



THE FORT POP-UP ROOF OEM INSTALLATION MANUAL

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Introduction

The Lippert Fort Pop-up Roof system is a manually operated pop-up bed system assisted by gas struts. The system comes fully assembled, only requiring installation to the roof of the unit.

For information on the assembly or individual components of this product, please visit:

<https://support.lci1.com/beds/>

NOTE: Images used in this document are for reference only when assembling, installing and/or operating this product. Actual appearance of provided and/or purchased parts and assemblies may differ.

Safety

Read and understand all instructions before installing or operating this product. Adhere to all safety labels.

This manual provides general instructions. Many variables can change the circumstances of the instructions, i.e., the degree of difficulty, operation and ability of the individual performing the instructions. This manual cannot begin to plot out instructions for every possibility, but provides the general instructions, as necessary, for effectively interfacing with the device, product or system. Failure to correctly follow the provided instructions may result in death, serious personal injury, severe product and/or property damage, including voiding of the Lippert limited warranty.

WARNING

The "WARNING" symbol above is a sign that a procedure has a safety risk involved and may cause death or serious personal injury and/or severe product and property damage, including voiding of the component warranty if not performed safely and within the parameters set forth in this manual.

WARNING

Failure to follow instructions provided in this manual may result in death, serious personal injury and/or severe product and property damage, including voiding of the component warranty.

WARNING

Make sure unit is fully supported and secured per manufacturer's recommendations before working on or underneath the unit or death, serious personal injury and/or severe product and property damage, including voiding of the component warranty, may occur.

CAUTION

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

CAUTION

Always wear eye protection when performing service, maintenance or installation procedures. Other safety equipment to consider would be hearing protection, gloves and possibly a full face shield, depending on the nature of the task.

CAUTION

Do NOT stand up OR step on the pop up. The pop up roof system is NOT designed for external loads. Standing up on the pop up, or using the pop up as a step, will cause product and/or property damage, possible personal injury and void the limited warranty.

CAUTION

Do NOT load the pop up roof system with ANY kind of cargo for storage OR transportation. Cargo stored or transported in the pop up roof system can cause product and/or property damage, possible personal injury and void the limited warranty. The pop up roof system is NOT designed for cargo storage or for transportation of cargo.

CAUTION

Moving parts can pinch, cut or crush. Keep clear and use caution.

Resources Required

- 2-3 persons, depending on task
- Cordless or electric drill
- Assorted drill bits
- Assorted drive bits
- 7/16" Wrench
- 1/2" Wrench
- Permanent marking method
- Silicone sealant

Preparation

Identify The Fort Pop-up Roof system to be installed:

- 2022116607 - Large
- 2022116591 - Small

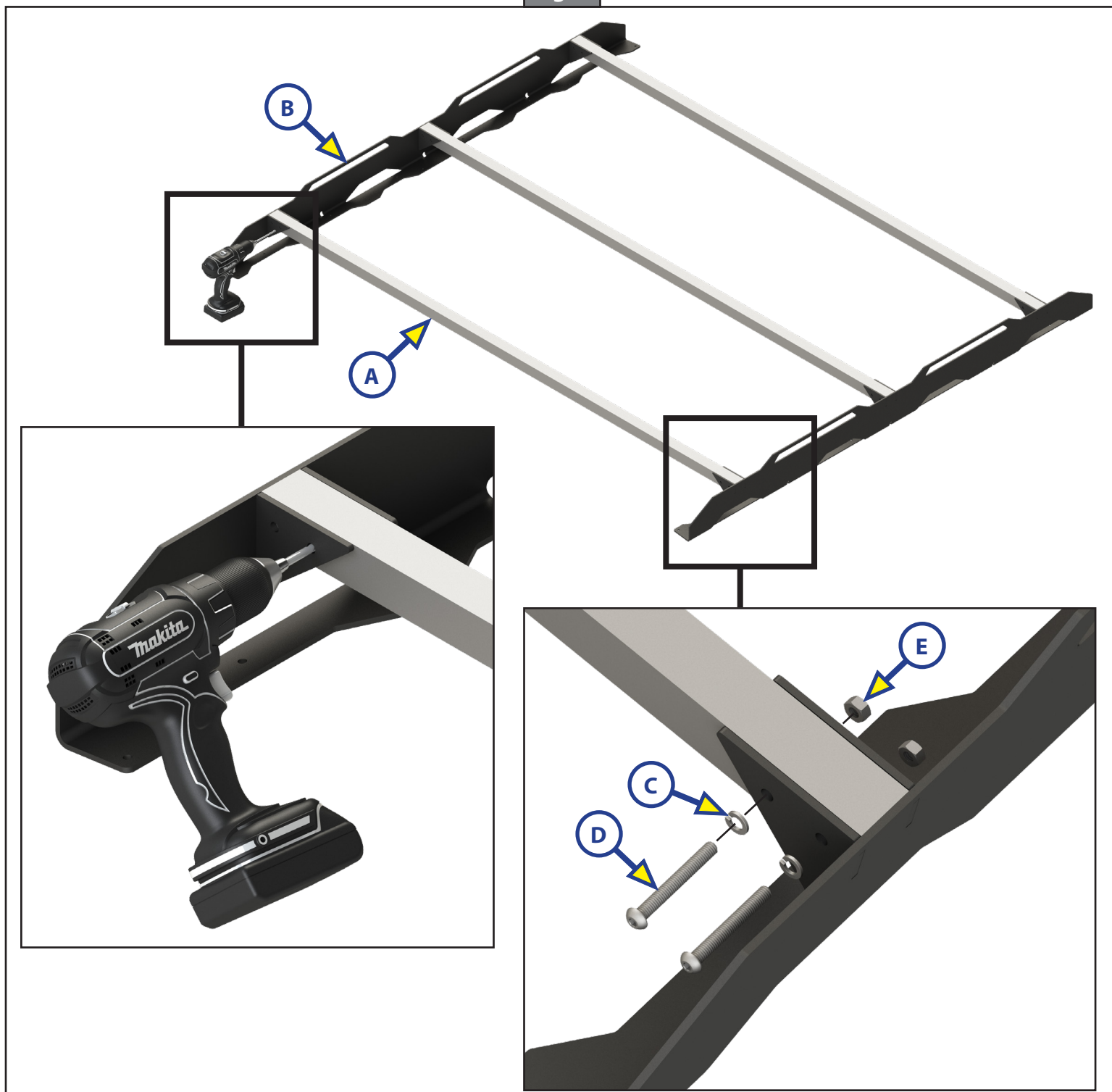
Pop-up Roof System Preparation

1. Make sure towable unit is level.
2. Make sure towable unit is properly supported and secured.
 - A. Chock all tires.
 - B. Open entry door to provide access to roof from inside.
3. Construct and position scaffolding to safely access and work on towable unit roof.

Pop-up Roof System Assembly Preparation

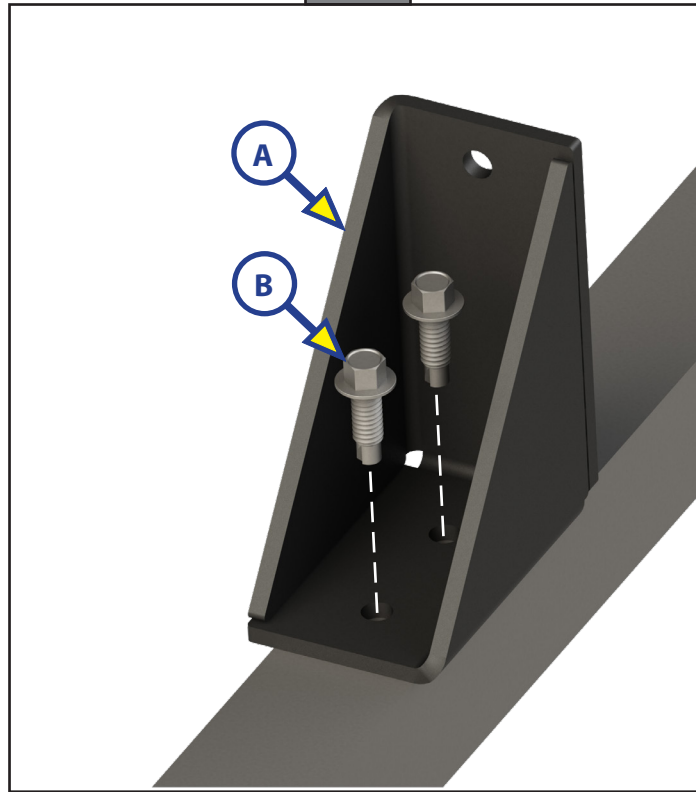
1. Assemble the pop-up roof mounting rack.
 - A. Place a crossbar (Fig. 1A) into one of the three angle brackets located on a main support frame (Fig. 1B) with the top of the crossbar flush to the top of the angle bracket.
 - B. If necessary, clamp the crossbar in-place to accurately hold its position while drilling holes.
 - C. Using the holes in the angle brackets as a guide, use a drill and an appropriate-sized drill bit to drill completely through the crossbar.
 - D. Slide 5/16" x 9/16" helical lock washers (Fig. 1C) onto two 5/16"-18 x 2 1/2" hex socket button head bolts (Fig. 1D), then insert the bolts through the angle bracket and crossbar.
 - E. Secure bolts in-place with 5/16"-18 hex nuts (Fig. 1E).

