

GAS SPRING REPLACEMENT ON MOTOR JACK (LEGEND)

Date: Feb/28/2019

RPL006-CA-233217

Rev.: 0

PRODUCT MODELS INVOLVED

This repair procedure involves the following product:

- ◆ Legend 12 to 20 feet long models.

PURPOSE OF THE REPAIR PROCEDURE

This repair procedure must be applied when the replacement of a gas spring for a motorize jack assembly is need on the COVANA Legend spa cover.

TOOLS NEEDED

The following tools recommended by the repair procedure are:

- ◆ 1 X 5/32 in (4 mm) Allen key
- ◆ 1 X 7/16 in (11 mm) spanner
- ◆ 1 X 7/16 in (11 mm) socket wrench
- ◆ 1 X ½ in (13 mm) spanner
- ◆ 1 X ½ in (13 mm) socket wrench
- ◆ 1 X Adjustable wrench
- ◆ 1 X 48 in (122 cm) level
- ◆ 1 X Robertson screws driver
- ◆ 1 X Vise grip
- ◆ 1 X Heat gun
- ◆ 1 X Scissors or retractable utility knife
- ◆ 1 X long nose pliers

LIST OF PARTS USED

The following new parts will be needed to proceed with this procedure.

Parts kit for model 2018 and lower:

226557: LEGEND MOTOR SIDE GAS SPRING 500N (G2 Generation)		
QTY	CODE	DESCRIPTION
1	188968	GAS SPRING 500N
2	226588	COTTER PIN 1/16" X 3/4"
1	233217	PROCEDURE « GAS SPRING REPLACEMENT ON MOTOR JACK (LEGEND) »
226694: LEGEND MOTOR SIDE GAS SPRING 700N (G2 Generation)		
QTY	CODE	DESCRIPTION
1	214455	GAS SPRING 700N
2	226588	COTTER PIN 1/16" X 3/4"
1	233217	PROCEDURE « GAS SPRING REPLACEMENT ON MOTOR JACK (LEGEND) »
226695: LEGEND MOTOR SIDE GAS SPRING 900N (G2 Generation)		
QTY	CODE	DESCRIPTION
1	214768	GAS SPRING 900N
2	226588	COTTER PIN 1/16" X 3/4"
1	233217	PROCEDURE « GAS SPRING REPLACEMENT ON MOTOR JACK (LEGEND) »

Parts kit for model 2019 and higher:

233276: LEGEND MOTOR SIDE GAS SPRING 600N (G3 Generation)		
QTY	CODE	DESCRIPTION
1	233221	GAS SPRING 600N
2	226588	COTTER PIN 1/16" X 3/4"
1	233217	PROCEDURE « GAS SPRING REPLACEMENT ON MOTOR JACK (LEGEND) »
233279: LEGEND MOTOR SIDE GAS SPRING 800N (G3 Generation)		
QTY	CODE	DESCRIPTION
1	217703	GAS SPRING 800N
2	226588	COTTER PIN 1/16" X 3/4"
1	233217	PROCEDURE « GAS SPRING REPLACEMENT ON MOTOR JACK (LEGEND) »
233283: LEGEND MOTOR SIDE GAS SPRING 1000N (G3 Generation)		
QTY	CODE	DESCRIPTION
1	217704	GAS SPRING 1000N
2	226588	COTTER PIN 1/16" X 3/4"
1	233217	PROCEDURE « GAS SPRING REPLACEMENT ON MOTOR JACK (LEGEND) »

PREPARATION

- ◆ The cover must be in close position before executing that procedure.
- ◆ Keep a clean working area to prevent accidents or stumble.
- ◆ Provide a clear space to discard old parts.
- ◆ Prepare the appropriate tools, as suggested above.
- ◆ Make sure the parts kit is complete as per the above list and parts have not been damaged during transport. Call your local dealer if the parts kit needs to be replaced.

