



## INSTALLATION INSTRUCTIONS

**P/N 400111 Starter Drive  
Assembly for Spyke 1.4 KW  
Starters and O.E.M. Replacement  
for Harley Davidson® P/N 31663-90**

### **READ THESE INSTRUCTIONS COMPLETELY BEFORE BEGINNING INSTALLATION!**

**NOTE:** Refer to the Factory Shop Manual electrical section for safety instructions prior to performing any repairs or installations of electrical components.

**CAUTION!** ALWAYS DISCONNECT THE BATTERY CABLES BEFORE PERFORMING ANY ELECTRICAL SYSTEM REPAIRS OR MODIFICATIONS. THIS WILL PREVENT DAMAGE TO THE ELECTRICAL SYSTEM OR ACCIDENTAL STARTING OF THE MOTORCYCLE IN CASE OF AN ELECTRICAL ARC CAUSED BY SHORTING THE BATTERY POWER TO GROUND.

**WARNING!** SEVERE DAMAGE TO THE ELECTRICAL SYSTEM OR PERSONAL INJURY MAY OCCUR BY NOT FOLLOWING THE ABOVE SAFETY INSTRUCTIONS.

#### **Step #1 REMOVE FRONT HOUSING:**

1. Remove the two long 8mm hex head bolts that slide through the brush cover and screw into the back of the front housing. (See Figure 1)
2. Remove the two 5/32 allen head bolts from the front housing. (See Figure 2)
3. Gently tap mounting ears with a soft hammer until front housing separates from motor. (See Figure 3) **NOTE:** Be careful when pulling the motor from the front housing that you do not separate the brush cover from the field case. (See Figure 4)
4. Remove ball bearing (inside drive shaft), drive shaft, spring, and idler gear from front housing. **NOTE:** Be careful not to lose roller bearings from idler gear when removing.

#### **Step #2 REMOVE (OLD) DRIVE ASSEMBLY:**

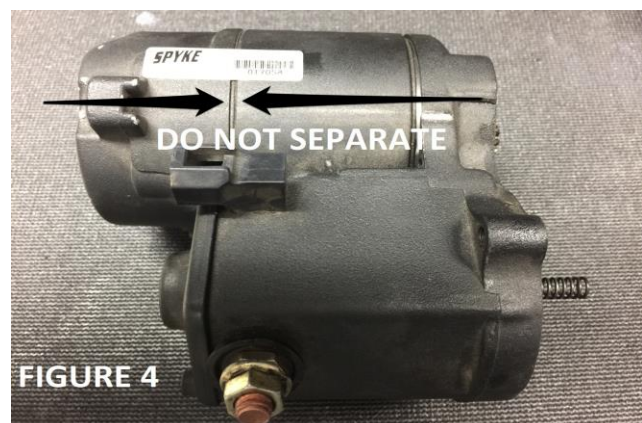
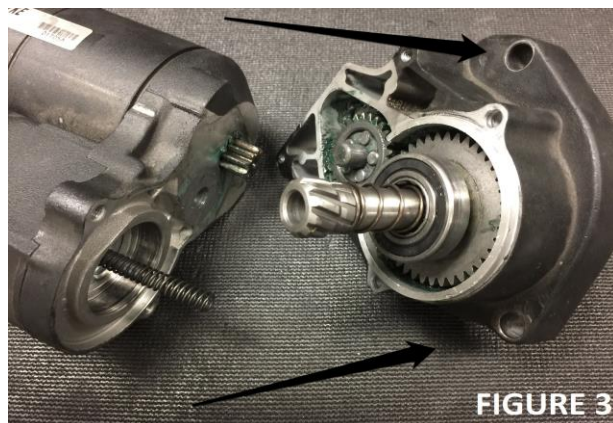
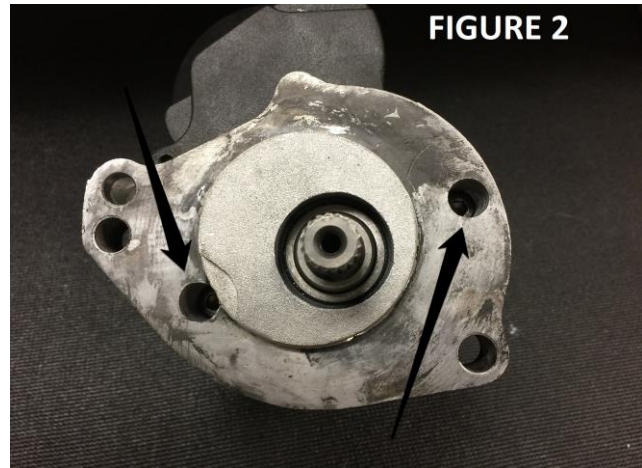
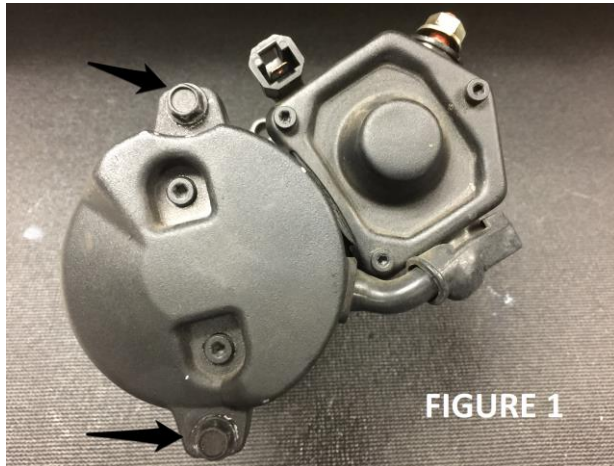
5. While holding front housing in a vice, use a 3/4" deep socket and hammer to remove drive from front housing. (See Figure 5)

