

# PRO-LIFT HYDRAULIC RAM REPLACEMENT GUIDE - 16/08/19





**Step 1:**

You will need the following tools:

**Provided:**

- 1. Allen Keys x 2: 4.5mm small / 5mm large
- 1a. 4 x M6 Nyloc, 2 x M10 Nyloc
- 1b. 4 x Grub Screws
- 1c. 2 x star lock caps
- 1d. 1 x SS shaft no thread
- 1e. 1 x SS shaft with thread
- 1f. 2 x provided black plastic bushes large
- 1g. 2 x spring steel retaining clips

1h. 2 x M6 50mm Socket head cap screws

**Not Provided:**

- 1i. Hammer
- 1j. flat head screwdriver
- 1k. small screwdriver for leverage
- 1l. 2 x Adjustable spanner small
- 2 x people

**Optional:**

- 1m. Quick Grips
- 1n. Long Nose Pliers



**Step 2:**

The first thing you need to remove is the foot pedals. Raise the height of your table to a workable height. If possible use a plank of wood or similar to lower the downright of the toprail onto. This will lock the height of the table and release pressure of all bolts and grub screws you need to remove.

bush. These are attached with loctite so may require significant force to remove. If you can't manually do this I would suggest using the hole in the back end of your adjustable spanner or similar as a lever.

In order to remove the foot pedals you will need both of your supplied allen keys and your adjustable spanner. Using the smaller Allen key provided you will need to firstly remove the Grub Screws from the foot pedal

**Note at all times you should have a second person supporting the weight of the top just in case.**



### Step 3:

Once you have removed the 2 grub screws you next need to remove the cross bolt. Using the larger 5mm Allen Key provided and your adjustable spanner unscrew the nut from the bolt. Pull the bolt out. Note: If the bolt is stuck use a hammer to tap it out.

One of your foot pedals should now be free and you should now be able to slide the foot pedal off.

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### Step 4:

Once you have removed one foot pedal from one side, repeat Step 2 and 3 on the other side. Remove 2 x grub screws, then remove the m6 bolt. Please note these Nyloc nuts you have now removed need to be thrown out. We can not use these during the re-assembly process. Once you have removed all screws and bolts the bush should look like above, and the foot pedal should just slide off. You may need to twist this as you slide it out.

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### Step 5:

Now you should have removed both foot pedals and 4 x grub screws 2 x m6 bolts and 2 x m6 Nyloc nuts. 1a (M6), 1b and 1h from step 1.

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### Step 5:

The next step is to release the top of the Hydraulic ram from the top pivot arm. **At this stage you are releasing the Ram from the table and unless the table top weight is supported, the table will collapse.**

Using a flat head screwdriver leverage under the star lock caps (1c.) on the top mount and pry these off. These should just flick off.

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### Step 6:

Once you have removed the first Star Lock cap, repeat the levering motion on the first Star lock cap, you will need to remove the Star Lock cap on the other side.

Flick this cap off, leaving just a 10mm Diam SS shaft exposed.

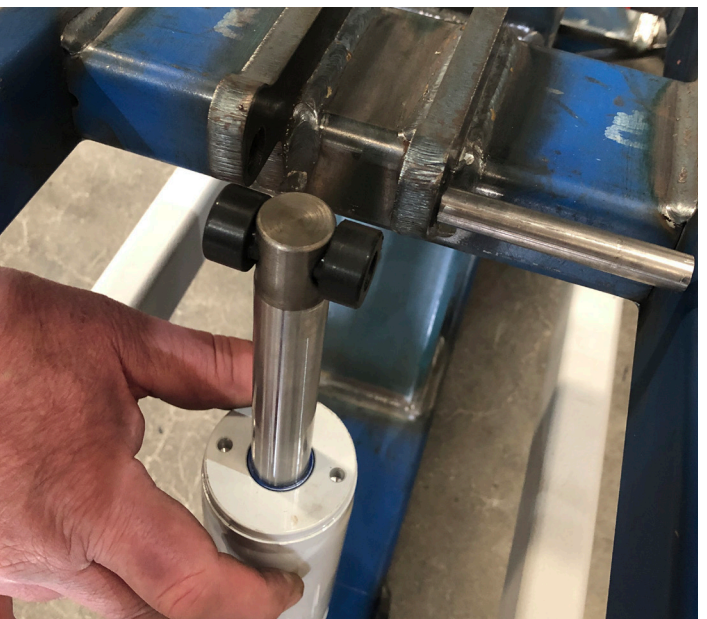
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### Step 7:

