

Steering Encoder Replacement

Parts required for this service:

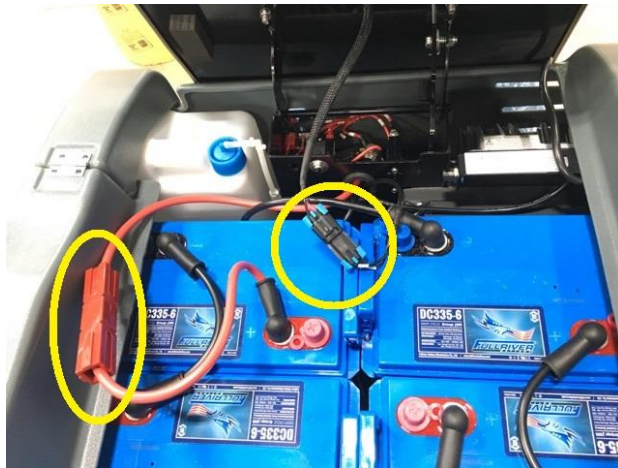
2.5 mm hex

5 mm hex

Replacement Steering Encoder

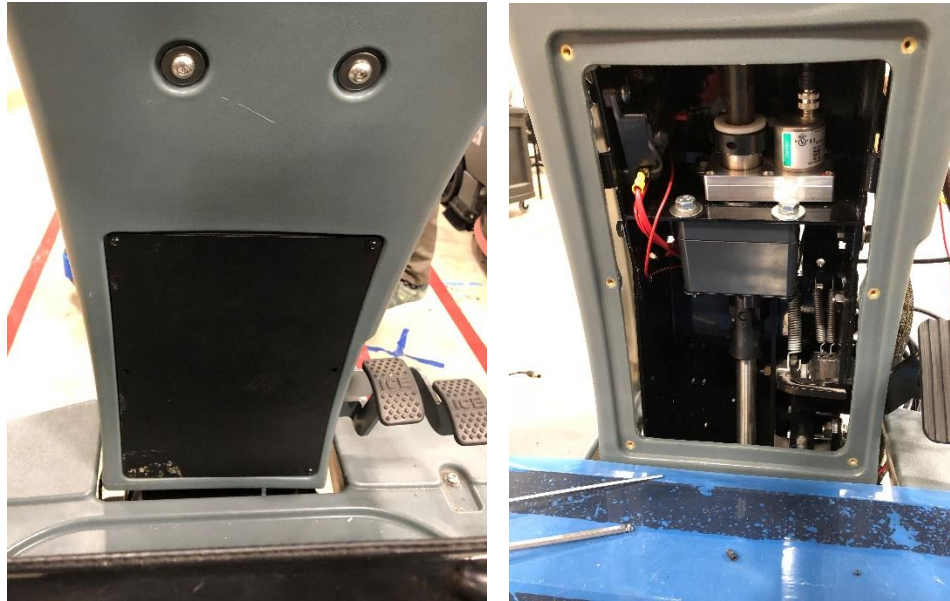
3 mm hex (optional)

Turn the key to power off the scrubber. Raise the seat and disconnect the red battery coupling.