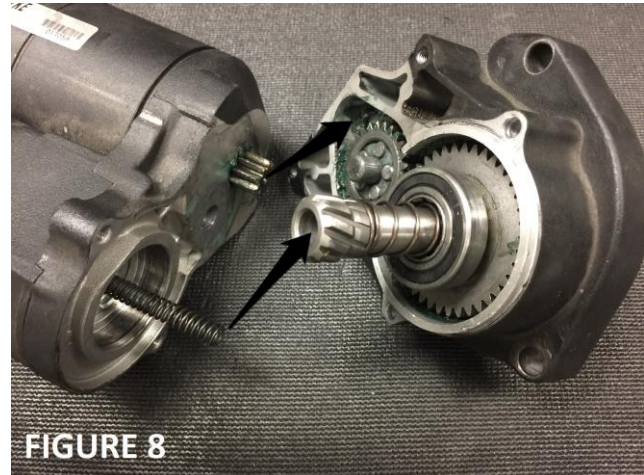
#### **Step #3 INSTALL (NEW) DRIVE ASSEMBLY:**

6. Using a press, press drive assembly into front housing until bearing is seated completely in the front housing.
7. Re-install freshly greased idler gear, spring, drive shaft, and ball bearing into front housing. (See Figure 6 & 7)
8. Re-install front housing onto motor. Make sure the plunger spring slides into drive shaft and armature gear goes into the cavity next to the idler gear. (See Figure 8)

9. Gently tap the top of the solenoid with a soft hammer until front housing and motor are seated together.
10. Screw 2 5/32 allen head screws through front housing and torque to approx. 7 ft. lbs.
11. Screw 2 long 8mm hex head bolts through brush cover ears and into front housing and torque to approx. 29 in. lbs.

**Congratulations! Your install is complete.**





For technical assistance call 909/547-9058

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#### LIMITED WARRANTY

PerTronix, LLC. Warrants to the original Purchaser of its (product) shall be free from defects in material and workmanship for a period of (12) months from the date of purchase.

If within the period of the foregoing warranty PerTronix finds, after inspection, that the product or any component thereof is defective, PerTronix will, at its option, repair such products or component or replace them with identical or similar parts PROVIDED that within such period Purchaser Promptly Notifies PerTronix, in writing, of such defects.