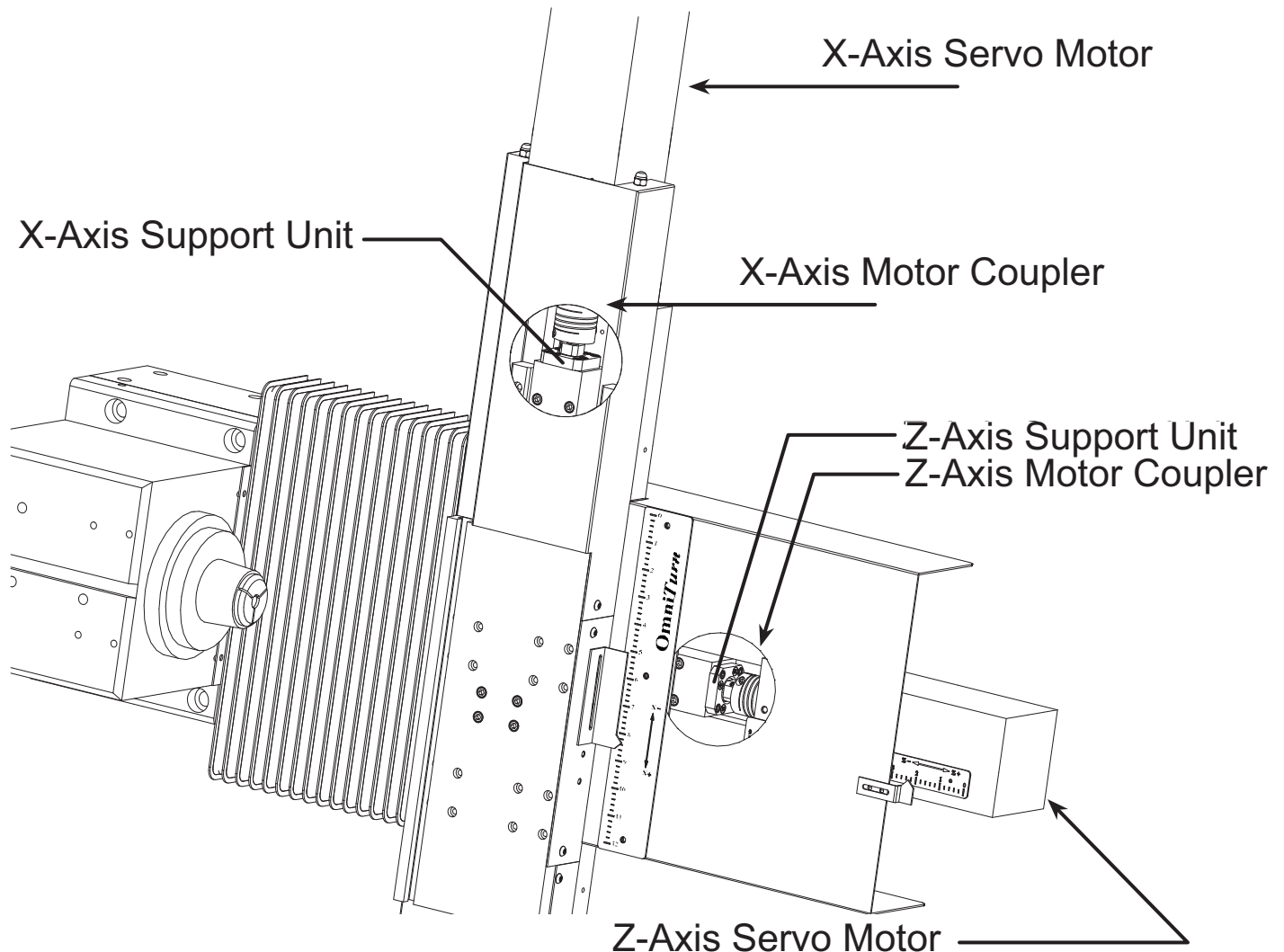


Servo Motor, Support Unit (Thrust Assy), and/or Motor Coupler Replacement



This document describes removal and replacement of the servo motors, flexible couplers and support units (thrust bearings) on the OmniTurn slides.

The illustration above shows the location of the components.

