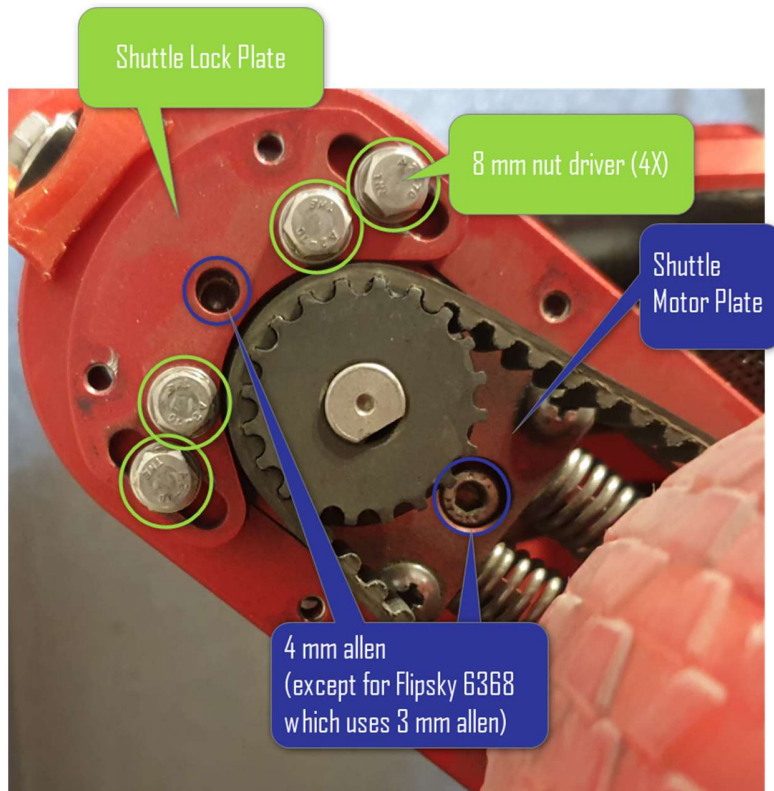


Motor Pulley Retightening – MetroboardX

Remove the Motor from the Motor Bracket Assembly

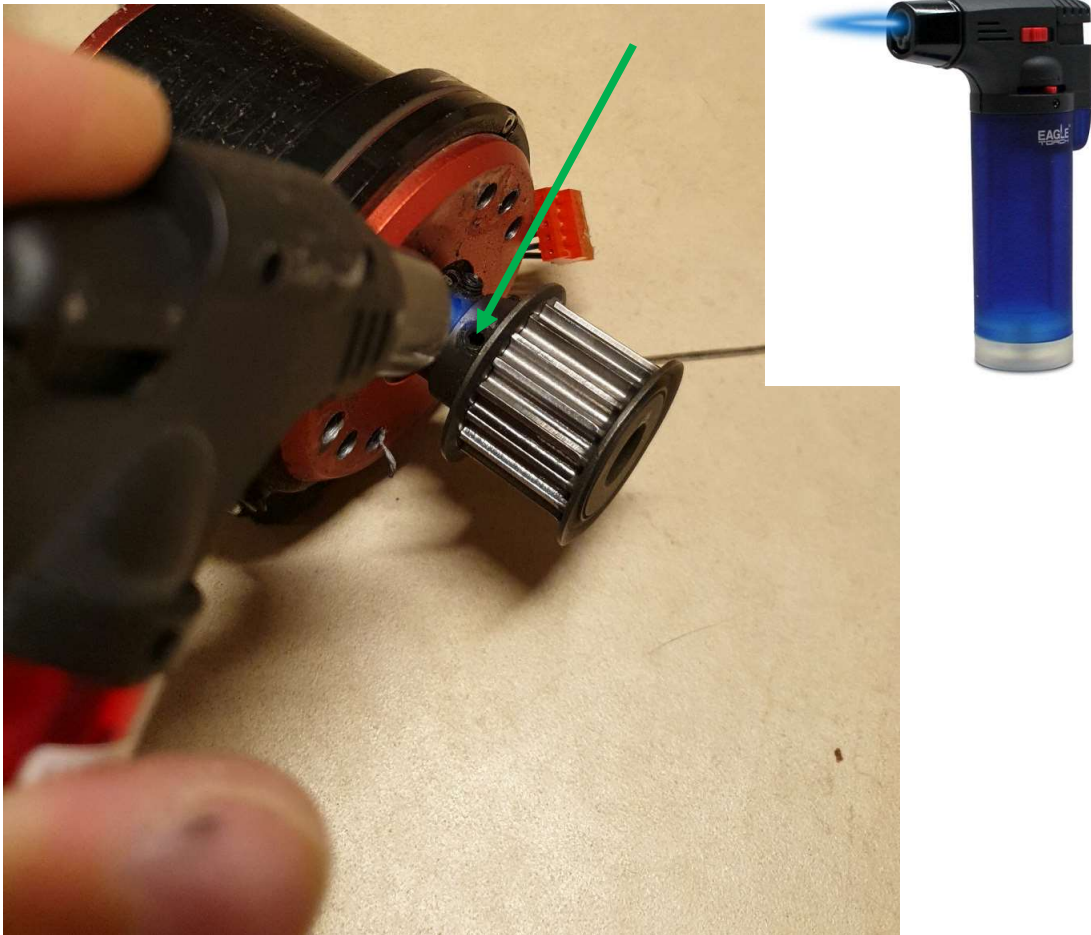
- 1) Remove Timing Belt following instructions here: https://metro-board.com/maintain/#switching_between_street_and_at_wheels
- 2) Leave M5 tensioning screw in place in the position it was in when belt tension was removed (and belt subsequently removed)
- 3) Completely remove the **four** hex head M5 screws shown circled in green below using an 8 mm nut driver (be careful not to lose the *split lock* and *flat washers* underneath the screw head).



