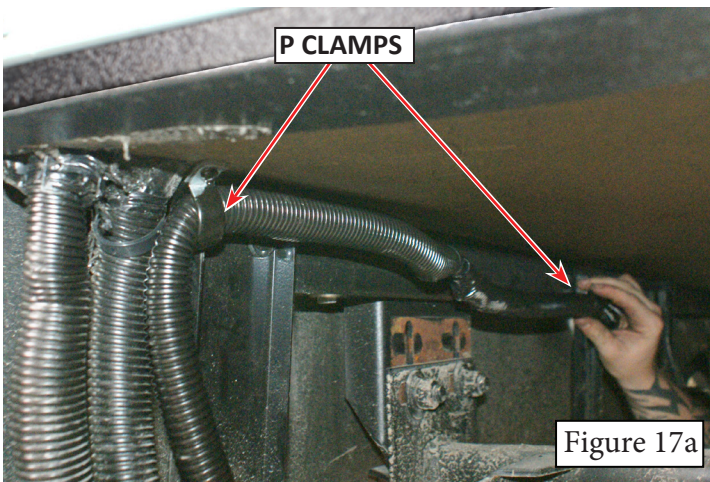


Figure 14

- 23. Cover the new wires attached to the Flex Guard in protective plastic loom (not supplied) (Figure 15).
- 24. Cover the rest of the new wires to be used in protective plastic loom (Figure 16) from the end of the Flex Guard to the bottom of the slide room floor.



- 25. Secure the wire looms to the slide out box along the outside rail (Figure 17a and Figure 17b) using wood screws and P-clamps (not supplied) every 12” - 16” the length of the slide out box.

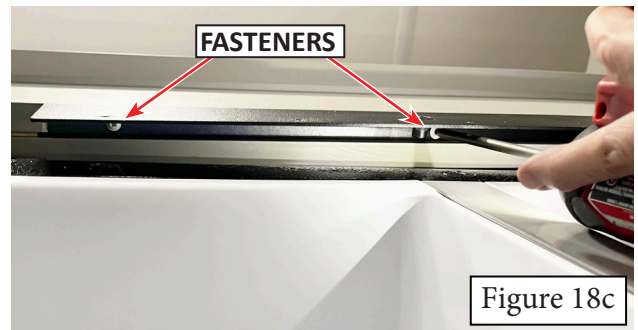
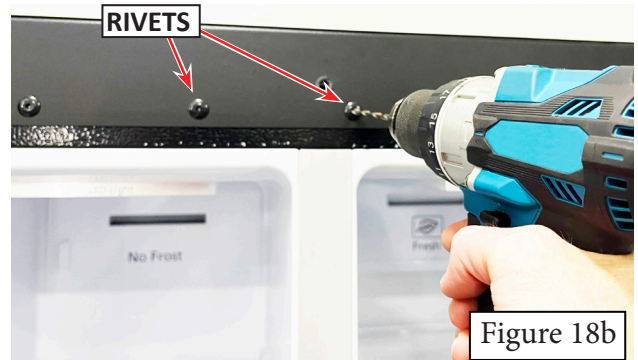
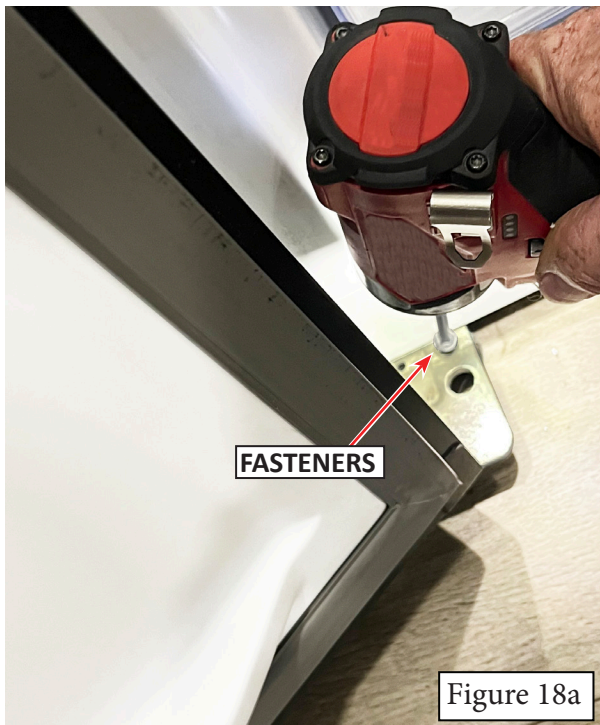


P CLAMP

+ NOTICE

NOTICE: Use caution and protect floor to prevent damage to the flooring while moving the refrigerator!

