
SHIM INSTALLATION IN EVOLUTION

Date: July/30/2020

RPL014-CA239074

Rev.: 1

PRODUCT MODELS INVOLVED

This repair procedure involves the following product:

- ◆ Covana Evolution
-

PURPOSE OF THE REPAIR PROCEDURE

This repair procedure must be applied when the cover of the Evolution is leaking.

TOOLS NEEDED

The following tools are needed:

- ◆ Robertson screwdriver
- ◆ Phillips screwdriver
- ◆ 3/8" (10 mm) socket wrench and spanner
- ◆ 7/16" (11 mm) socket wrench and spanner
- ◆ 1/2" (13 mm) socket wrench and spanner
- ◆ 7/32" (5.5 mm) Allen key
- ◆ SAE or metric socket kit
- ◆ 48" (122 cm) level
- ◆ 2 x 50' (15 m) ratchet straps
- ◆ 5/32" (4 mm) Allen key
- ◆ Measuring tape

The following items are needed:

- ◆ One of the following seals (according to the dimension of the Evolution)
 - COV-GEN-SEAL PACKAGE LENGTH 33.5' (A.C.: 212596)
 - COV-EVO-SEAL PACKAGE 9' LENGTH 37' (A.C.: 215116)
 - COV-EVO-SEAL PACKAGE 10' LENGTH 39' (A.C.: 215117)
 - COV-EVO-SEAL PACKAGE 11' LENGTH 41' (A.C.: 213657)
- ◆ 4 COV-SHIM-UHMW-1/4" (A.C.: 239075)
- ◆ 4 COV-SHIM-UHMW-1/8" (A.C.: 239076)
- ◆ COV-GEN-FOAM BUMPER-8 PACK (A.C.: 234408)
- ◆ 2 M8-1.25X X 50MM BUTTON HEAD Z/P (A.C.: 233731)
- ◆ 2 of the following edge panels (according to the dimension of the Evolution)
 - COV-EVO-PANEL 27.25"X96"-EDGE (A.C.: 227811 – LATTE/WHITE, A.C.: 227812 – PLATINUM WHITE, A.C.: 213660 – WHITE/WHITE)
 - COV-EVO-PANEL 33.25"X96"-EDGE (A.C.: 227814 – LATTE/WHITE, A.C.: 227815 – PLATINUM/WHITE, A.C.: 213661 – WHITE/WHITE)
 - COV-EVO-PANEL 39.25"X96"-EDGE (A.C.: 226263 – LATTE/WHITE, A.C.: 227810 – PLATINUM/WHITE, A.C.: 213662 – WHITE/WHITE)

- COV-EVO-PANEL 45.25"X96"-EDGE (A.C.: 227817 – LATTE/WHITE, A.C.: 227818 – PLATINUM/WHITE, A.C.: 213663 – WHITE/WHITE)
- ◆ COV-GEN-SEAL "D PROFILE" 55749 BLACK SEAL (A.C.: 222263)
 - 66' 5" (for the bottom seal and to replace the top seal if it is damaged)

OR

- ◆ One of the following packs (according to the color of the Evolution)
 - COV-AFS-EVO-I-BEAM PACK-WHITE (A.C.: 230249) + COV-GEN-SEAL "D PROFILE" 55749 BLACK SEAL (A.C. 222263) 31' 6" (to add a seal in the bottom of each I-beam)
 - COV-AFS-EVO-I-BEAM PACK-LATTE (A.C.: 230250) + COV-GEN-SEAL "D PROFILE" 55749 BLACK SEAL (A.C. 222263) 31' 6" (to add a seal in the bottom of each I-beam)
 - COV-AFS-EVO-I-BEAM PACK-PLATINUM (A.C.: 230251) + COV-GEN-SEAL "D PROFILE" 55749 BLACK SEAL (A.C. 222263) 31' 6" (to add a seal in the bottom of each I-beam)

PREPARATION

- ◆ To execute this procedure no objects, debris, ice, or snow must be on the cover.
- ◆ It is preferable to be two persons to execute this procedure.

WARNINGS AND CAUTIONS

- ⚠ **Warning:** This procedure must be performed by a certified Covana installer.
- ⚠ **Warning:** To prevent someone from operating the spa cover during repair procedures, keep the key out of the key switch socket at all time. The certified Covana installer must keep control of the key during all the repair procedure. Derogation from this directive could cause serious injury or damage to the cover.

