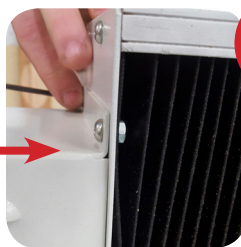
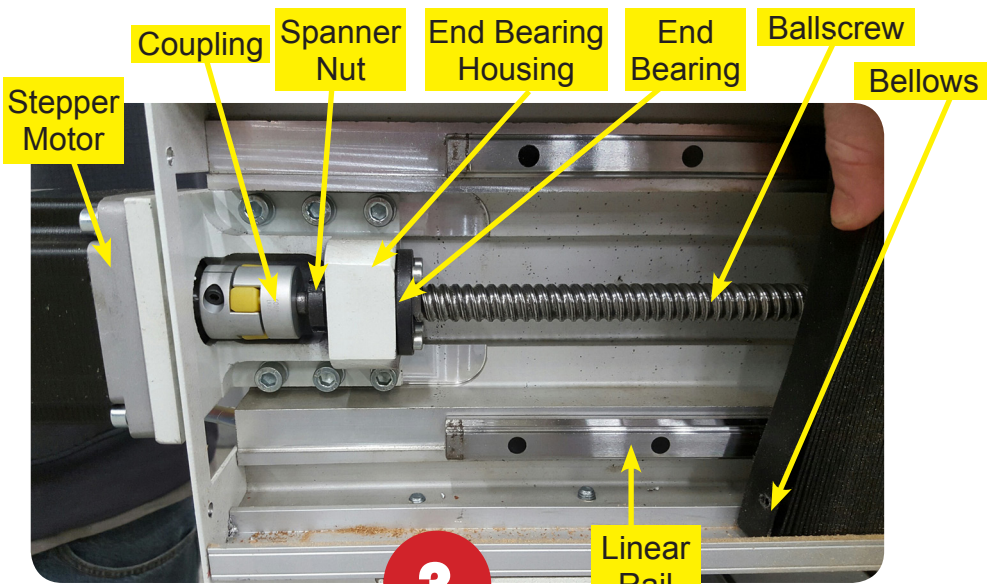




1 To verify there is mechanical backlash, grab the spindle and try and move it right to left. The stepper motor should be under power so that it prevents the screw from turning during this test. Listen for a small banging noise. If a noise is detected, this means the spanner nut may have backed off the ball screw allowing for the ball screw mechanical assembly to move thus causing backlash.

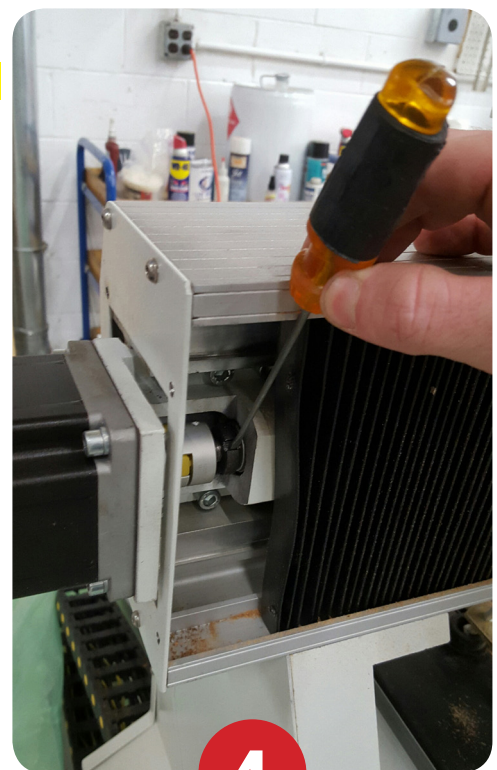


2 Remove stepper motor cover.
NOTE: Two of the screws have hex nuts located by the black bellows covers. Be sure not to lose them when removing cover.



3

Slide back the bellows to expose the end bearing / coupling assembly. Repeat Step 1 and try to visually inspect the spanner nut to see if there is movement or a gap between the spanner nut and end bearing housing. If confirmed there is movement, using a spanner wrench tighten up the nut to remove the backlash. If a spanner wrench is unavailable, a flat head screw driver can be used with a mallet. Place the flat head screw driver blade into the groove of the spanner nut and lightly tap the screw driver tightening the spanner nut. The stepper motor should be engaged to prevent rotation or clamping the coupling to prevent this from turning.



4 After everything is tight, recheck for backlash. If there is minor or no change, repeat the above instructions. In addition, check all fasteners to make sure they are tight and that there is no other movement in the mechanical assembly.