- 4) Now the *Shuttle Lock Plate* will be free and you can remove it.
- 5) Remove the **two** motor mounting socket head cap screws circled in purple above using a 4 mm allen key. If you have a “flipsky 6368” black motor you will need a 3 mm allen (you will see the words flipsky 6368 on end cap of motor if this is the case). Be careful not to lose the *split lock washer* underneath the screw head.
- 6) Now the motor will be free from the *Shuttle Motor Plate*. Slide the motor carefully out of the plate (be careful not to yank on motor cables since they will still be attached to the rest of the board).

Remove the Motor Pulley from the Motor

1) Using a “torch lighter” as shown below, aim the flame directly at the set screws (there are two 90° apart) and hold for about 15 seconds. The purpose of this is to destroy the threadlocker with heat before attempting to remove the set screws.



2) Now using a 2.5 mm allen key, remove the set screw being careful not to strip the head of the set screws or allen key. If it's difficult to remove, go back to step 1 above and reapply heat for another 15 seconds and try again.

3) With both set screws removed, slide the pulley off the motor shaft.

4) Fill a glass with **boiling** water and put both set screws and the pulley in the glass for about 5 minutes. The reason for this is to help remove any remaining dried threadlocker on the threads of both the pulley and set screws.

5) Remove from hot water and using a “scratchy” sponge or an X-acto knife, remove any remaining dried threadlocker from the set screws. You can use the sharp edge of the knife to carefully run through the threads of the set screws. Rinse any debris off and then dry with a towel. Allow to air dry as well for at least 15 min.

6) Using one of the four Shuttle Lock Plate M5 Hex head screws that you removed in the previous steps, run the screw through the threads of the motor pulley to help remove any remaining dried threadlocker. Be sure to go all the way through the threaded hole into the center of the motor pulley as shown in pic below. Do this for both threaded holes. This will help clear out any remaining threadlocker. Remove this screw completely.



7) Plug the bottom of side of the pulley with your finger as shown below.



8) Now run hot water through the opposite end of the pulley and make sure you see water shooting out of the 2 set screw holes (to wash out any loose threadlocker debris).



9) Dry the pulley with a towel and using compressed air, aim into the threaded holes and blast out any remaining water. If you don't have any compressed air you can try blowing into the hole with your mouth or using a hair drier set to the highest heat setting, but be sure that all water is removed from the threaded holes. Visually inspect that this is the case. Allow to air dry for at least 30 minutes.



Reinstalling the Motor Pulley onto the Motor

Now that everything is clean and dry it's time to reassemble the motor pulley to the motor.

1) The motor pulley needs to be set at the correct height relative to the motor face plate. The hub of the motor pulley needs to be about 5.5 mm (7/32") above the face plate. Using either a 7/32" drill bit or 7/32" allen key, place on the motor face plate as shown below close to the motor shaft. This will act as a spacer when we tighten the set screws in the next steps. Now slide the motor pulley onto the motor shaft.



2) Apply "RED" High Strength threadlocker (Loctite 263 is best or similar) onto the threads of one set screw. Be sure the pulley is pushed against the 7/32" spacer (e.g., drill bit) and using a 2.5 mm allen key tighten the **first set screw** firmly against the **flat of the motor shaft**. Be sure to crank it down **firmly** using the short end of the L-shaped allen key in the set screw head and using the long end for leverage. You want this tight, but of course be careful not to strip the head of the screw.



3) Now you can remove the 7/32" spacer and apply threadlocker to the second set screw (90° from first one) and firmly tighten as well.

Reassemble Motor to Motor Bracket

1) Jump back to the first page of these instructions and follow steps 6 through 1 (in reverse order) to reassemble the motor to the motor bracket.

2) If both left and right side motor pulleys are loose, jump back to page 1 and repeat for the other motor pulley.

VERY IMPORTANT: YOU MUST WAIT AT LEAST 12 HOURS FOR THE THREADLOCKER TO DRY BEFORE TRYING TO RUN THE MOTORS AND/OR RIDE THE SKATEBOARD OR THERE IS A GOOD CHANCE THEY COULD VIBRATE LOOSE AGAIN. DO NOT RISK THIS!