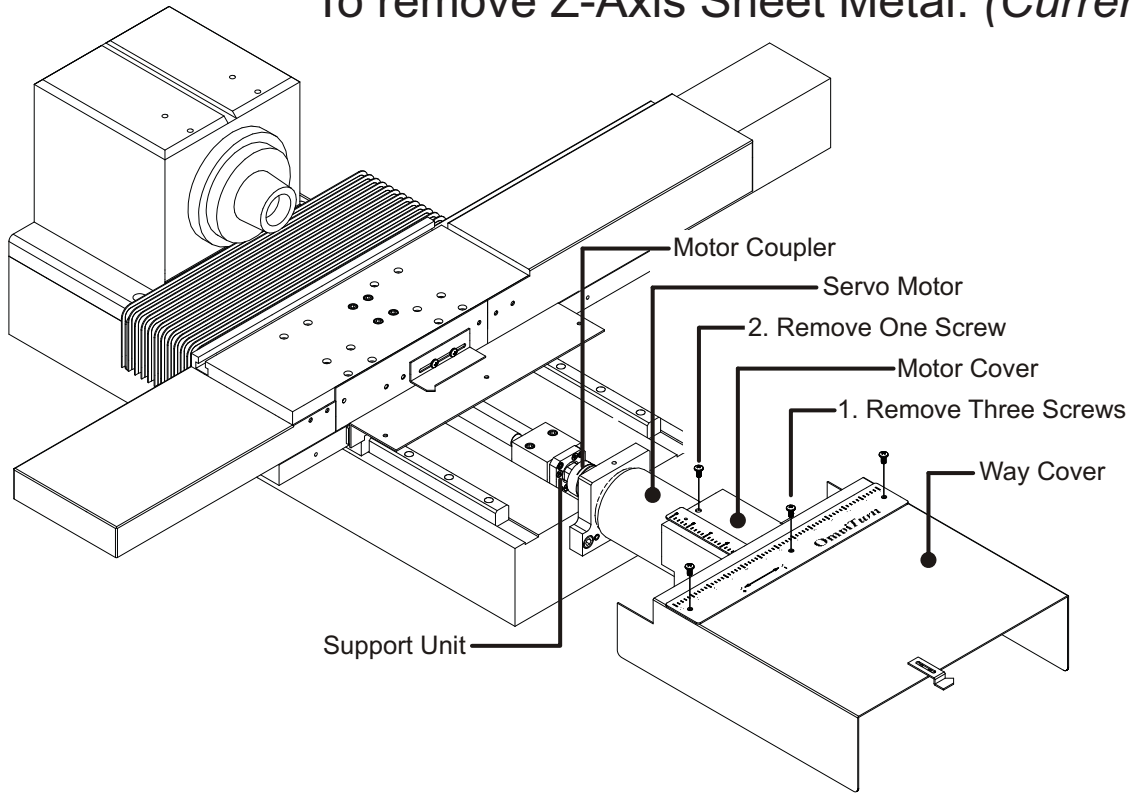
Sheet metal removal is illustrated on pages 2 and 3