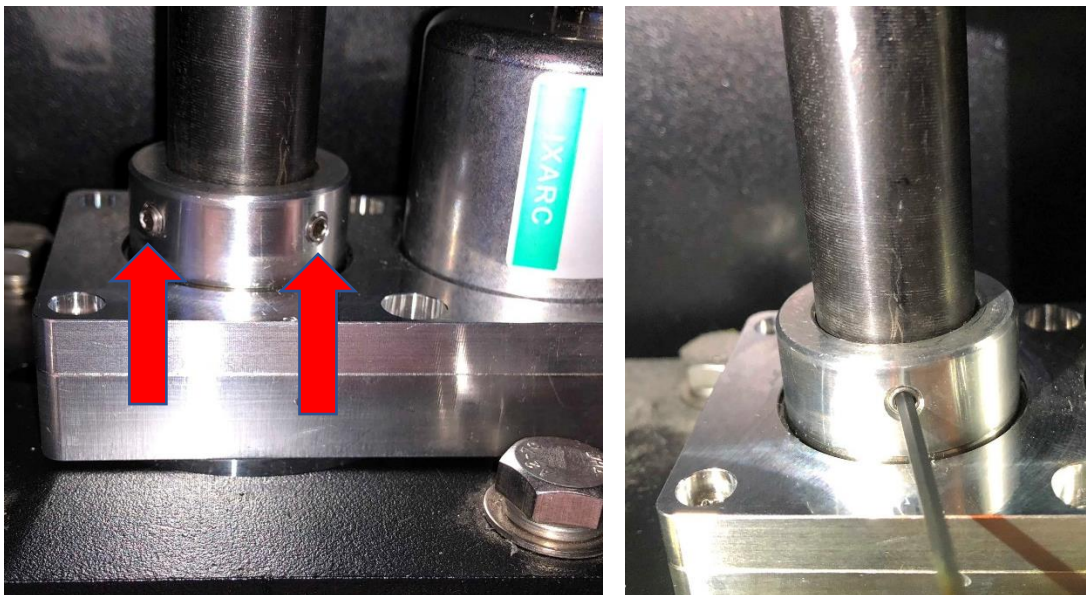
Make sure the front wheel is oriented straight ahead. This will be our point of reference.

Remove the access panel to access the Steering Column

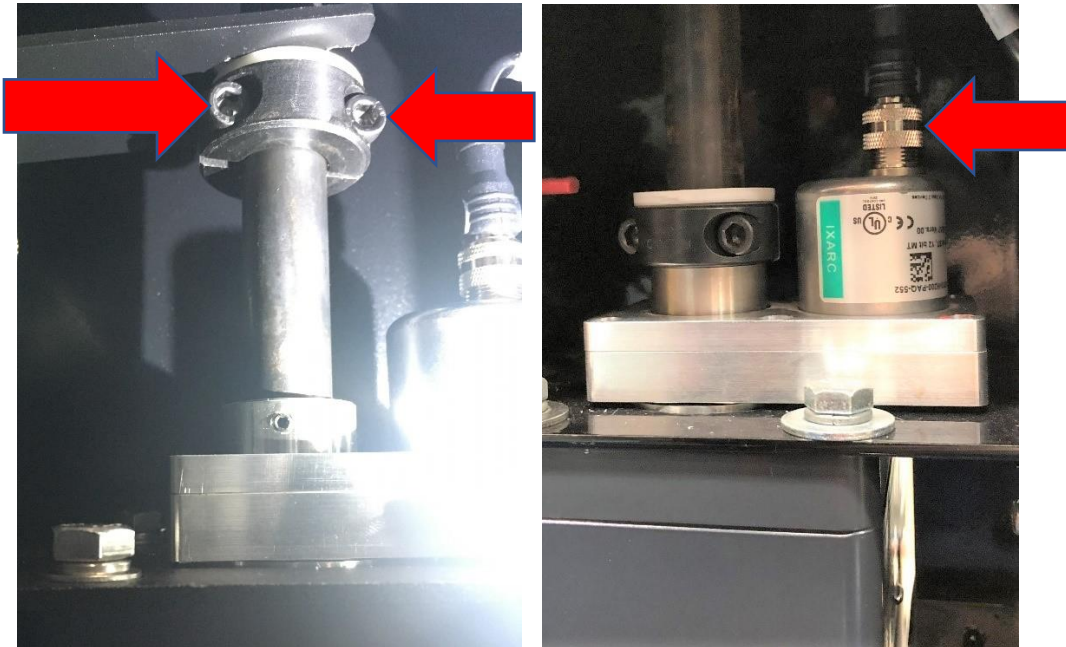


Spin the wheel to provide access to these two set screws.

