

Patton Machine, July 2017

Triumph Trailing Arm Repair Jig Instructions

For complete illustrated instructions see:

<http://www.pattonmachine.com/TAK-Set-Up.htm>

The only power tool needed is a hand held power drill. Note, the kit contains a guide plate and two guides, the ***tall one for drilling*** and the ***short for tapping***. Be sure you have the proper guide set, either for Heli-Coils, KeenSerts or 3/8" studs.

- For 5/16 –24 studs the Heli-Coils use a 21/64th" drill bit and the Helicoil tap that comes in the Helicoil thread repair kit.
 - For 5/16 –24 studs the KeenSerts use an "X" drill bit and a 7/16-14 *bottoming* tap.
 - For 3/8" studs use a 5/16" drill bit and a 3/8-16" coarse *bottoming* tap.
1. This repair can be done without removing the trailing arm from the car although the hub assembly and brake backing plate must be removed
 2. Clean the TA casting face before starting the job so the guide plate lays flat.
 3. Rotate the guide plate around until it slips down over all six studs and lays flat against the housing. You may have to try the plate in several locations to find the best fit as original studs are not always perfectly aligned. Mark three studs to repair then remove the guide plate. Remove those three studs and reinstall the guide plate.
 - a. With the plate for tapping to 3/8" studs the process is a little different but the concept is the same. Once you drill and tap for the first three 3/8" studs, you'll insert the new studs and then use the larger holes in the plate for the new studs as you drill and tap the remaining three 5/16" holes.
 4. Bolt the guide plate on the remaining studs using 5/16" flat washers and 5/16-24 fine thread nuts. Due to very tight tolerances, a drop of oil will allow the steel guides to slip easily into the base plate.
 5. Wear gloves and eye protection as small aluminum chips will be flying.
 6. When drilling or tapping, hold the guide insert firmly against the plate. Use a quality lube like Tap Magic for aluminum for BOTH drilling and tapping. **Use caution when drilling not to go too deep.** Mark the drill depth on the drill bit with a piece of tape. You DO NOT want to drill all the way through the TA. Use caution when drilling not to go too deep.

7. Drill and Tap all three of the stud holes before moving the guide plate.
8. Remove guide plate and screw in the threaded insert following the insert manufacturer's directions.
9. Screw the three studs back in. Alignment may be easier if the new studs are left slightly loose when repositioning the guide plate for the second phase. Repeat steps 4 – 8.
- 10. Remount the brakes and axle hubs and tighten the nuts to the torque specified for your car. Do not overtighten.**
11. Before storing the tool steel guides coat them with oil or grease to prevent rust and corrosion.