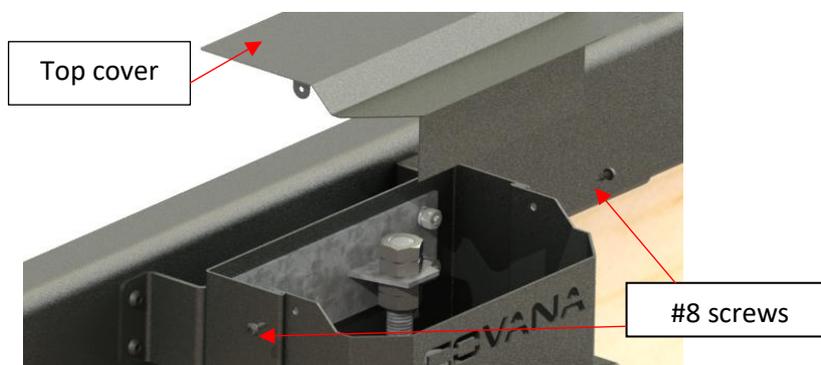
WARNINGS AND CAUTIONS

- ⚠ **Warning:** This procedure must be performed by a certified COVANA installer.
- ⚠ **Warning:** To prevent someone operating the spa cover during repair procedure, keep the key out of the key-switch socket at all time except when the DC motor control box need to be energized at the appropriate procedure steps. The mechanic must keep control on that key all along the repairing procedure. Derogating from this directive could cause serious injury or damaging the cover.
- ⚠ **CAUTION:** Do not use power tools, some parts are fragile and may break under too much torque.

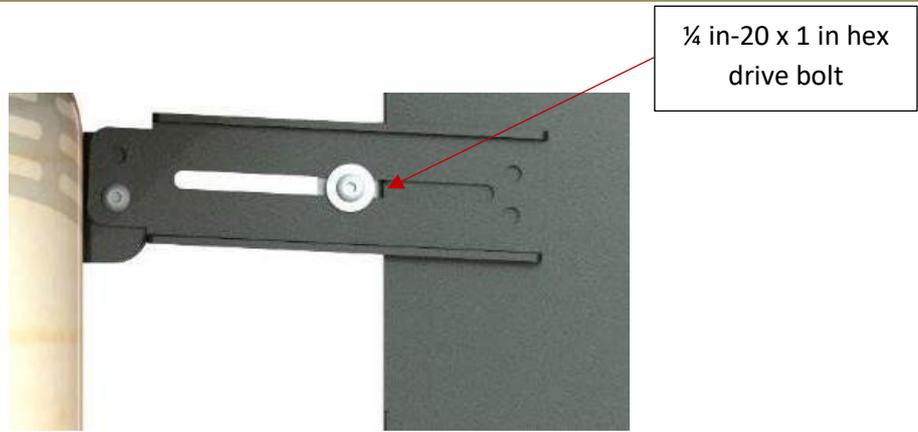
STEPS TO FOLLOW

Disassembling steps

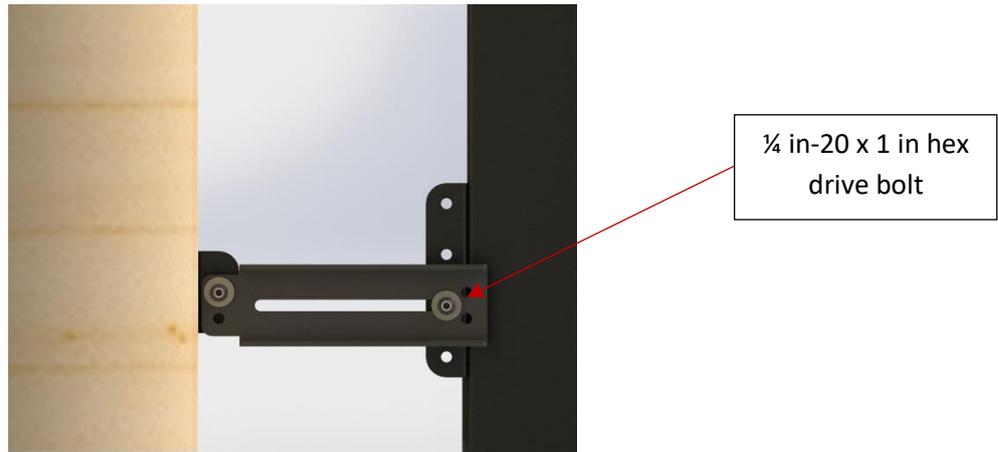
- 1) Unscrew the two Robertson #8 self-drilling screws and take the top cover off. Use the Robertson screwdriver.