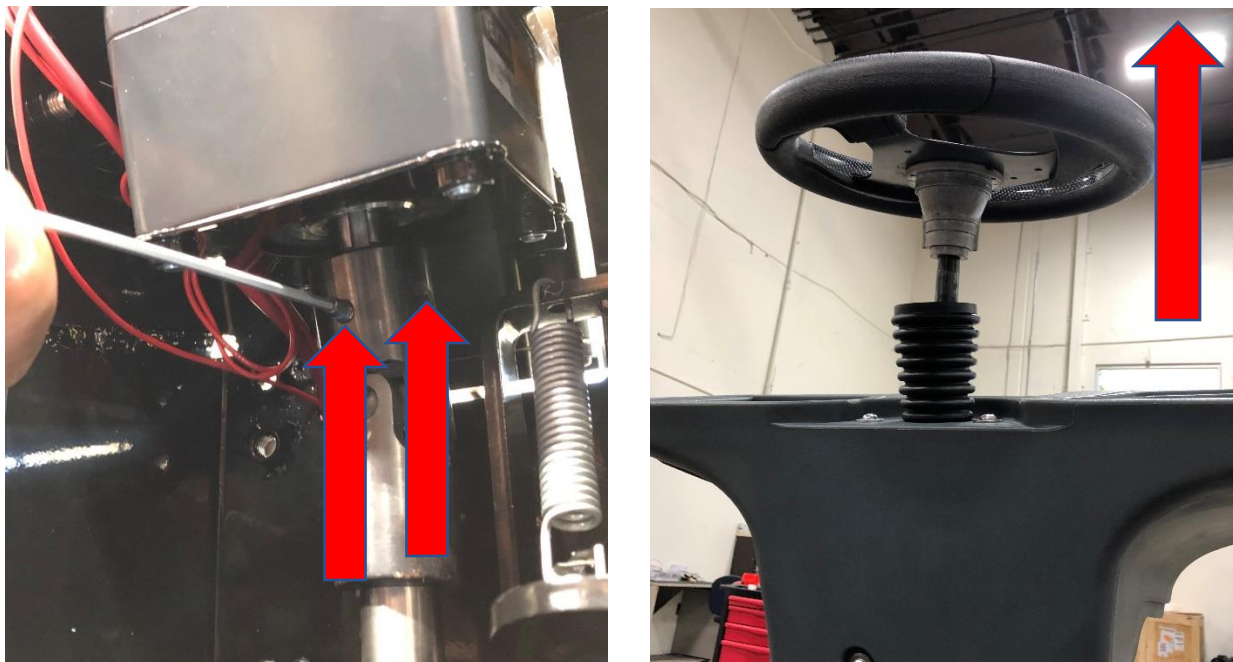
Loosen them but do not remove completely.



Loosen the collar (2 hex screws) and slide it down. Unplug the Steering Encoder connector.



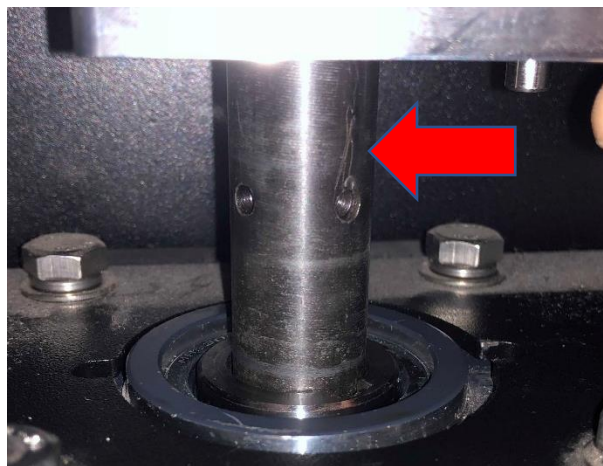
Remove the two set screws indicated below, then pull the steering wheel straight up.



