



# Part Replacement

## Adjustable Pull Pin Carriage

### Inspiration DAP Machine/Multi-Station Cross Overs

#### Memo:

This document instructs on the procedure required to update and replace the height adjusting carriage that is used on the DAP and Cross-Over sections of the multi-station machine. The installation process is the same for all machines but parts are physically different and the correct parts need to be installed to prevent incompatibility issues. Listed below are the parts required to update the carriage per type of machine.

#### Parts Required:

- DAP Carriage Assembly – Left/Right Reversible (PN: 731-7446-KT)
- Multi-Station Cross Over Carriage (PN: 731-7523-KT)

#### Tools Required:

- Metric Hex Key Wrench Set or Specific Keys
  - 3mm Hex Key
  - 4mm Hex Key
  - 5mm Hex Key
  - 6mm Hex Key
- Vice Grip Pliers
- Torque Wrench
- Metric Open Wrench Set or Specific Wrenches
  - 7mm Open Wrench
  - 10mm Open Wrench
  - 13mm Open Wrench
  - 17mm Open Wrench
- Metric Socket Set or Specific Sockets
  - 8mm Socket
  - 17mm Socket



**READ ALL INSTRUCTIONS INCLUDED ON HANG TAG ATTACHED TO CARRIAGE ASSEMBLY PRIOR TO INSTALL. FAILING TO DO SO COULD RESULT IN IMPROPER INSTALL AND HAVE POTENTIAL FOR INJURY.**

## Instructions:

1. Remove the upper pulley from the pulley bracket housing (Fig. 1) using a 6mm hex key to remove the button head bolt and 17mm open wrench to remove the nylon nut.

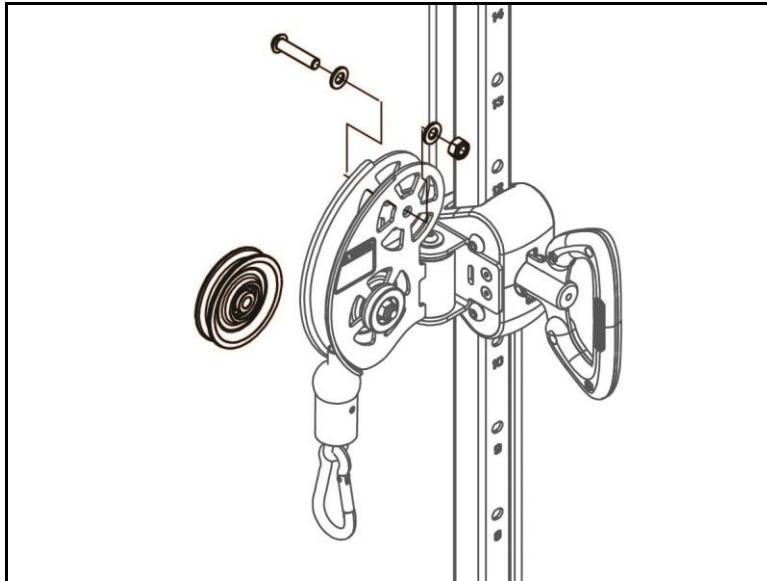


Fig. 1

2. Move the cable out of the bracket and remove the center securing button head screw along with its corresponding hardware with a 5mm hex key and a 13mm open wrench (Fig. 2).