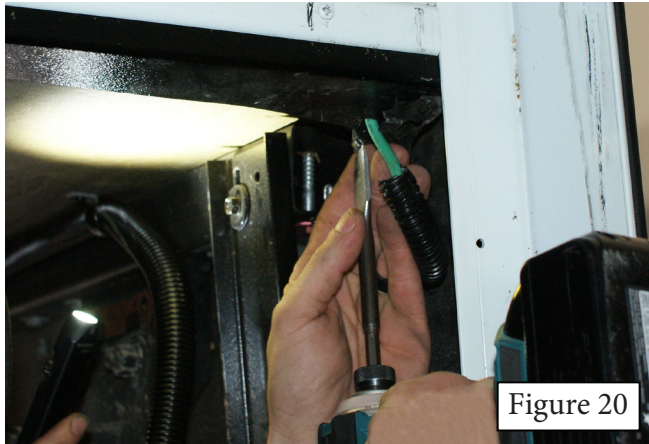
26. Inside the RV, use a screwgun and #2 square bit to remove the two (2) fasteners at the bottom corners of the refrigerator (Figure 18a). Retain fasteners.
27. Using an 11/64" bit, drill out the five (5) rivets from the upper refrigerator bracket (Figure 18b).
28. Gently push the refrigerator back in the opening to access the three (3) vertically installed screws holding the bracket to the cabinet above (Figure 18c). Use a screwgun and #2 square bit to remove the three (3) fasteners securing the bracket.



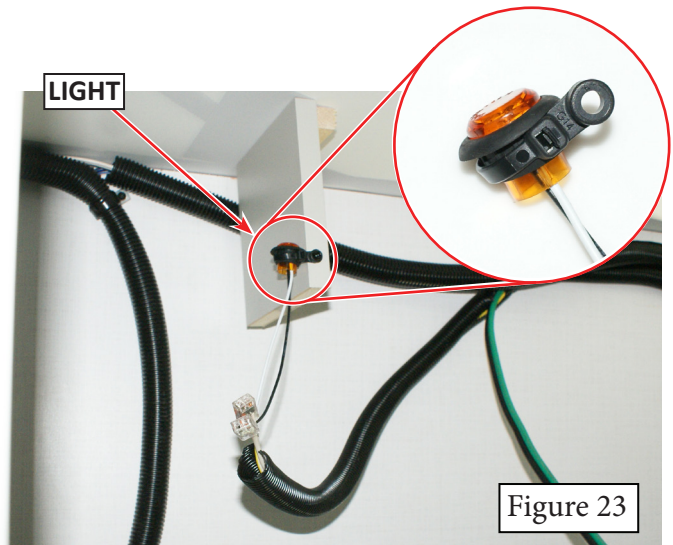
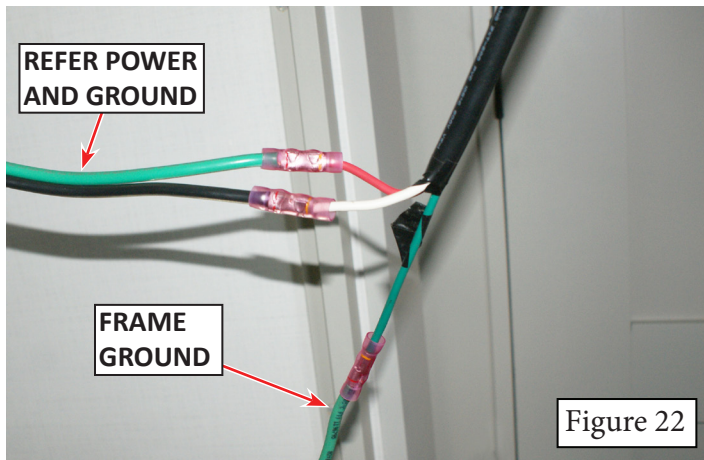
29. Remove bracket (Figure 18d)
30. Carefully pull the refrigerator out of the slide out to gain access to the wiring behind it (Figure 19).



