05/06 Gsxr 1000 Clutch Mod

By: Ali (Jetspeedz)

Parts: 21472-41G10 - WASHER, CLUTCH - $10.09 From 06 Gsxr 750
Opt: 11482-40F00 - GASKET, CL COVER - $8.29

Tools: 13/64 Drill bit, 30mm , 12mm, 10mm, 8mm sockets, and Torque wrench (7ft-bls and 68.5ft-lbs) may need 2 diff torque wrench one for high And low. Also an impact gun & air compressor is highly recommended but not necessary, just makes it easier taking 30mm nut off.

Additional Parts: Grease with Molybdenum disulfide - Valvoline Durablend Part#vv278 Pictures later below , Gasket Sealer – any auto parts store

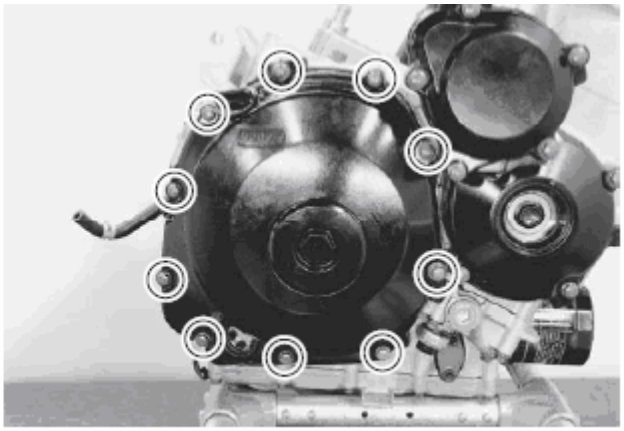
This is a very simple procedure so don't let the size of this document scare you. There are a lot of pictures so you can't get confused.

Good Luck…

- *Drain oil and filter*- Might as well do this while doing an oil change.

CLUTCH

- Remove the clutch cover.



Just use a zip tie or something to hold the rear brake down. Putting the bike in gear wont do anything you can still move the hub with enough force even with the bike in gear. But you dont need the special tool.

- Hold the clutch housing with the special tool.

CAUTION

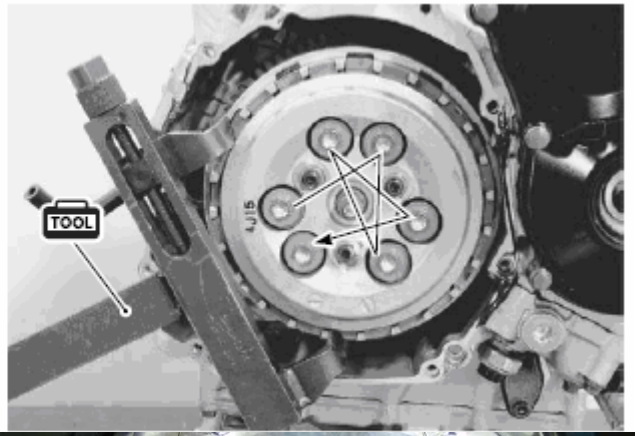
Do not damage the clutch plates by the special tool.

09920-53740: Clutch sleeve hub holder

- Remove the clutch springs.

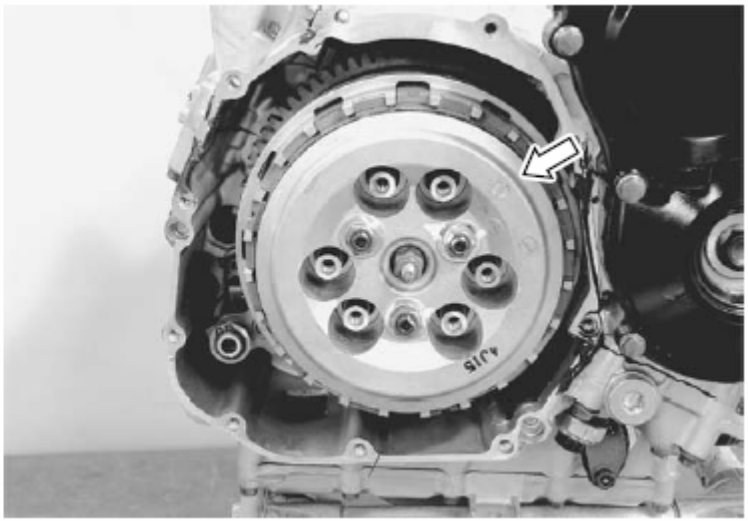
NOTE:

Loosen the clutch spring set bolts little by little and diagonally.