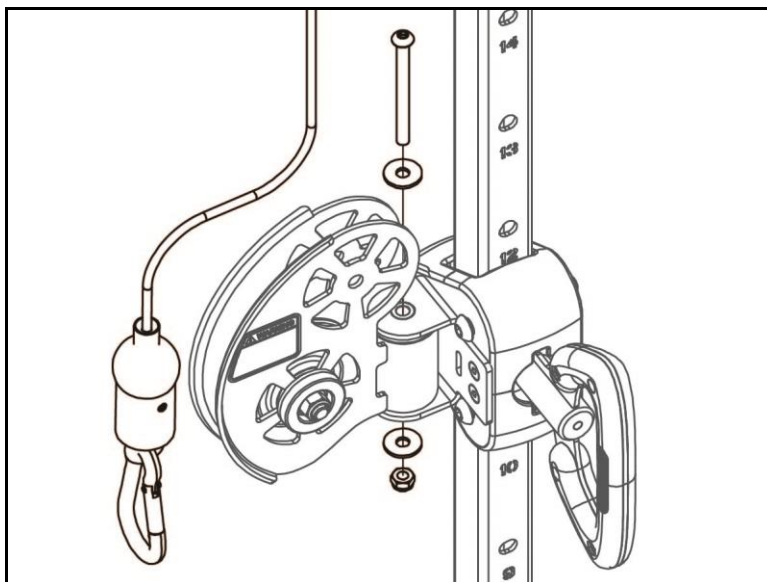


Fig. 2

- Slide out the inner race sleeve (Fig. 3) to separate the pulley bracket from the carriage assembly; two spacers will come loose in the process.

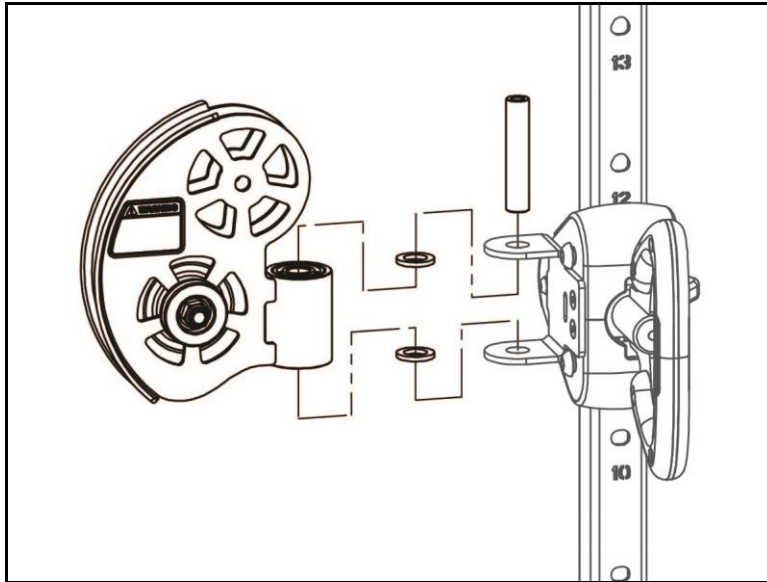


Fig. 3

- Using a pair of vice grip pliers or a 7mm open wrench to grip the cable end shank; remove the nylon lock nut holding the cable end to the carriage assembly with a 10 mm open wrench (Fig. 4).

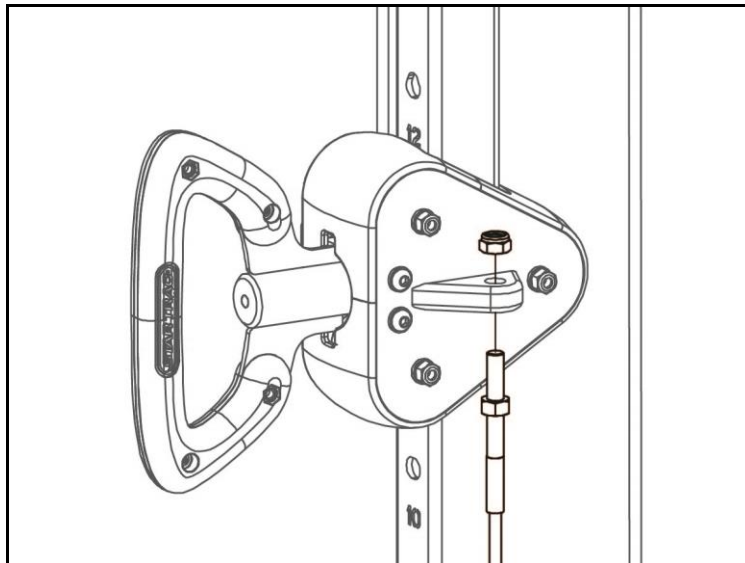


Fig. 4

- Using a 10mm wrench and a 4mm hex key – remove the rearmost roller securing hardware to slide off the rear cap and roller (Fig. 5).