Now that you have removed both star lock caps you need to remove the 10mm Diam Pin. **Note when this is removed the table top will completely collapse if the top is not supported.**

Using a Screwdriver or similar, and a hammer tap the pin out and completely through the ram and all it's black plastic bushes. If this is hard to do, this generally means you have not supported the weight of the table top properly.

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### Step 8:

As you tap the pin through the top mount of the Hydraulic ram you should release this Ram from the Top Pivot arm.

Once this is release you will be able to rotate the Ram out of position.

The top mount of the Ram is now released from the table completely.

Remove the pin from the table entirely and place this off to the side. You may wish to use this later.

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### Step 9:

The next step is to remove the metal retaining clips from the black plastic bushes. These are made of spring steel so they are flexible. There are a number of ways to pry these off, but the way we would suggest is:

Firstly locate the opening in the ring clip as shown in the picture above.

Using a flat head screwdriver or similar with a prying motion in the gap you will need to try and force the clip out of the groove.

You need to force the ring inwards towards the body of the Hydraulic Ram. Don't worry if you damage the

Plastic Bushes, we have provided you spare bushes if they need replacing and the clips are easier to install than remove.

Once you have removed one side of the ring from the groove you will need to work your way around the ring prying this off.

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### Step 10:

Once you have removed one of the rings it should sit on the inside of the Black Plastic Bush as shown in the picture above (indicated by the arrow).

Repeat this process with the remaining ring so that both rings are sitting on the inside of the black plastic bushes.

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### Step 11:

Now that you have removed the retaining clips you now need to remove the Black plastic bushes so that you can remove the Hydraulic RAM. Using a screwdriver and a hammer you will need to maneuver these out in an outwards direction. The intention is to remove these out of the way so that you can wiggle the ram out of position.

You should not need to tap this with too much force as these only sit in the metal groove and should be a relatively light press fit. Once you have removed one

side it should be relatively easy to remove the other side. The Hydraulic ram should now be sitting loosely in the metal frame on the base.

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### Step 12:

You will now need to remove the Ram from the table entirely. Push the ram through as far as you can to one side and maneuver the ram upwards until one side is out of the metal frame.

You should now be able to remove this ram entirely from the assembly.

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**Step 13:**

Now that your Hydraulic Ram is released completely from the table you should be able to lower the top section of your table completely. Rest the downright back on the base.

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**Step 14:**

Remove the black plastic bushes from the top of the faulty ram. Keep these as you will need to use these for re-assembly.

If the spring steel retaining clips are still in shape and not deformed you can also keep these and reuse these during the re-assembly, otherwise remove these and dispose of them.

**Note at all times you should have a second person supporting the weight of the top just in case.**

**You have now successfully removed the faulty Hydraulic Ram from your table. You will now need to follow the next set of instructions to install the replacement Hydraulic Ram.**



### Step 15:

Unpack your new replacement Hydraulic Ram. If the hole through the top shaft is not in alignment with the Hydraulic Foot Pedal mount shafts you will need to adjust this. Using a screwdriver or similar lever and rotate this shaft so that the hole in the shaft lines up with the foot pedal mount shafts. This will make Assembly easier later on.

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### Step 16:

Slide the retaining clips back onto the shaft of the Hydraulic ram. These need to be on the Ram before you put the Black Plastic Bushes in place or you will have no way of locking the Ram and bushes in position. You can use the old retaining clips if they are still in shape, otherwise use the new clips provided.

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### Step 17:

Lift the top section of your table completely up so that you have room to move and work underneath. While 1 person works on installing the ram, another must hold the top up or the person working on the ram may be injured.

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### Step 18:

While your friend holds the table up, slot the ram with the retaining clips in place in the reverse order to how you removed it.