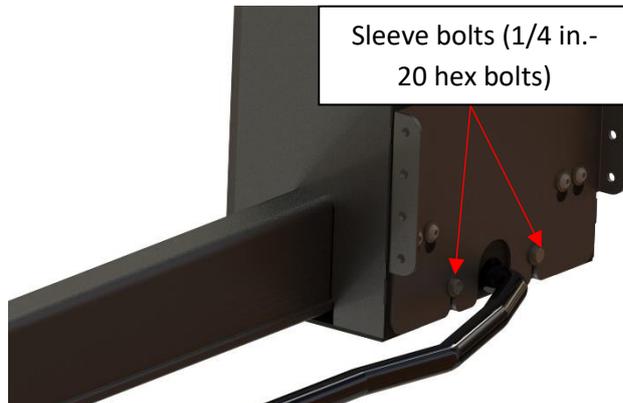
- 2) Detach the bottom mount bracket arms from the tub mount brackets. Unscrew the two ¼ in-20 x 1 in hex drive bolts on the outside. Use a 5/32 in Allen key with a 7/16 in spanner.



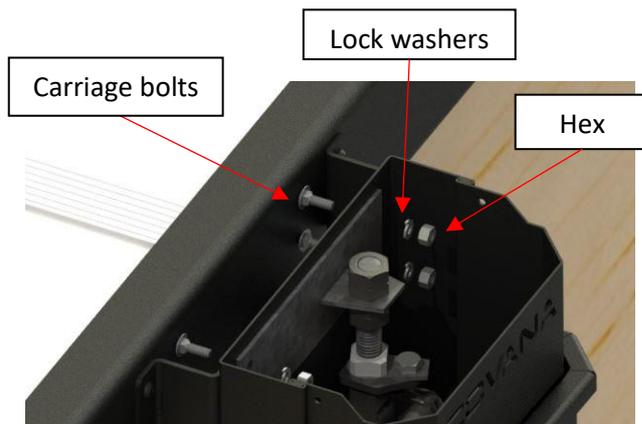
- 3) Separate the top mount bracket arms from the tub mount brackets by unscrewing the two ¼ in-20 x 1 in hex drive bolts on the outside. Use a 5/32 in Allen key with a 7/16 in spanner.



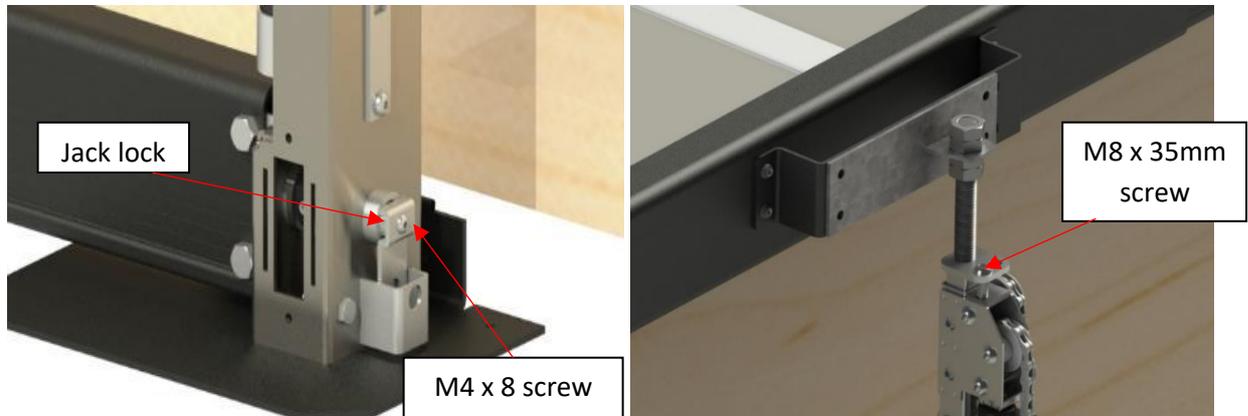
- 4) Untighten the two ¼ in-20 hexagonal bolts at the bottom of the sleeve. Use a 7/16 in socket wrench or spanner if there's not enough space.