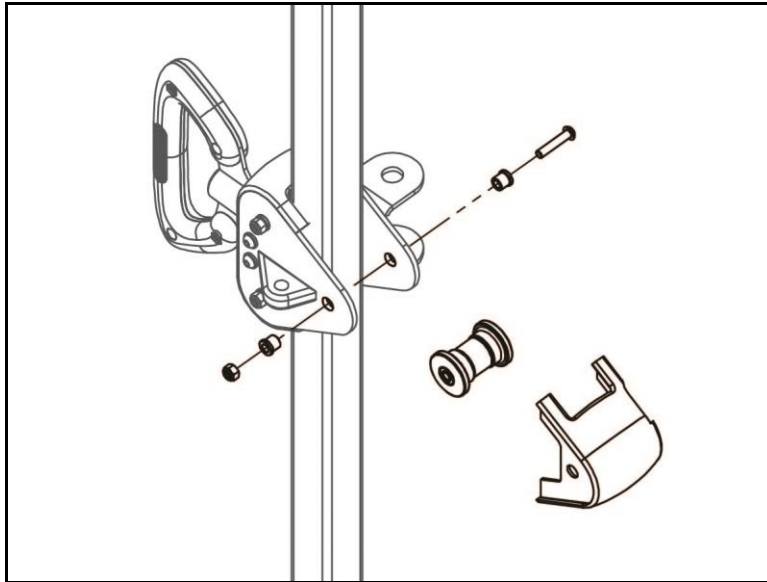


Fig. 5

- With all the necessary hardware removed – dislodge the old carriage assembly (Fig. 6) from the adjustment bar post.

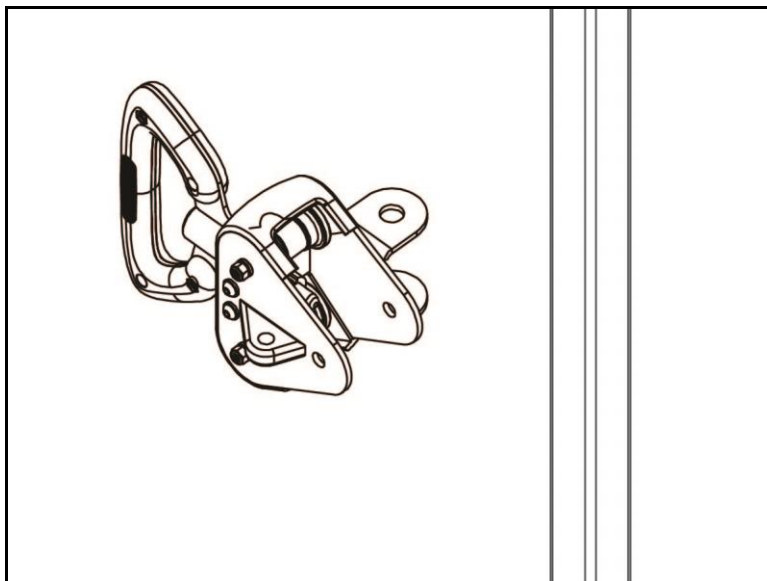


Fig. 6

7. Locate your new carriage assembly and prepare the carriage for mounting by disassembling the prebuilt carriage into four main groups (Fig. 7) accompanied by their corresponding hardware.