The ram can only be installed 1 way. The fat side of the ram faces up when in use, and the flat side faces down. The stickers are on the flat side which need to face downwards (towards the triangulation of the base)

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**Step 19:**

Once the Ram is in place it should look like this. Fat side facing out.

At this stage if you were using a piece of wood during removal lower the table top back onto the piece of wood.

Ensure your friend is still in place holding the table just in case this piece of wood does get knocked while you are re-assembling the table.

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**Step 20:**

Using the Big Black bushes provided you will now need to reinstall these. The groove that is cut in this part is asymmetrical. Ensure the short side is facing in as shown in the picture. This allows you to correctly mount the retaining clip for re-assembly.

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**Step 21:**

Using your hands and by wiggling the Hydraulic ram into place you should be able to push the Black Bushes into place so that they sit in the metal frame with the groove for the retaining clip just behind the metal uprights.

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**Step 22:**

Repeat Step 20 and 21 on the other side of the ram. Once again make sure the retaining clip is already on the Hydraulic ram and that the bush is facing the correct direction with the smaller edge internal.

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**Step 22:**

You will now have to pull the retaining clips into the groves. You will need to do this on both sides of the Hydraulic Ram. You should just be able to do this with your hands, but otherwise use a screwdriver to leverage these into position. Ensure the clip is in place the whole way around the bush.

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**Step 23:**

You now have to replace the Black Plastic bushes that you removed from the top shaft of the faulty Hydraulic ram. The thin lips on the bushes face inwards. These should be easy to install.

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**Step 24:**

Using a Screwdriver as a lever through the cross hole your M6 Bolt for your foot pedal will go in, pull up on the Hydraulic ram and pump the ram into a position where the top bushes you just installed in step 23 line up with the top pivot arm mount hole. If you get this as close as possible the next step of reinserting the chosen shaft will be a lot easier.

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### Step 25:

As shown as you continue to pump the Hydraulic ram up you will bring the Cross hole in that shaft up towards the Mounting plates on the Top pivot arm.

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**In the next step we have provided two different options. If you have used Star Lock caps previously and are confident you will attach these properly this is the easier method.**

**If you have never used them or are not sure once you do that you have installed them correctly please use method B which uses a double ended threaded 10mm SS shaft and 2 x M10 Nyloc nuts.**



### Method A- Star Lock Option:

If you have used Star Lock caps previously and know how to install them properly you will need the 10mm diam SS shaft you removed from the assembly in the first place and the 2 star lock caps provided.

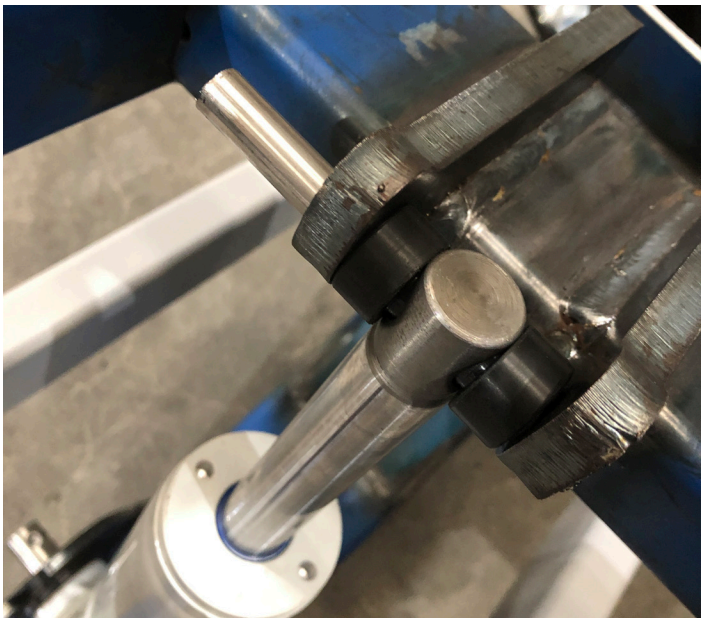
**Note: This should only be undertaken if you are very confident with this method. If you do not install star lock caps properly you risk the pin working its way out and your table collapsing under load.**



### Method B - Nyloc and Threaded Shaft

If you have never used Star locks before, or can't get them on the table once the pin is in place please use the double ended shaft with 2 threads on it.