STEPS TO FOLLOW

- 1) Operate the Evolution until it is at approximately 6 inches from the spa.
- 2) Remove the seal from under the cover.
- 3) Install foam bumpers on the spa to protect the acrylic.
- 4) Operate the Evolution until it gets to its lower position.

- 5) Remove the rubber cap on one of the non motor post.
- 6) With a 7/32" Allen key, unscrew the 3/8"-24 x 1" Allen bolt on top of the post.



Figure 1

- 7) With a Philips screwdriver, unscrew the four M6 x 20 mm bolts and 1/4" painted washers on the post.



Figure 2

- 8) With a Philips screwdriver, unscrew the M6 screw at the bottom of the post.

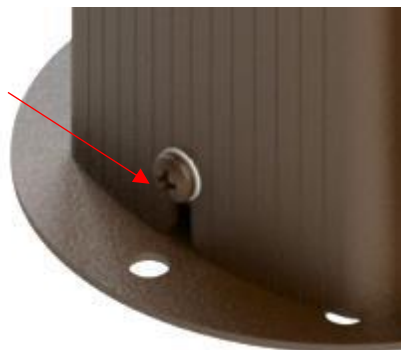


Figure 3

- 9) Lift the sleeve off of the post by carefully holding the bottom of the sleeve and store it in a safe place.
- 10) With a 5/32" Allen key, screw the M8 x 50 mm jack lock bolt in the appropriate lock hole.

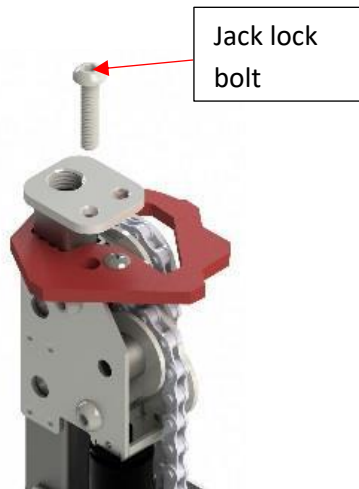


Figure 4

- 11) With a 1/2" socket wrench and spanner, unscrew the two 5/16" – 18 x 2" bolts, two nylon-insert lock nuts and plastic washers on the long aluminum u-frame over the driveshaft at the bottom of the jack.

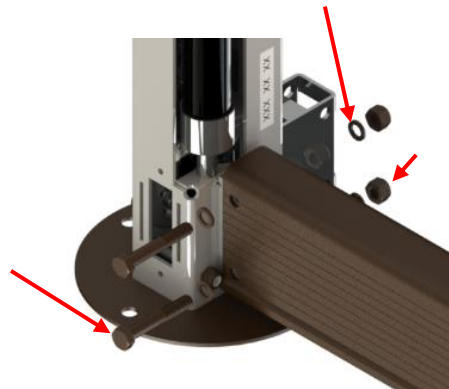


Figure 5

12) With a Philips screwdriver, unscrew the M6 screw at the bottom of the aligned motor side post.

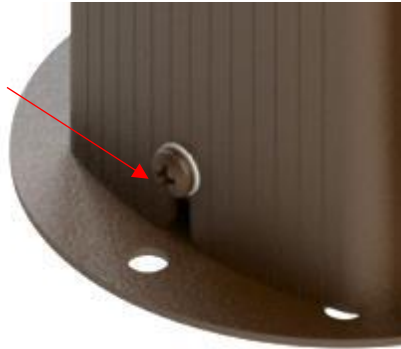


Figure 6

13) Lift the outer sleeve and repeat step 11) at the other side of the u-frame (near the motor post).

14) Remove the u-frame and store it in a safe place.

15) Remove the drive shaft at the bottom of the jack and store it in a safe place.

⚠ Warning: Make sure the non motor jack is locked before removing the drive shaft or the non motor jack will fully deploy and may cause injuries to people nearby or damage to the Evolution.

16) Repeat steps 5) through 15) for the other non motor post.

17) With the help of another person, carefully move away the two non motor jacks still linked by the two short u-frames and metal coupler.

18) With a Philips screwdriver, unscrew the four M6 x 20 mm bolts and 1/4" painted washers at a motor side post.