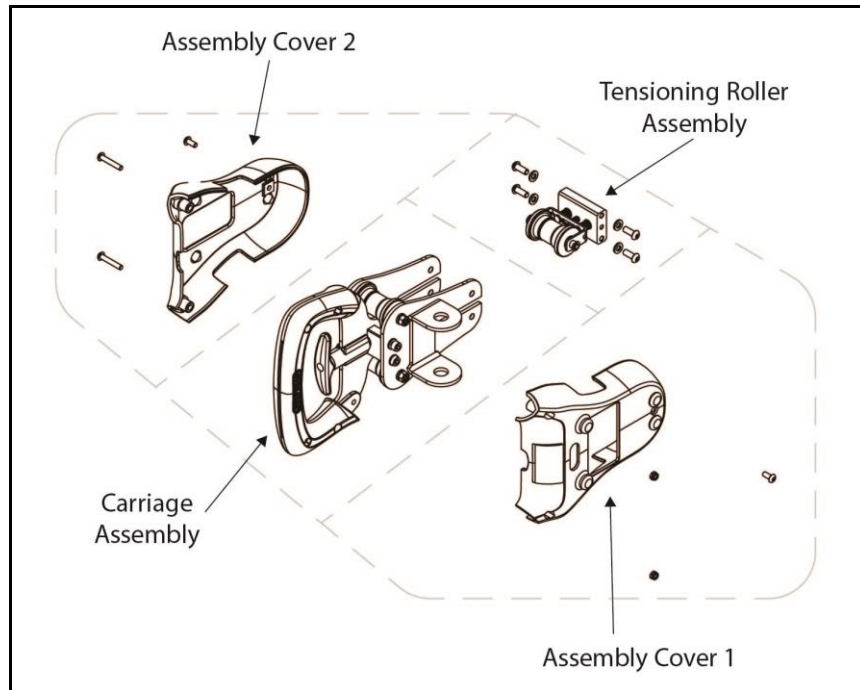


Fig. 7

8. Locate the rear roller tensioning assembly and verify that there is approximately 9mm (0.35in) of stud protruding from the base plate (Fig. 8) prior to commencing assembly. If the springs need to be compressed; verify that the center set screw is backed off to prevent it from bending the roller holding bracket.

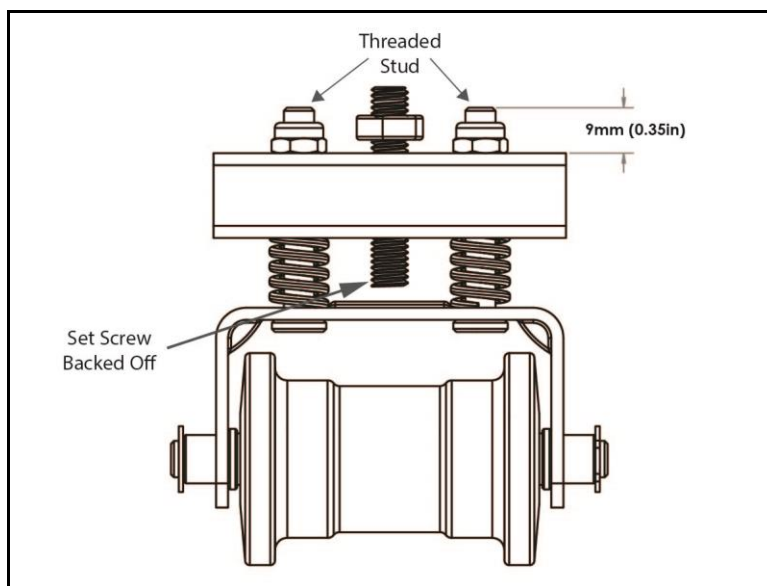


Fig. 8

- Mount the carriage assembly onto the adjustment bar (Fig. 9) and allow the pin to engage into one of the available holes.