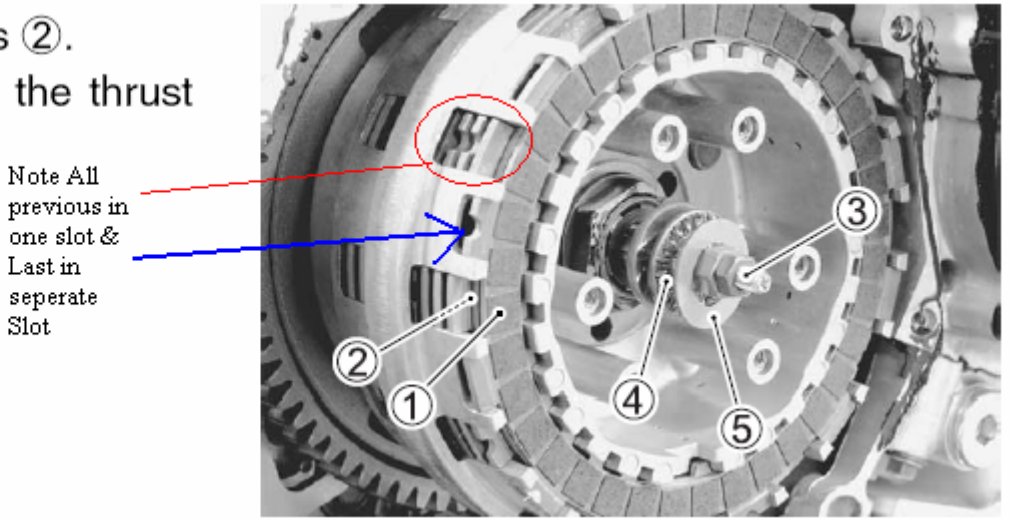
At this Point I decided to Mark the Sleeves –A for All, L for Last this is so I remember the last plate goes in a different slot. Also helps at the end when assembling the plate back on the hub and lining up lifter pins.

