

It will take approx. 30 minutes to replace the shift shaft.

### The difference between the Old and the New Shift Shafts

The shift shaft shown on the left is the one that should be replaced, and the replacement shift shaft is shown on the right.

The shiftshaft that should be replaced is 15mm longer the replacement one.

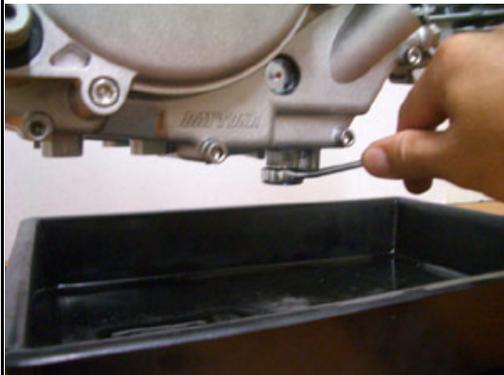


The replacement shiftshaft is 185mm in its entire length.

### Instruction

**FIG.1**

Draing engine oil from the oil draing bolt on the bottom of the crank case



**FIG.2**

Remove the shift lever

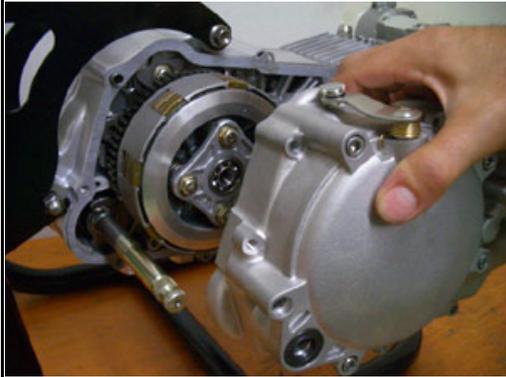


**FIG.3**

Loosen the bolts to remove whole clutch cover

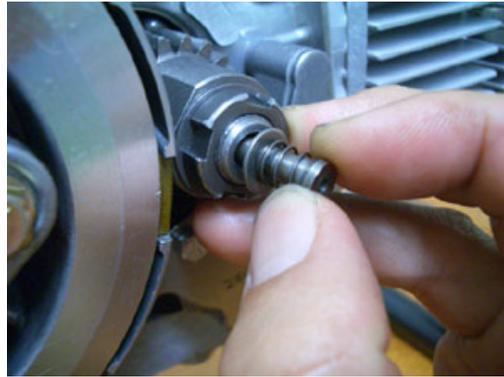


After loosening all the bolts, remove the clutch cover



**FIG.4**

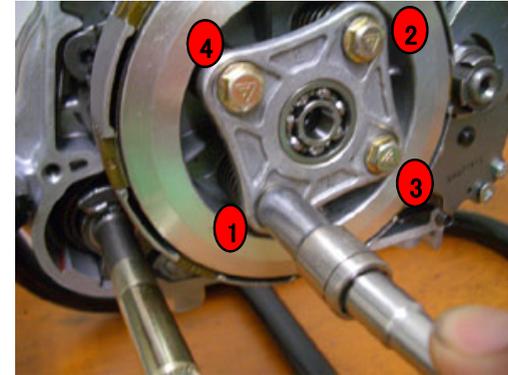
Remove the Oil Through, Spring and Plain Washer that are shown in the below photo.



**FIG.5**



To prevent distorton of the clutch lifter plate, gradually loosen the four bolts in the below specified sequence. DO NOT loosen up to the end. Turn the first 2-3 times, then loosen the second one.



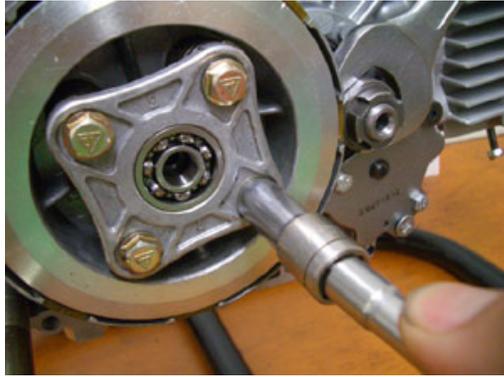
**FIG.5**

Gradually loosen the second bolt. Turn the second one 2-3 times, and then loosen the third one.



**FIG.5**

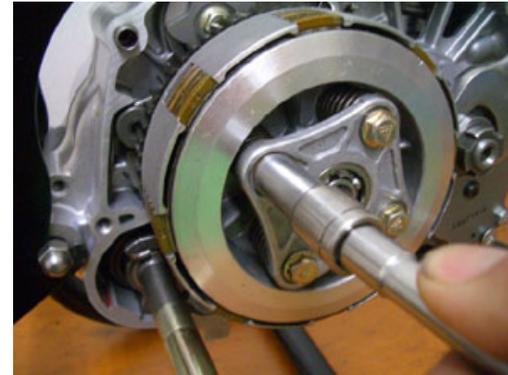
Gradually loosen the third bolt. Turn the third one 2-3 times, and then loosen the forth one.