Coupler removal and replacement: page 4

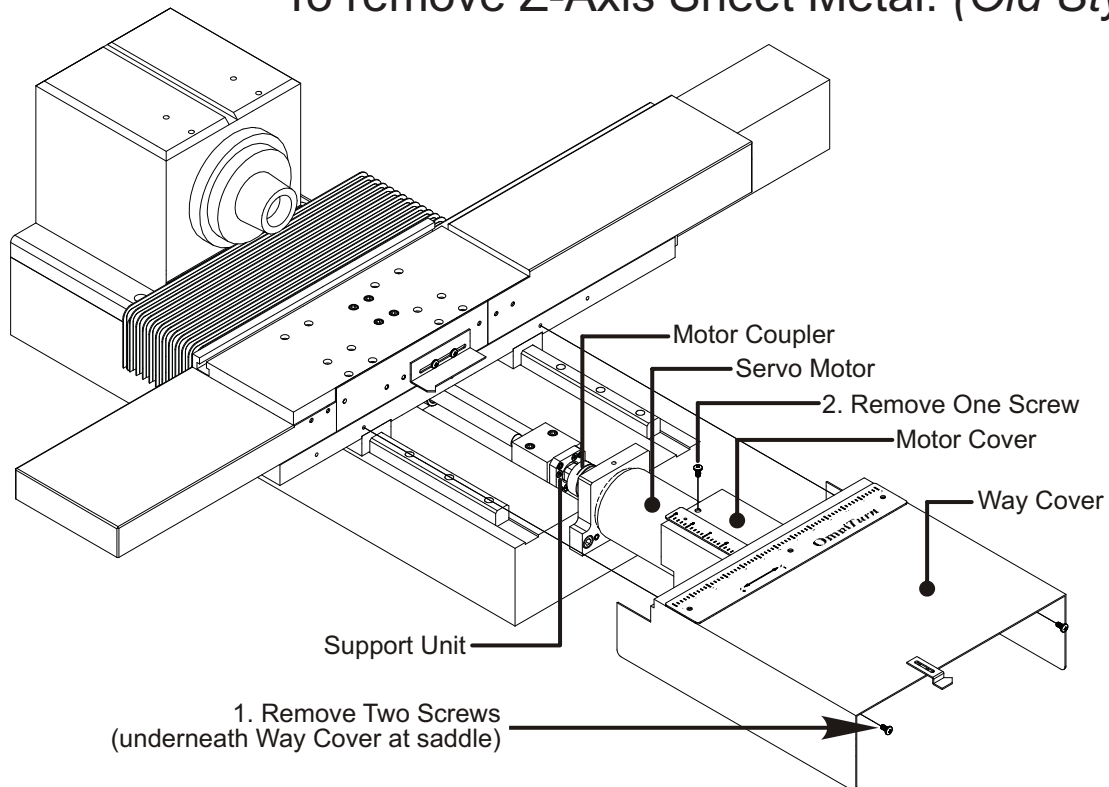
Servo motor removal and replacement: page 4

Support unit removal and replacement: page 5

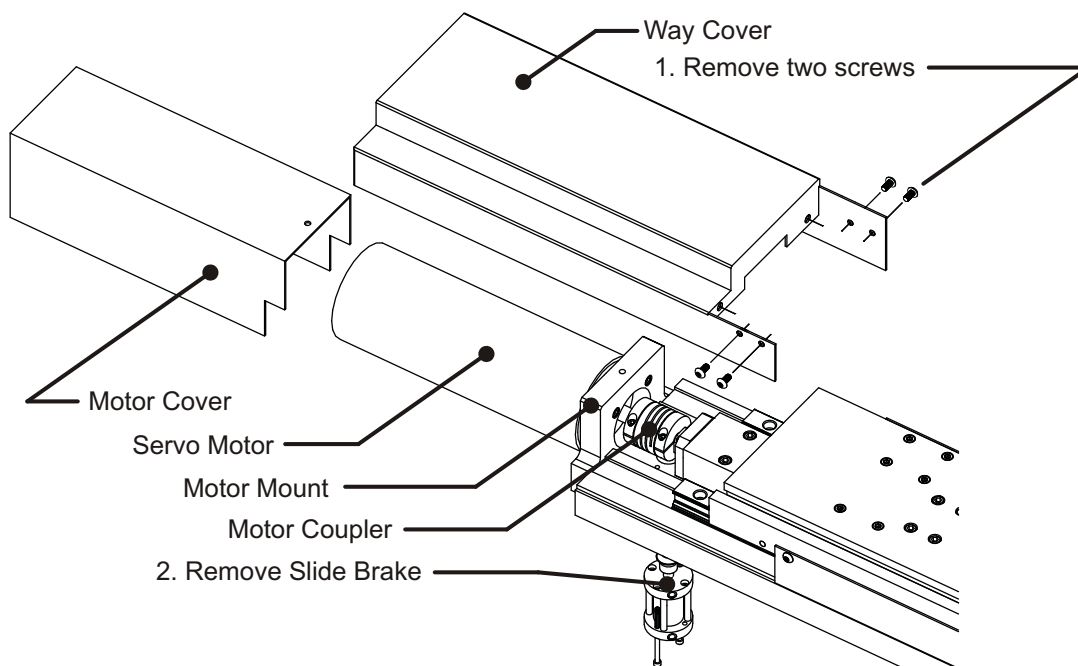
To remove Z-Axis Sheet Metal: (Current)



To remove Z-Axis Sheet Metal: (Old Style)

