

## HKS 700E Power Take Off Configuration Change

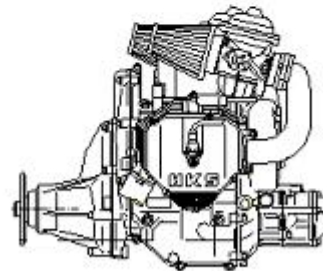
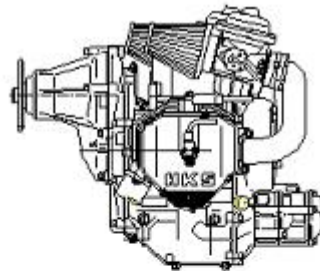
### ***SAFETY FIRST...***

- Read all instructions before proceeding
- Make sure all power is off to the engine
- Make sure the fuel system is shut down
- Be careful not to drop any tool or part while working within the engine compartment
- Count all tools and parts before starting
- Account for all tools, hardware, and parts when complete
- Safety glasses must be worn during this procedure

### **Introduction**

The HKS 700E Engine comes from the factory preconfigured with the PTO (Power Take Off) in either an up or down position. Normally, it should not be necessary to change the configuration of the PTO. When it is necessary to change the PTO, the work should be:

1. Completed by a knowledgeable and trained mechanic.
2. Carefully completed per the following instructions.



### **Supplies Required:**

- 04Y-457 \* Front Cover Gasket 1x
- 04Y-224 Reduction Cover Gasket x1 (for Type A 3.47 gear reduction)
- 04Y-225 Reduction Cover Gasket x1 (for Type B 3.47 gear reduction)
- 04Y-409 Washer 1x
- 04Y-399 Nut Crank M25 x1

\* If the serial number is 100599 or less, contact the dealer to obtain the correct front cover gasket.

### Tools Required:

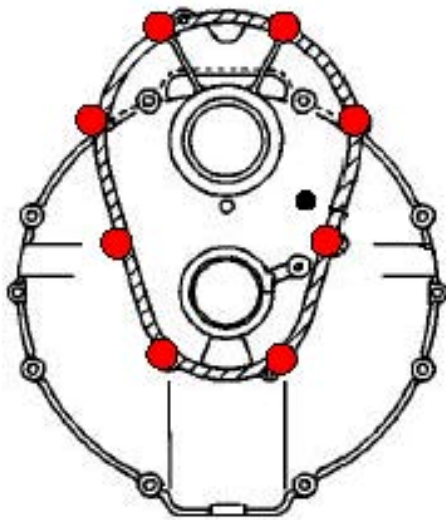
- Torque Wrench (beam type)
- Metric wrenches and sockets
- An 8mm shaft drift pin to hold the crankshaft in place
- LOCTITE 243

### STEP 1

Read all instructions completely before starting.

### Disassembly

#### STEP 2

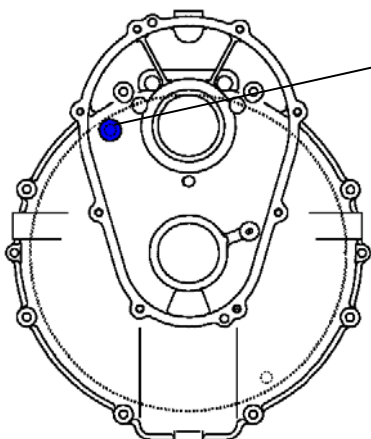


Remove the 8-M6 GEAR REDUCTION COVER bolts (indicated in the illustration at the left in red). After all the bolts are removed, carefully remove the Gear Reduction Cover.

**Note:** The PTO shaft, bearing, and the entire gear assembly will come off attached to the Gear Reduction Cover. It will be heavier than expected when removed, use caution not to drop the cover and gear assembly.

Clean the reduction cover gasket surfaces on both the reduction cover and the front cover.

#### STEP 3

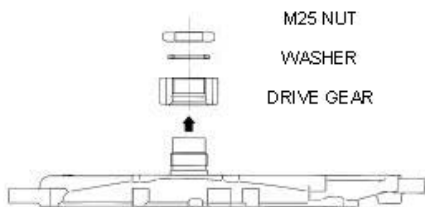


Rotate the CRANKSHAFT and insert the 8mm drift pin into the hole and indicated at the left to hold the CRANKSHAFT in place.

**Note:** The engine front cover which separates the PTO gear housing and the crankcase is not sealed. Use caution not to introduce any dirt or debris into the Gear Reduction Housing space.

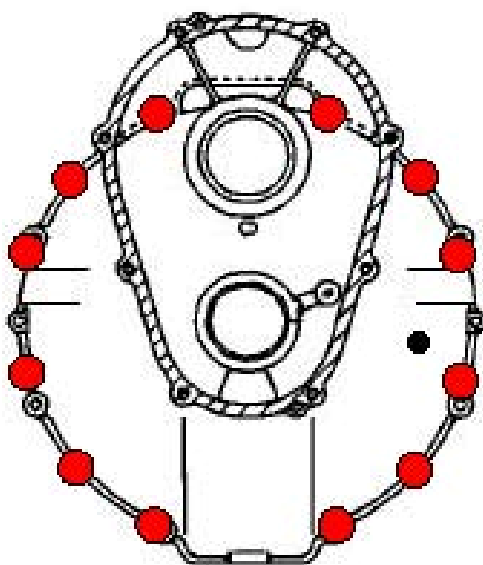
**STEP 3 (continued)**

Remove the M25 NUT, WASHER and the DRIVE GEAR. Clean the crankshaft thread surfaces.