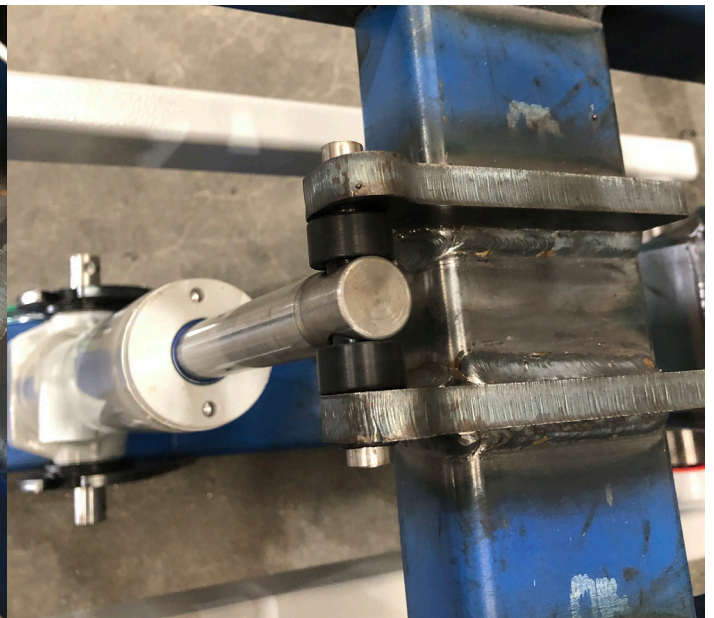
**With this method you tighten two nylocs simultaneously in opposite directions once the shaft is in place.**



### Method A - Step 26:

Using the Pin you removed from your original assembly line up the bushes with the holes and push this through the top mounts, black bushes and Hydraulic Ram shaft. You may need to use a hammer and a screwdriver or similar to tap this into position. If the shaft won't go in this probably means your shaft holes and bushes do not align with the pivot arm mount holes. Re-align and try again.

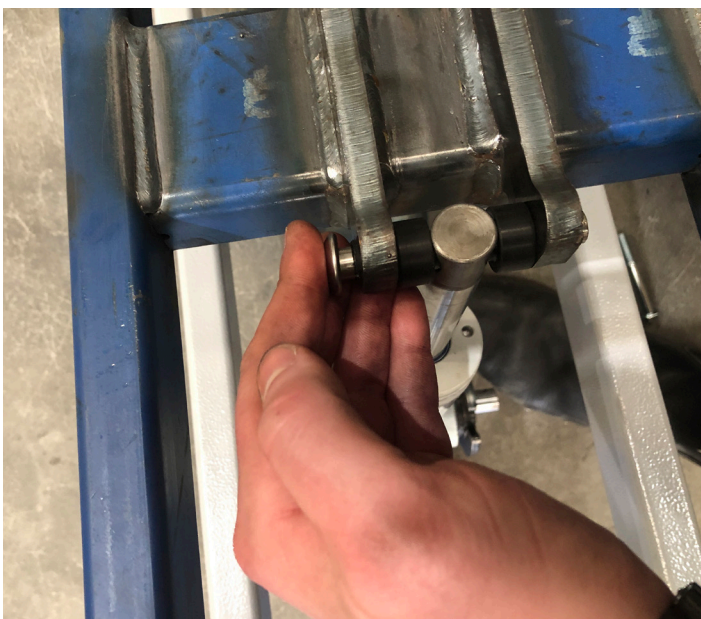
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### Method A - Step 27:

Once you have tapped the pin through make sure that this is centrally positioned as shown above.

**Note at all times you should have a second person supporting the weight of the top just in case.**



### Method A - Step 28:

You now have to push the star lock caps provided onto the shaft. You can push these on with the palms of your hand or tap them on with your palms of your hand. The access is poor to apply these caps.