- 5) Unfasten the sleeve from the cover mount bracket. Unscrew the four ¼ in-20 x ¾ in carriage bolts. Use a 7/16 in socket.



- 6) Slide the three sleeves (Inner/Middle/Outer) upward to expose the jack.
- 7) Repeat steps 1 to 6 for the other post if needed (There is two motor-jacks).
- 8) Put the jack lock back in its original place and screw on the M4 x 8 screw to fix it. Turn the shaft with the key to align it with the bracket. If your unit doesn't have a jack lock bracket near the bottom of the jack (model 2019 and +), locate the M8 x 35mm screw at the top and put it to lock the jack assembly.



- 9) Take the U-frame off the drive shaft by unfastening the two hexagonal 5/16 in-18 x 2 in bolts at both legs. Use a ½ in socket wrench and spanner.



- 10) Take the drive shaft off. Slightly tilt the post to facilitate the operation.



- 11) Make sure the lights are off. Disconnect the two motors cable from the control box. Turn and hold the key counter clockwise for 10 seconds then turn the key repeatedly on the same side 10 times in less than 10 sec: the red light should be flashing. **Stay on the reset mode during the next steps. Turn the key quickly on any side just to ear the click in the control box. You don't need to always move the jack.**



- 12) Reconnect only the motor cable of the broken jack to the control box.
- 13) Rise the jack of approximately 4 in by turning the key counter clockwise.
- 14) Tighten the vise grip at the bottom of the exposed inner jack tube. **The vise grip needs to be very tight around the inner tube of the jack.**



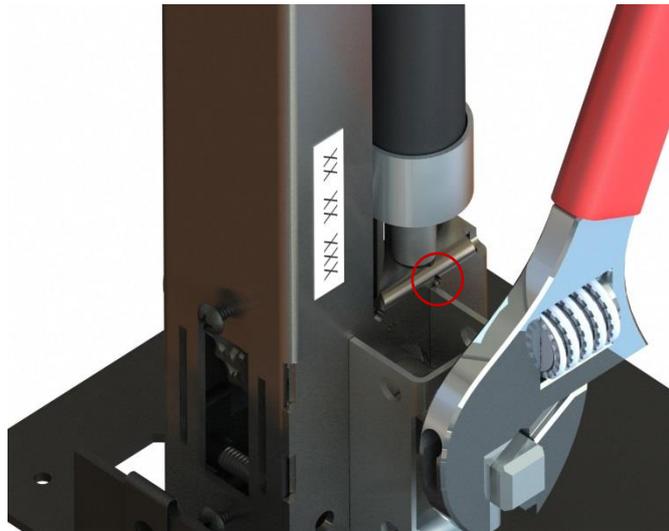
- 15) Use the key to lower the jack of approximately 2 in to take the tension off the metal wire.
- 16) Use a utility knife to cut the heat-shrink and remove it from the hook.



17) Take the hook off the jack outer section.