Fig. 1



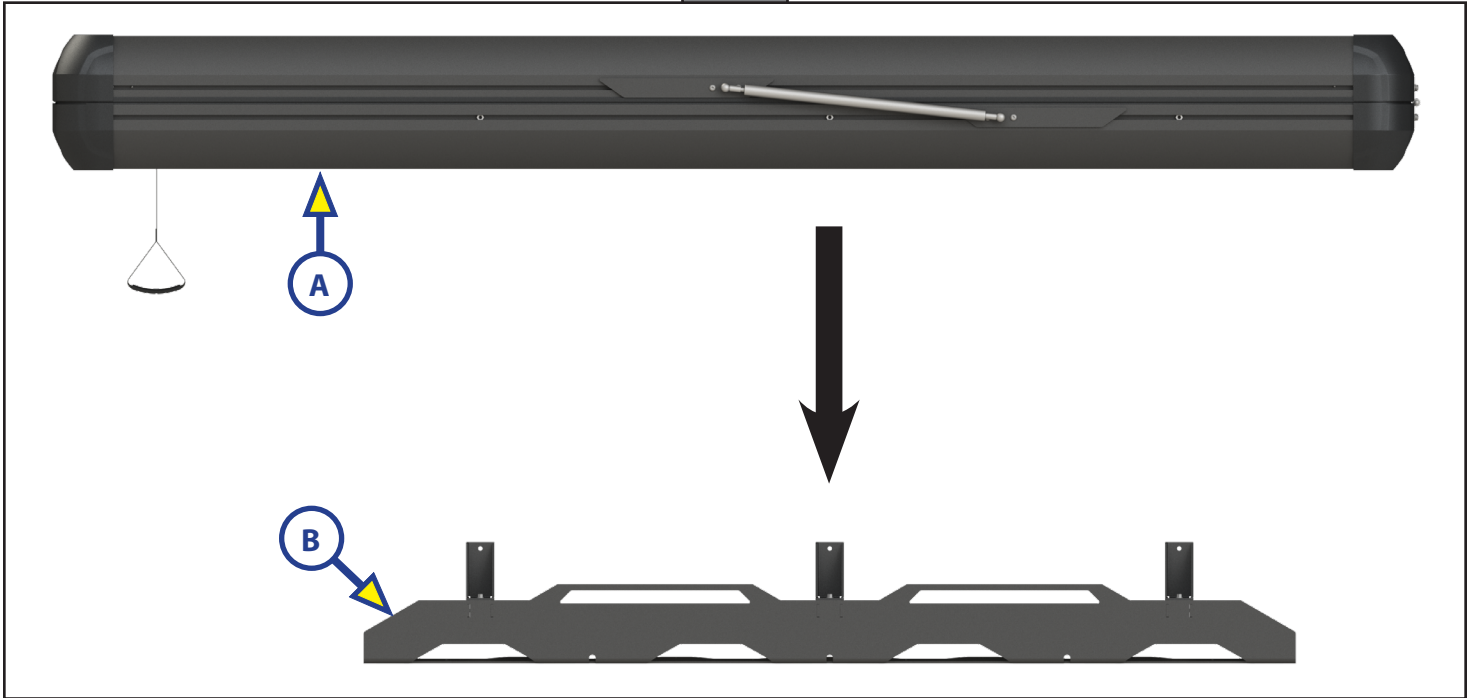
- F. Repeat steps A-E to attach two more crossbars to the main support frame.
- G. Place the other ends of the previously assembled crossbars into each of the three angle brackets on a second main support frame.
- H. Repeat steps B-E to attach the three crossbars to the second main support frame.
- I. Place an angled pop-up roof support (Fig. 2A) in position on a crossbar.
 - I. The side of the support with two holes mates to the crossbar.
 - II. The side of the support with one hole faces inward, where the pop-up roof will be placed.
 - III. Secure the support in-place with two 5/16"-18 x 1" hex washer head self-drilling screws (Fig. 2B).

Fig. 2



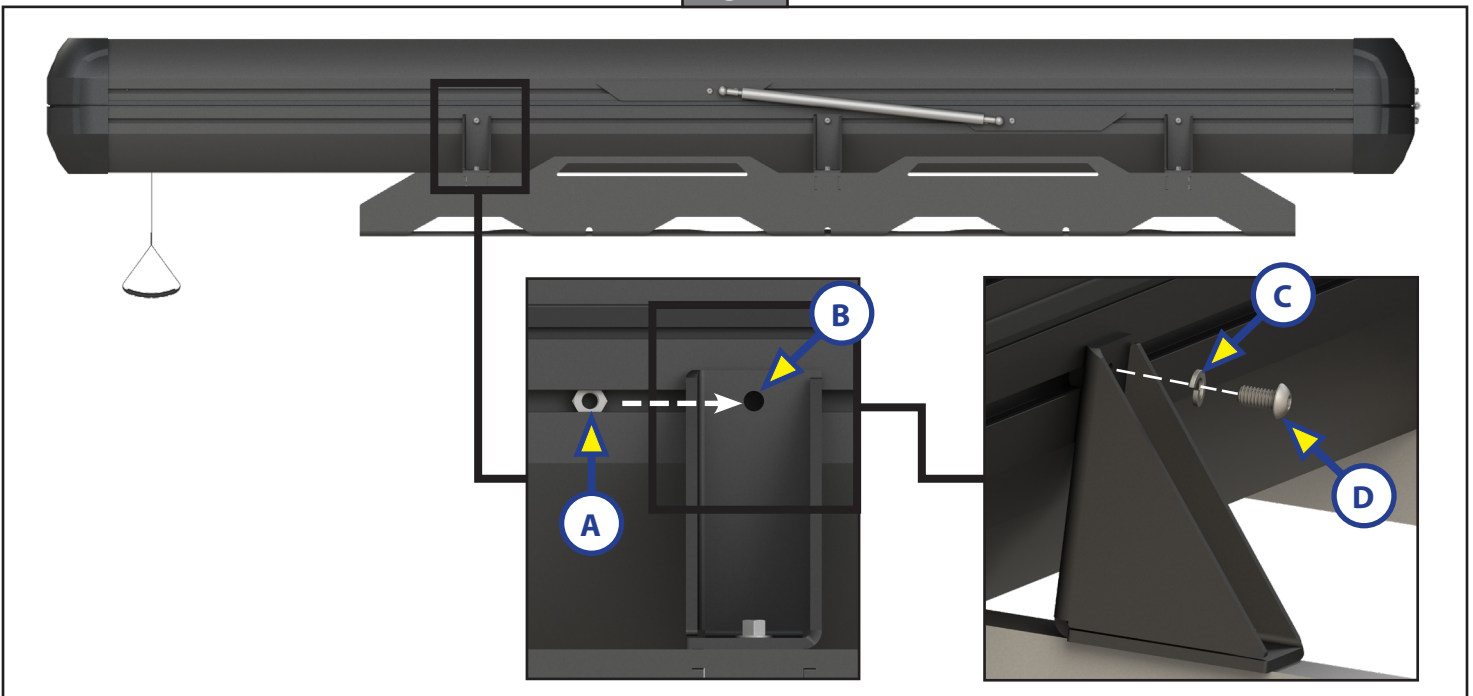
- J. Repeat step G to install the remaining five angled pop-up roof supports.
2. Assemble the pop up roof to the roof mounting rack.