**FIG.5**



Gradually loosen the third bolt. Turn the third one 2-3 times, and then loosen the first one again gradually. Then continue loosening.



**FIG.6**

Remove the clutch lifter plate.



**FIG.7**

Remove clutch springs



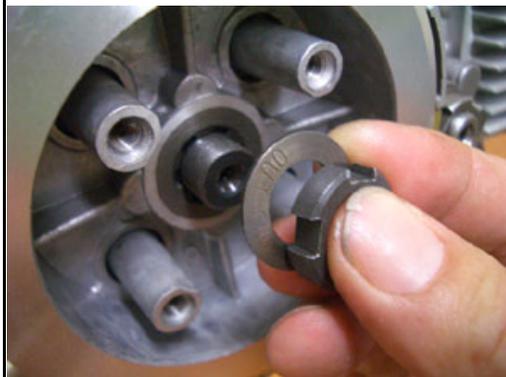
**FIG.8**

Remove the clutch center nut by an impact wrench or by using the clutch housing holder.



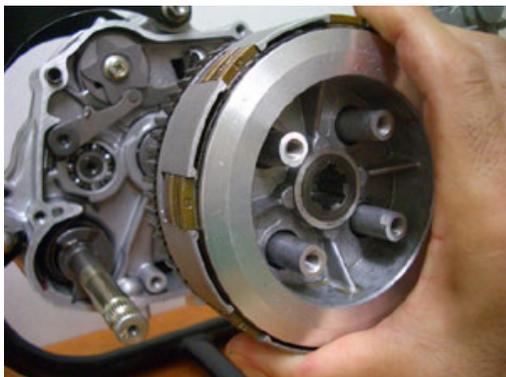
**FIG.8**

Remove the center nut and the spring washer.



**FIG.9**

Remove the complete clutch basket.



**FIG.10**

Remove the spacer and two washers.



**FIG.11**

Loosen the Shift Locating Plate Bolt.



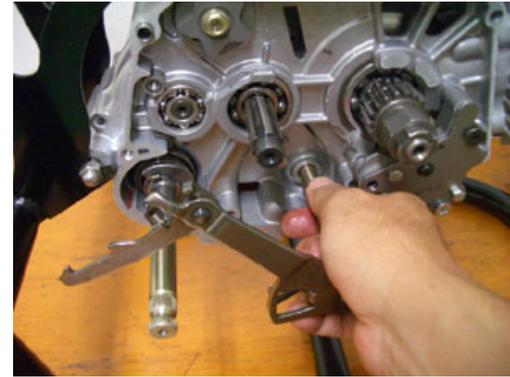
**FIG.12**

Push the shift arm downward and hold it in that position before the removal of the shift shaft.



**FIG.12**

Pull the shift shaft out of the crank case



**FIG.13**

Have the replacement shift shaft, and insert it back to the crank case half way. Then, hold down the shift arm and then press the whole shift shaft again to the end.



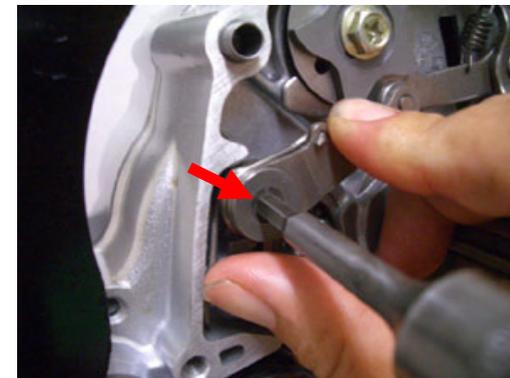
**FIG.14**

**Place the shift arm back to the right position. Be sure that the projection (circled in the below photo) sits in the right position.**



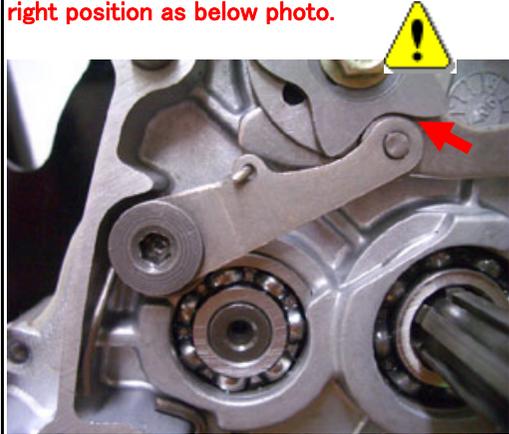
**FIG.15**

Place the shift locating plate in the right position and tighten the bolt to 10Nm(7.4ft-lbf).



**FIG.16**

Be sure that the shift locating plate is placed in the right position as below photo.



**FIG.16**

Place the SPLINED washer back to the clutch shaft to the place where the groove is.



**FIG.17**

Turn the splined washer around the shaft by approx. 30 degrees, so that the projections of the splined washer are hidden behind the shaft.