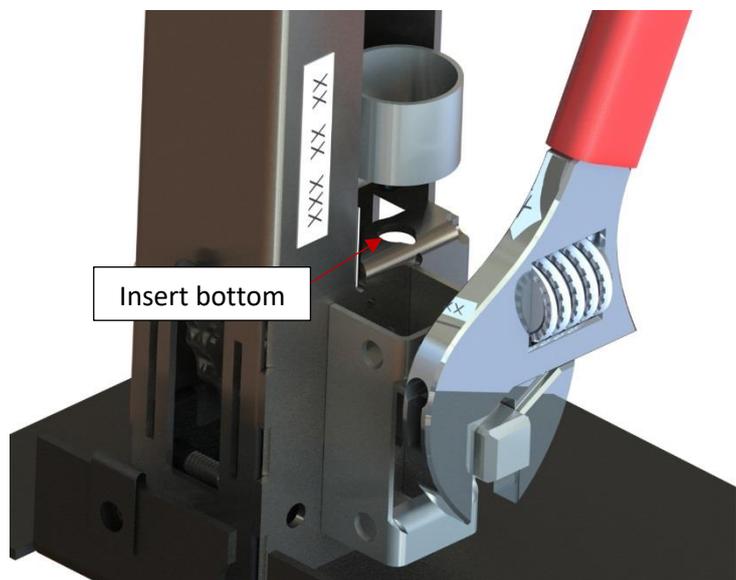
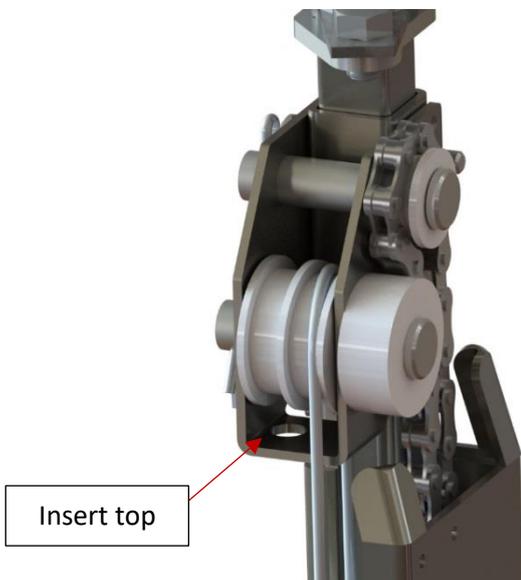
18) Take off the two spring pins with the pliers. You may to punch it out.



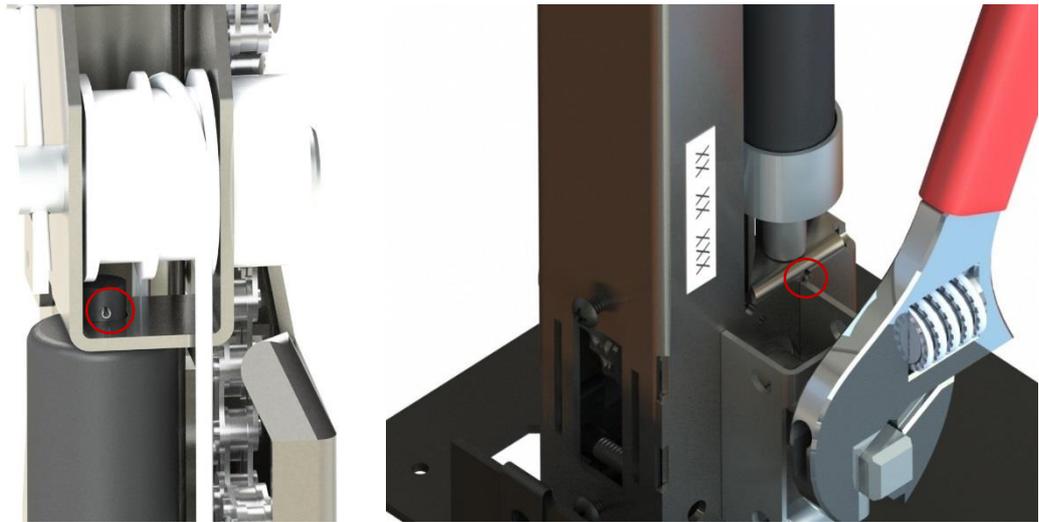
19) Turn the key counter clockwise to rise the jack to its maximum height, then take the gas spring off and discard it. **Keep control on the jack with the wrench.**