Fig. 3



- A. Set the pop up roof (Fig. 3A) onto the mounting rack (Fig. 3B).
- B. Slide each captured $5/16"$ -18 hex nut (Fig. 4A) in the groove located in the bottom half of the pop up to align with the mounting hole (Fig. 4B) of each rack's support.
- C. Place a $5/16"$ x $9/16"$ helical lock washer (Fig. 4C) onto a $5/16"$ -18 x $5/8"$ hex socket head machine screw (Fig. 4D) then insert the assembled screw through the support and engage the captured hex nut. Turn the screw a few times to capture the nut, but do not fully tighten at this time.

Fig. 4

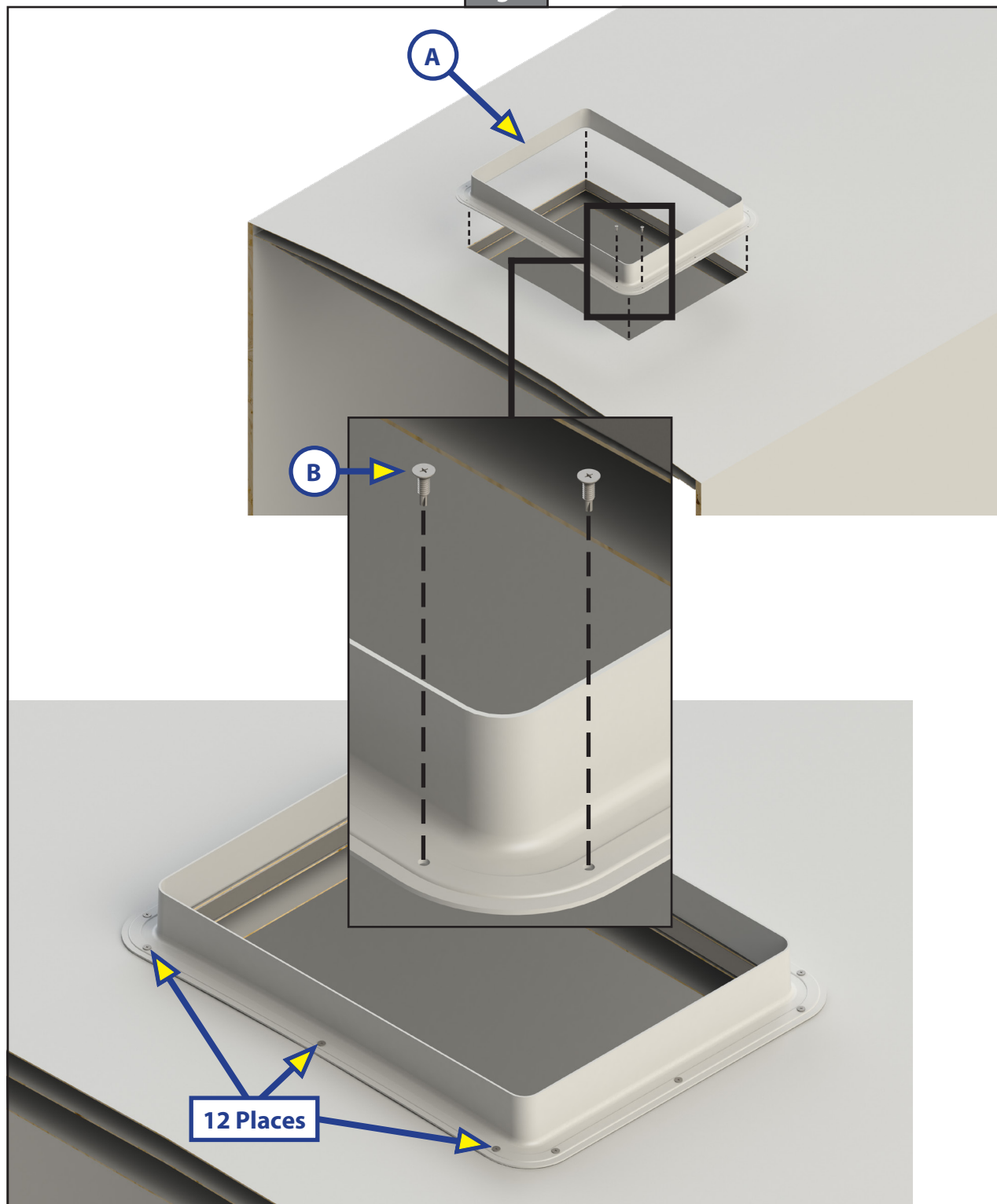


- D. Repeat steps B-C for the remaining five mounting supports.

Installation of Pop Up Roof System

1. Set the pass through sealing trim (Fig. 5A) on the roof of the unit, aligning it with pass through cutout opening.
2. Using a drill and appropriate drive bit, secure the pass through sealing trim to the roof of the unit with twelve 1/4"-14 x 3/4" Phillips flathead self-drilling screws (Fig. 5B).
3. Apply a silicone sealant over each screw (step 2) to seal against moisture.

Fig. 5



4. Set the assembled pop up roof system (Fig. 6A) on top of the unit (Fig. 6B), making sure the pop up's pass through cutout aligns with the previously installed (step 2) sealing trim (Fig. 5A).
 - A. Adjust the placement of the assembled pop up to be aligned with the center of the unit's roof line and centered side-to-side of the unit's roof edges (Fig. 7).

