

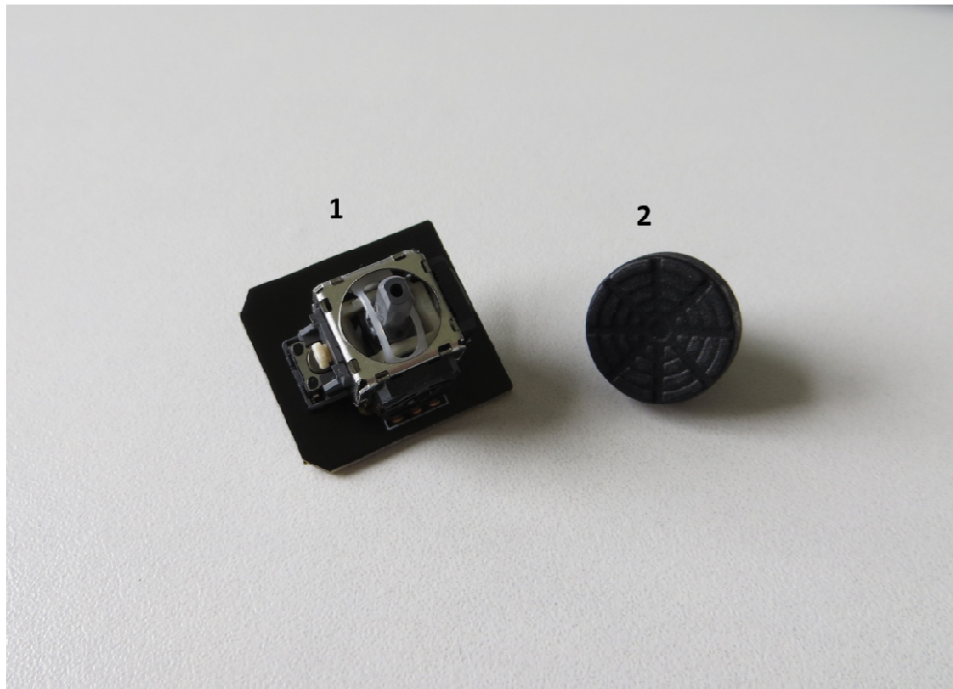
Radar TDC slew upgrade for Thrustmaster Cougar Throttle

Installation Instructions

Last updated – July 2020 V1.0

Parts:

You will receive these parts with your kit:



1. Sensor PCB – ALPS sensor and PCB to fit inside throttle
2. Cursor Hat - SLS 3D printed plastic hat part

Tools required:

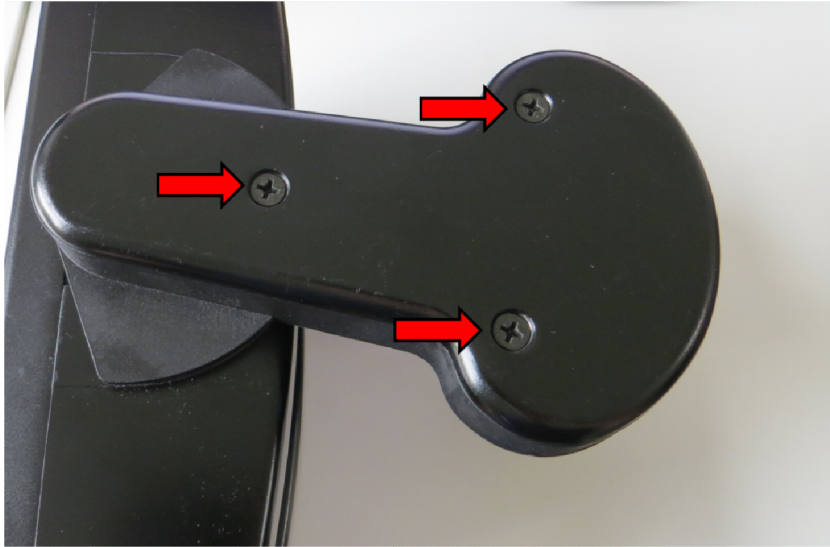
For the installation you will need the following tools:



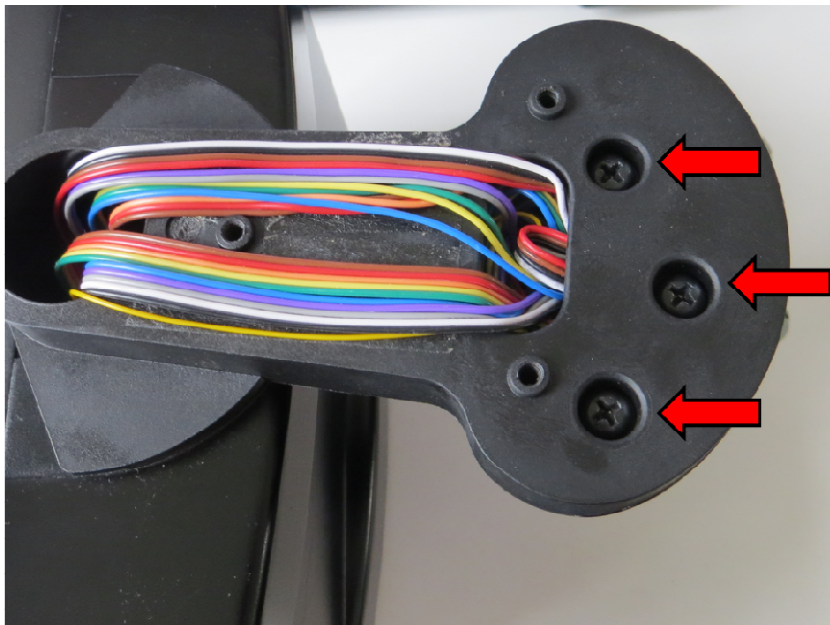
- Phillips screwdriver (PH1 recommended size)

Removing the old sensor:

Start the installation by removing the 3 screws from the side of the throttle, and removing the side cover plate.



Once the side cover plate is removed, remove the 3 screws marked below so you can remove the whole throttle grip.



Once the throttle grip is removed, rotate it so you have access to the 4 screws on the bottom. **Be careful as the grip is still attached to the rest of the throttle by the wires, which could be damaged if they get excessively pulled or stressed.**

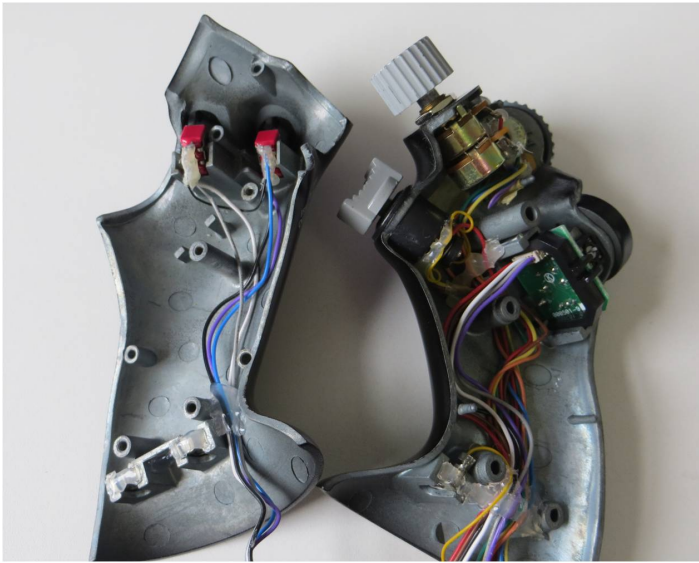
Next remove the 4 screws from the underside of the throttle grip:



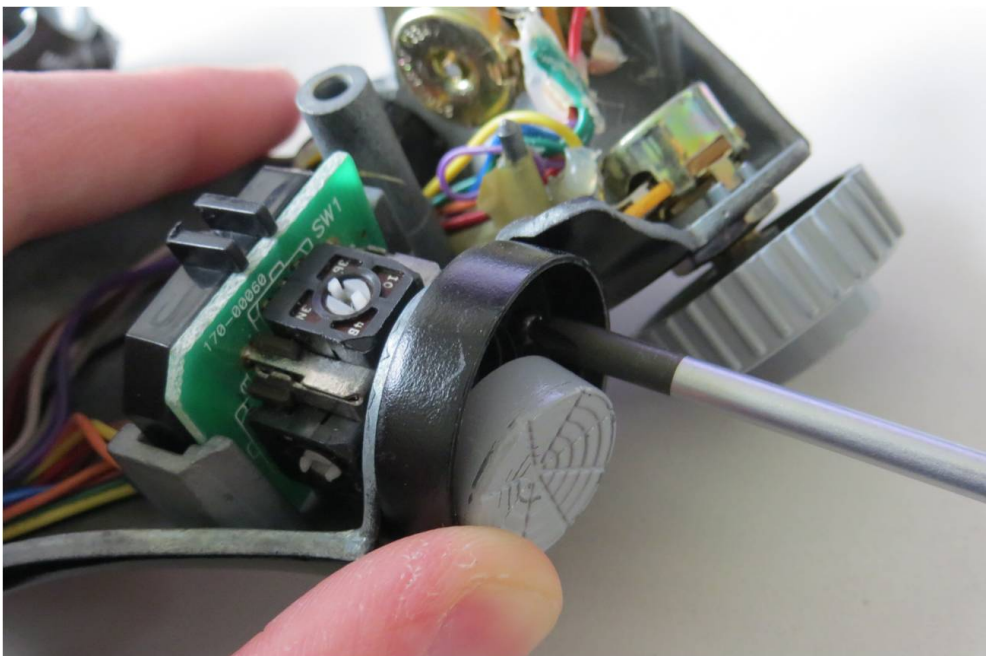
Remove the 4 screws so they are not lost during the next steps.



Separate the two throttle halves to give access to the internal parts.



Next you need to remove the small metal 'collar' piece from in front of the sensor. To do this you may need to push the sensor to one side to get access and remove the **two** screws attaching it to the throttle.

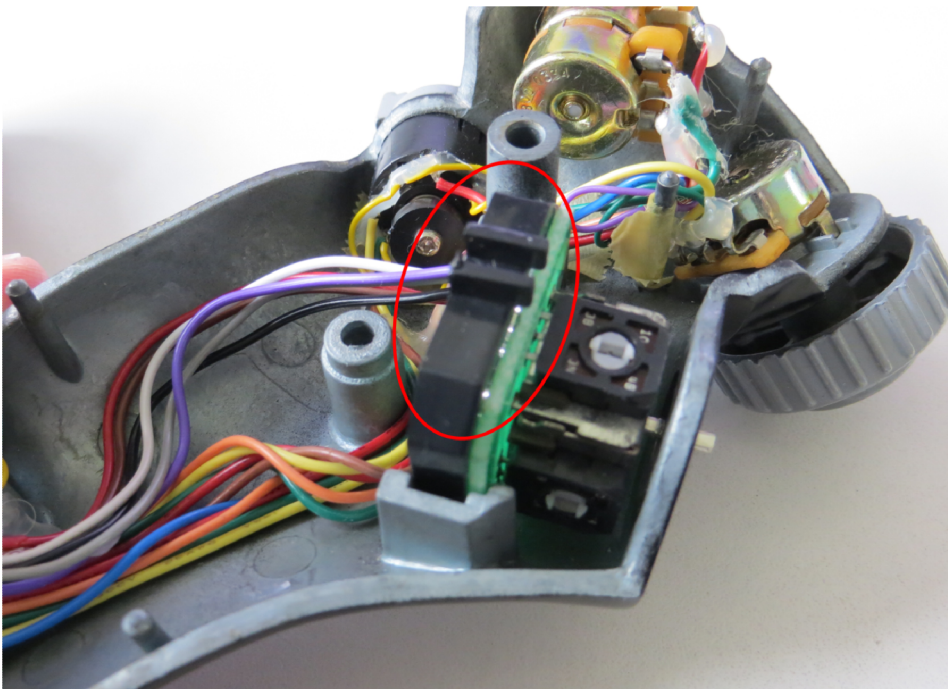


Once the two screws are removed, gently pull the collar piece and the grey hat part away from the sensor.