Assembling steps

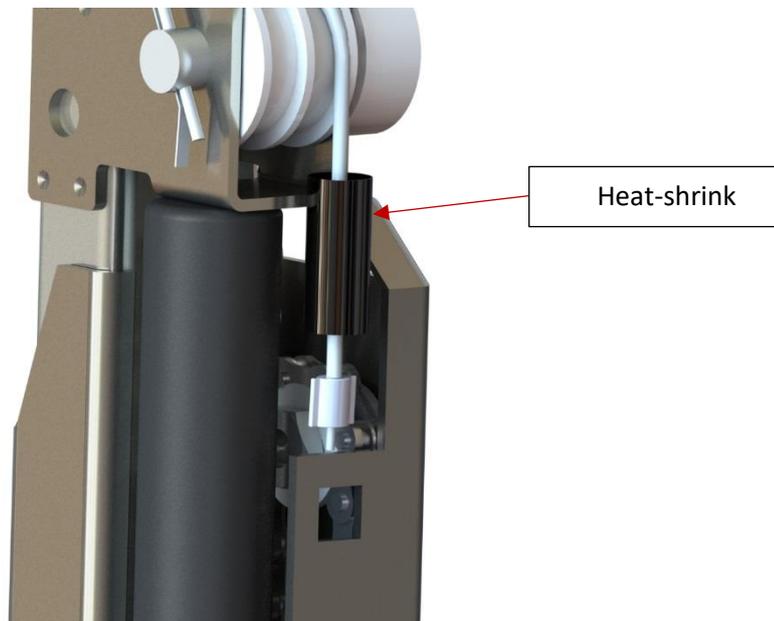
1) Change the gas spring for the new one. **Make sure the two extremities of the gas spring are insert in their appropriate places.**



- 2) Turn the key clockwise to lower the jack to your height.
- 3) Put the new spring pins on. You may have to use pliers.



- 4) Insert the metal wire in the heat-shrink.



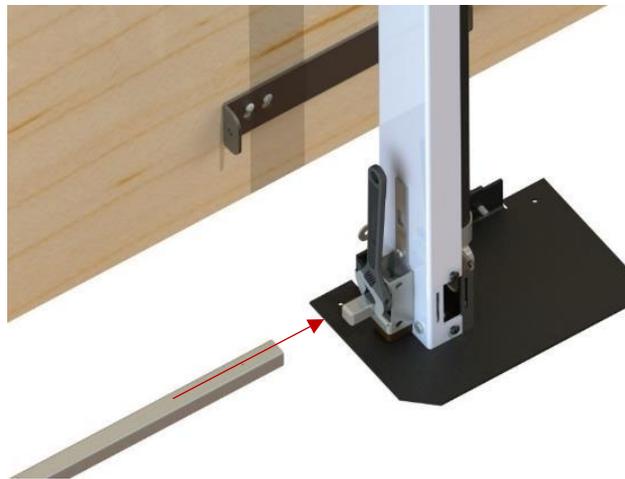
- 5) Put the hook back on the post and insert the cable in it. Cover the hook with the heat shrink.



- 6) Use a heat gun to shrink the heat shrink on the hook.
- 7) Turn the key clockwise to put tension back on the metal wire, make sure it is correctly positioned.



- 8) Remove the vise grip and wait until the red light to turn on.
- 9) Install the drive shaft onto the motorized and non-motorized jack's shaft.



- 10) Install the U-frame over the drive shaft. The U-frame will bolt on the motor and on the non-motor jack. Fasten it back in place using the four hexagonal 5/16 in-18 x 2 in bolts and the 5/16 in-18 nylon insert locknuts. Use a 1/2 in socket wrench and spanner again.