Fig. 6

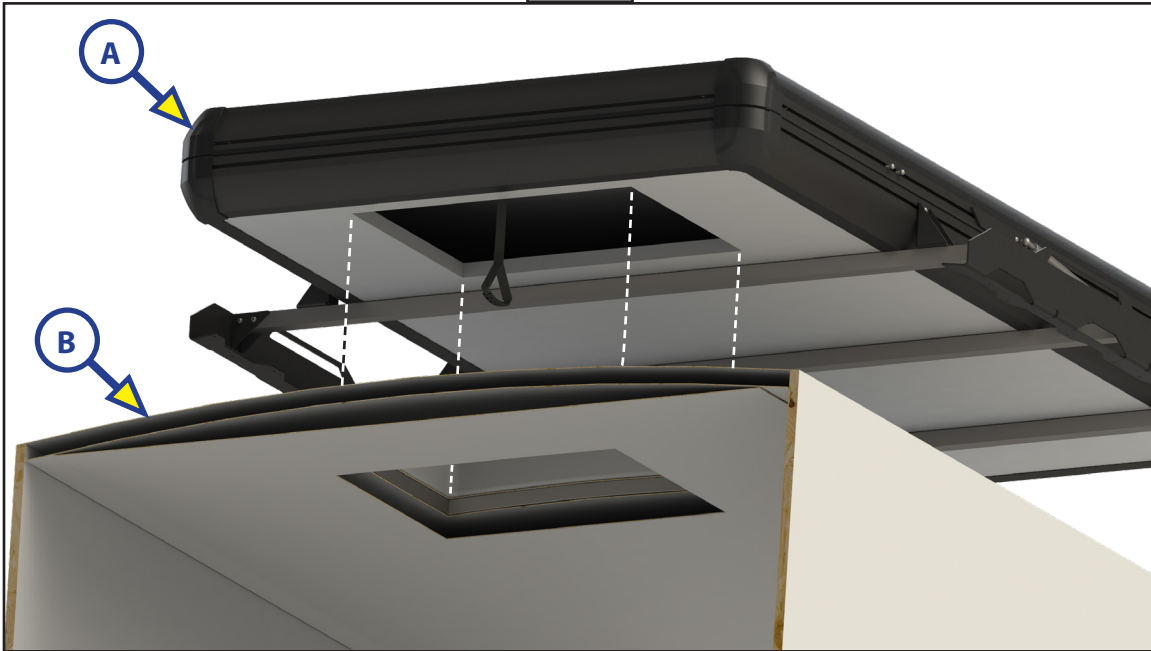
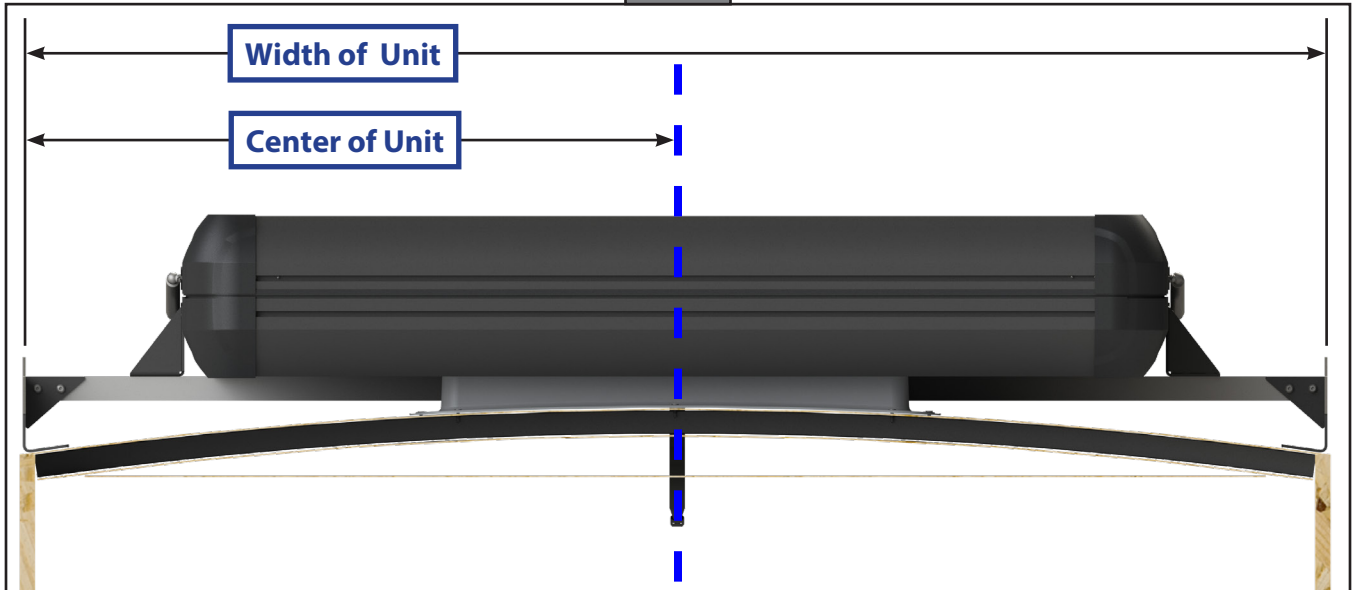
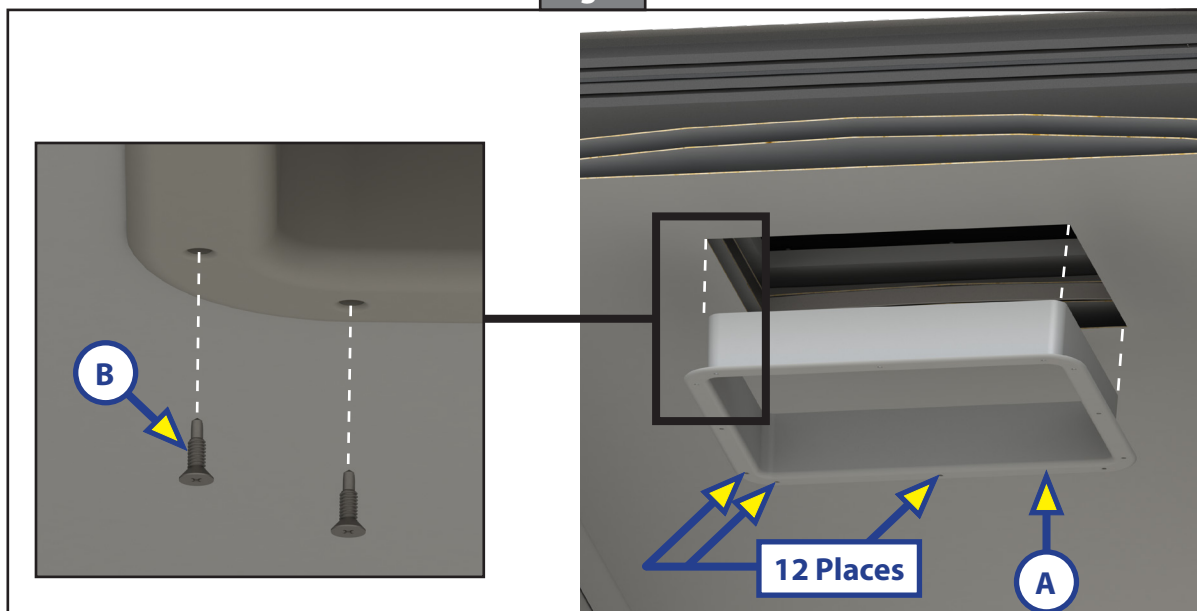


Fig. 7



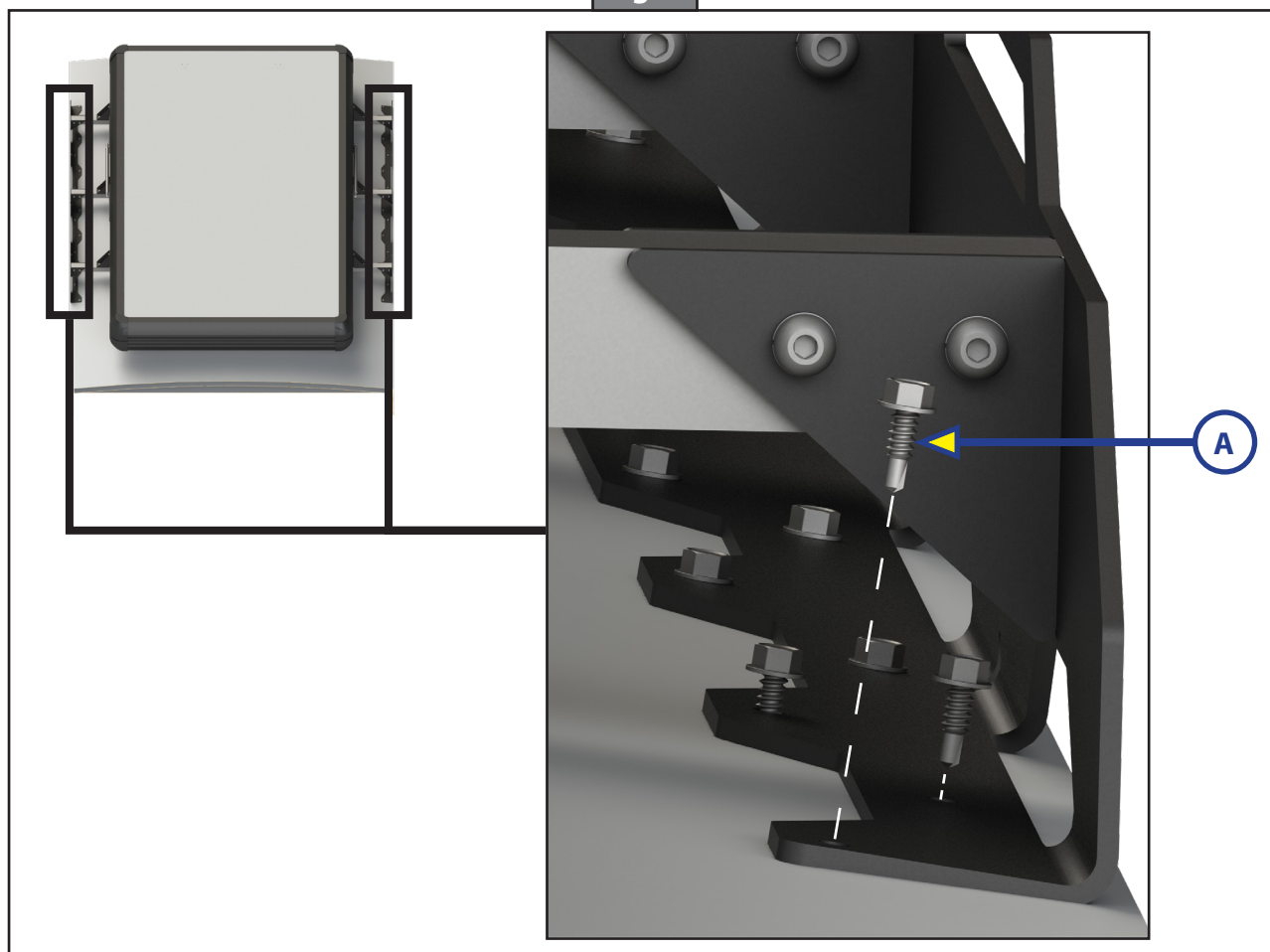
- B. From inside of the unit, insert the bottom trim (Fig. 8A) within the cutout opening.
- C. Using a drill and appropriate drive bit, secure the bottom trim to the unit's ceiling with twelve 1/4"-14 x 3/4" Phillips flathead self-drilling screws (Fig. 8B).