**FIG.17**

Place the LOCK WASHER back to the shaft to the end



**FIG.18**

Be sure that the LOCK WASHER sits right on the splined washer with no gap between them.



**FIG.18**

Place the spacer back to the shaft.



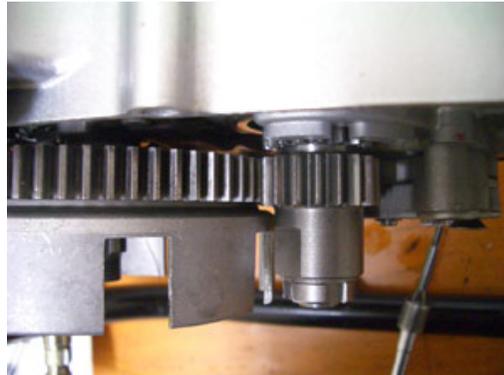
**FIG.19**

Place the clutch basket back to the shaft.



**FIG.20**

Be sure that the ring gear of the clutch basket goes into the primary gear and sits in the right position.



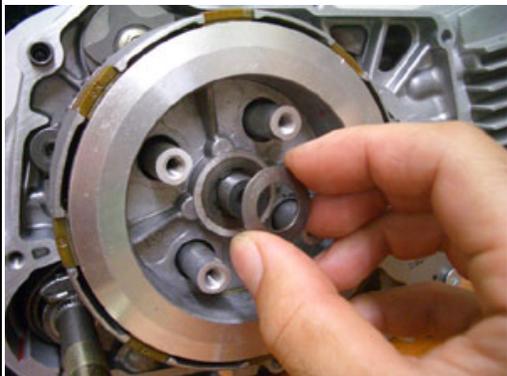
**FIG.20**

Place the clutch disc and plates back to the right position.



**FIG.21**

Place the spring washer back to the clutch shaft.



**FIG.22**

**Tighten the clutch center nut to 45-48Nm by using the clutch basket holding tool and torque wrench.**  
If an impact driver is used, you need to give the most careful attention not to over-torque.



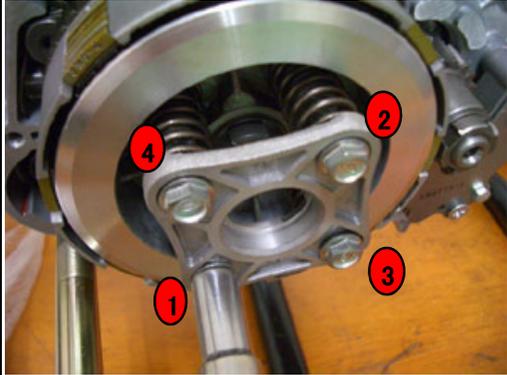
**FIG.22**

Place the clutch springs back to the clutch bosses.



**FIG.23**

To prevent distorton of the clutch lifter plate, gradually tighten the four bolts in the below specified sequence.



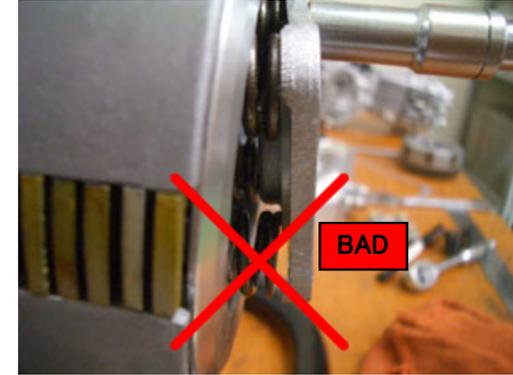
**FIG.23**

**DO NOT** tighten a bolt to the end without tightening the others. The clutch lifter plate needs to be held parallel to the clutch when tightened gradually. Torque to 10Nm.



**FIG.23**

The below photo is the **BAD EXAMPLE**. If the clutch lifter plate is tightened **NOT** parallelly, then the plate may be broken.



**FIG.23**

Place the washer, spring and oil through back to the right position.



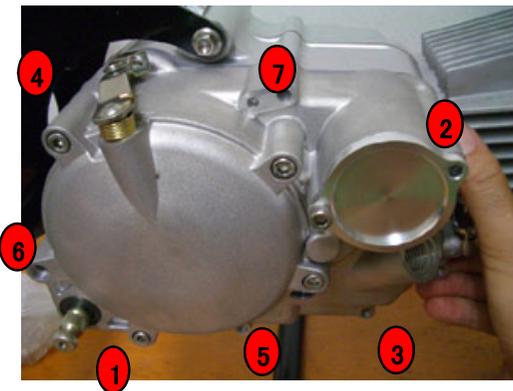
**FIG.24**

Place the gasket back to the right position.



**FIG.25**

Place the clutch cover back to the right position. Then gradually tighten the bolts in diagonal sequence. Torque to 10Nm.



**FIG.25**

Pour engine oil to the required oil level.