31. Using a screw gun and a 3/4" butterfly bit, drill a hole in the in the floor of the slide out box in the back corner of the refrigerator area (Figure 20).
32. Fish the wires up through the hole (Figure 21).



33. Install butt connectors (P/N 106821) on the new refrigerator 8ga wires and connect the refrigerator (Figure 22).
34. Install another butt connector to replace the existing frame ground connection (Figure 22).
35. Position the amber light in the refrigerator cabinet so it can be seen when illuminated. Connect 14ga to light wires using Wago connectors (P/N 101917)(Figure 23).



36. Loom (not provided) the refrigerator wiring and light wiring (Figure 24).

37. Secure the wiring to the wall behind the refrigerator with zip ties and screws (not provided)(Figure 25).



Figure 24

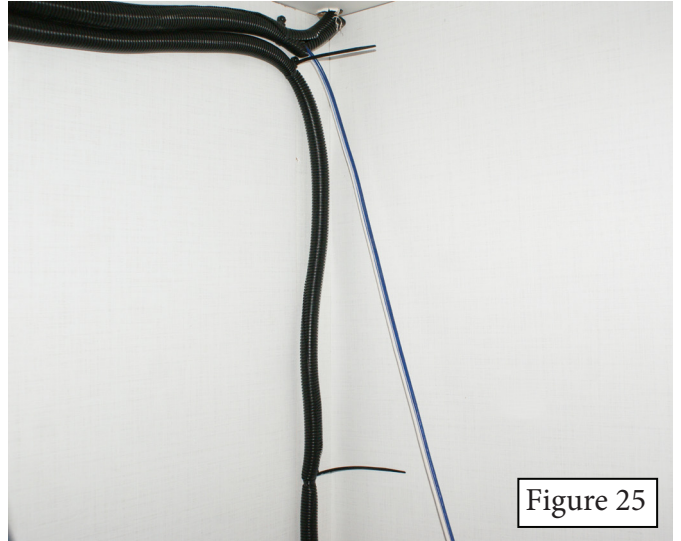


Figure 25

38. Carefully install refrigerator back into opening (Figure 26) and secure with original screws and five (5) new rivets (P/N 105866).

39. Using an externally rated sealant (not provided), seal where the wiring passes through under the slide out room (Figure 27), where the P-clamps attach and (if necessary) where the wiring passes through the RV frame and the hole in the frame rail (not shown)