The hat part is a press fit onto the old sensor, so it may require a small amount of force to remove it.



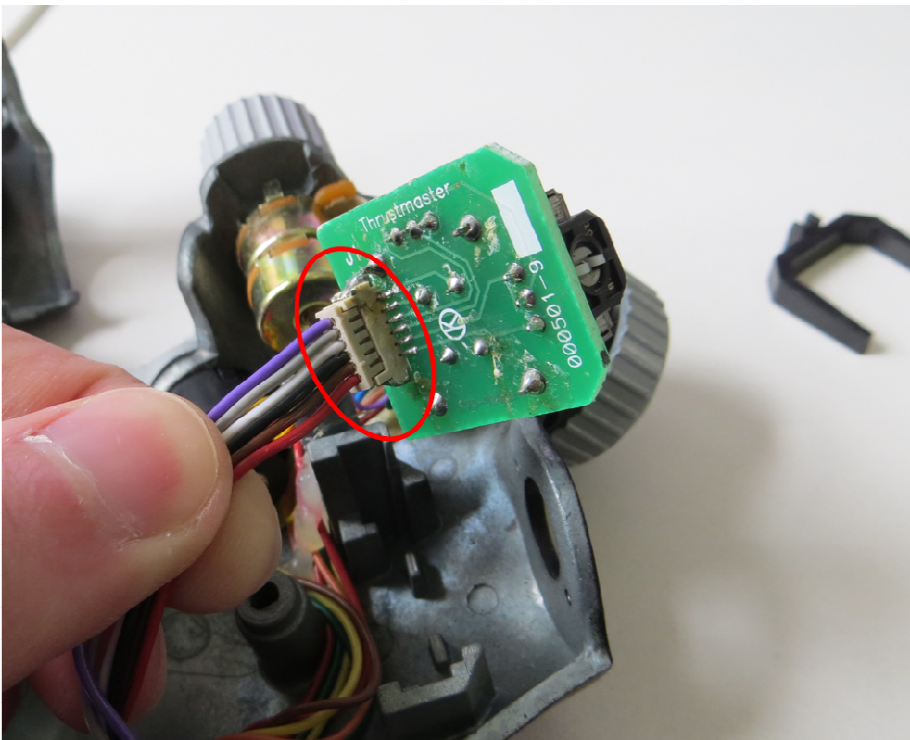
Next turn your attention back to inside the throttle grip. Remove the plastic part holding the old sensor in place. Pull this part vertically upwards to remove it, again it is a press fit so may need a small amount of force to remove.