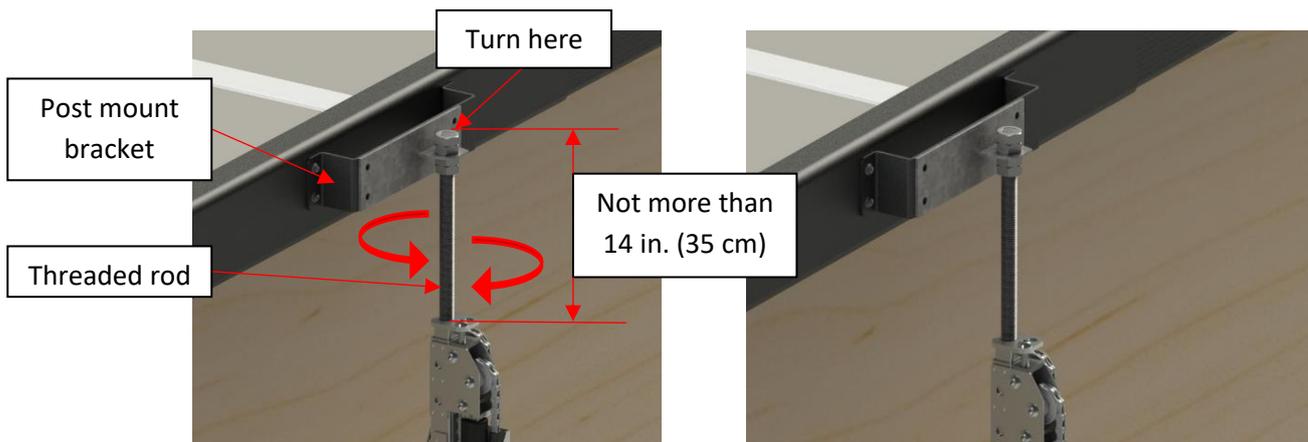


11) Verify if the drive shaft is still engaged at both ends. Slip your fingers under the U-frame to do this operation.

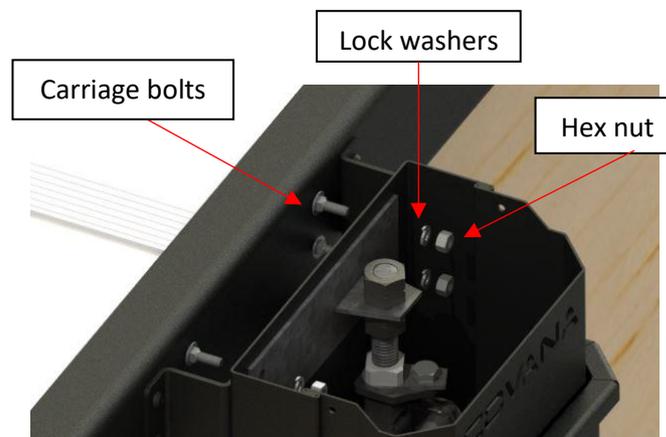


12) Once the U-frame is in place, you can now remove the jack lock bracket at the bottom of the non-motor jack. Unscrew the Philips M4 x 8 mm bolt. **Keep the lock bracket and the hardware for future use.** If your unit doesn't have a jack lock bracket near the bottom of the jack (model 2019 and +), locate the M8 x 35mm screw at the top and remove it to unlock the jack assembly.

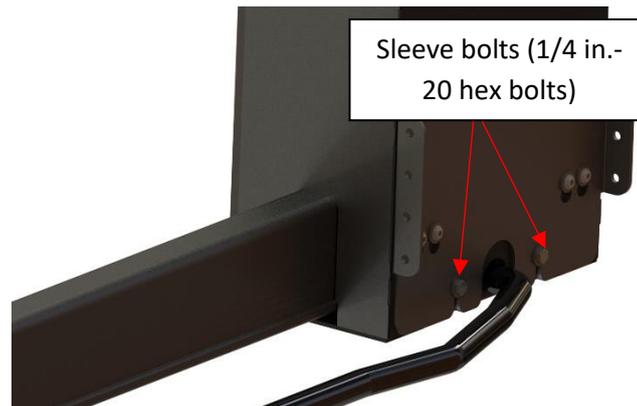
13) If anything moved, adjust the height to match the cover mount brackets holes by turning the jack adapter located at the top of the jack. Use the 15/16 in wrench.