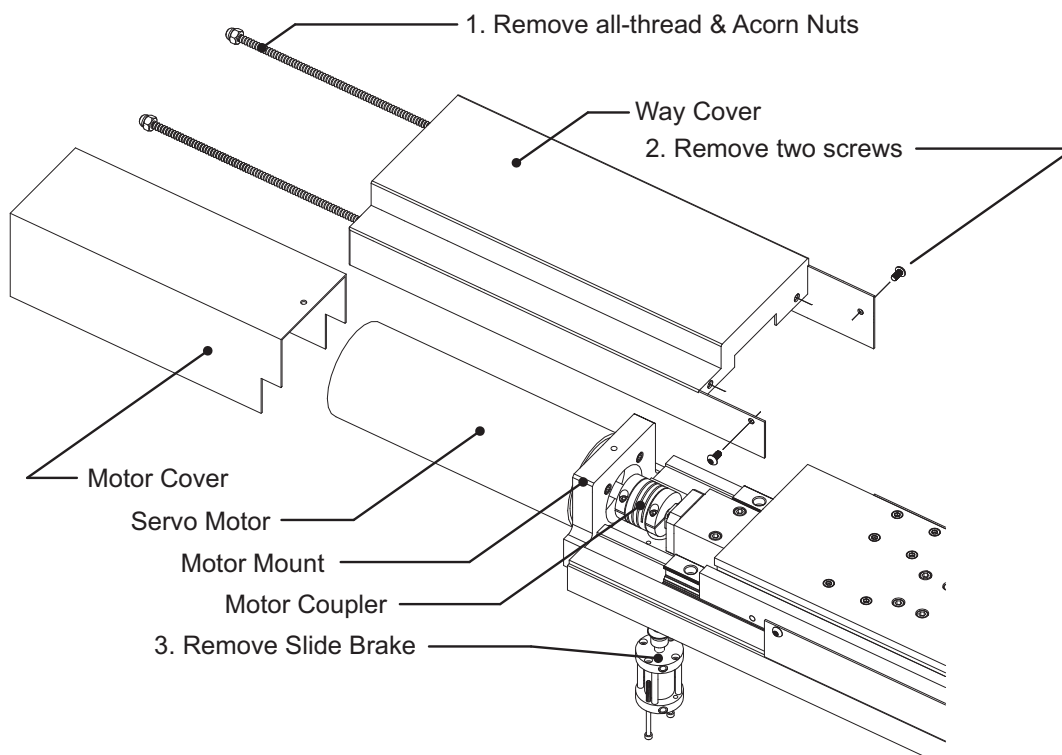


To remove X-Axis Sheet Metal: (Current)



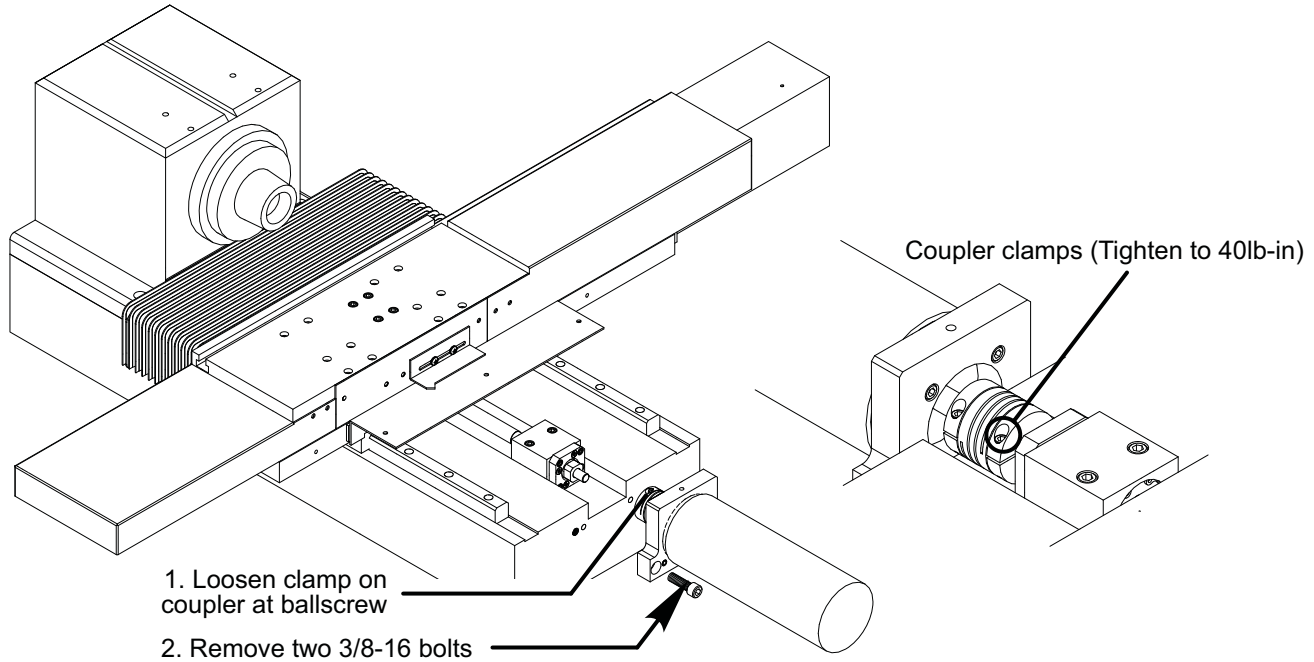
For X-Axis, the slide brake must be retracted or removed. To remove: two 6-32 cap screws secure the cylinder to the saddle. To retract, disconnect servo motor cables at controller, then turn servos ON.