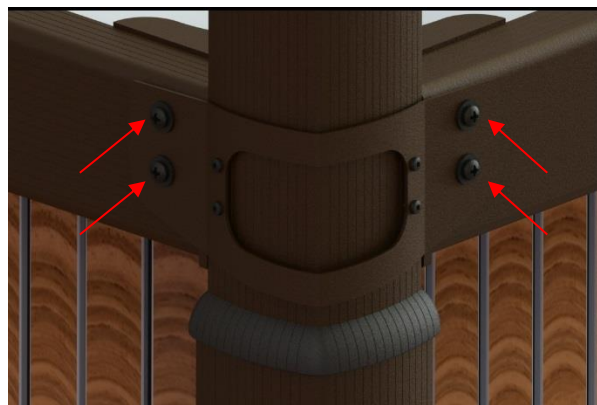


Figure 7

- 19) Repeat step 18) at the other motor side post.
- 20) With the help of another person, carefully move away the motor side and store it in a safe place.
- 21) With a Robertson screwdriver, unscrew the three #8 x 3/4" screws linking the corner bracket and the side c-channel on one end of the Evolution.

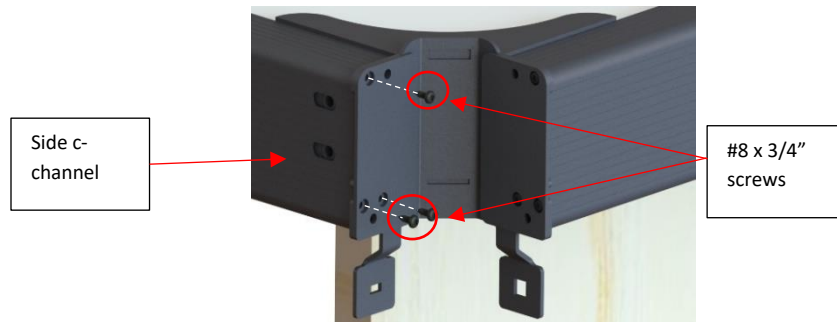


Figure 8

- 22) Repeat step 21) on the other side of the Evolution.
- 23) Pull the assembly and store it in a safe place.
- 24) Repeat steps 21) through 23) at the other end of the Evolution.
- 25) Remove the two end panels of the Evolution.

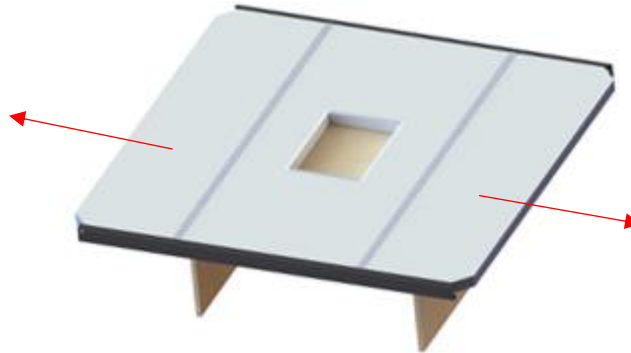


Figure 9

- 26) Slide off the two I-beams.
- 27) Inspect the I-beam seal on the top of each side of the two I-beams. If they are damaged, refer to the annex to learn how to remove the old seal and replace it with a new one.

28) Install the I-beam seal on the bottom of each side of the two I-beams. Make sure that the bottom seal touches the vertical seal.

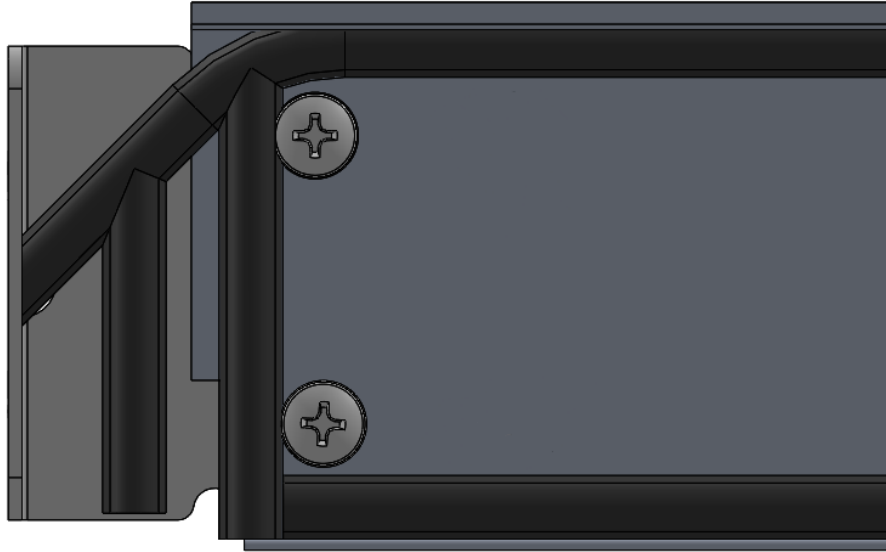


Figure 10

29) Slide the two I-beams back in the side c-channels.