Fig. 8



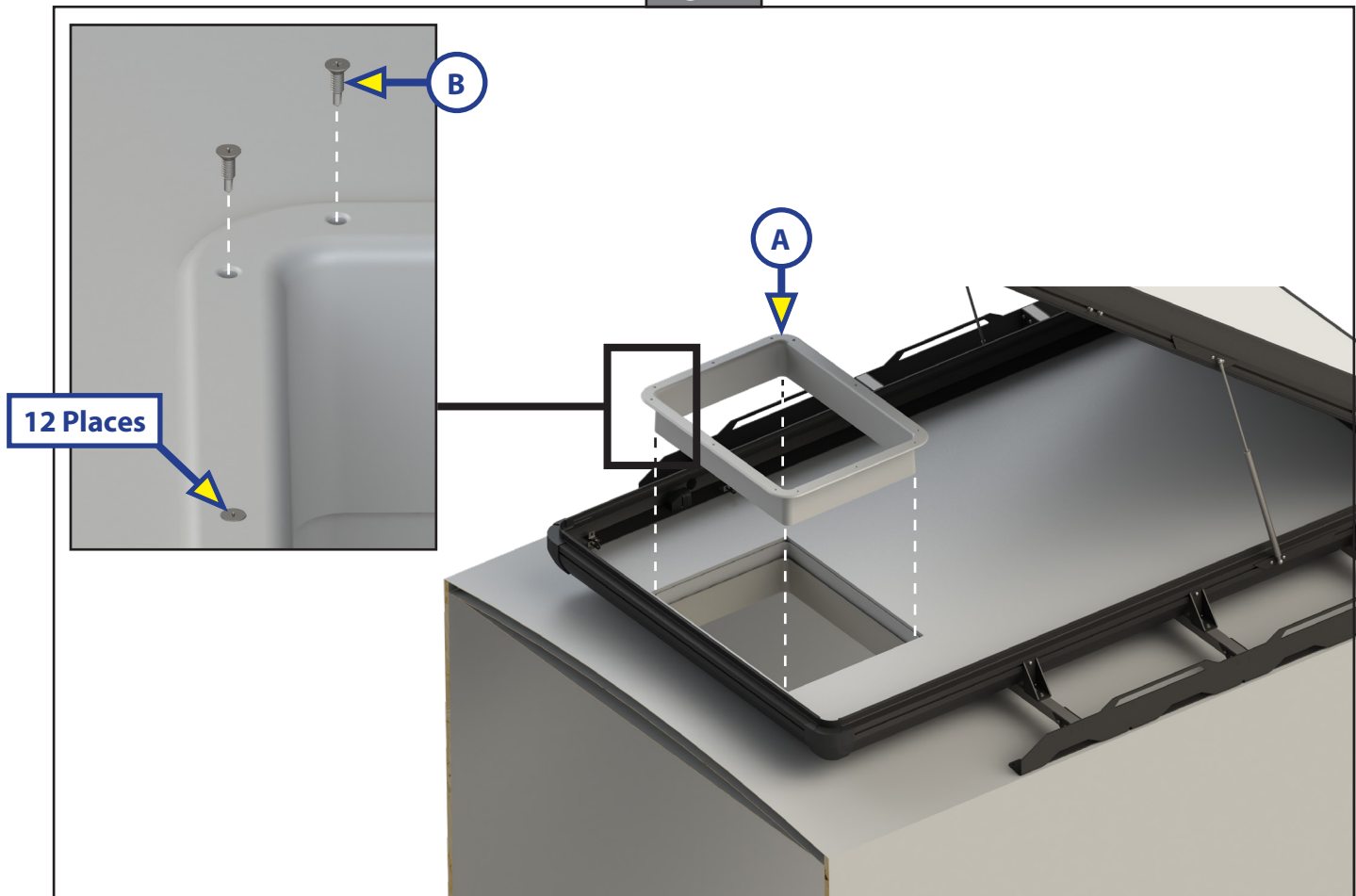
- 5. While making sure the pop up roof system is held in-place, secure the roof mounting rack to the unit's roof with twenty-eight 1/4"-14 x 3/4" hex flange self-drilling screws (Fig. 9A).

Fig. 9



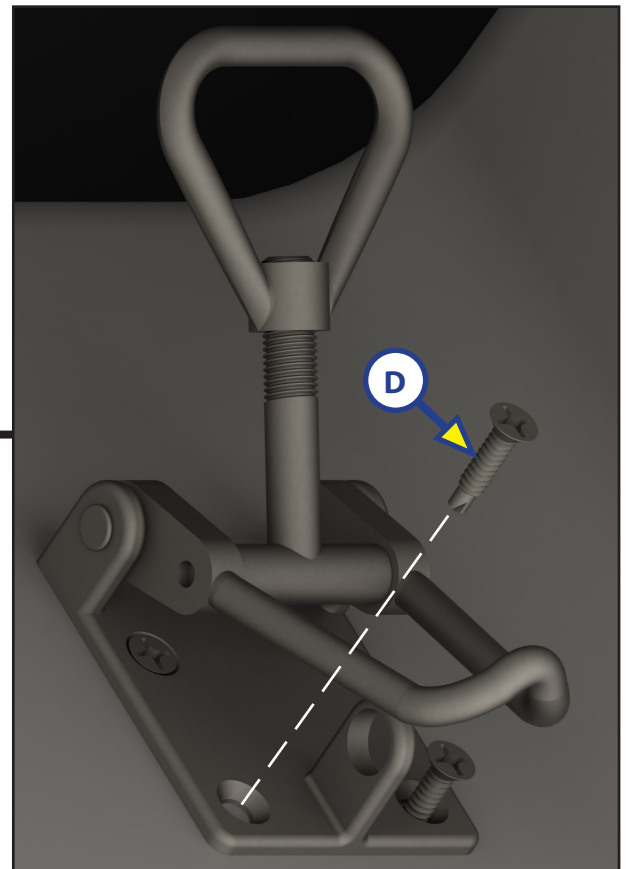
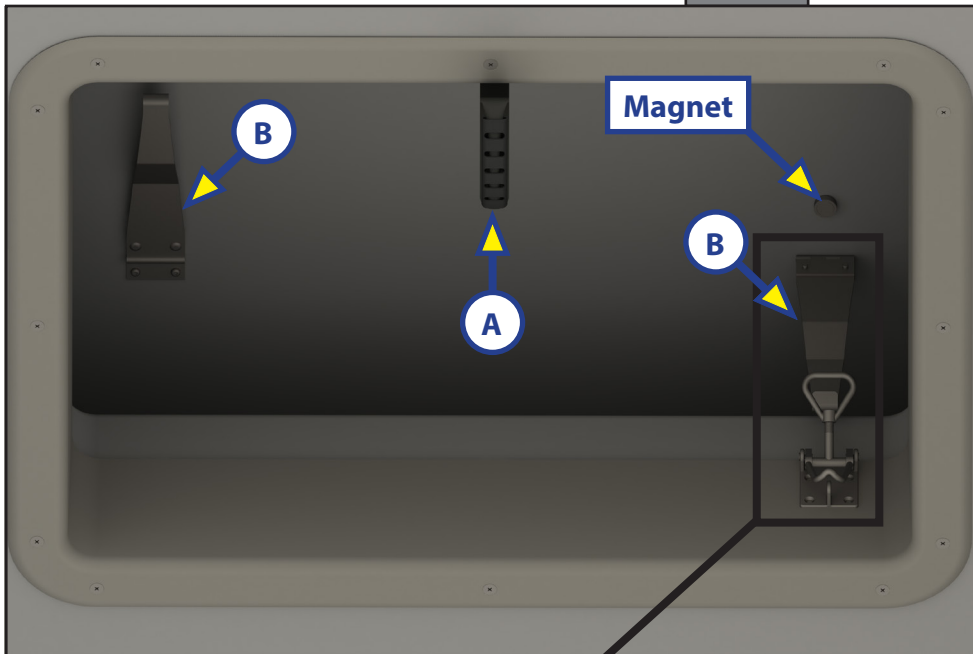
6. Fully open the pop up roof.
 - A. From inside the pop up roof system, insert the top trim (Fig. 10A) into the cutout opening.
 - B. Using a drill and appropriate drive bit, secure the top trim to the pop up roof system's floor with twelve 1/4"-14 x 3/4" Phillips flathead self-drilling screws (Fig. 10B).

