# Q3S Arm Angle Device Instructions 

Newell Brands<br>Hayden McKinley<br>2/19/24<br>Installing Device

1. Pick the correct device for the test, the devices always get installed on the doorside arm of the Q3S. Forward Facing test device is marked "Forward" and Rear Facing test device is marked "Rear"
2. The two cylindrical posts on the side will align with the bolt holes on the outside of the Q3S elbow.
3. Install by aligning the posts, and rotating the device inward, to seat them and clip the curved mating surface across the top of the arm. There should be no gap around the arm and the curved mating surface.


4. Once the device is installed, the Wixey angle gauge (https://www.amazon.com/Wixey-WR365-Digital-Angle-Gauge/dp/B0054RJ7VC) will fit on top of it, in line with the arm. This will give you the arm angle readout. Note: Peeling the clear rubber cover over the Wixey sticker is suggested to have a better fit.


Twist Measurement
5. Remove the Wixey Gauge, rotate 90 degrees, and reattach to arm angle device, now perpendicular to the arm. The readout will now give you arm twist measurement.

6. Remove Wixey gauge and arm angle device by lightly rotating outward, holding arm to prevent movement.

## Building Device

1. After printing or machining the device from the provided CAD model, glue down a strip of steel shimstock (https://www.memaster.com/6544K841/), onto the flat top surface of the device, running the length of the device. This works for the magnetic base of the wixey gauge.

2. On the hollow side alignment posts, a $2 \mathrm{~mm} \times 6 \mathrm{~mm}$ magnet will be glued into the bottom of each cutout.