⚠ Warning

- ⚠ Ensure the upright position of the I-beams.
- ⚠ Ensure the proper insertion of the short I to C connection plate in the c-channel.

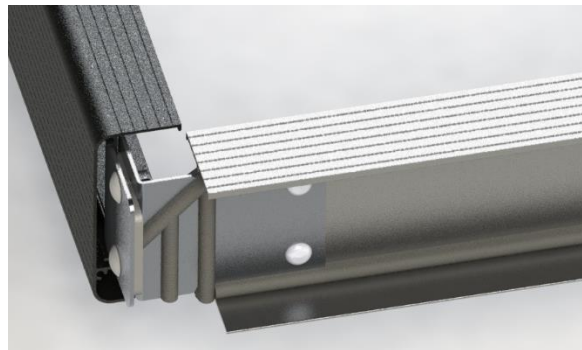


Figure 11

- ⚠ When inserting the I-beam into the fiberglass foam panel, ensure not to chip the fiberglass.
- ⚠ Make sure the I-beam has cleared bottom and top section.
- ⚠ While inserting the I-beam in the c-channel, make sure it is always square with the c-channel.
- ⚠ Ensure I-beams are oriented towards the top as indicated with the sticker.

30) Slide in one end panel on each end of the Evolution.

⚠ Warning

- ⚠ Ensure that the panels are pushed as far as possible by hand and are completely inserted in the I-beam.
- ⚠ Make sure that the colored side of the panel is on top.

31) Take back one of the assemblies comprised of two corner brackets and an end c-channel and install it back on one end of the Evolution. It is recommended to slightly engage the top flange before the bottom when sliding the c-channel onto the foam panel. Make sure to leave some space to put the shim.

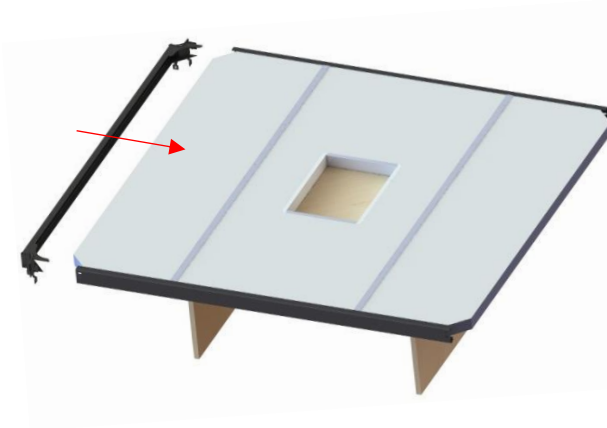


Figure 12

32) Put the 1/4" shim on each corner bracket and make sur that they do not interfere with the side c-channel.