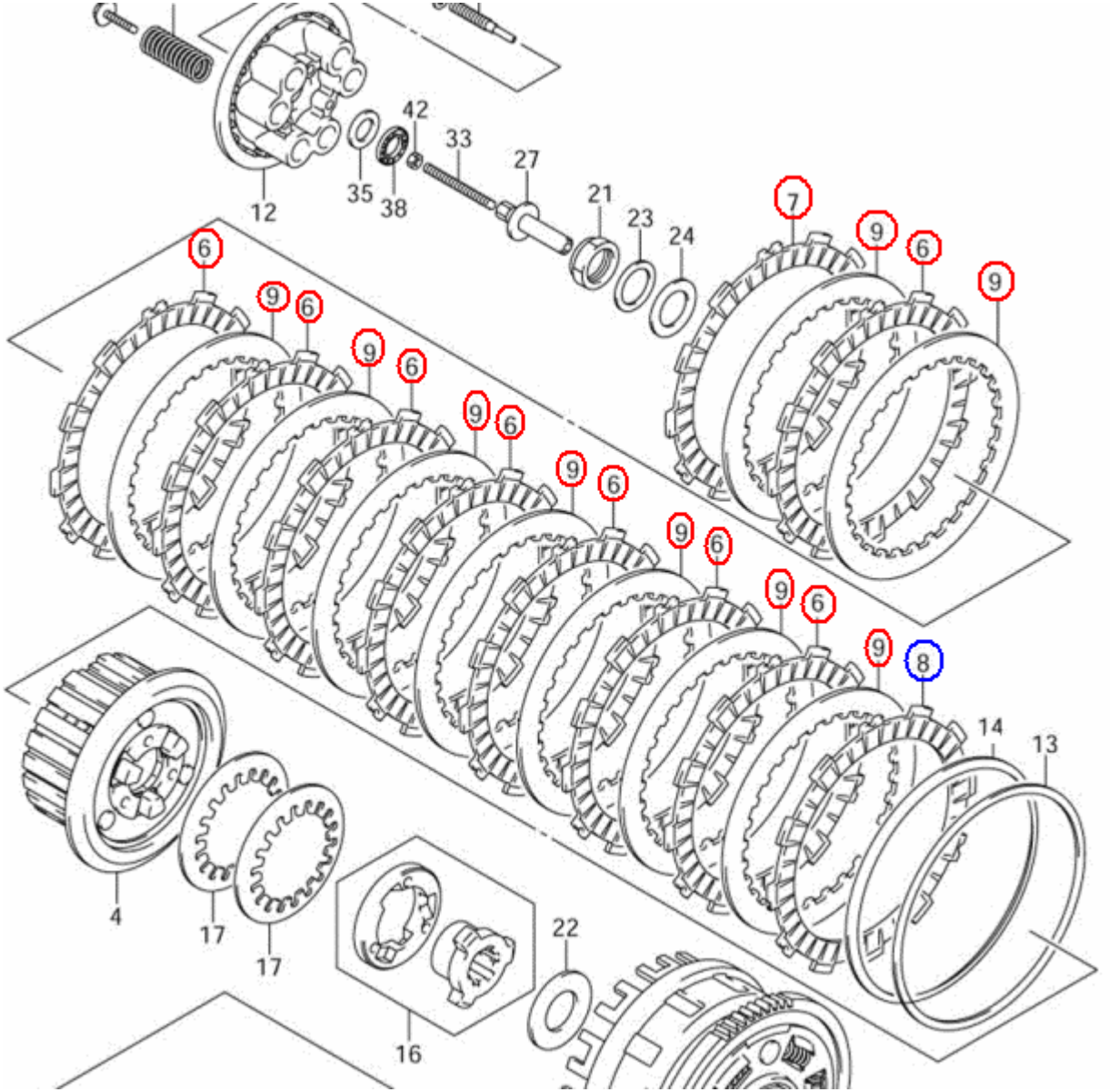
- Remove the pressure plate.



Take out all the fibers and plates and make sure to stack them in the same order and facing the same direction in which they came out. I used **MASKING Tape to MARK a small group of plates and fibers each time I took out a few and separate mark for the LAST Plate on Hub**

- Remove the clutch drive plates ① and driven plates ②.
- Remove the clutch push piece ③, bearing ④ and the thrust washer ⑤.

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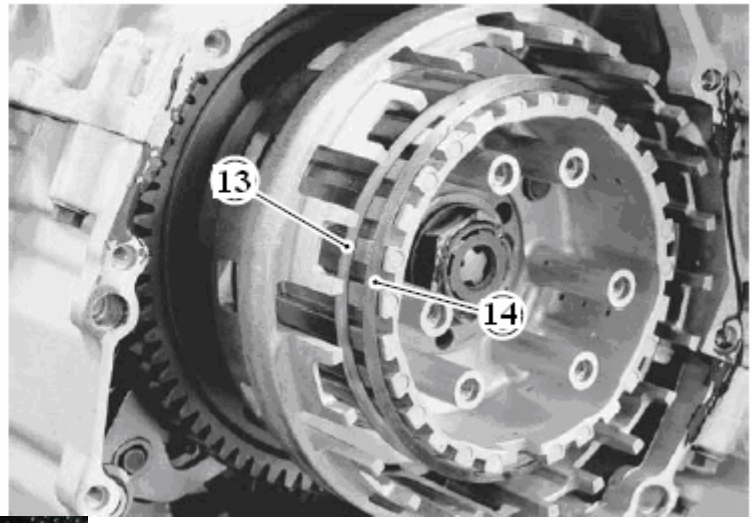
This is where I started to take out the fibers and plates and marked them… Make sure you take them out in the same order you put them back in.

