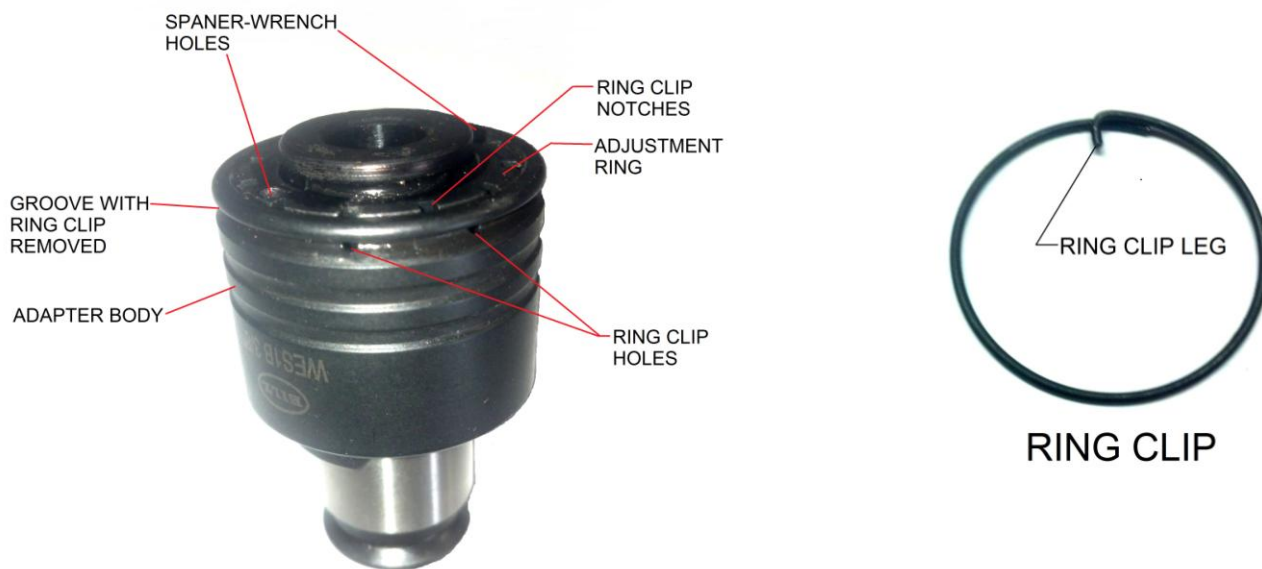




CLUTCH ADJUSTMENT for BILZ Torque Limiting Adapters

Torque settings on ETA model TLA-xxx Tap Adapters are easily adjusted. However, the BILZ factory sets the adapters at the appropriate setting for typical taps of each size. The factory setting is approximately 60% of breaking torque on a typical coarse thread tap. Fine thread taps generally withstand greater torque loads. Conversely spiral taps usually withstand less torque load given their smaller cross section.

DO NOT ADJUST THE CLUTCH UNLESS NECESSARY. ALWAYS TEST MULTIPLE TIMES BEFORE DECIDING TO CHANGE THE FACTORY SETTING.



To Adjust the Clutch on TLA Adapters

1. There are 2 holes in the Adapter Body Groove for the Ring Clip Leg to go into. The one with the Ring Clip Leg currently in and an empty one only visible after the Ring Clip is removed. The purpose for this unused hole is explained in step 9 below. Place a Mark on the adapter Body near the hole that the Ring Clip Leg is inserted into with a metal scribe or pencil.
2. Place a Mark near the corresponding Notch on the Adjustment Ring (the one that currently contains the Ring Clip Leg).
3. After hole and notch are marked, carefully remove the Ring Clip. The easiest way to do this is with a tiny pointed scribe tool or a very tiny screwdriver. Gently pull the straight end out of the Adapter Body Groove sliding the Clip up over the top edge of the Adapter Body. Once one end is started the entire clip will slide over the top edge except for the very end with the leg on it. Now you can pull the clip off and out of the hole completely using your fingers or a small pair needle nose pliers.
4. Turn the Adjustment Ring about 90 degrees ($\frac{1}{4}$ turn) counter-clock-wise and then back to original setting to loosen clutch plates prior to adjustment. This threaded Adjustment Ring is not under spring tension or interference fit so it should turn freely. Use a spanner wrench if you have one. Alternatively, a small needle nose pliers with its points inserted into the Spanner Wrench Holes will provide enough leverage to adjust this ring.

*Note; **Do not loosen the Adjustment Ring more than 90 degrees.** However, if the Adjustment Ring is threaded too far CCW and comes off, be careful not to dump the clutch plates and drive balls from inside or you may not get it reassembled in the correct notch. If it comes off, quickly rethread the Adjustment Ring back into the Adapter Body.*

5. If clutch is slipping too soon then you will need to turn the Adjustment Ring clock-wise (CW) 1 Notch and only 1 notch! If you are breaking taps then you will need to turn the Adjustment Ring counter-clock-wise (CCW) 1 Notch and only 1 notch.
6. Replace the Ring Clip, inserting the leg through the hole that you marked in step 1 and into the notch in the Adjustment Ring.
7. Load a new tap into the adapter and snap it into the tap chuck on your ETA Tap Arm and test this new clutch setting in a fresh, untapped hole to see if performance of the adapter has improved. If so you have successfully adjusted the clutch on a TLA-xxx Adapter.
8. **IMPORTANT: If you need to adjust the TLA clutch further only move 1 notch in either direction at a time between test runs.** Remember turning Adjustment Ring CCW (loosening) increases slippage and CW (tightening) decreases slippage.
9. If you find the best setting would be half way between 2 notches then align the nearest notch up with the alternate hole in the Adapter Body groove. This alternate hole enables you to move the Adjustment Ring ½ notch in either direction.

Note; Adjustment Ring does not have to be completely tightened snug on the clutch to be effective. Some wiggle is ok and will vary by tap size and clutch setting required.