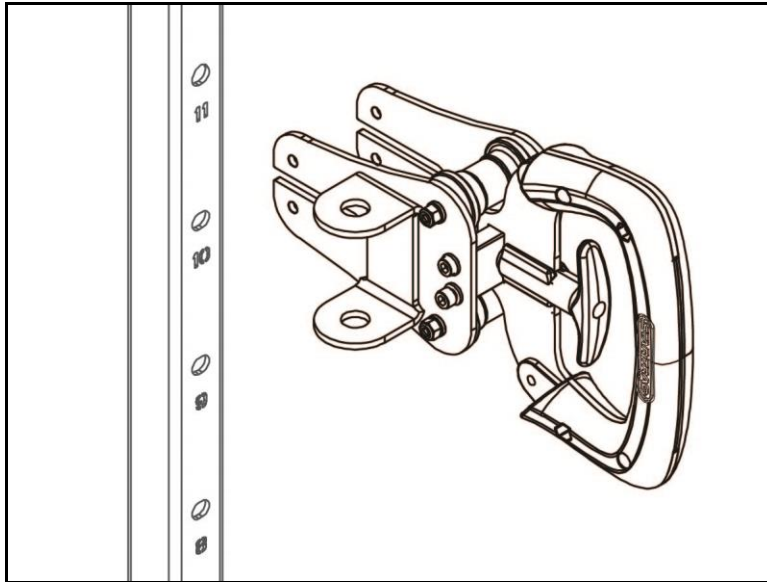


Fig. 9

- Locate the rear roller tensioning assembly along with its hardware (Fig. 10). Apply Loctite 242 (Blue) to each screw and mount them to the carriage assembly securing the hardware with a 4mm hex key and torquing all four button head screws to 10Nm (88.5in-lb).

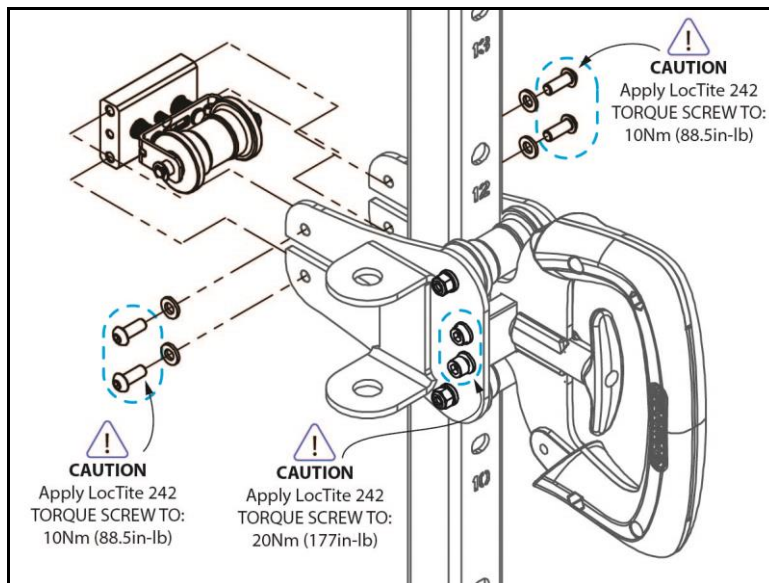


Fig. 10

### NOTE

In the event that inserting the roller tensioning assembly is difficult; Loosen the hardware that secures the two front rollers and two of the four socket head screws securing the pull pin handle to the side plates.

### CAUTION

This Step requires the application of Loctite 242 to specific bolts and torquing certain screws to a particular torque spec.

11. Now back up the nylon lock nuts that are threaded onto each of the studs (Fig. 11) using a 8mm socket until at least one full thread of each stud is protruding through the nylon ring of each lock nut (Fig11 – Det. A). Note that the roller comes into contact with the adjustment post.