- Remove the spring washer (14) and its seat (13)

Will be Replaced
with new
Washer later
Keep in Same ORDER

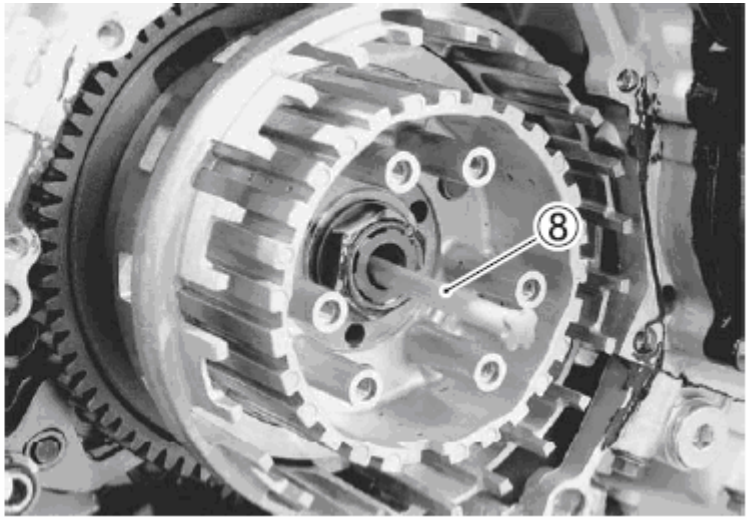


Concave spring Washer #14, will be replaced.

This is #13 and this is a Flat washer and you need to keep this.

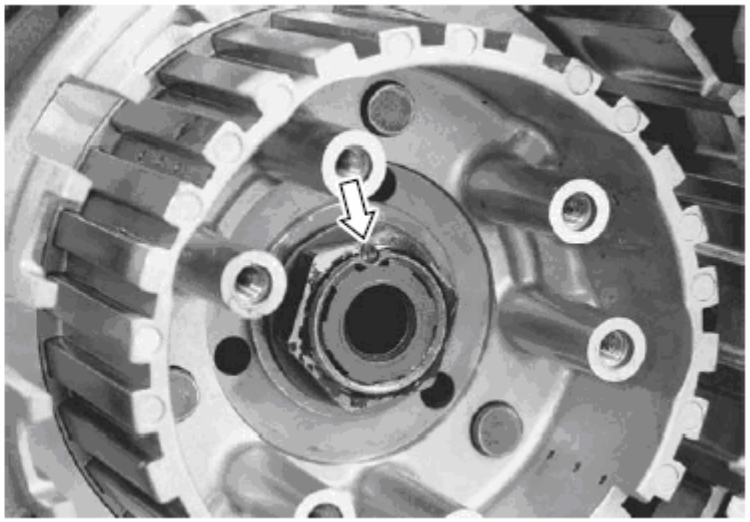
- Remove the clutch push rod ⑧.