**STEP 4**

Remove the 12-M6 BOLTS (show in red in the illustration at the left). Carefully, remove the FRONT COVER.

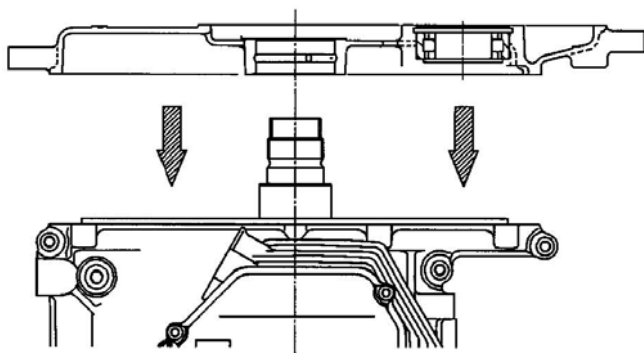


**Note:** Use caution not to introduce any dirt or debris into the crankcase or flywheel housing space.

Remove the old front cover gasket from the crankcase housing and the front cover. Inspect and clean the gasket surfaces.

**Assembly**

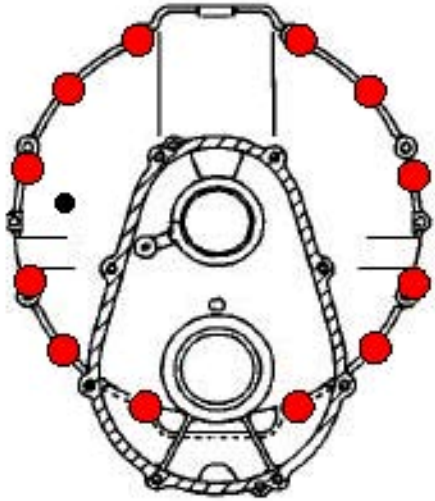
**STEP 5**



Replace the gasket (04Y-577).

**STEP 5 (continued)**

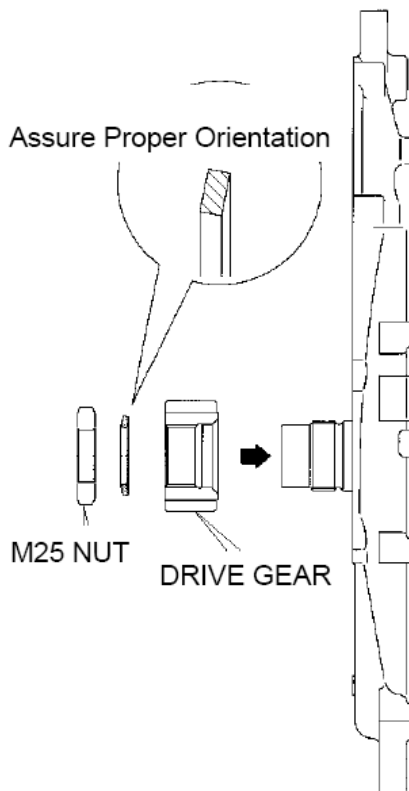
Rotate the front cover to the desired position and re-install the front cover.



Install each of the 12-M6 BOLTS back into place, apply LOCTITE 243 to each bolt before it is installed. Tighten each bolt to a torque value of 8.6ft-lb (1.2kg-m)

Insert the 8mm drift pin into the hole as indicated in step 3 to hold the CRANKSHAFT in place.

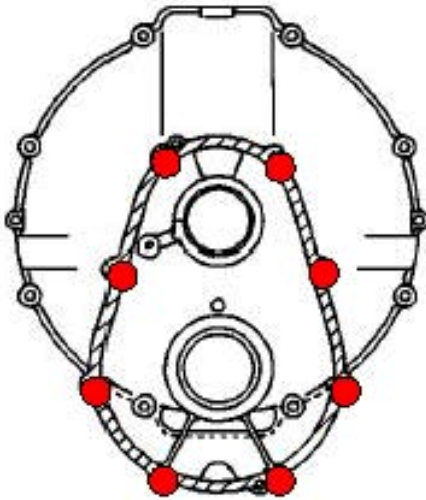
**STEP 6**



Install the DRIVE GEAR, WASHER. Make sure the washer orientation is correct as per the illustration at the left. Make sure the crankshaft thread surface is free from oil and dirt. Apply LOCTITE 243 to the shaft thread surface and install the new M25 NUT (04Y-399). Tighten the M25 nut to a torque value of: 72.3ft-lb (10.0kg-m)

Remove the 8mm drift pin that is holding the crankshaft in place.

**STEP 7**



Install REDUCTION GEAR COVER with PTO Shaft, and gear assembly as was removed in step 2. Tighten the M6 BOLT to a torque value of: 8.6 ft-lb (1.2kg-m) Apply LOCTITE243 to hold the bolt in place

**STEP 8**

Account for all tools and parts used during this procedure.

**Document History**

| Revision Date     | Rev number | Change   |
|-------------------|------------|--|
| November 30, 2008 | 1.01       | Notes on the difference between part number 04Y-224 and 04Y-225 front cover gaskets. |