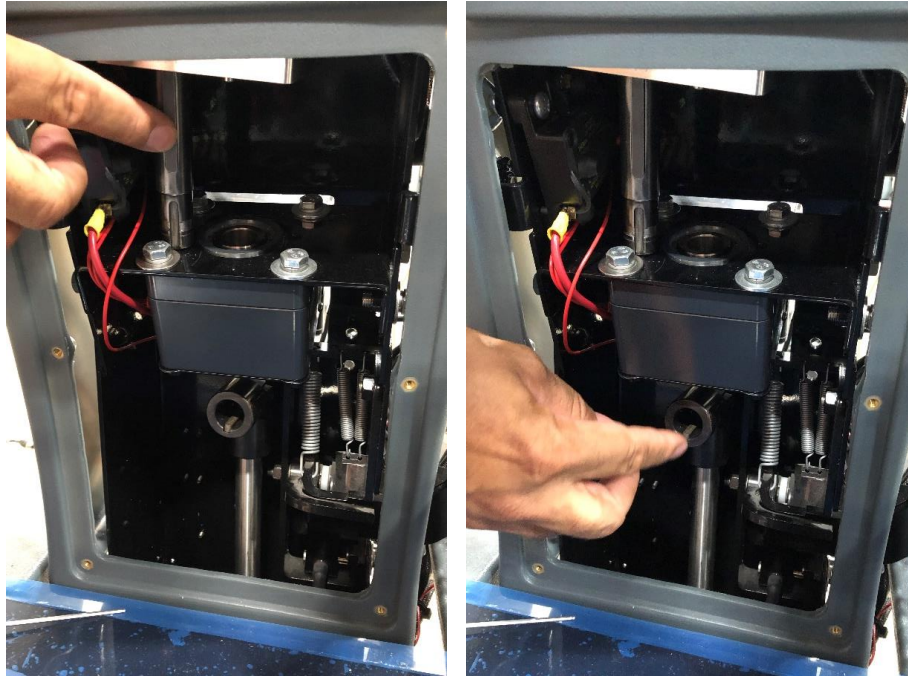


The Steering Encoder can now be slid off from the bottom of the steering shaft and replaced with a new one.

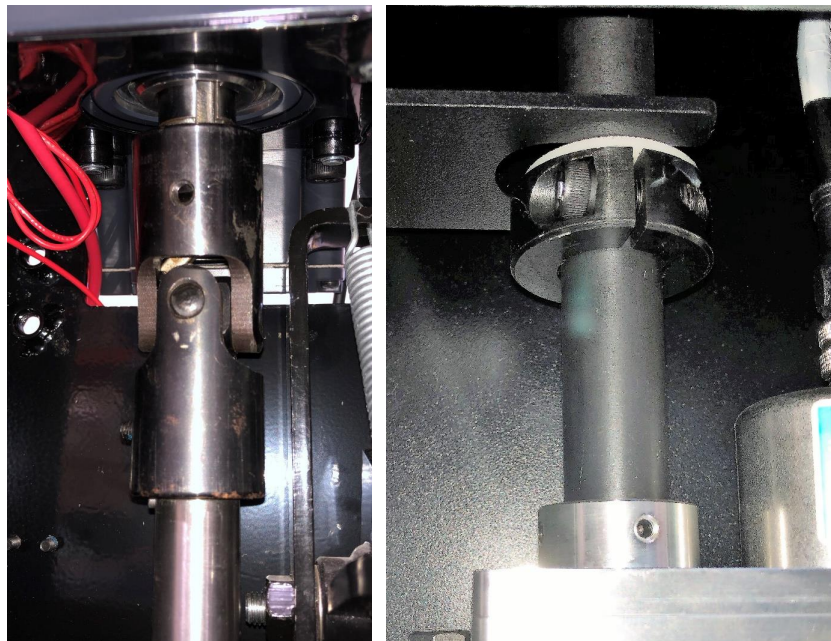
The set screws on the steering encoder need to be aligned with the threaded holes on the steering shaft. Since the holes can't be seen when the encoder is in place, it is useful to indicate their location(s) by scratching or marking the shaft.



The shaft, U joint and keys should be configured to resemble the images below.
(See end of document for a high resolution image)



Push the steering wheel down to move the shaft into place. It should move through the drive motor and lock into the U joint below. Make sure the keys all line up and the wheel is pushed all the way down before re-securing the four set screws. Raise the collar back up and tighten the hex screws.



Verify that the wheel is straight and the logo on the steering wheel lines up properly. If the wheel is straight and the steering wheel logo is misaligned, the steering wheel may be removed and repositioned. Use a 3 mm hex to remove the three screws that reside on the underside of the steering wheel. DO NOT remove the phillips screws.



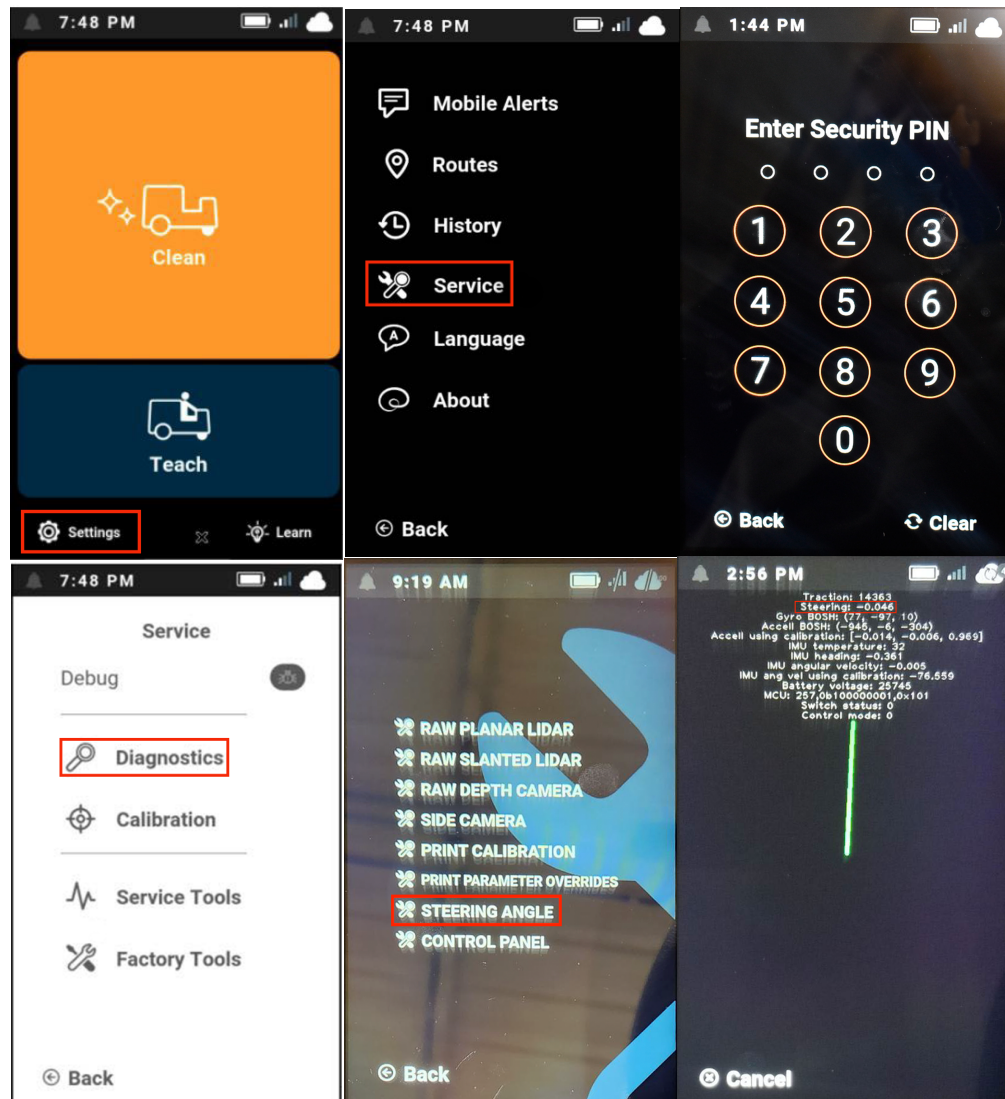
Use a 7/8 socket wrench to remove the nylon nut and washer that secures the steering wheel. Wiggle the steering wheel back and forth and pull up to remove. Once freed, realign and reassemble.



Reconnect the red battery coupling. Turn the key to power on the unit to ensure proper start up and system operation.

Check the Steering Encoder functionality and alignment.

Settings>Service>Service PIN>Diagnostics>Steering angle



The Steering value should change as the steering wheel is rotated left and right.

The green line should move left and right as the steering wheel is rotated and should orient straight up when the wheel is straight.

If these two conditions aren't met, they must be corrected before the steering may be calibrated and the unit used autonomously.

A steering calibration must be performed after the Steering Encoder has been replaced.