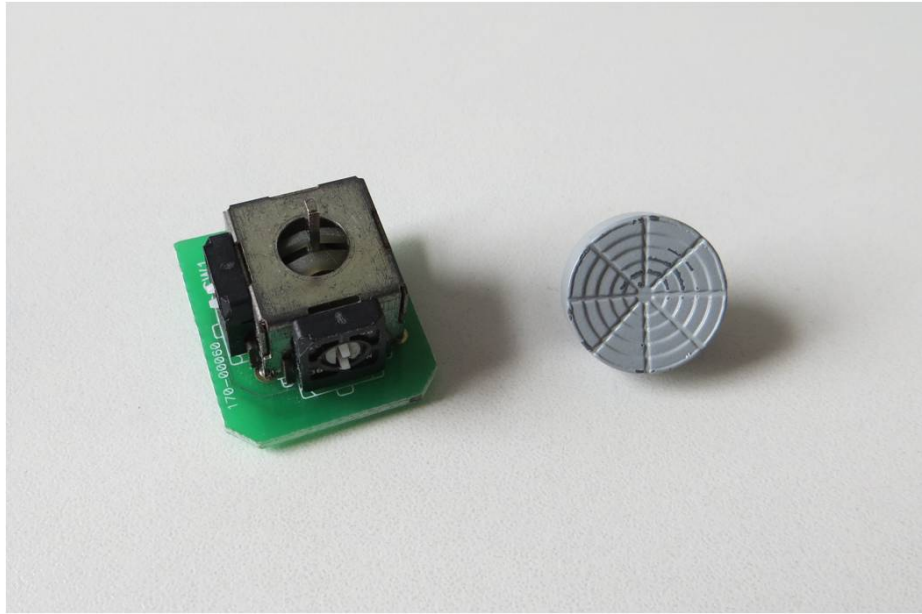
Once removed keep this part safe, as you will need it when the new sensor is installed.



The old sensor should now lift free from the throttle. Carefully disconnect the cable from the old sensor board.



The old sensor parts have now all been removed. You might want to keep these somewhere safe in case you ever need them in the future.