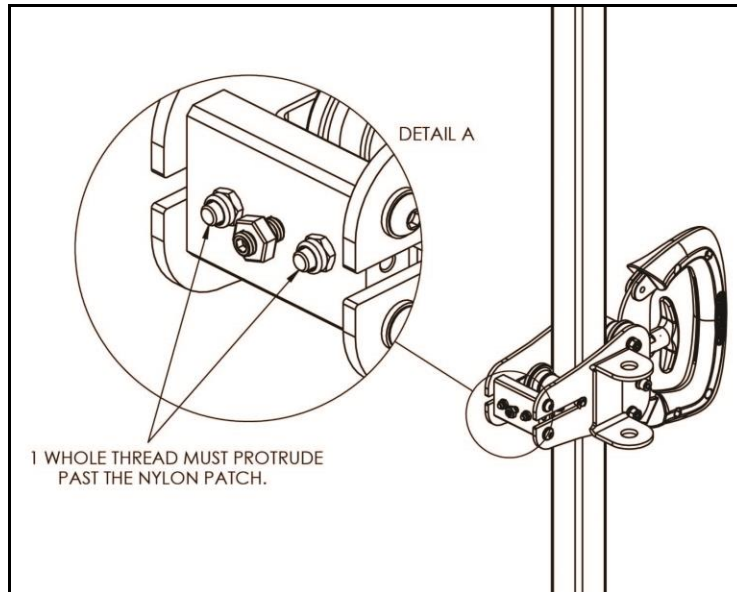


Fig. 11

12. Engage the center set screw stopping system to prevent excess slop from developing by turning the set screw clockwise until it comes in contact with the roller holding bracket (Fig. 12 – Det. B). Once the set screw comes in contact with the bracket – turn the secondary lock jam nut clockwise until it locks the set screw in place and prevents it from backing off.

**CAUTION**

The locking jam nut needs to be torqued to 7.5Nm (66.38in-lb).

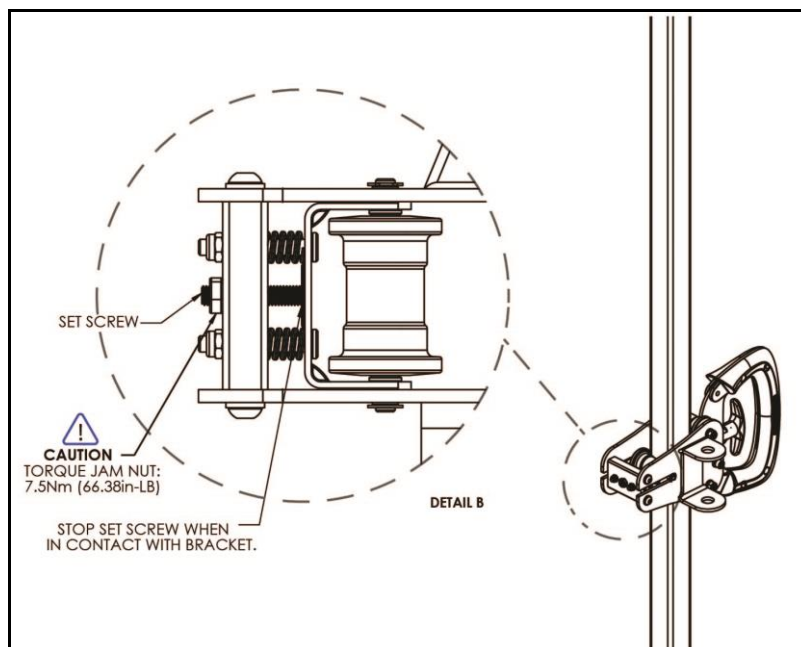


Fig. 12



13. Test the carriage assembly by verifying that the assembly is able to adjust up and down without binding. Make sure that the pull pin engages into the next available hole once the pull pin handle is released. If the partially assembled carriage operates properly with **no non-engaging pins** or **excessive play**, continue to Step 14 & 15.