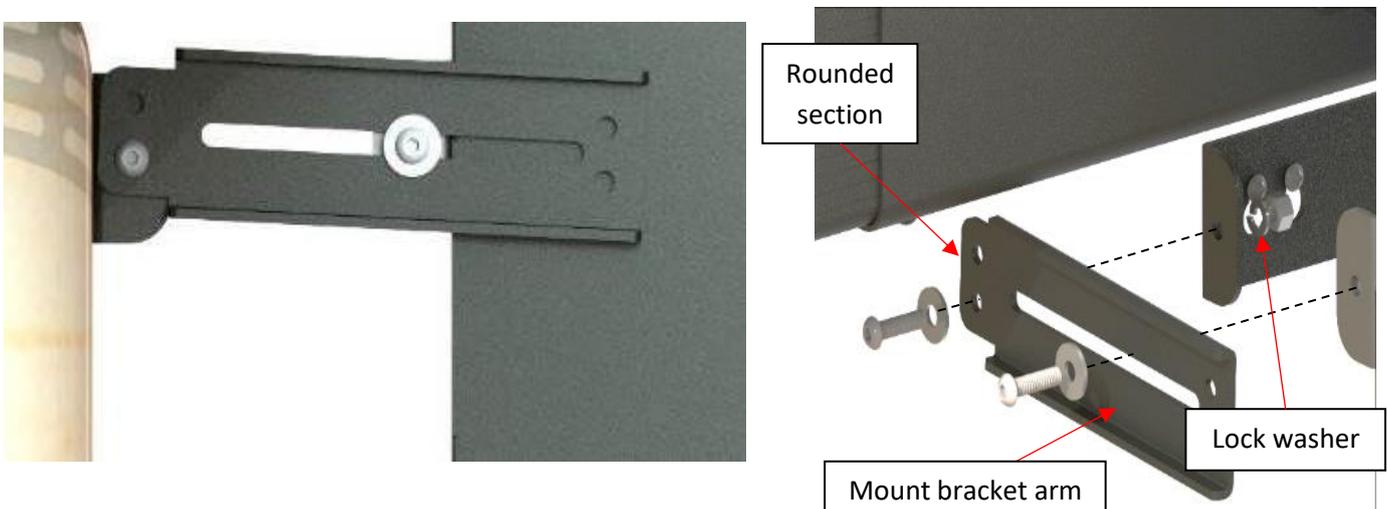
14) Slide the three sleeves over the jack and fasten them using the ¼ in-20 x ¾ in carriage bolts at the top with ¼ in lock washers and ¼ in-20 nuts. Use a 7/16 in socket.



- 15) Retighten the ¼ in-20 hexagonal bolts at the bottom of the sleeve. Use a 7/16 in socket wrench or spanner if there's not enough space. Ensure that the washer is outside of the outer sleeve. This will ensure the sleeve is held correctly.



- 16) Attach the top mount bracket arms to the tub mount brackets using the ¼ in-20 x 1 in hex drive bolt, ¼ in flat washer on the outside. Use a ¼ in lock washer and ¼ in-20 nut on the inside. Use a 5/32 in Allen key and 7/16 in spanner.



- 17) Just as the top brackets, attach the bottom mount bracket arms to the tub mount brackets using the ¼ in-20 x 1 in hex drive bolt, ¼ in flat washer on the outside. Use a ¼ in lock washer and ¼ in-20 nut on the inside. Use a 5/32 in Allen key and 7/16 in spanner.



18) Repeat steps 11 to 17 for the other post (if both have been changed).

19) Verify if the posts are still level in both axes. If not, unscrew the mount arms and reposition the sleeves. Use the outer sleeve as a reference. Use the 48 in level.



20) Attach the top cover of the two posts. Use the provided Robertson #8 self-drilling screws. (2 screws per post)