I would suggest using your hands first. Intertwine your fingers of both hands together together and with the caps in the hard part of the palms of your hands crush the caps onto both sides of the pin simultaneously. You will hear a click and when you push the cap it should stay in place.

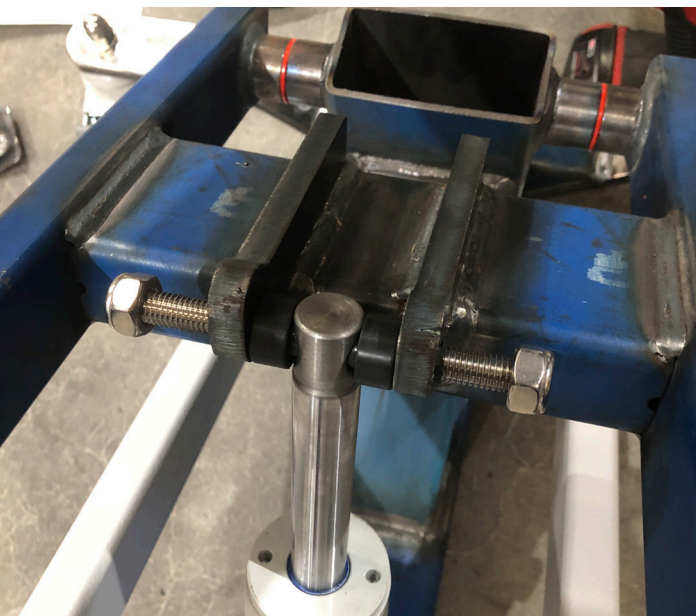
Alternatively if this doesn't work using a soft rubbery object compress these into position. I have shown here



using a Quick clamp. If you have one of these ensure it has a soft end on it otherwise use a bit of towel or rubber or similar as to not damage the cap when putting it on.

**Both caps need to be compressed into position simultaneously with the Quick clamp method.**

**If you damage the cap and the head is indented while trying to install, please remove the pin and use the threaded shaft method 2 instead.**



### Method B - Step 26:

Using the Pin with the M10 tapped ends, line up the bushes with the holes and push this through the top mounts, black bushes and Hydraulic Ram shaft. You may need to use a hammer and a screwdriver or similar to tap this into position. If the shaft won't go in this probably means your shaft holes and bushes do not align with the pivot arm mount holes. Re-align and try again.

**Note at all times you should have a second person supporting the weight of the top just in case.**

### Method B - Step 27:

Once you have tapped the pin through make sure that this is centrally positioned as shown above and start to tighten the two supplied M10 Nyloc nuts.

**Note at all times you should have a second person supporting the weight of the top just in case.**



### Method B - Step 28:

Using two adjustable spanners tighten both of the Nylocs simultaneously until they reach the end of their thread as shown in image 2.

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**Step 29:**

You are now ready to reattach the foot pedals to the Hydraulic Ram. Firstly you will need to attach the M6 Bolt and M6 Nyloc. Slide the foot pedal onto the shaft on the Hydraulic Ram. In the foot pedal bush there are 4 holes through this. 1 is a cross hole which does not have a thread in it. Align this cross hole up with the cross-hole in the shaft ensuring the short side of the foot pedal is facing forward and angled slightly downwards.

Shown in image 2 The cross hole is the smaller hole on the very left of the image, and the two other holes pictured are tapped. These are for the Grub screws and will be used later.

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**Step 30:**

Once you have aligned the foot pedal hole with the cross hole in the Hydraulic Pump shaft you should be able to push the M6 bolt through this hole with relative ease and tighten the NEW supplied Nyloc nut using your Adjustable spanner and the supplied larger Allen Key. If you are having trouble getting this bolt through the hole, lightly tap the head of the bolt with a hammer. Note: You will need to use the new Nyloc nuts.

Now that you have tightened the cross bolt you will need to replace the two Grub screws. Using the smaller Allen Key provided replace the Grub screws you previously removed and tighten these as much as possible.

Repeat steps 29-31 on the other side foot pedal, ensuring both pedals are at the same angle.

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**Step 31:**

# THE HYDRAULIC RAM REPLACEMENT SHOULD NOW BE COMPLETE.