Fig. 10



7. Install the two latch assemblies.
 - A. Use the pull strap handle (Fig. 11A) to pull down the pop up roof closed.
 - B. Pull down each latch plate (Fig. 11B) from its magnetically-stored position.
 - C. With each latch assembly in the closed position (Fig. 11C), engage the latch plates with the latch assemblies' open clasp.
 - D. Place the mounting base of each latch assembly against the pass through trim and mark the location of mounting holes.
 - E. Release the latch plates from the latch assemblies then secure each latch assembly in-place with four #8-18 x 3/4" flat Phillips head screws (Fig. 11D).

Fig. 11



Optional Solar Panel Installation

If equipping The Fort roof system with a solar panel, install the supplied solar panel mounting frames.

1. Mount the two solar mounting frames to the top half of the pop up roof system in similar fashion as the bottom half of the pop up roof to the roof mounting bracket (step 2.B. of the Pop-up Roof System Assembly Preparation section).
 - A. Set the two solar mounting frames (Fig. 12A) on the top of the pop up roof.
 - B. Slide each captured nut in the groove located in the top half of the pop up to align with the mounting holes of each solar mounting frame.
 - C. Place a 5/16" x 9/16" lock washer (Fig. 13A) onto a 5/16"-18 x 5/8" hex socket head machine screw (Fig. 13B). Repeat assembly for seven more washers and screws.
 - D. Insert assembled screws into each of the solar frame's mounting holes, engaging the 5/16"-18 hex nuts (Fig. 13). Turn the screws a few times to capture the nut, but do **NOT** tighten down at this time.

Fig. 12

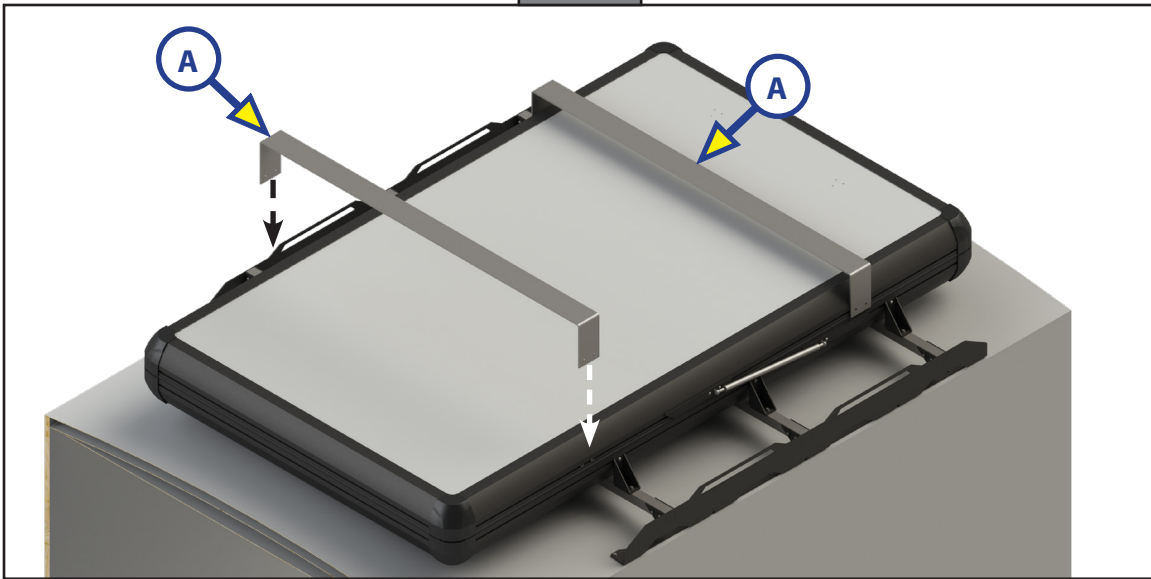
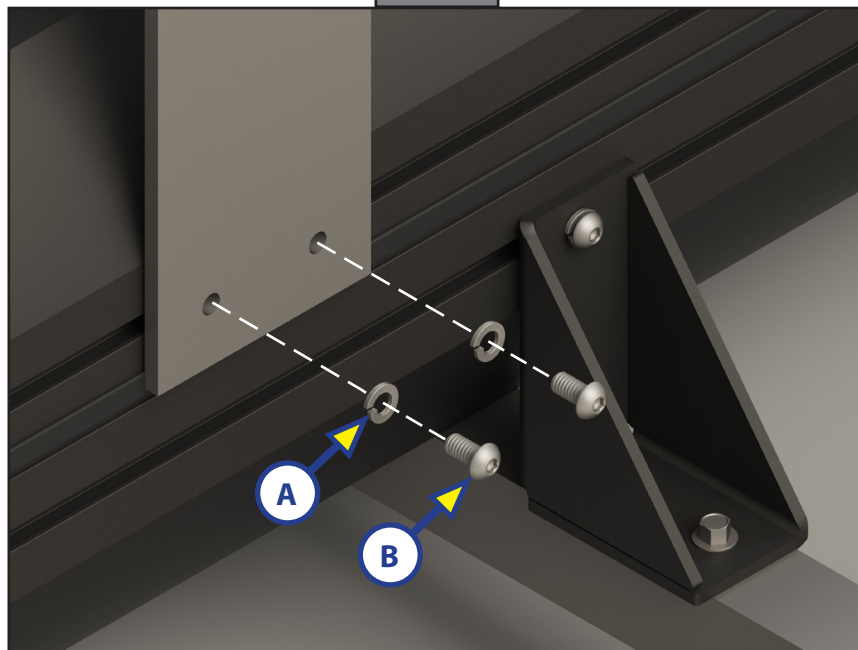
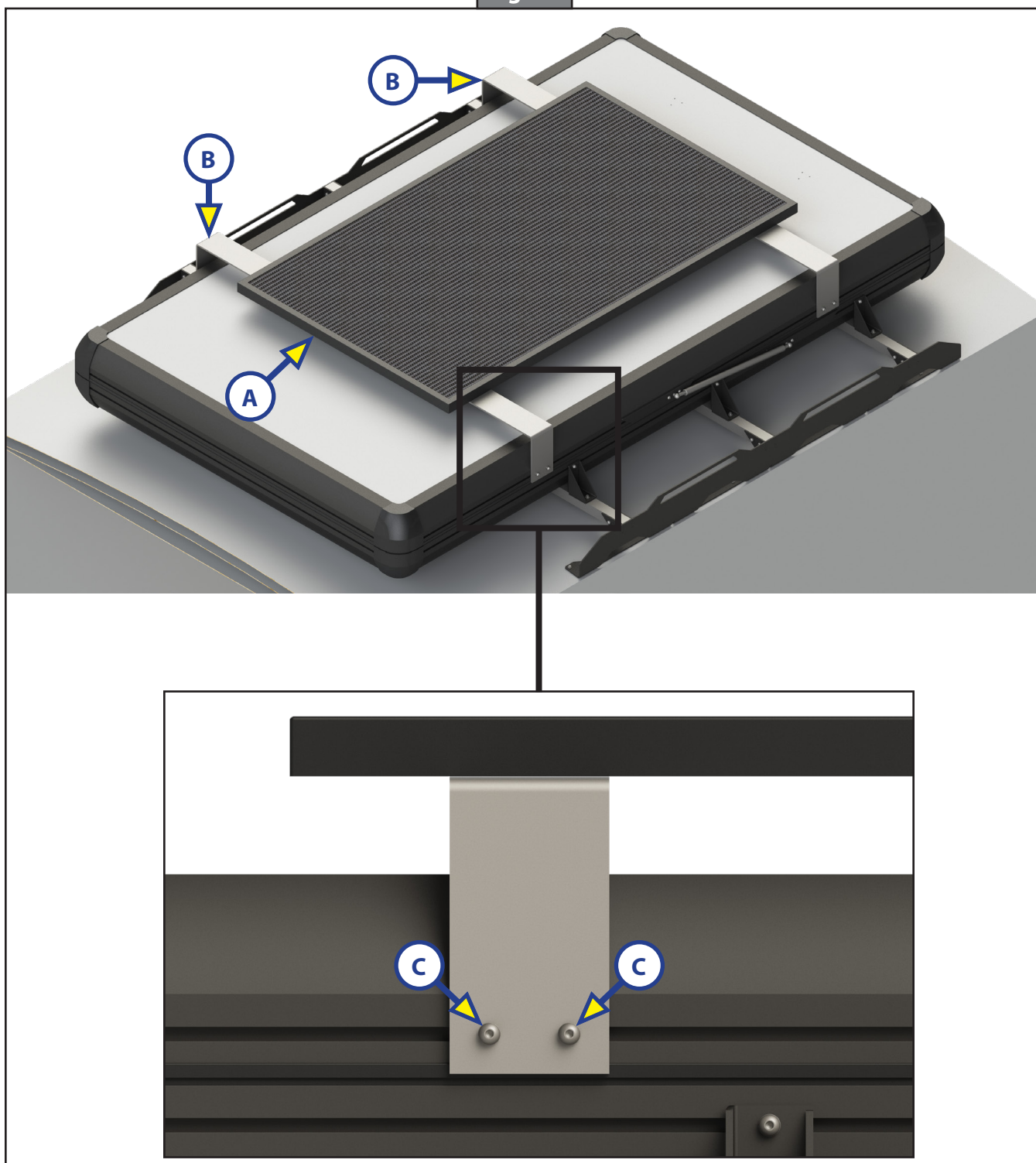