*If problems are encountered please contact our customer service group for further technical assistance.*

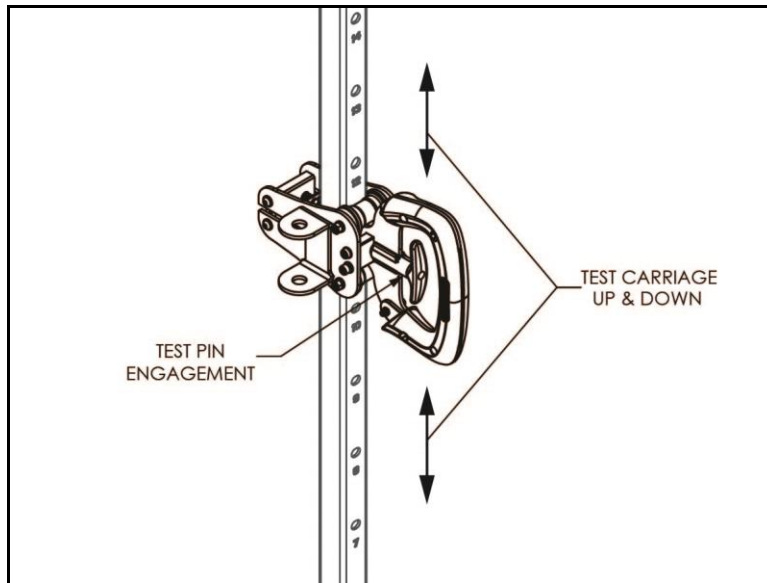


Fig. 13

14. Mount the left and right side covers onto the carriage assembly, verifying that the text of all warning labels is properly oriented. Secure the covers by installing two short button head screws to the rear end of the carriage and two longer button head screws to the front section accompanied with the corresponding hex nut using a 3mm hex key to tighten the screws.