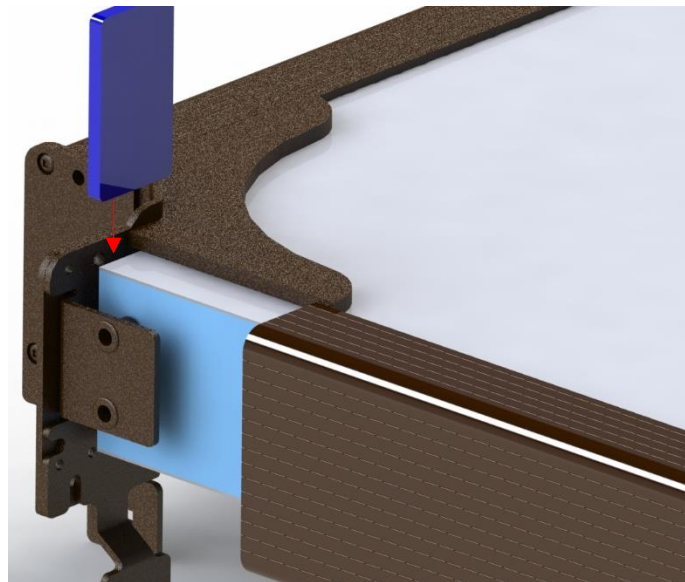


Figure 13

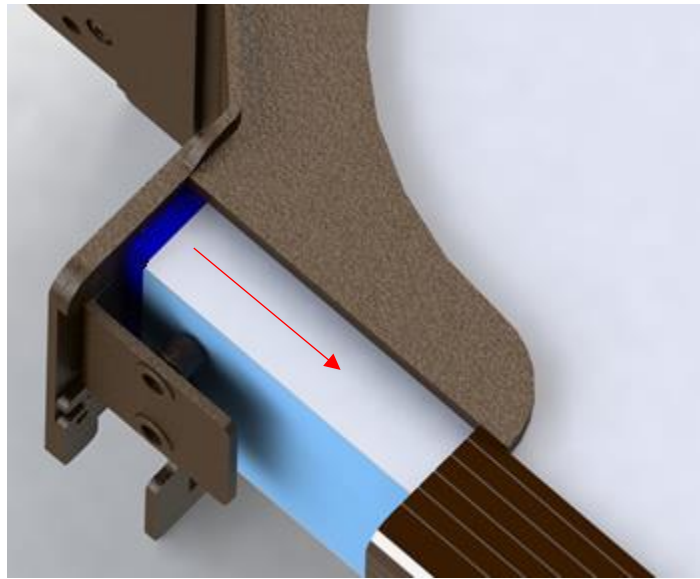


Figure 14

33) Repeat steps 31) through 32) with the other assembly at the other end of the Evolution cover.

34) Install the ratchet straps on each side of the Evolution. The ratchet straps must bind the Evolution at the corner brackets like shown in Figure 15.

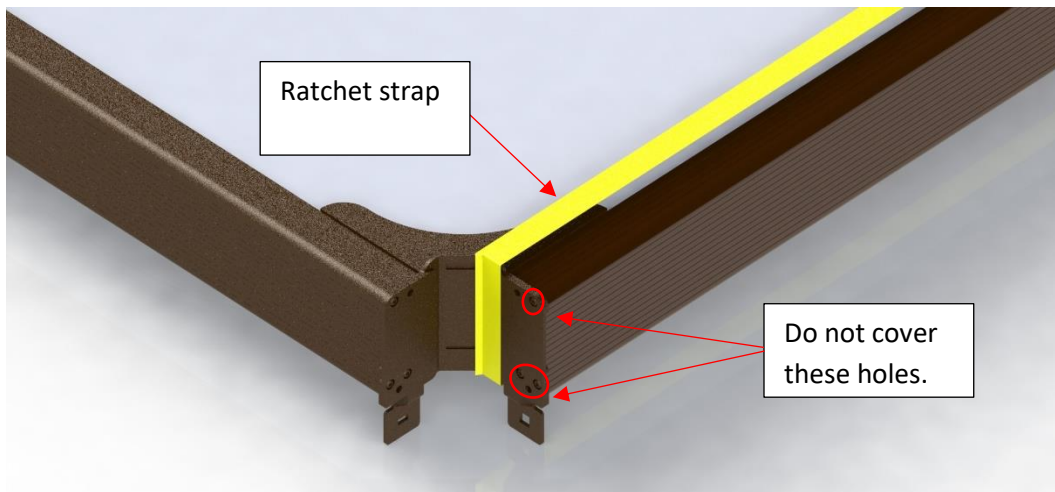


Figure 15

⚠ Warning

- ⚠ Make sure that the ratchet straps do not cover the three holes on the side c-channels.
- ⚠ Do not install the ratchet straps on the end c-channel in order to avoid the bending of the corner bracket.
- ⚠ Put cardboard under the metallic part of the ratchet strap to avoid damaging the panel surfaces.

- 35) With a Robertson screwdriver, screw the three #8 x 3/4" screws linking the corner bracket and the side c-channel on one end of the Evolution.