Figure 26

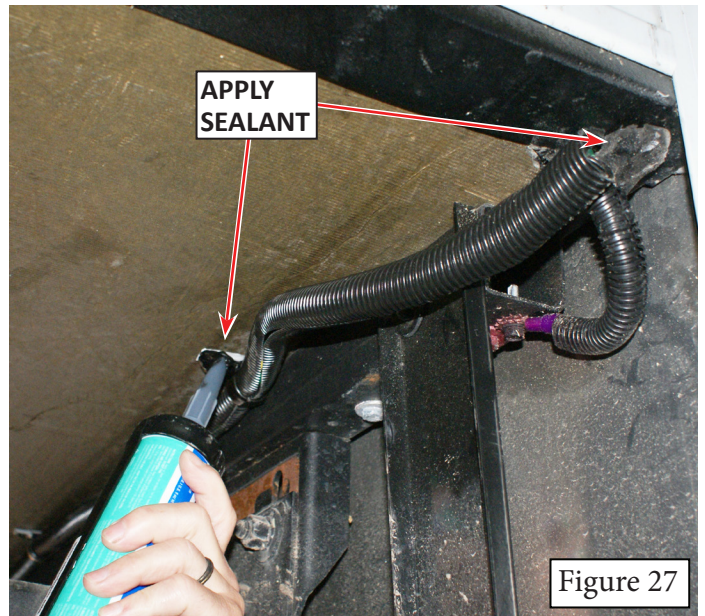
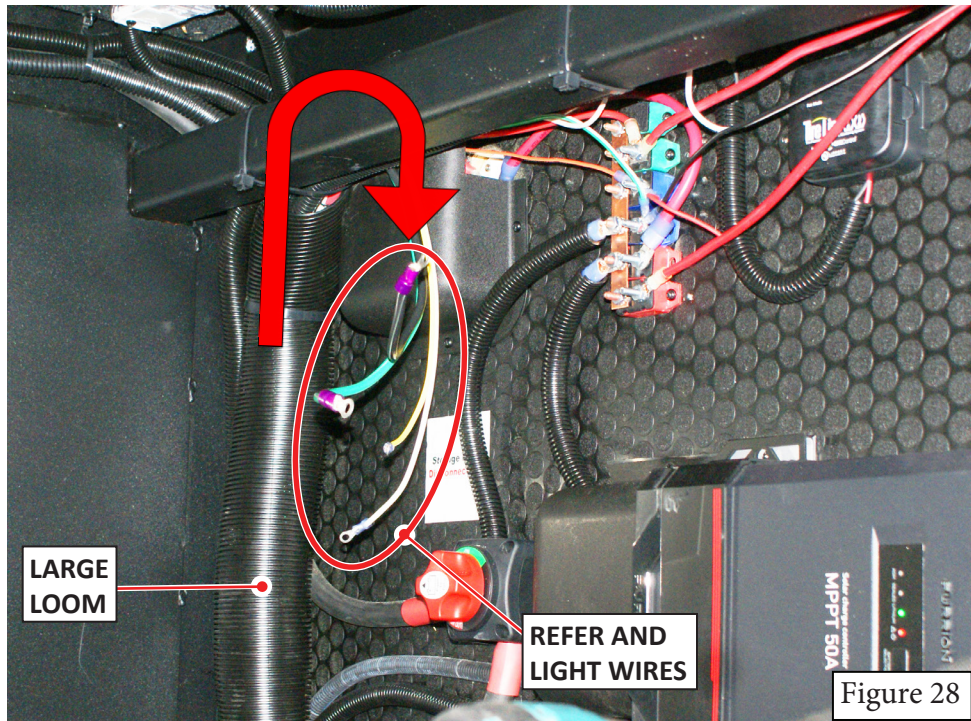
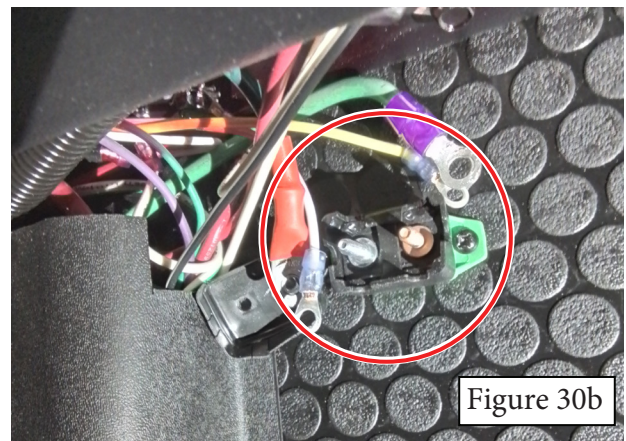
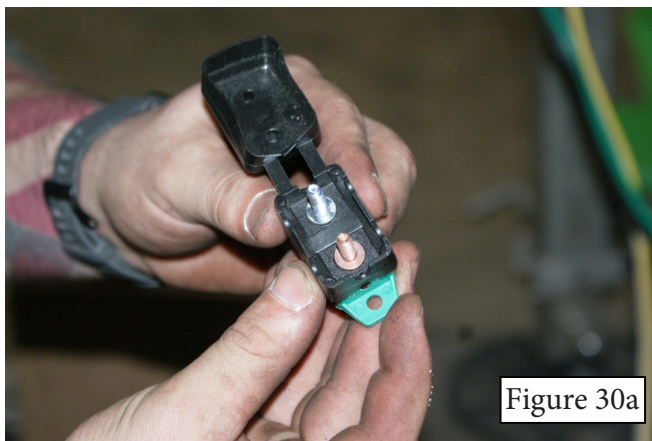


Figure 27

40. Run the refrigerator and light wires up through the large loom into the front cargo bay with the rest of the wires. Install connector eyelets (P/N 101645 for 14ga, P/N 101656 for green 8ga, P/N 100981 for black 8ga) on the wires (Figure 28).