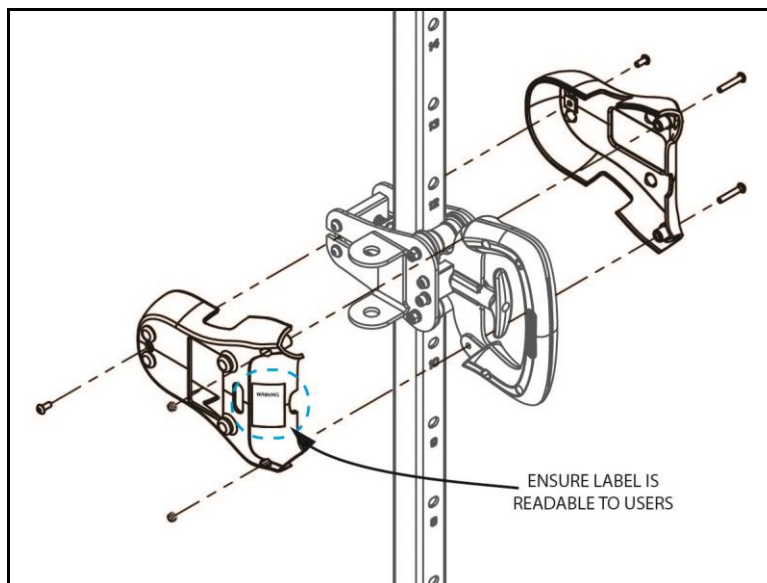


Fig. 14



15. To complete installation reverse Steps 4 to 1; the fully assembled carriage should look like the below (Fig. 15).

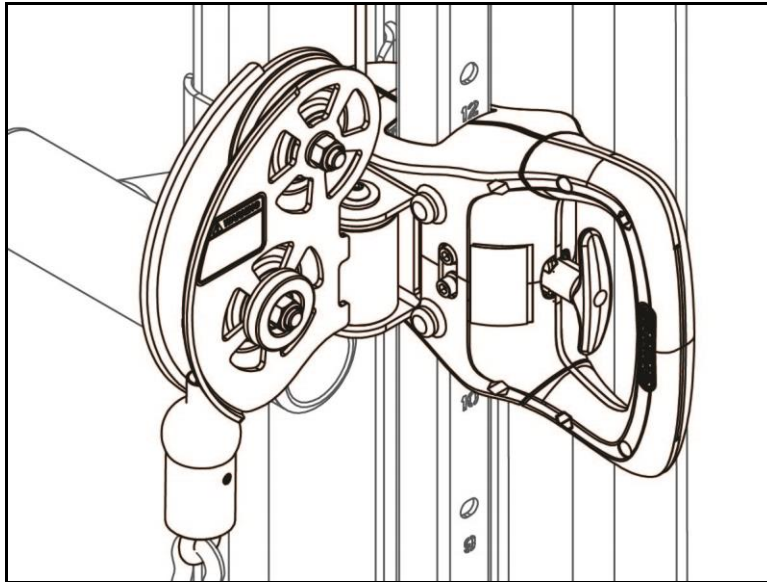


Fig. 15

### NOTE

If the pulley bracket that was removed in Step 3 was replaced with a new piece in the course of this process; The following items (Fig. 16) will be left over as spare parts and replacement is complete. If the pulley bracket from Step 3 was reused the items from (Fig. 16) should be installed in Step 16.

16. Replace the hardware for the lower cable pulley (Fig. 17) of on the pulley bracket assembly using a 6mm hex key and a 17mm socket to add a round plastic bumper to each side of the bracket.

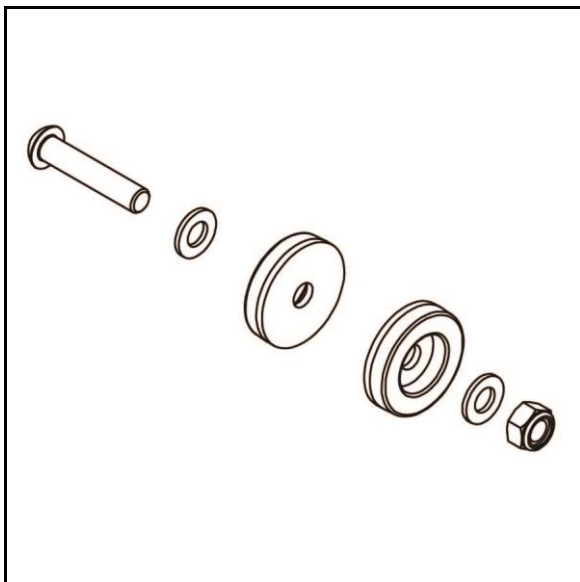


Fig. 16

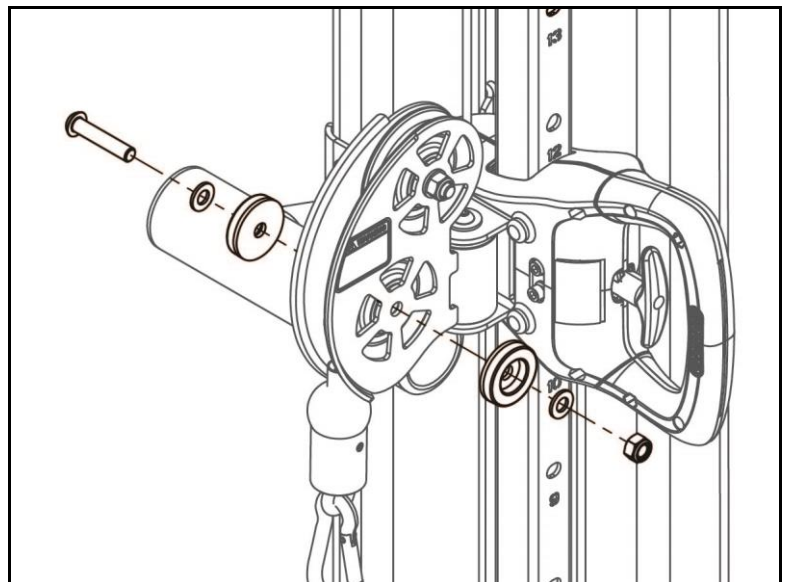


Fig. 17