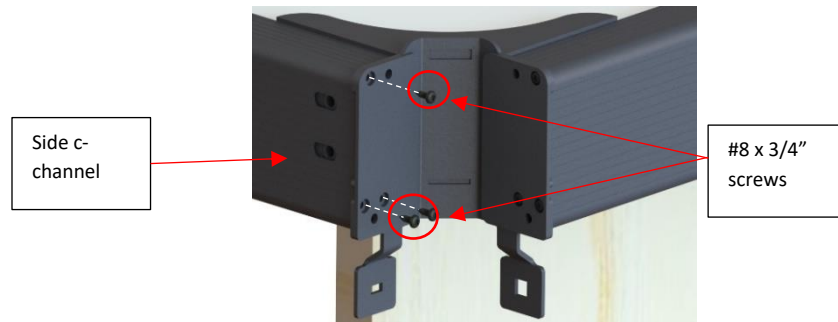


Figure 16

- 36) Repeat step 35) at every corner of the Evolution.
- 37) Pour water on the Evolution to verify if there is still water leakage. If yes, add the 1/8" shim to the 1/4" at each corner of the Evolution by repeating steps 31) through 37).
- 38) Remove the two ratchet straps.
- 39) With the help of another person, carefully put back in position the motor side.
- 40) With the help of another person, carefully put back in position the assembly comprised of the two non motor jacks, small u-frames, and metal coupler.
- 41) Lift the outer sleeve of a motor side post and slide a drive shaft over the square shaft located at the bottom of the motor jack.

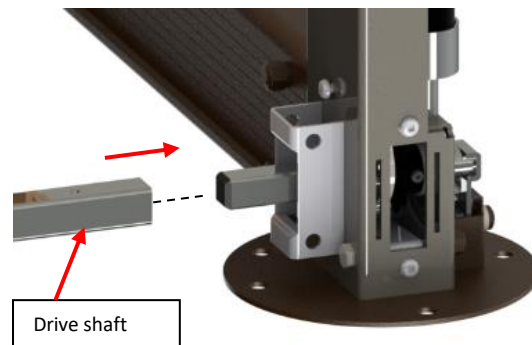


Figure 17

- 42) Hold the drive shaft and slide it over the square shaft located at the bottom of the opposite non motor jack.
- 43) Take back a long u-frame and install it over the driveshaft. With a 1/2" socket wrench and spanner, screw the two 5/16" – 18 x 2" bolts, two nylon-insert lock nuts and plastic washers on the long aluminum u-frame at the bottom of the motor jack and the non motor jack.

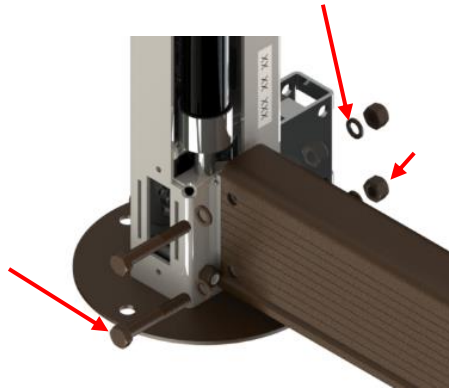


Figure 18

44) With a Philips screwdriver, screw the M6 screw at the bottom of the motor side post.

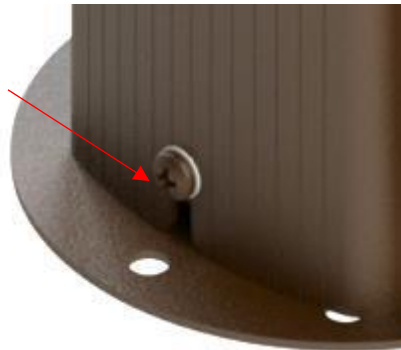


Figure 19

45) Repeat steps 41) to 44) on the other side of the Evolution.

46) With a 5/32" Allen key, unscrew the M8 x 50 mm jack lock bolt of each of the non motor jack and store them in a safe place.

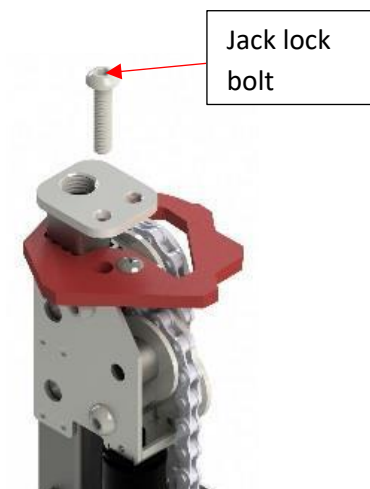


Figure 20

47) Slide the sleeves over all the non motor jacks. Be sure to align the opening at the bottom of the sleeves with the u-frames attached.