To remove X-Axis Sheet Metal: (Old-style)



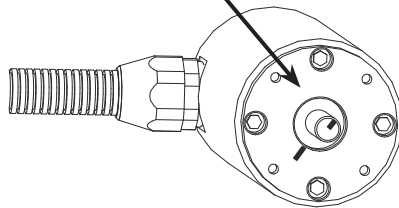
For X-Axis, the slide brake must be retracted or removed. To remove: two 6-32 cap screws secure the cylinder to the saddle. To retract, disconnect servo motor cables at controller, then turn servos ON.

To remove Servo Motor (and Coupler)

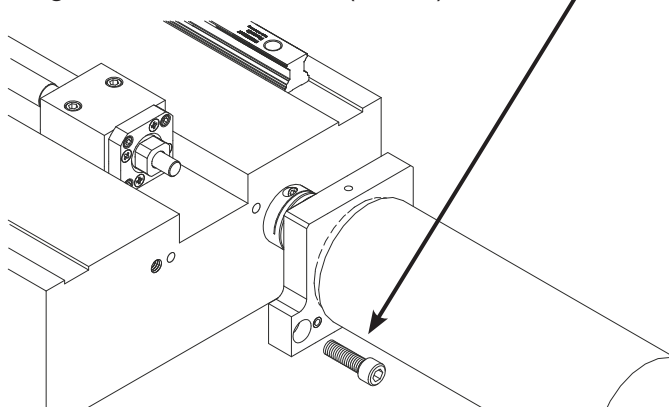


To replace Servo Motor and Coupler

"Home" marks at 180° apart



1. Tighten two 3/8-16 bolts (30lb/ft)



2. Before tightening coupler, verify alignment by sliding coupler back and forth on shafts. Tighten coupler clamps to 40lb/in.

1. Re-install Servo Motor:

1a. On **Z-Axis**, pull the slide all the way away from the spindle, against the Belleville stack; on **X-Axis**, push slide all the way down, against Bellevilles.

1b. Notice the mark on the end of the motor shaft and another on the face of the motor. These marks are aligned when the motor is at "home". Turn the motor shaft so that the marks are 180° apart; that is 1/2 turn. This provides about 0.100" clearance past home.

1c. Attach the motor to motor mount, then attach mount to the base, slipping the shaft into the coupler. Don't let the motor shaft turn much off its 180° setting.

1d. Tighten the motor mount to the machine (30lb/ft).

1e. Check alignment by sliding coupler back and forth on motor and ballscrew shafts.

1f. Tighten the coupler clamps to 40lb/inch.