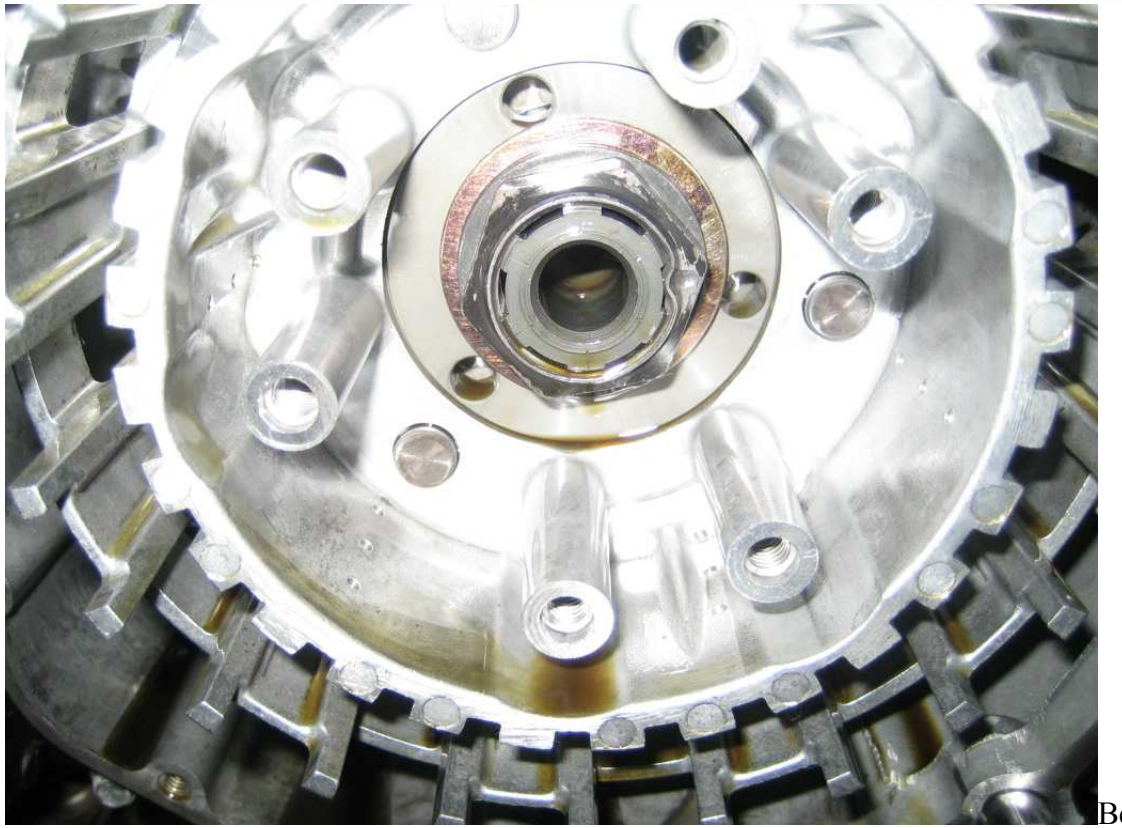
NOTE:
If it is difficult to pull out the push rod ⑧, use a magnetic hand or a wire.



- Unlock the clutch sleeve hub nut.

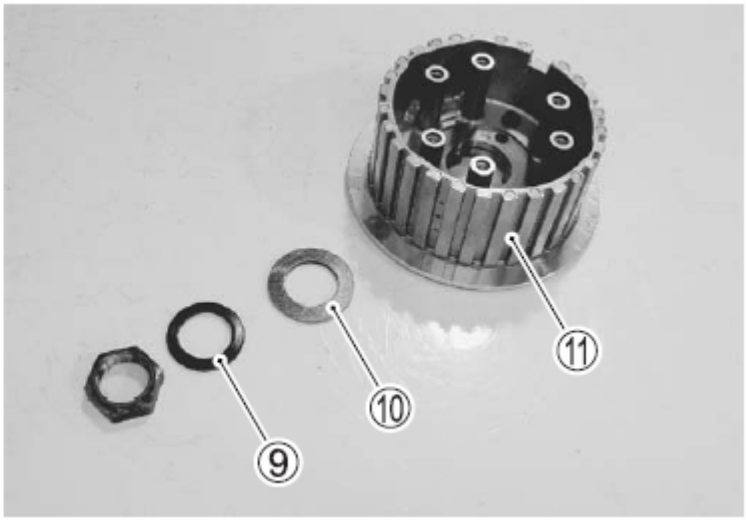
30mm socket and highly recommend impact gun, without impact gun you might turn the wheel with the force applied or might get lucky and get it off.