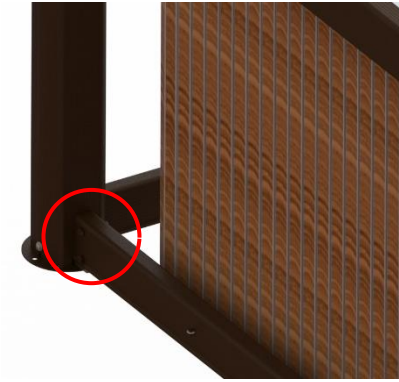


Figure 21

48) With a Philips screwdriver, screw the M6 screw at the bottom of each non motor post.

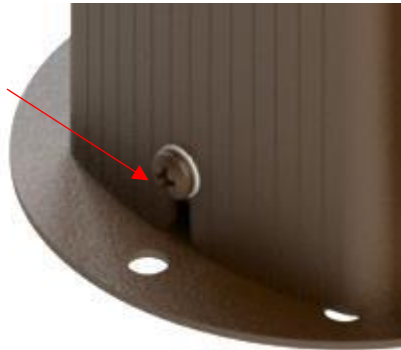


Figure 22

49) Slide the all-weather seals on each post all the way down against the outer sleeve.

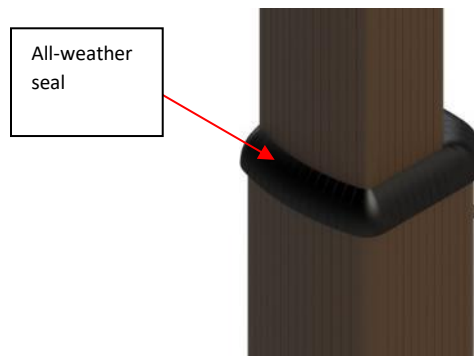


Figure 23

50) With a 7/32" Allen key, screw the 3/8"-24 x 1" Allen bolt on top of the non motor post.



Figure 24

51) Ensure the Covana cover is centered. Use a measuring tape on all four sides and make sure it is still resting on the foam spacers. If not, center the Covana cover.

52) With a Philips screwdriver, screw the four M6 x 20 mm bolts and 1/4" painted washers at a post.

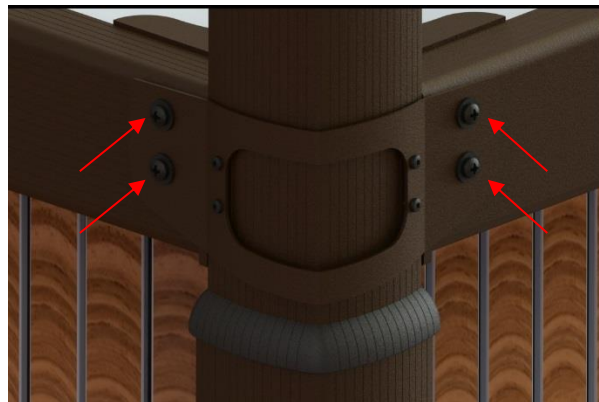


Figure 25

53) Repeat step 52) at the remaining posts.

54) Put back the rubber cap on each of the non motor post.

55) Follow the section "Seal Application" in the Evolution installation manual to install a new seal under the Evolution cover.

End of procedure.

Annexe

Installation of seal on I-beams

1. Put the I-beams in a dry and clean place and carefully remove the seals that are already installed and remove the I-to-C bracket by undoing the two round Philip head screws.
2. Clean the area where the seal will be installed with alcohol and let it dry for at least one minute.
3. Follow the instructions on the images to properly install the I-to-C bracket and the seal on both sides. Failure to follow the instructions will cause leakage of water in the swim spa.

