

Townsend Industries, Altoona, Iowa 50009 ♦ Phone 1-800-247-2262 or 1-515-967-4261 ♦ FAX 1-515-967-7519

1650 MULTI S-1 CYLINDER REMOVAL

1. Swing the S-1 away from the parent press. Remove the nut and bolt (6) from the vertical micro control block (7).
2. Remove the four screws (36) on the main shaft bushings (2 and 4).

CAUTION: UPON COMPLETION OF STEP 3, THE T-51 CYLINDER WILL BE FREE TO FALL.

3. Remove the two remaining screws (43) from the operator and non-operator side main shaft bushings.

Installation Of Cylinder In Multi S-1

1. Place the NON-OPERATOR side cylinder bushing (4) onto the cylinder main shaft. Be sure that the helix pin (9) slides freely in the bushing hole.
2. Lift the cylinder into place and turn the bushings (2 and 4) to align the holes in the side plates.
3. Install and tighten the flat head screws (43) on both sides. Install the remaining screws (36) into both bushings and tighten them evenly by alternating between screws until all the screws are tight.
4. Using the horizontal micro tool (11), pull the cylinder to the operator side until it stops. Loosen the set screw in the micro hub assembly (13) and slide the cylinder to attain 1-1/4" between the ring gear and the inside of the NON-OPERATOR side plate. Lock the set screw (13) down tightly.
5. Move the cylinder toward the NON-OPERATOR side with the horizontal micro tool until there is 1" between the ring gear and the inside of the NON-OPERATOR side plate. Tighten the stop screw (8) gently against the stop. **DO NOT OVER TIGHTEN.**
6. Using the horizontal micro tool (11), center the cylinder. Attach the vertical micro control (7) to the micro hub assembly(12).

1650 Multi S1 Main Shaft Removal and Installation

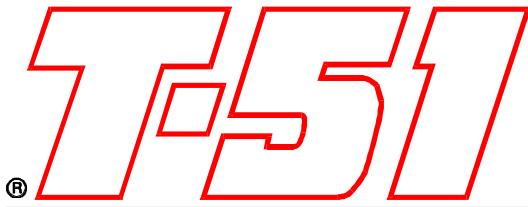
Removal (The cylinder must first be removed from the S1.)

1. Using the plate (14), turn the shaft (16) so that the screw (17) can be removed through the ring gear end access hole in the cylinder. Shaft should be marked so you start the screw from the correct side. **CAUTION:** Damage to (17) threads may result if pressure is not released on (17) by rotating and holding the ring gear or by removing the ring gear.
2. Using the plate (14), locate the screws on the main shaft bearings (18) through the access holes in the cylinder and loosen them 1/4 turn. **Loosening them more could allow the lock ring to fall into the center of the cylinder.** Loosen the screw (13) just enough to clear the flat or slot on the shaft and remove the horizontal micro gear assembly (12).
3. The main shaft assembly (16) can now be removed from the cylinder.

Installation

1. Insert the main shaft assembly (16) into the cylinder.
2. While pushing on the shaft, replace the screw (17) through the access hole on the ring gear side of the cylinder. The screw can only be threaded from one side of the shaft. Tighten the screws in the non-operator side and operator side bearings (18).
3. Replace the micro horizontal assembly (12) so that the screw (13) aligns with the slot on the operator side of the shaft (16). Slightly tighten the screw (13).

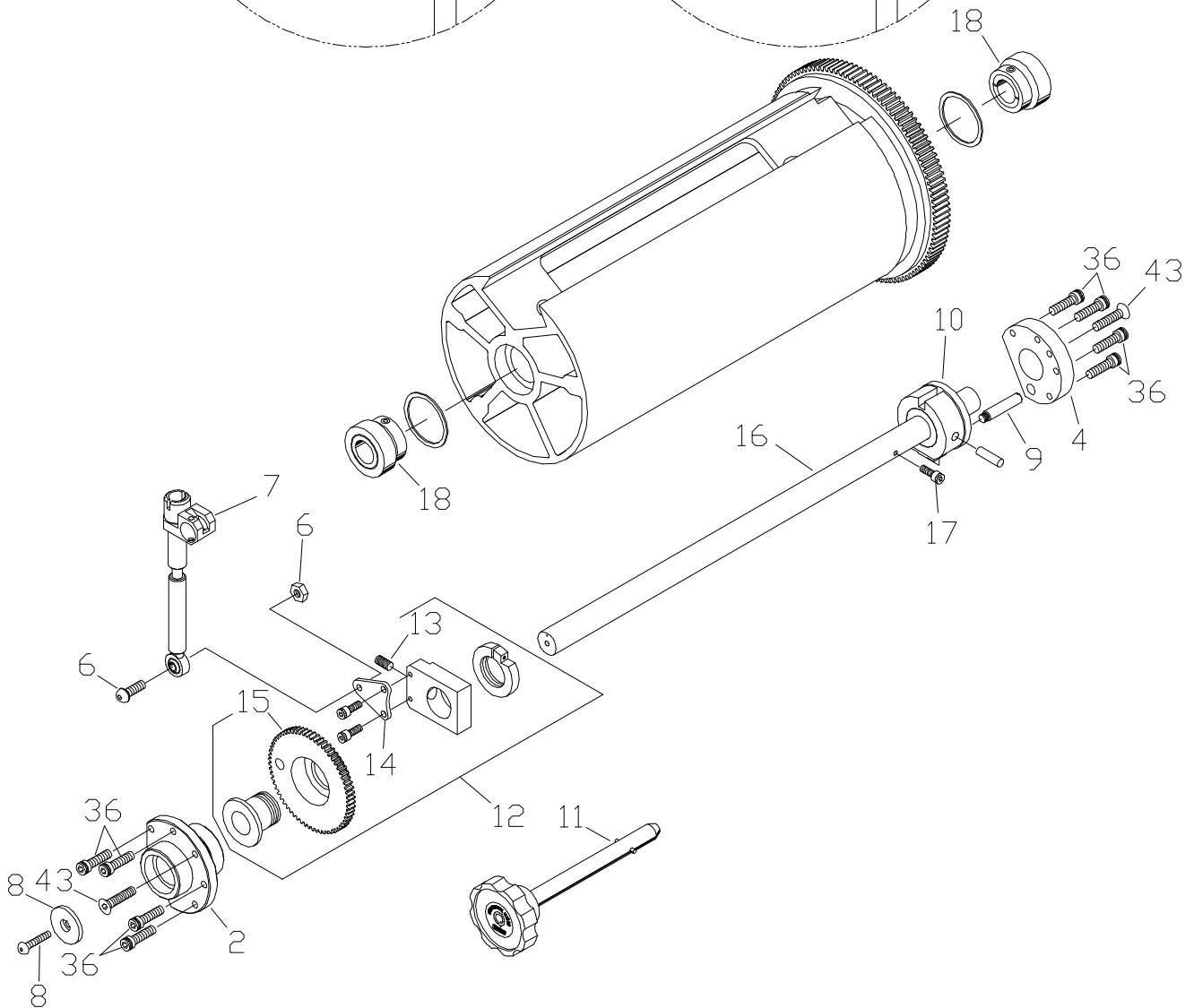
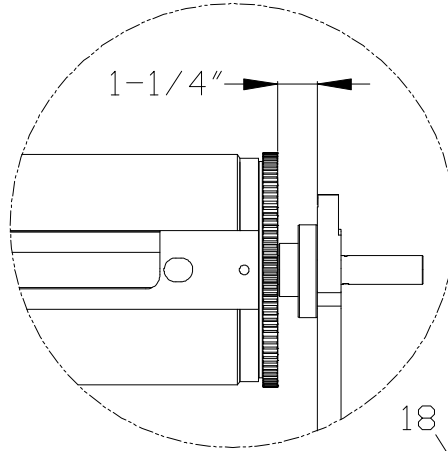
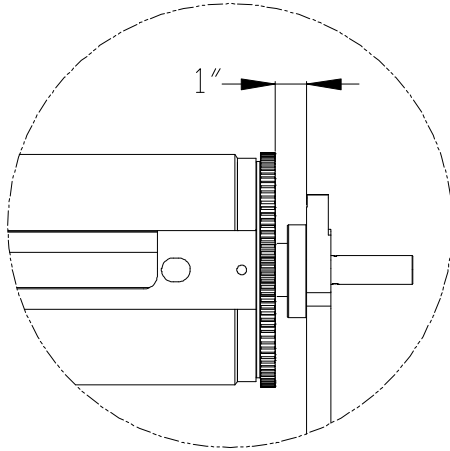
Install the cylinder in the press and refer to the Cylinder Limiting Setting instructions to complete the installation.



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Cylinder all the way
away from operator

Cylinder all the way
towards the operator



MULTI 1650 PLATE CYLINDER REMOVAL