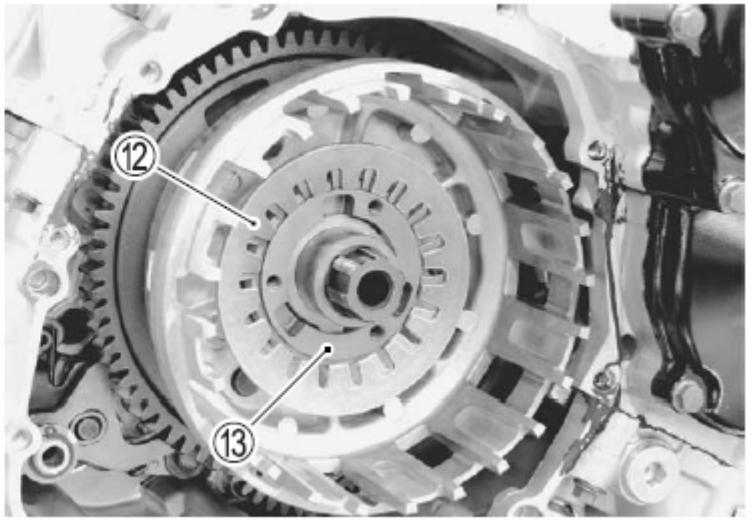
Be very careful when undoing the center punch. Take a flat head screw driver and lightly tap it till you get the center punch to lift.

- Remove the conical spring washer ⑨, washer ⑩ and clutch sleeve hub ⑪.

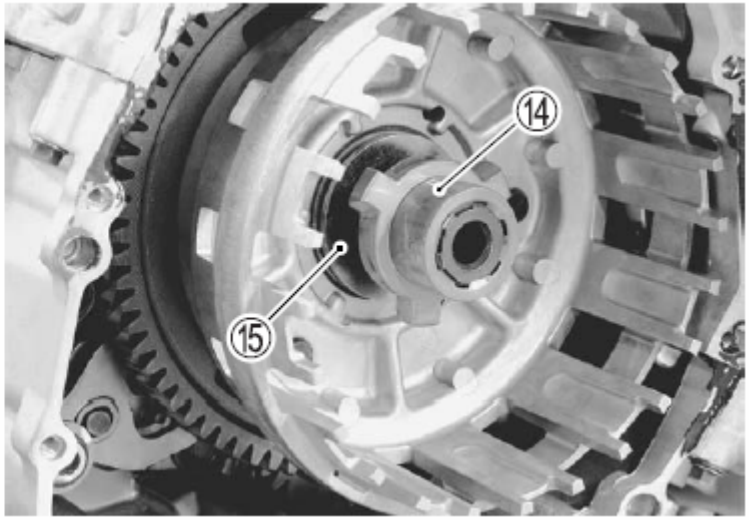


I marked the Washers (not necessary but helps and #9 is convex)

- Remove the wave spring washers ⑫ and clutch lifter driven cam ⑬.



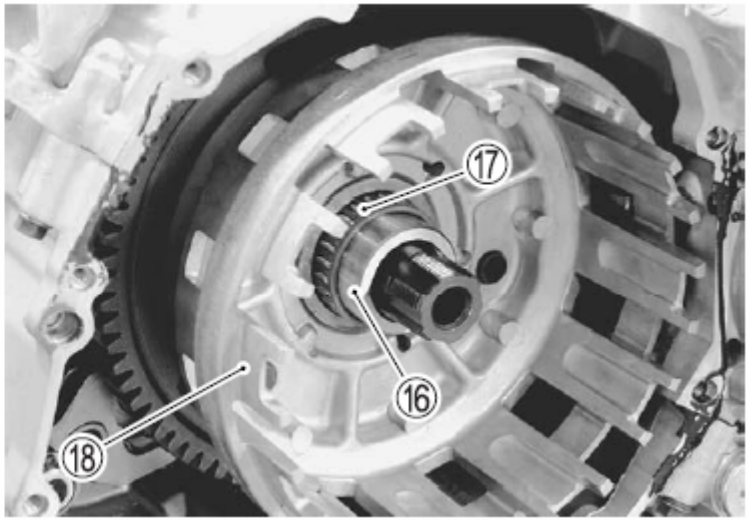
- Remove the clutch lifter drive cam ⑭ and washer ⑮.



- Remove the spacer ⑯ and bearing ⑰.
- Remove the primary driven gear assembly ⑱.

