



## INSTALLATION INSTRUCTIONS COMPUFIRE 1084 GEAR SETS

<b>54001</b>	<b>1990-1993</b>	<b>H-D</b>	<b>BIG TWINS</b>
<b>54002</b>	<b>1994-1997</b>	<b>H-D</b>	<b>BIG-TWINS</b>
<b>54003</b>	<b>1998-LATER</b>	<b>H-D</b>	<b>BIG-TWINS</b>

NOTE: The Compu-Fire 1084 Gear Sets are designed to improve starting torque by lowering the gear ratio of the starter ring and pinion gear or to improve the strength of the fragile ring gear teeth found on the H-D original equipment 102 tooth ring gear found on 1998 and later bikes. If your bike is equipped with an aftermarket clutch, contact the clutch manufacturer to verify if the original equipment H-D ring gear will fit.

### KIT CONTENTS

1ea 84 Tooth Ring Gear  
1ea 10 Tooth Pinion Gear  
6ea 5/16 X 24 Socket Head Cap Screw

NOTE...Refer to the Factory Shop manual for safety instructions prior to performing any repairs or installation of engine and electrical system components. This installation requires the use of Factory H-D service tools for removal of the primary drive assembly and the clutch. If you are not familiar with this procedure or do not have access to the correct tools, Engine Electronics, Inc. recommends the installation be performed by a trained motorcycle technician.

CAUTION...always disconnect the battery cables before performing any engine or electrical system repairs or installations. This will prevent accidental cranking of the engine caused by shorting battery power to ground at the starter motor.

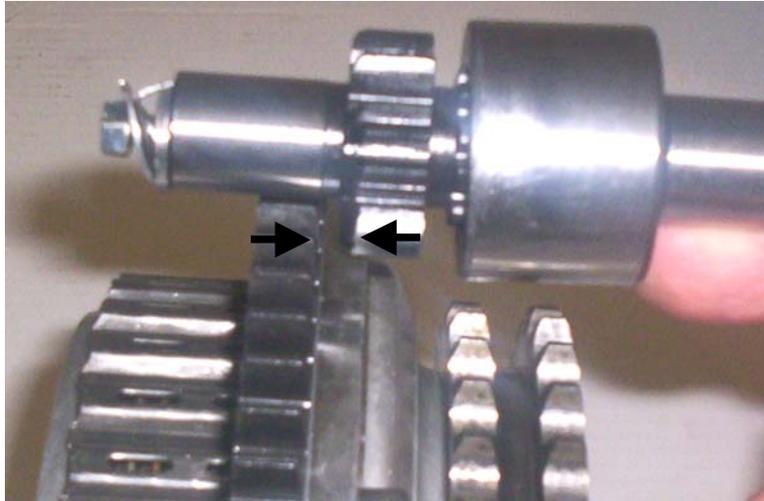
WARNING...Severe damage to the motorcycle or personal injury may occur by not following the above instructions.

## **RING AND STARTER PINION GEAR REMOVAL**

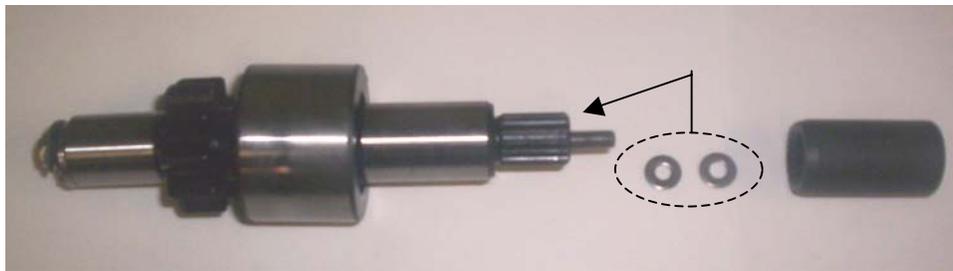
1. Remove the seat and disconnect the cables at the battery. Remove the ground cable first and then the positive (+) cable.
2. Drain the oil in the outer primary case and remove the outer primary cover following instructions in the Factory Shop manual.
3. Bend the tab on the jackshaft bolt away from the bolt head. Remove the starter pinion gear with the jackshaft bolt, lock plate and washer.
4. Remove the clutch assembly using the procedure found in the Factory Shop manual.
5. Remove the original equipment ring gear from the clutch basket by drilling out the rivets with a 5/16-inch drill bit. Drill through the rivet head and tap the ring gear off the clutch basket using a hammer.
6. Drill out the six holes in the clutch basket with the 5/16-inch drill bit.

## **RING AND STARTER PINION GEAR INSTALLATION**

1. Attach the new 84-tooth ring gear to the clutch basket using the six 5/16x24 socket head cap screws supplied. NOTE... The bevel side of the ring gear (identified by the three dots) faces away from the starter motor. Torque the socket head cap screws to 29 ft lbs.
2. Assemble and install the primary drive assembly following the instructions in the factory Shop manual.
3. Install the new 10-tooth pinion gear with the jackshaft bolt, lock plate and thrust washer. Torque the jackshaft bolt to 7 – 9 ft lbs. Bend the lock tab on the lock plate against a flat on the jackshaft bolt head.
4. Measure and adjust the air gap between the ring gear and the pinion gear. See **Fig-1**. The correct gap is .075 - .125 inch. If the gap is larger than .125 inch, use the supplied shim washers inside the jackshaft coupler. See **Fig-2**. If the air gap is smaller than .075 inch, the jackshaft must be shortened by removing material from the splined end of the shaft. See **Fig-3**.
5. Install the outer primary cover following instructions in the Factory Shop manual and re-fill the primary case with the proper amount of primary oil.
6. Re-install the battery cables in the reverse order they were removed. Re-install the seat.



**Fig-1** (Adjust air Gap to .075" - .125")



**Fig-2** (If gap is too large, use shims)



Remove material from these two surfaces as required to meet air gap of .075" - .125"

**Fig-3** (Remove material, if air gap too small)