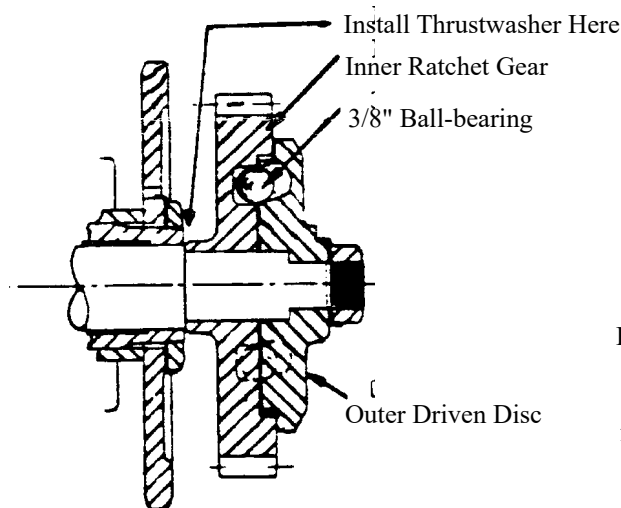


Starklite Cycle Tech Article#7

INSTRUCTIONS FOR RATCHET KIT INSTALLATION

Thank you for your interest in our new product. After installation you will find your kickstarter mechanism solid and positive. While the procedure is simple, the results are extremely effective. Please read and follow instructions carefully

1. First, remove the exhaust system and chain guard, revealing the kickstarter mechanism.
2. Flatten the tab washer retaining the kickstarter ratchet nut, remove nut and entire ratchet gear assembly.
3. Wash up the various parts and examine for wear. File off any burrs on the mating surfaces. The outer driven disc has 5 angled recesses into which 5 - 3/8" ball bearings fit. The inner ratchet gear has 8 angled ramps. The inner ratchet gear is rotated clockwise by the kickstarter arm and progressively a ball bearing in the outer disc rolls out to the edge of its' recess and jams against a passing ramp. Unfortunately, the only force holding each ball at the end of its' recess is the relatively mild force of gravity - a force that is counter-acted by dirt, grease and general wear in the gear set. Under optimum conditions, the ratchet gear will index 16 times per revolution
4. The repair of this mechanism consists of two modifications. The first modification decreases the running clearance or end-play between the inner ratchet gear and the outer disc. The transmission main shaft, upon which the gear mechanism runs, has a shoulder located just behind the inner ratchet gear. The shaft at this point increases in diameter from 3/4" to 29/32". Place the shim washer included in the kit against shoulder and replace the ratchet gear and outer disc, leaving out the ball bearings. The outer disc shoulders on the lands of 2 flats cut into the end of the shaft. Manually attempt to bottom the outer disc and check if the inner ratchet gear still rotates freely, or is in a bind. Generally, adding the shim washer behind the ratchet gear will take up any free play. Carefully grind or machine a small amount of metal off the back shoulder of the ratchet gear until there is the slightest amount of free clearance between the outer disc and the inner ratchet gear. With the kickstarter ratchet nut drawn up tight, the inner ratchet gear should be just free to rotate(.005 - .010 clearance).
5. Remove the mechanism from the shaft and place the outer disc on the bench, recess side up. Place the 5 springs in the kit into the recesses, then place the 5 new ball bearings on top of the springs. Put 2 drops of oil on Each ball. Lower the inner ratchet gear onto the disc and as they mesh, rotate the ratchet gear slightly clockwise. Lubricate the Main shaft and, while holding the ratchet gear mechanism compressed together, slide assembly onto shaft. Reinstall tab washer and nut using a drop of red Loctite. Tighten nut and lock tab washer. Test ratchet mechanism for proper action. It should rotate counter-clockwise freely with a continuous clicking noise as all 5 ball bearings roll up and down the passing ramps of the inner ratchet gear. Attempting to rotate the inner gear in a clockwise manner should result in an immediate positive locked condition, indexing 40 times per revolution.
6. Reinstall the chain guard and exhaust system and feel free to start your bike , confident that the kickstarter mechanism will fail no more!



By carefully following these directions you will get the best results for restoring your kickstarter assembly. All *Starklite Cycle* parts are manufactured to surpass original factory specifications. If you have any questions please feel free to call or write. Our goal is to provide you with the highest quality parts to get your *INDIAN* back on the road. Thank You