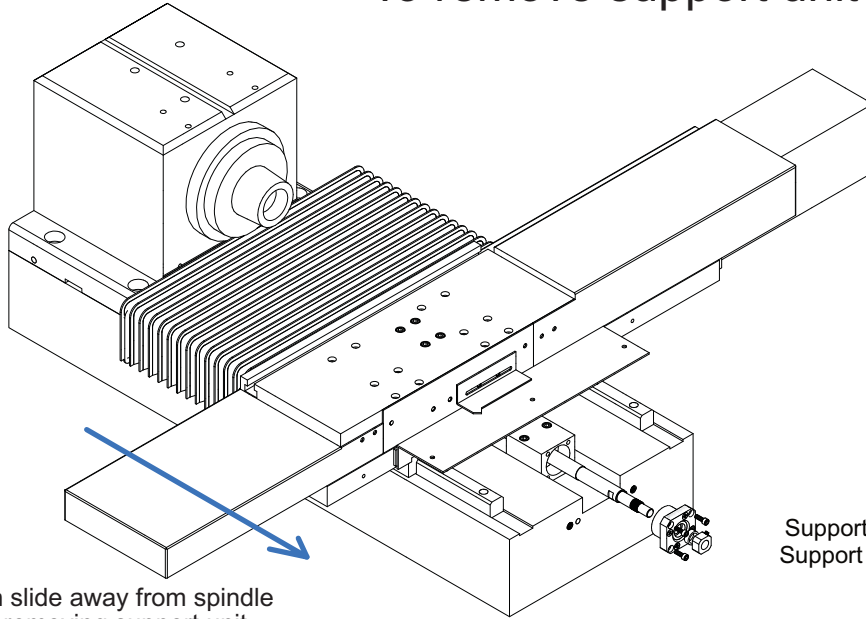
1g. On X-Axis, replace slide brake.

2. Install all sheet metal

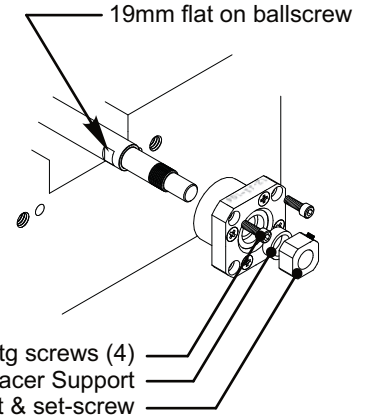
2a. After re-assembly, jog the axis to both ends and verify that the scale pointer will go just slightly past "0"; jog back inside of "0", then establish Home as usual. If the pointer is not at "0", loosen it and move it as required.

3. Re-set all tools before running!

To remove support unit from ballscrew:

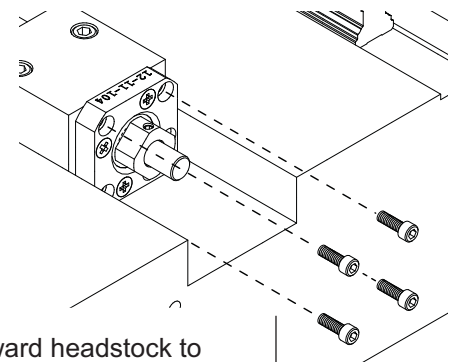
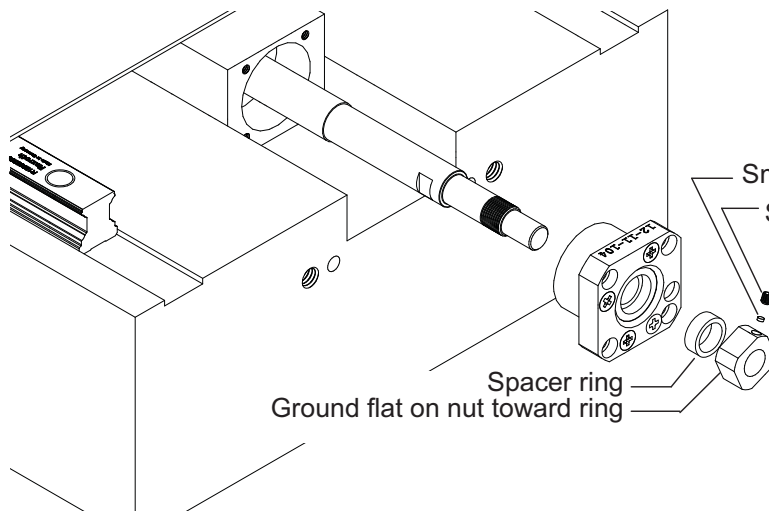


Push slide away from spindle after removing support unit mounting screws.



1. Remove four socket screws holding support unit to block.
2. Push slide in z-axis to expose flat on ballscrew.
3. Loosen support unit nut set-screw
4. Loosen support unit nut using 1/2" and 19mm wrenches.

To attach new support unit to ballscrew:



1. Slip support unit onto ballscrew
2. Slide spacer ring onto ballscrew
3. Tighten nut using 1/2" and 19mm wrenches.
NOTE: ground flat on nut goes against ring
4. Install small brass cushion
5. Secure nut with setscrew (not too tight)

6. Push slide **gently** toward headstock to seat support unit in block.
7. Tighten four mounting screws (20 in/lb)