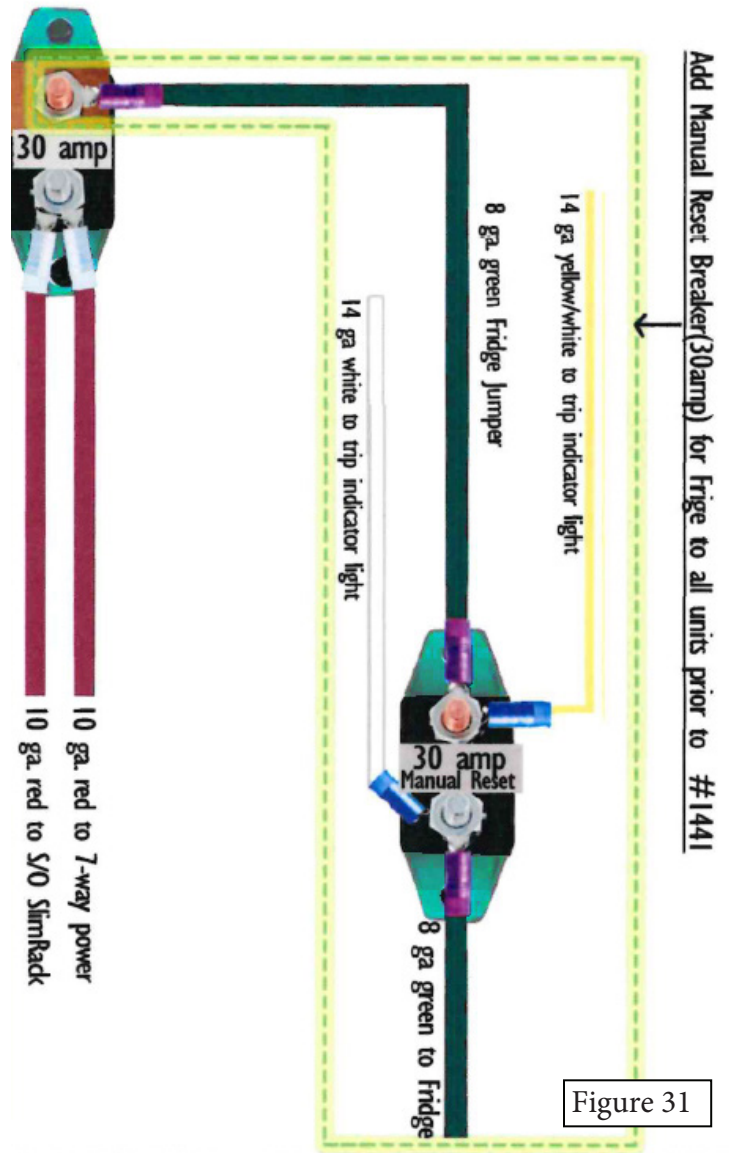
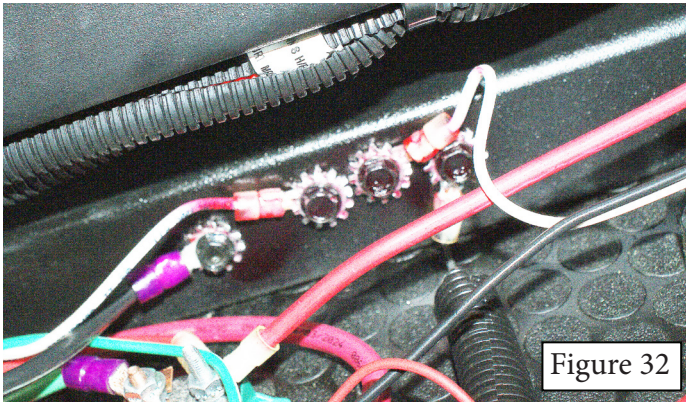


41. Cut old fridge wires (blue/white) behind loom and tuck away (not shown).
42. Install 30 amp resettable mini breaker (P/N 106328) with attached cover (P/N 109559) on the wall (Figure 30a and Figure 30b).



43. Connect wiring for the refrigerator resettable mini breaker (Figure 31):

- Install terminal (P/N 101656) onto 8ga green wire. Connect it the protected (silver) side of the manual reset breaker.
- Install terminal (P/N 100981) on the 8ga black wire and ground it to the crossbar with the other grounded circuits (Figure 32).
- Connect 14 GA yellow to power (copper) side and white to protected (silver) side on 30 amp manual reset mini breaker.
- Make an 8 GA green jumper with purple ring terminals (P/N 101656) from 30 amp resettable power (copper) side and run to 30 amp mini breaker power (copper) side.
- Snap cover shut on refrigerator mini breaker.



