1200QMD Backlash Removal Instructions for Both Axes

ONLY loosen screws with washers!! Do not touch any other screws!

Loosen, but do not remove the 3 button head screws shown with the red arrows.

 Barely loosen the socket head screw shown with the orange arrow.

 Leave the socket head screw shown with the blue arrow tight. It will act as a pivot.

 Using a block of wood and a hammer, lightly tap the worm gear housing - NOT THE MOTOR BRACKET - in the direction shown by the green arrow. Tap the housing as far from the pivot screw as possible, but DO NOT tap on the drive test knob.

 Tighten all screws and test for backlash. Test through an entire worm cycle every 60 degrees of rotation or so. You want a gear mesh that minimizes backlash while still allowing the worm to turn through any minute high spot that it may have.

 Multiple tries may be required to "tweak it just right."

 DO NOT over-tighten the gear mesh or your motor will not be able to turn the worm.

 DO NOT turn the drive test knob manually! It's purpose is to provide visual verification that the worm is turning. Turning this knob by hand can destroy your stepper motor.

 If you need to loosen the gear mesh, tap lightly on the motor side of the Motor / Worm Gear Housing. You may wish to further loosen the orange arrowed socket head screw before trying to tap the mesh looser. Then snug it back before trying to re-tighten the mesh.

 Hammer not withstanding - this is precision work. The difference between too tight and having backlash is a matter of one or two thousandths of an inch.