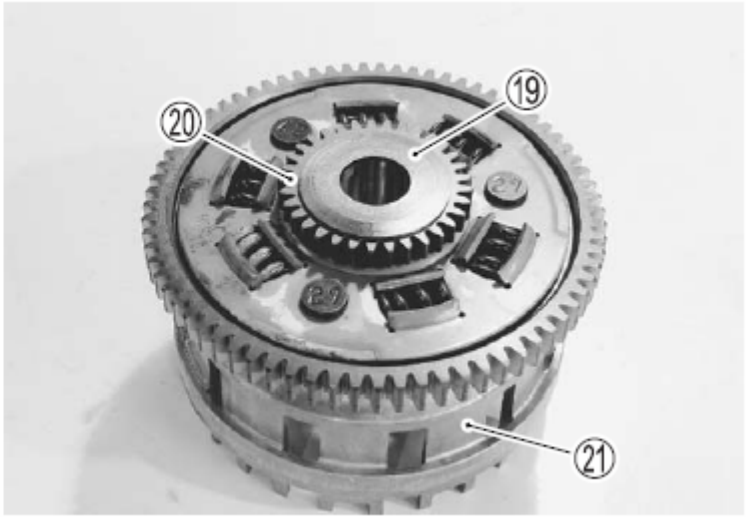
NOTE:

If it is difficult to remove the primary driven gear, rotate the crankshaft.



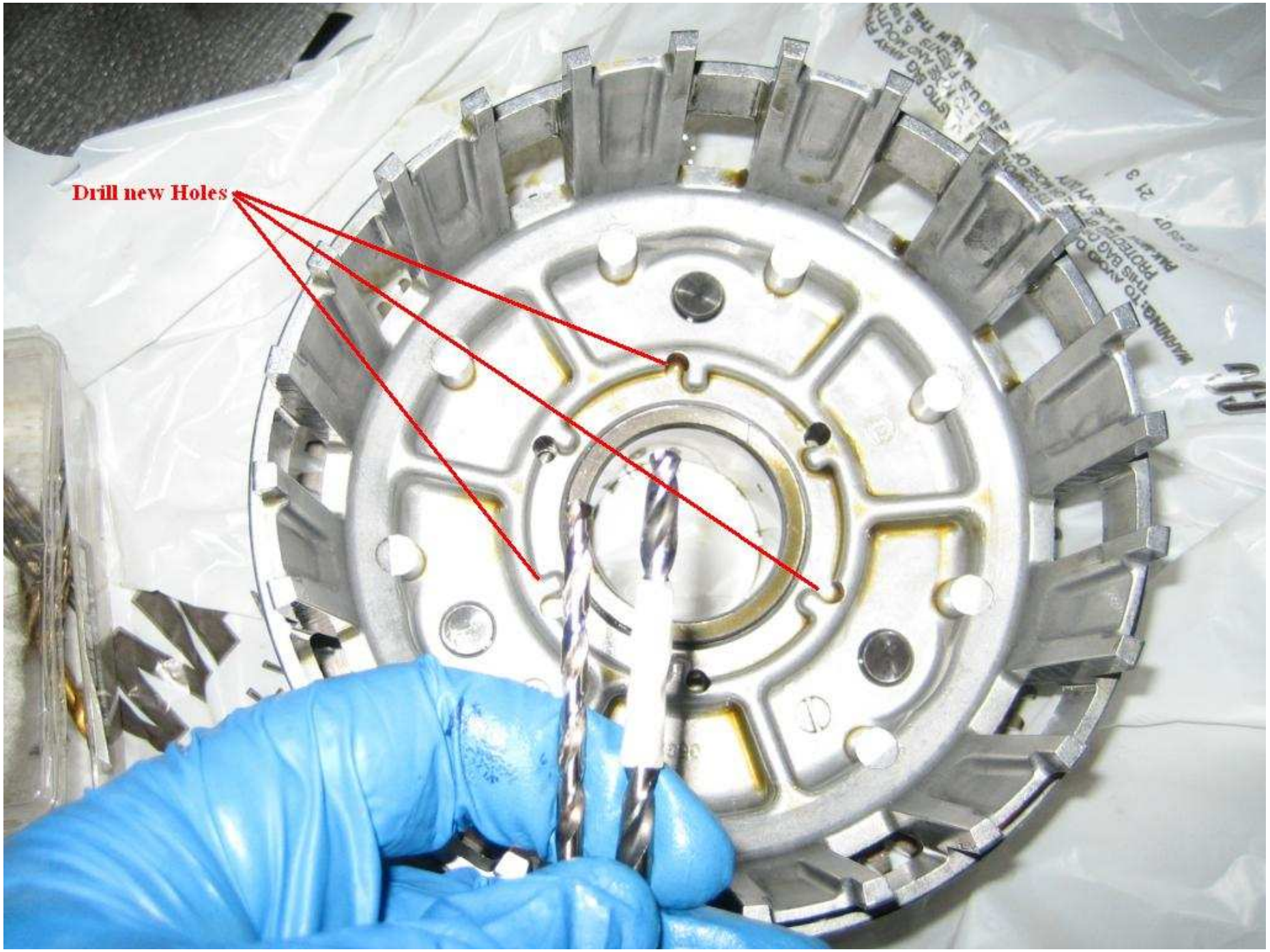
The Trick here is to simply use a magnet and it comes right off.