Fig. 13



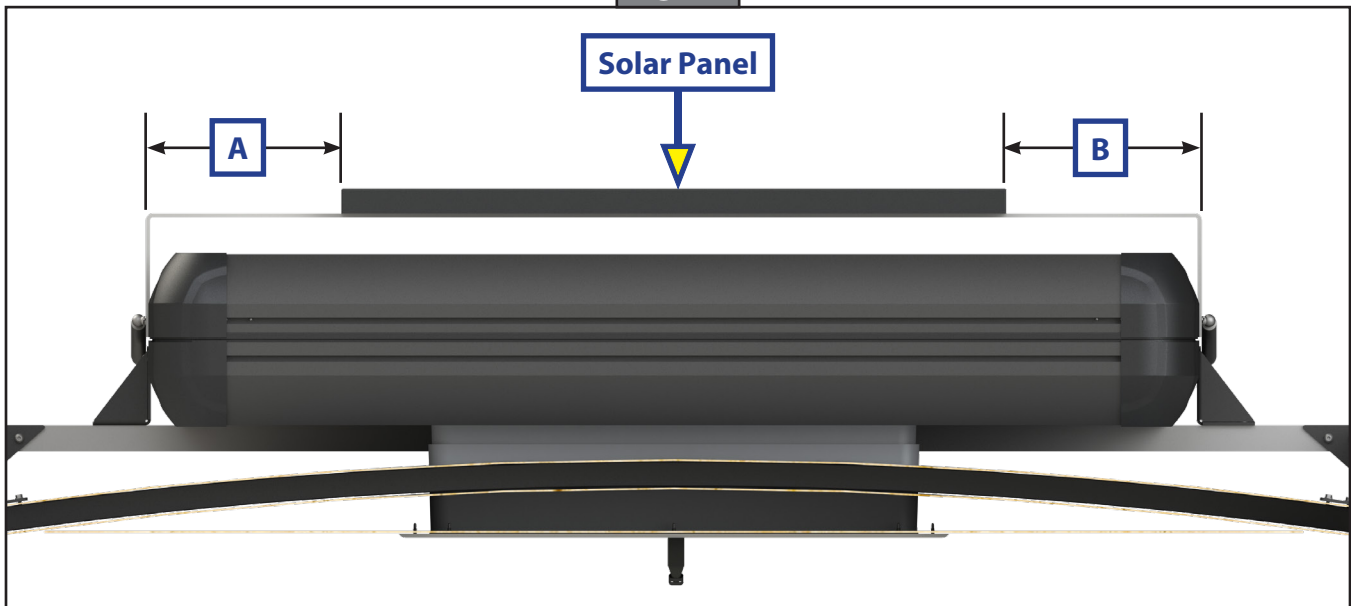
2. Place and orient the solar panel (Fig. 14A) on top of the roof's solar frames (Fig. 14B) in accordance with the manufacturer's recommendations.
 - A. Along the length of the solar panel (Fig. 14A), adjust the solar mounting frames (Fig. 14B) to give the panel good support while making sure there is enough electrical cable to reach it's power connection.
 - B. Gently clamp the solar panel to the solar mounting frames to maintain the intended orientation during final solar panel installation.
 - C. Tighten the previously installed (step 1.D.) solar mounting frame screws (Fig. 14C) to secure the frames in-place to the top half of the pop up roof system.
 - D. Release the clamps from the solar panel.

Fig. 14



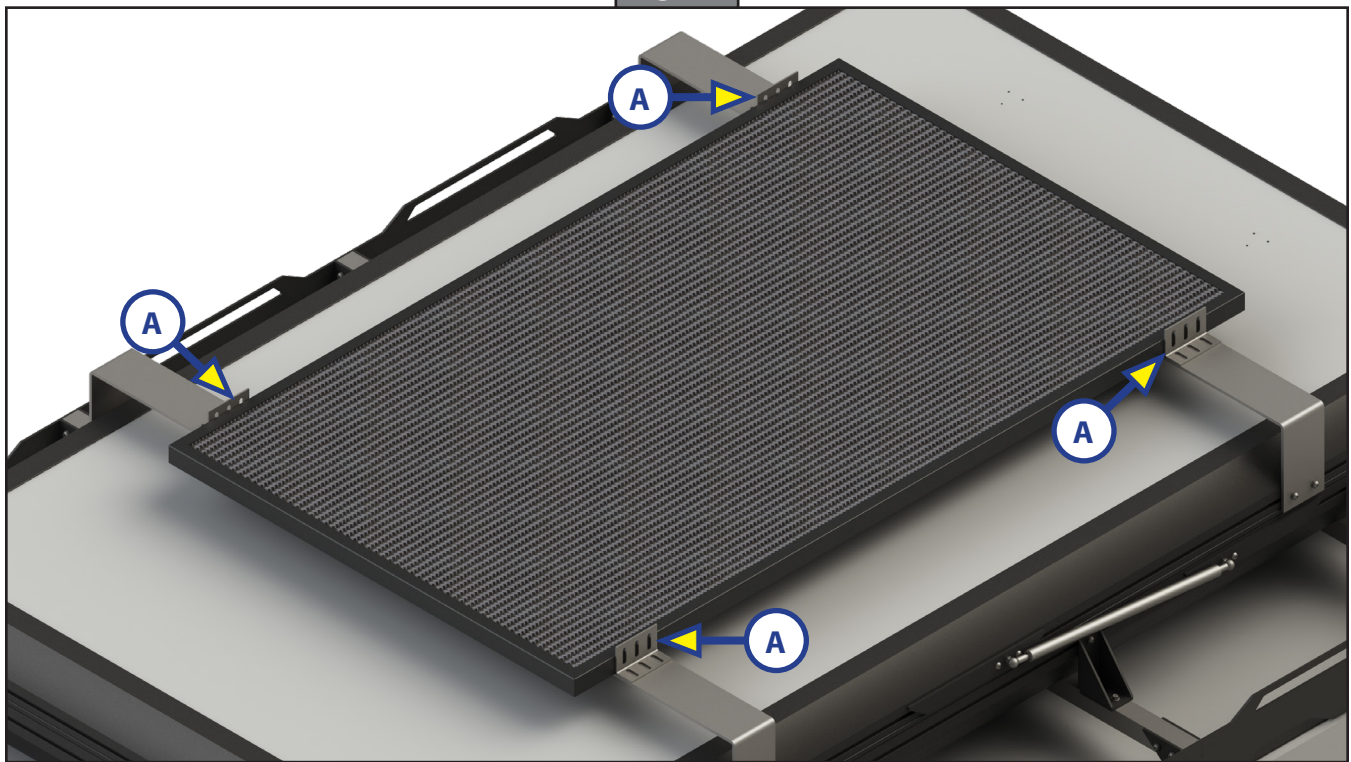
3. Install the solar panel.
 - A. Keeping the solar panel's existing front-to-back position, adjust that panel evenly side-to-side; dimension A should equal dimension B (Fig. 15). Re-clamp the solar panel in-place.