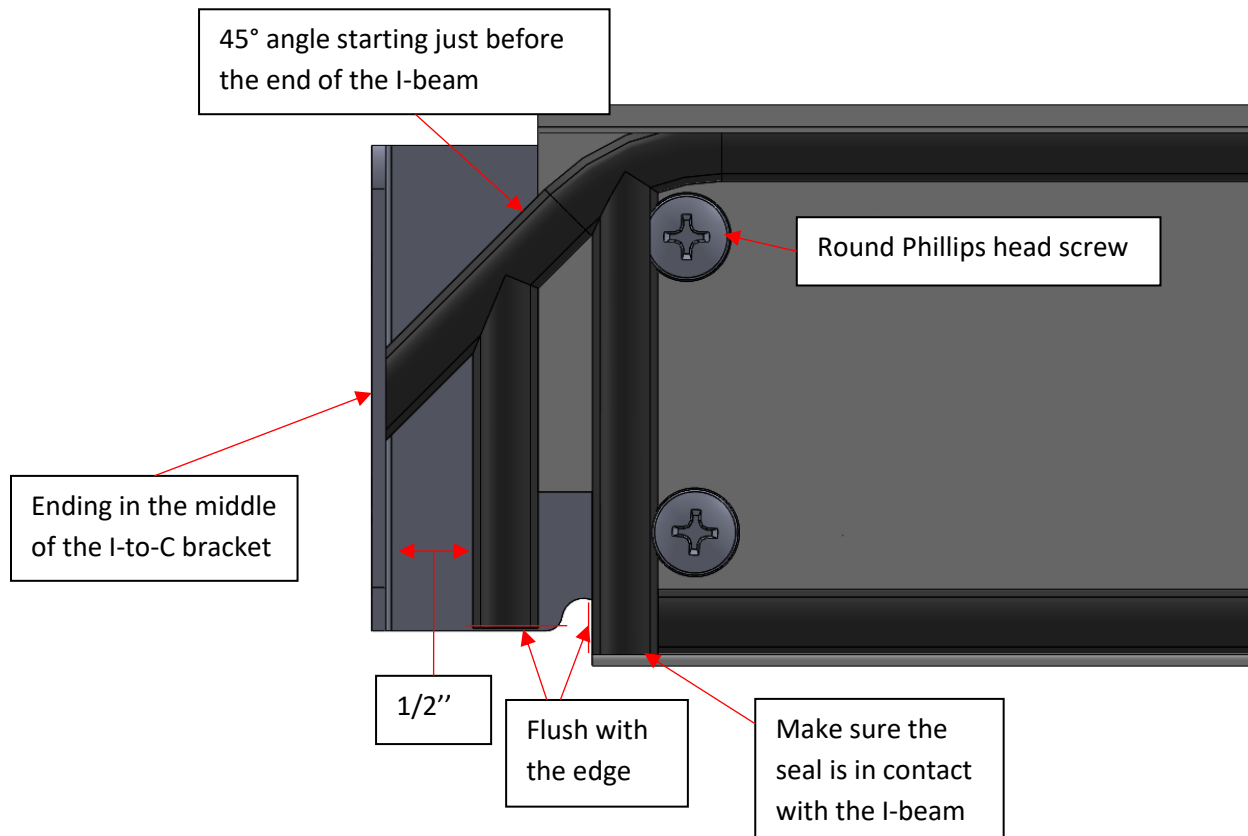


Figure 26

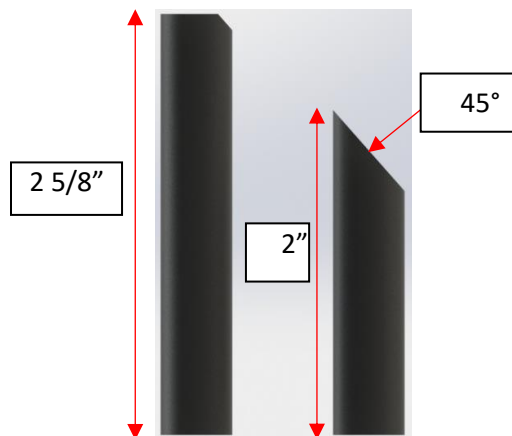


Figure 27

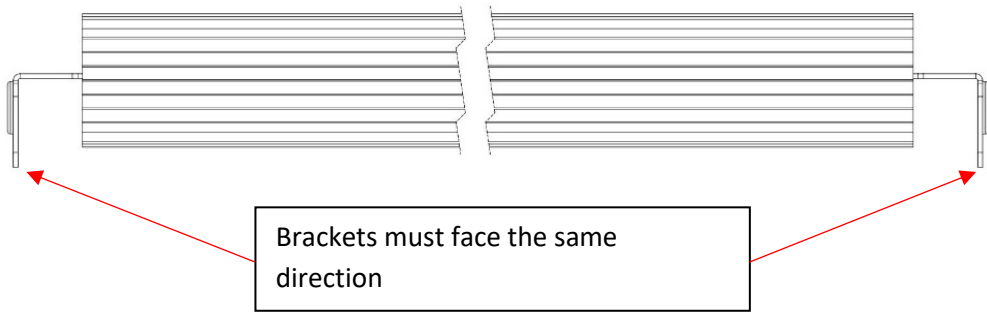


Figure 28