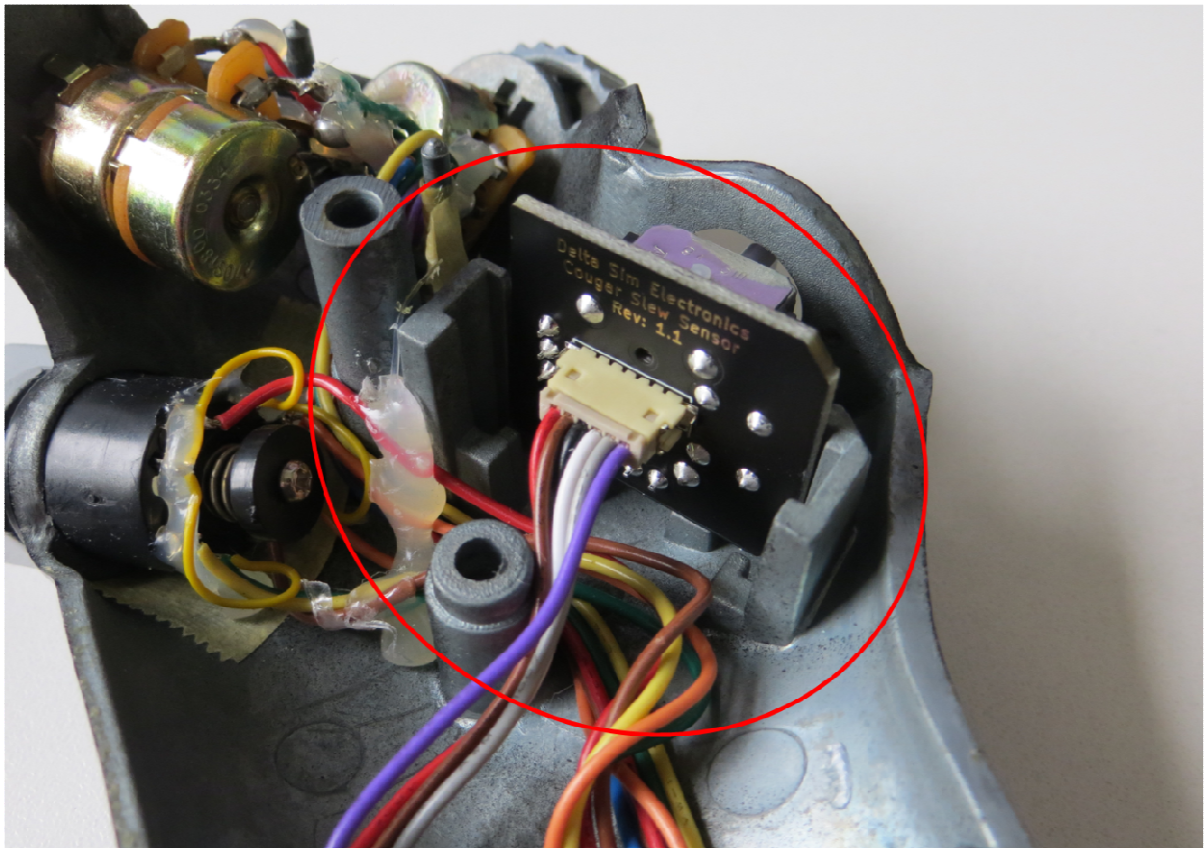


New sensor installation:

To install the new sensor into the throttle housing, connect the 6 pin cable to the new sensor PCB and then position