Fig. 15



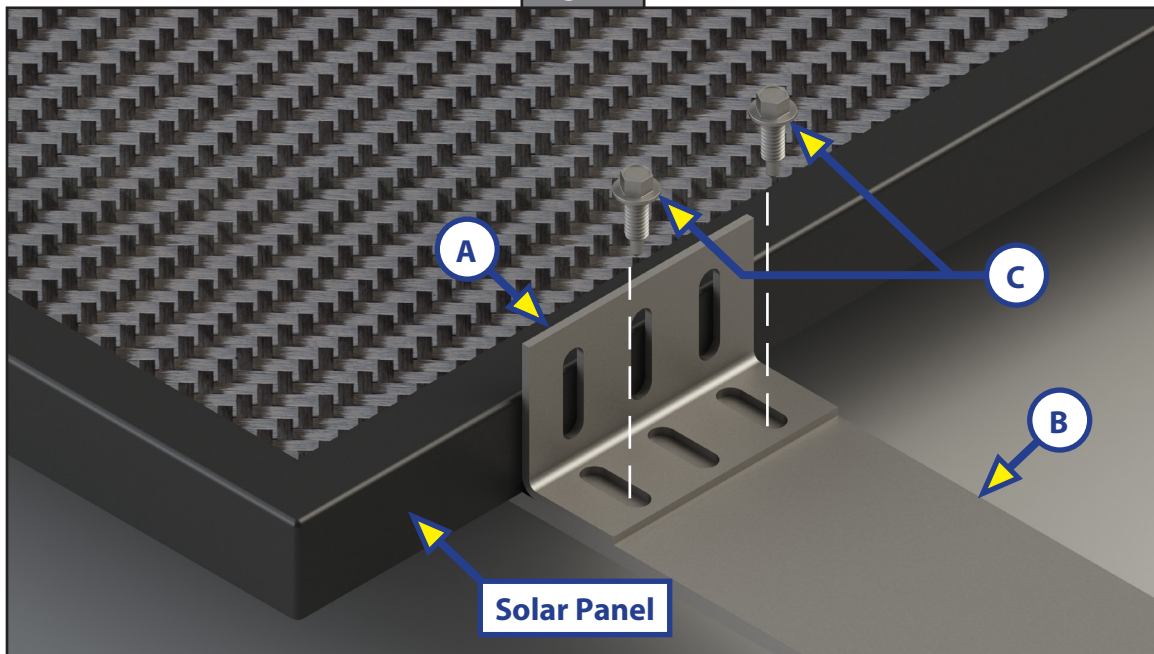
- B. Place the four solar mounting L-brackets (Fig. 16A) on the solar mounting frames (four places) and snugly butt the brackets up against the sides of the solar panel.

Fig. 16



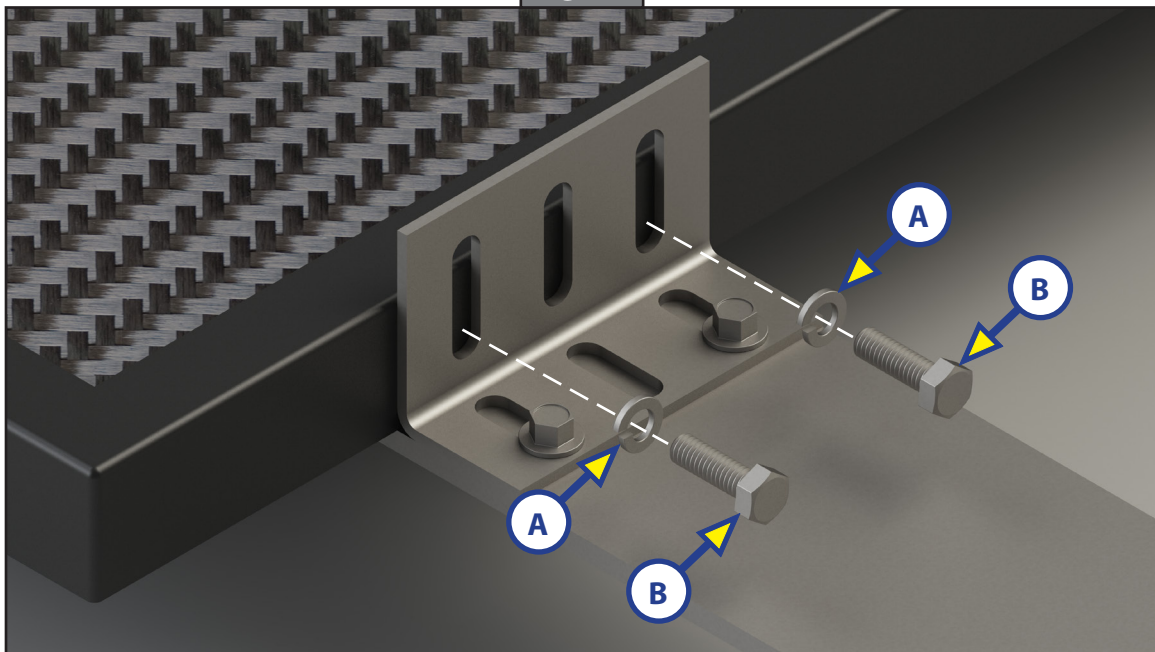
- C. Secure each L-bracket (Fig. 17A) to the solar mounting frames (Fig. 17B) with two hex flanged self-drilling screws (Fig. 17C). Use the slots in the L-bracket to keep the bracket snug against the solar panel as the self-drilling screws are being installed.

Fig. 17



- D. Place a 5/16" x 9/16" lock washer (Fig. 18A) onto a 5/16"-18 x 1.0" hex head machine screw (Fig. 18B). Repeat assembly for seven more washers and screws.
- E. Secure the solar panel to each L-bracket with two of the assembled machine screws, four places. Do **NOT** over-tighten the hex head screws so as to avoid damaging the solar panel.

Fig. 18



⚠ NOTICE

All electrical wiring harnesses shall be loomed and secured to prevent possible damage and installed in accordance with RVIA electrical standards.

- 4. Complete electrical installation of the solar panel to the pop up in accordance with the manufacturer's recommendations.

Post installation Check

1. Check alignment of pop up; must be centered side-to-side within unit's roof width and parallel along RV's roof line. Adjust if necessary.
2. Check all fasteners for looseness. Tighten as necessary.
3. If installed, check solar panel placement; must be well-supported and secure. Adjust if necessary.
4. From inside the RV:
 - A. Check the inside pass-through trim for looseness; secure if necessary.
 - B. Release the two latching mechanisms if necessary.
 - C. Open and close the pop up a few times to make sure the pop up fully opens and closes freely without any obstruction.
 - D. If installed, make sure solar panel remains secured. Adjust and tighten as necessary.
 - E. Close the pop up roof system.
 - I. Check for good compression of the locking system to ensure the inside of the roof system is sealed for protection from environmental intrusions.
 - II. Inspect the adjustable clasps to make sure they are firmly mounted to the pass through.
 - III. Inspect the locking mechanisms to make sure that when completely locked the pop up is under good compression; no looseness at the engagement point between the latch plates and adjustable clasps.
 - IV. If the latching connection between the latch plate(s) and the adjustable clasp(s) is/are not under compression when the clasp(s) is/are fully closed:
 - a. Unlock the clasp and disengage the latch plate.
 - b. Turn the adjustable eye of the clasp clockwise to shorten the reach of the latch plate's hook to the eye.
 - c. Re-engage the latch plate(s) with the clasp(s) and re-lock the mechanism(s).
 - d. Check the locking mechanism for good compression.
 - V. If necessary, repeat step IV until good locking compression is achieved.
5. Close and secure the pop up roof system.
6. Do a final check of the pop up roof system, mounting rack and—if so installed—solar panel for looseness. Tighten loose areas as needed.

Notes

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