44. Close and seal underbelly openings used to route wires (Figure 33).
45. Turn on battery disconnects and plug RV in. Check for proper operation of the refrigerator.
46. Install plastic covers over Travel Disconnect and mini breaker wiring.
47. Repair complete (reference Figure 34 - final diagram on the final page).



Figure 33

Add Manual Reset Breaker(30amp) for Frige to all units prior to #1441

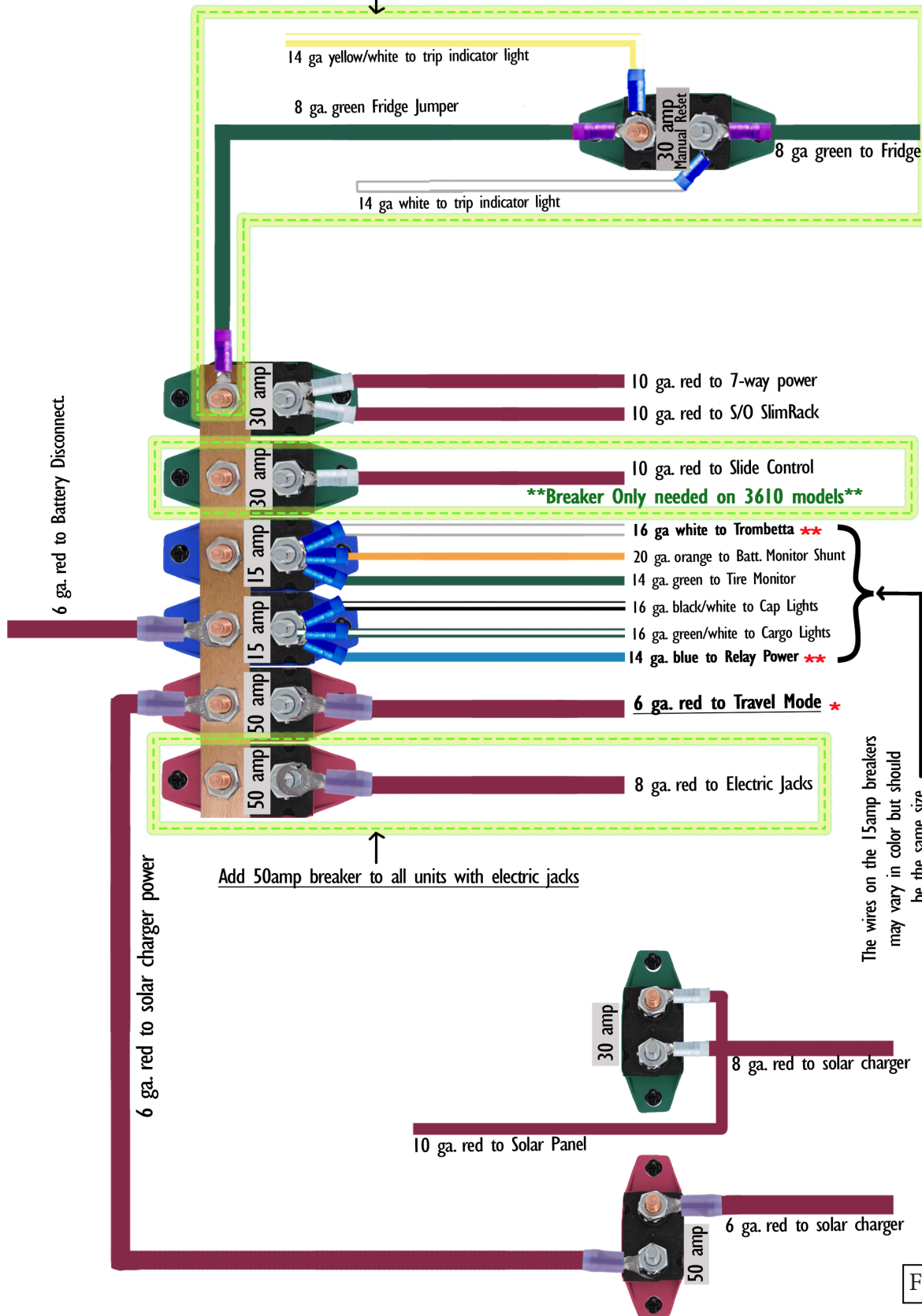


Figure 34