the new sensor inside the throttle grip.

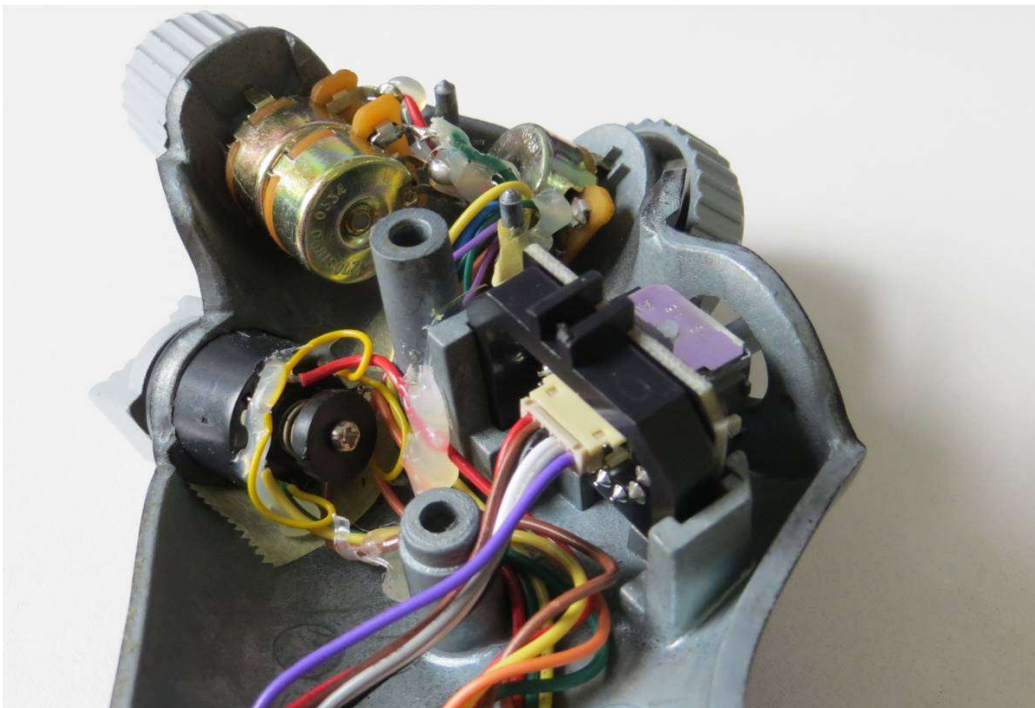
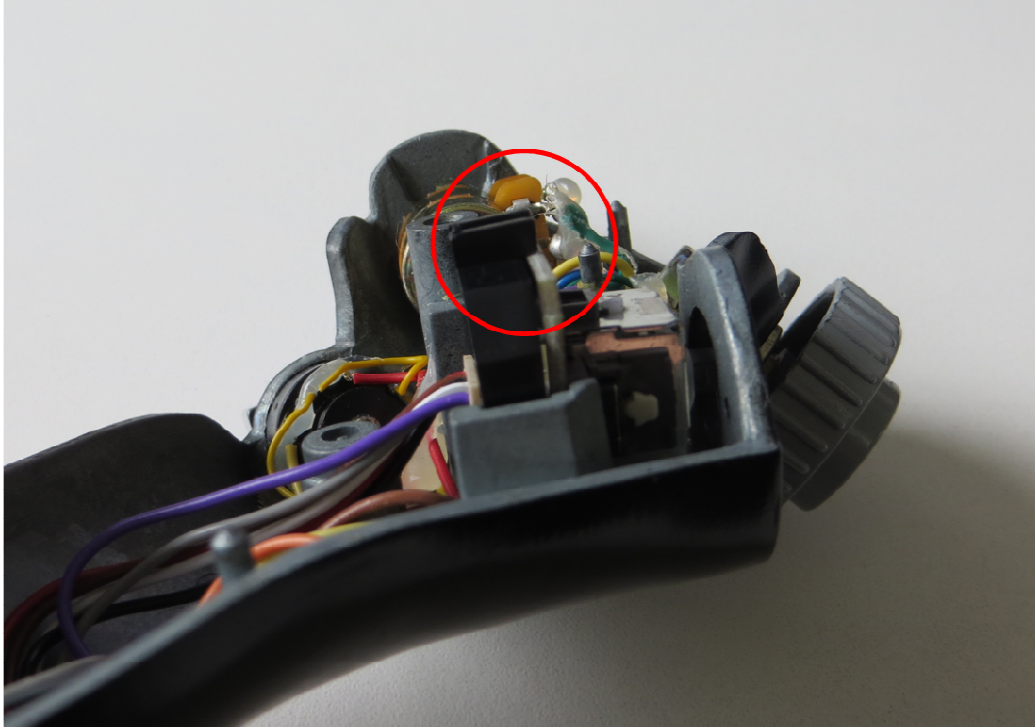
Make sure all of the following have been done before proceeding:

1. The 6 pin cable has been full installed into the connector on the new sensor board.
2. The new sensor has been positioned in the throttle as below. It needs to be as far forward in the metal cradle as possible, **sitting on the small metal pieces moulded into the throttle body, and flat against the front walls**
3. The cable to the sensor has been positioned around the posts where the throttle screws together. **If it passes over any screw posts it will be crushed when the throttle is reassembled and could be damaged.**



Next installed the plastic part we remove earlier behind the new sensor PCB. It should be a light press fit so some force might be needed to install it.

Make sure it has been installed the right way around, so the two small overhanging plastic parts or pressing onto the top of the PCB, as shown below.



Next reinstall the front metal collar part.

Screw in the two screws but **do not fully tighten them**. The metal part can then be moved around slightly so the sensor shaft falls as close to the centre of the hole in the metal collar as possible.

Once you are happy you can fully tighten the screws.



Next you can install the new hat part onto the sensor. This as a light press fit so might require a small amount of force to install.

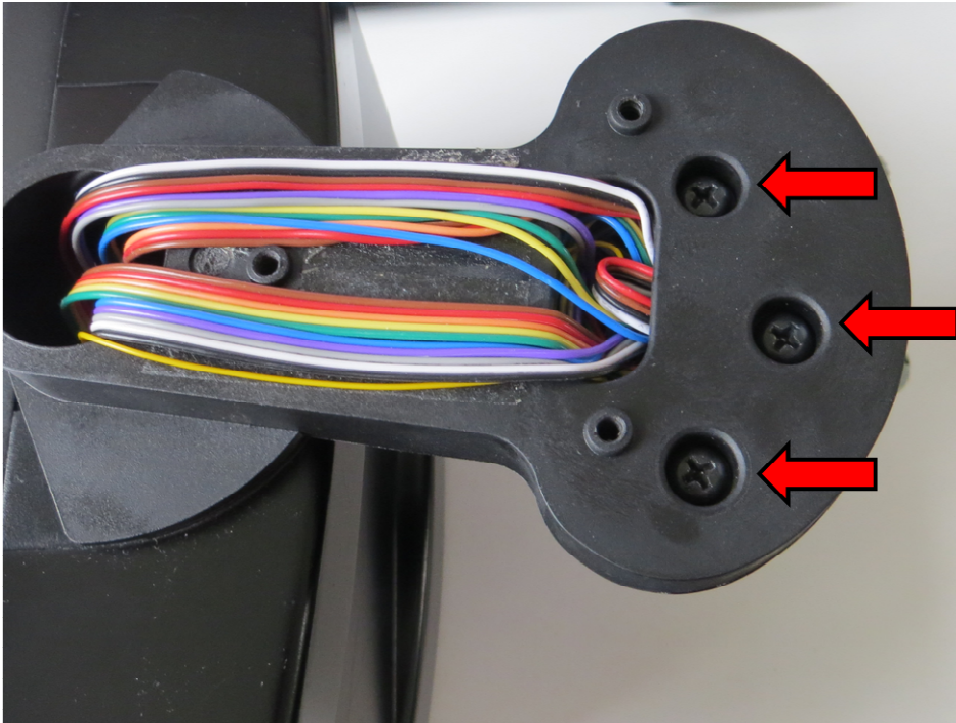


Now the sensor is fully installed, so you can reassemble the throttle opposite of how we disassembled it earlier.

Start by putting the two halves back together, **be careful how you route the wires out of the throttle so none become crushed between the two halves, which could damage them.**

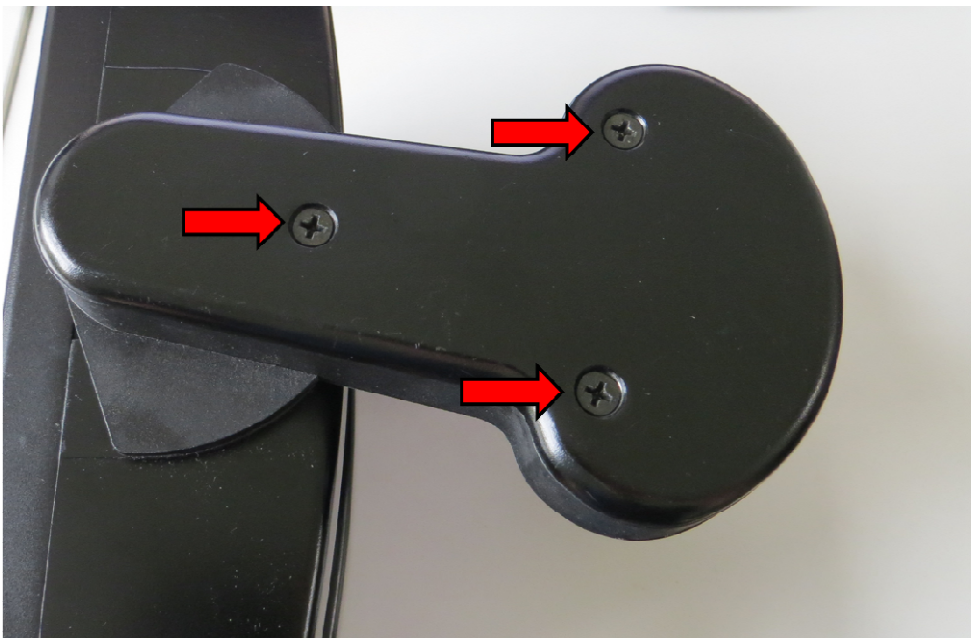


Reattach the throttle grip to the main body with the 3 screws we removed earlier.



Make sure the exposed cables are running as flat as possible, and not covering any screw holes or overhanging the edges. Any excess cable must be pushed up into the throttle grip or down into the throttle base.

There is very limited space behind the side plate, so it will not go on properly unless care is taken to manage the cables so they are flat and away from the screw holes and edges, as show in the above image.





You are now done with the installation!

You can now use your favourite joystick test software to check the new sensor is working properly.

If you are using the standard "HOTASConfig.exe" software from Thrustmaster, I recommend the standard profile for the Microstick X and Y axis:

