

DEWBOT VI Pivot Replacement Process
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PIVOT REMOVAL

1. Open or remove robot top cover (1/8" Allen)
2. Remove chainguard
3. Break and remove drive chain.
4. Remove the (2) 10-32 SHCS (5/32" Allen) securing the chain tensioner and remove the tensioner.
5. Loosen set screws (9/64" Allen) and remove Pivot Drive Sprocket & Hub Assembly – don't lose the shaft key.
6. Put robot on side – pivot to be replaced up
7. Remove the (3) 10-32 SHCS (5/32" Allen) and washers securing the Absolute Encoder Mounting Plate and allow the plate and encoder to hang out of the way.
8. Break and remove steering chain (**CAUTION** The Steering Motor and Drive Sprocket cannot be turned by hand without causing damage. If the steering chain master link is not in an accessible position it will be necessary to turn the robot on and use steering drive to move the chain in order to access to the master link – master link is accessible from robot's bottom). Do not mix steering and drive chains, which are different lengths (39 & 43 links, respectively, excluding the master link).
9. Remove the E-Style Retaining Ring at the top of the Pivot Tube and the Washer Spring
10. Remove Pivot

PIVOT REPLACEMENT

1. Make certain that the replacement pivot is lubricated and that all bolts and connections are tight.
2. Remove the Pivot Drive Sprocket & Hub Assemble – don't lose the shaft key.
3. Insert the Pivot into the 2" hole in the Bottom Pivot Plate. Press Pivot fully into Pivot Plate until the Bearing Flange is in contact with the plate. Make certain that the 1/2" thrust bearing (blue nylon ring) and its associated washer are correctly seated.
4. Make certain that the top 1" bearing is correctly seated in the Top Pivot Plate.
5. Place the Washer Spring on the Pivot Tube
6. Install the E-Style Retaining Ring to secure the Pivot to the Robot.
7. Reinstall the steering chain, inserting the body of the master link through the window in the Top Pivot Plate (needle nose pliers recommended). Use a chain puller to bring the chain ends together to allow the master link insertion. Apply master link cover and retaining clip from below.
8. Reinstall the Absolute Encoder Mounting Plate. Make certain all spacer washers are correctly reinstalled. Secure with (3) 10-32 SHCS (5/32" Allen).
9. Reinstall the chain tensioner, securing with (2) 10-32 SHCS (5/32" Allen).
10. Place robot back on wheels.
11. Install the Pivot Drive Sprocket & Hub Assembly. Make certain that the shaft key and 3/8" acytral washer are in place. Tighten set screws (9/64" Allen) to secure.
12. Reinstall the drive chain.
13. Reinstall the chain guard.
14. Reinstall robot top cover (1/8" Allen)
15. Turn on robot and calibrate Pivot angle using calibration potentiometer.