

# Shimano Calcutta TE Maintenance

This article describes a complete teardown of the Shimano Calcutta TE (CTE) reel for service and includes details on specific modifications that can be made to this reel to improve performance. This article is highly technical and you should only attempt the steps detailed below if you are confident in your reel servicing skills. Also note that the performance modifications are by no means recommended by Shimano and may affect your ability to have the reel serviced under warranty. Shimano parts referenced in the article can be ordered by calling Shimano directly at 1-877-577-0600.

## Recommended Tools

- 1) Small Phillips screwdriver &ndash; See tools image
- 2) Q-tips
- 3) Shimano oil part number BNT1445
- 4) Towel or rag
- 5) Shimano grease part number A-dra1/4 ( ¼ ounce size will do around 10-15 reels)
- 6) Schematics of the reel [ CTE 400 | CTE 300 ]
- 7) 10mm wrench or nut driver or the Shimano tool that came with the reel
- 8) Small flat head screwdriver
- 9) Toothbrush
- 10) Rubbing Alcohol

The following steps will cover a complete teardown of the reel for maintenance:

## DISASSEMBLY

- 1) Remove the small Phillips head screw on the handle nut retaining plate [Figure 1]

- 2) Using the supplied Shimano wrench remove the handle nut and lock plate
- 3) Remove the handle assembly and spring washer
- 4) Remove the drag star and all pressure washers. Pay close attention to the arrangement and order of these washers. (3 pressure washers and two brass shims) [Figure 2]
  
- 5) Loosen the side plate take down screw to loosen the left side plate (or right on left handed reels)
- 6) Once the side plate is open remove the small Phillips head screw and remove the left side plate (or right with left handed reels) [Figure 3]
  
- 7) You should now have access to the brake case assembly. Remove the two small Phillips head screws and remove it from the frame of the reel. [Figure 4]
  
- 8) Remove the spool assembly from the reels frame
- 9) Handle side plate removal- remove small Philips head screw and the clicker lever
- 10) Remove the three larger Phillips head screws. Do not remove the smaller screw closest to the quick access side plate screw!
- 11) Remove the side plate assembly
- 12) Reinstall the clicker lever and screw. This will prevent the clicker spring assembly from coming loose [Figure 5]
  
- 13) Remove the main gear assembly from the handle shaft. Older reels may need to be tapped on a table to remove. [Figure 6]

14) Remove all drag washers and drag plates. Be careful with the Dartanium washers as they are fragile and can crack easily. Pay attention to the washer order. [Figure 7]

15) Carefully remove the drag washer "A" and drag click plate. [Figure 8]

16) Remove the anti reverse ratchet and assist stopper pawl. Pay attention to the position of the ratchet. It can be installed upside down later. This will cause the clutch to not reengage. This is also a good time to inspect the assist stopper. If excessive wear can be seen then there is a good chance the anti reverse bearing has failed. [Figures 9 & 10]

17) Using an old tooth brush clean all excess grease from the teeth of the main and pinion gears.

18) Remove some cotton from the end of a Q-tip and clean the center of the pinion gear. This is where the spool shaft goes through the gear. Oil and dirt can slow the free spool of your reel. [Figure 11]

19) Carefully remove all the grease from the drag washers and drag plates. Be careful as the Dartanium drag washers are very fragile. Do not bend them while cleaning them!

20) Using a old toothbrush and some simple green to scrub the frame. Make sure to clean as much as you possibly can. After scrubbing rinse the reel in some fresh water and towel dry.

21) Using some Q-tips and rubbing alcohol clean the spool raceway, level wind gear and line guide.

22) Clean the spool shaft and spool lips with Q-tips and rubbing alcohol. This will remove any excess grease, dirt or oil

which will hinder the free spool performance.

23) Apply one drop of Shimano oil to the spool shaft bushing

24) Using the A-Dragr grease apply to ½ of the teeth on the main gear. There is no need to lubricate the pinion gear. It will be lubricated from the main gear

25) Reposition the drag click pin holder (BNT2697) on the handle shaft. It is keyed to fit flush on the handle shaft. [Figure 12]

26) Reposition the anti reverse ratchet and assist stopper pawl on the handle shaft. There is a small hole to allow the drag click pin to go through it. Make sure the ratchet is on correctly and not upside down. [Figure 13]

27) Apply a light film of grease to the back side of the main gear. This will hold the drag washer & “; and drag click plate to the main gear and ease reassembly. There is a small tab that will line up to a hole on the main gear. [Figure 14]

28) Using the A-Dragr grease apply a small amount between your index finger and thumb. Apply grease sparingly to the drag washers on both sides. A slight shine should be seen after grease is applied. Do not over lubricate the washers as you will lose drag pressure. Grease is not required on the drag plates.

29) Install all drag washers and drag plates in correct order. Make sure the keyed washer is installed correctly. The tabs face down and align in two slots on the main gear. [Figures 15 & 16]

30) Install the pinion gear and yoke assembly into the reel. See the images for correct positioning of the gear into the yoke assembly [Figures 17 & 18]

31) Install the roller clutch inner tube onto the top drag plate. This has two small tabs that will align into slots on the top drag plate. [Figures 19 & 20]

32) Install the two small yoke springs onto the posts. [Figure 21]

33) Remove the clicker lever for reassembly of the side plate.

#### RE-ASSEMBLY

34) Reinstall side plate assembly and torque the three Phillips head screws

35) Reinstall the clicker lever and torque the small Phillips head screw.

36) Reinstall the shims and pressure washers in the correct order. [Figures 22 & 23]

- 37) Reinstall the handle and handle screw, lock plate and lock plate screw.
- 38) Reinstall the spool assembly
- 39) Reinstall the brake case assembly. Make sure that you do not force the assembly on. If it does not line up slightly rotate the spool until the brake case drops in. The idle gears need to mesh before it can be torqued.
- 40) Reinstall the left side plate (right on left handed models)
- 41) Apply one drop of oil to each side of the worm gear (level wind) and one to the middle of the worm gear. [Figure 24]