

**Part Number:** 94.1.4KW

**Description:** Super Torque Starter

**Fitment:** Twin Cam

**Version:** 1 6/07

**Note:** For safety considerations, we recommend disconnecting the positive lead from the battery terminal while working on your motorcycle. You may want to put the battery on the charger or better yet, start with a fresh one.

1. Depending on your specific model you might need to take off pipes, accessories, primary cover, etc. to remove the old starter; refer to your motorcycle service manual. Here, the old starter ready to disconnect electrical connections, then the bolts from the rear support and remove. **Fig.1**

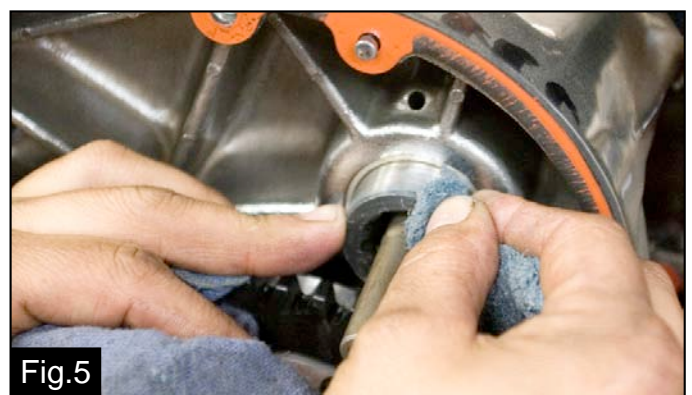
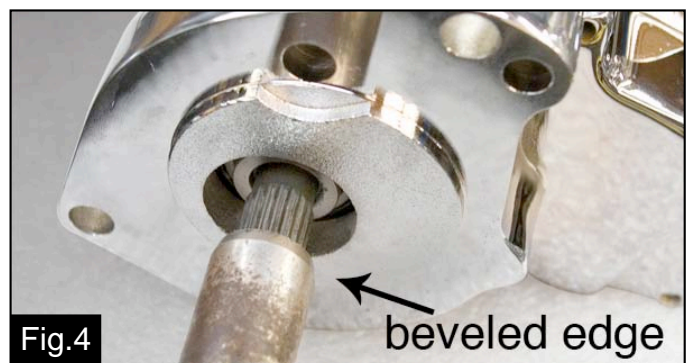
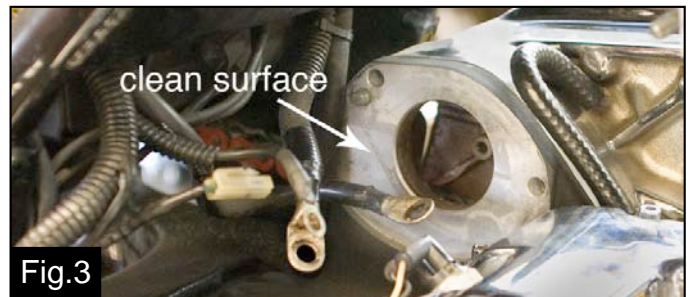
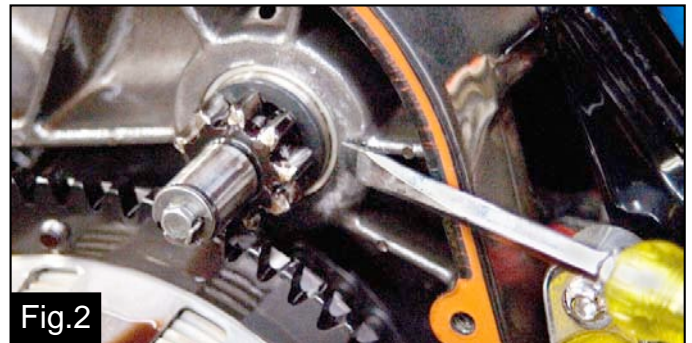
**Note:** The jackshaft bolt has been over tightened, stretching the threads and creating a slight bend in the bolt. This causes misalignment of the starter drive gear to the starter ring gear (notice chewed up edges). For the best starter performance, replace the jackshaft bolt and starter drive gear if you have this condition. **Fig.2**

2. Clean the face of the transmission-mating surface to ensure a straight, solid connection when you install your new Spyke starter. **Fig.3**

3. Make sure the jackshaft coupler is inserted onto the starter output shaft with the beveled end towards the starter. **Fig.4** Use a small amount of grease to hold the coupler in position as you put the starter into place. Twist the jackshaft bushing to align the splines of the coupler.

4. Using red thread lock, secure the starter with the bolts and lock washers to the two mounting points, Tighten bolts to 25 ft. lbs. torque.

5. Make sure the jackshaft bushing is free of any debris by deburring it using some steel wool. Do not grease this bushing, as it will attract debris. Keeping it clean and straight will insure better movement and alignment of the starter drive gear. **Fig.5**



6. Hold onto the positive cable as you attach it to the starter to avoid twisting the inside contact. **Fig.6** It should be parallel to the bottom of the case. This condition will end up with a poor connection and lost potential to the starter that eventually can cause arching. **Fig.7**

7. Use your fingers to hold the starter drive gear while tightening the jackshaft bolt. **AVOID OVER TIGHTENING!!** (see Note **Fig.2**) This is a good tightening method to avoid over tightening and stretching the threads on the other end. **Fig.8**

8. Once it's in place, use some vise grips to pull out the jackshaft, when you let go it and it should snap back into position. This will help insure proper alignment with the starter ring gear. If it doesn't snap back, take it out and turn it 180 and try again. Make sure it snaps back before securing the starter. **Fig. 9** Once you have the proper orientation, use red thread lock on the jackshaft bolt and secure it. Put a little red thread lock on the back of the lock tab. Once in place, bend it down to secure.

9. Your new Spyke starter is now installed. Reassemble the rest of your bike, reconnect the battery and go for a ride!!