- Remove the thrust washer ⑲.
- Remove the oil pump drive gear ⑳ from the primary driven gear assembly ㉑.



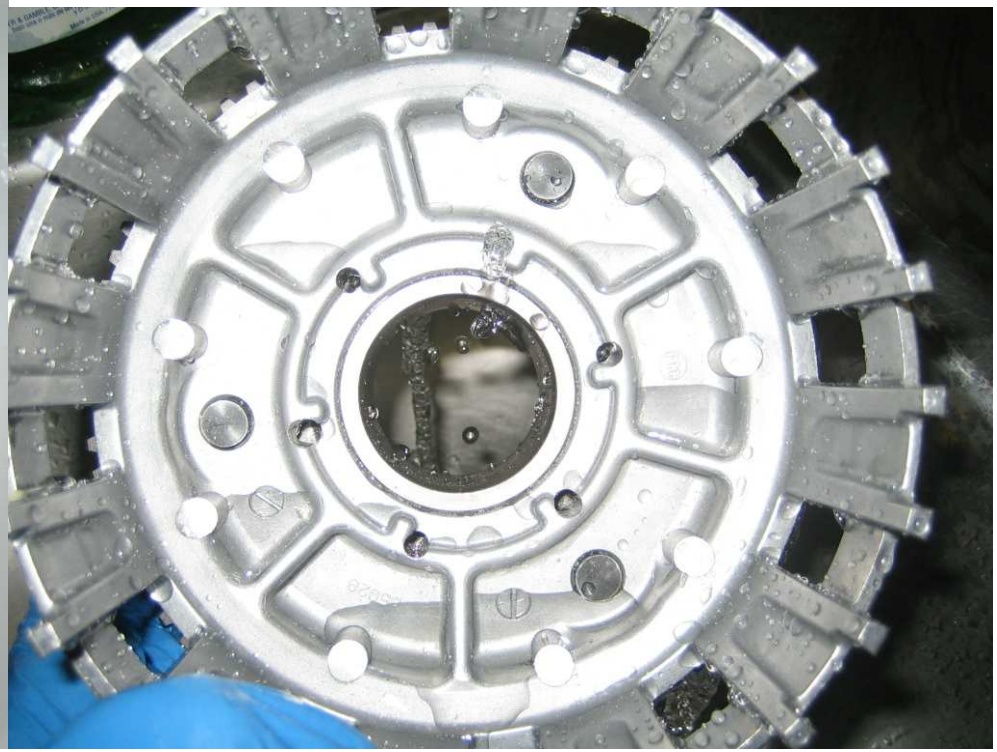
- Drilling the holes

You can’t remove the basket from the flywheel so don’t bother. Basically your drilling blind but you will know for sure when you drill through the basket trust me. The drill bit I used was **13/64** which is about 1mm bigger then oem hole but will work just fine.



This is the part where some people might get worried about drilling to Far. That I why I used masking tape to give me a guide to where I can apply less pressure when I get close to the tape which indicated I'm about to go through the basket. Even if you punch through and hit the flywheel for a second you will not harm anything so don’t worry.

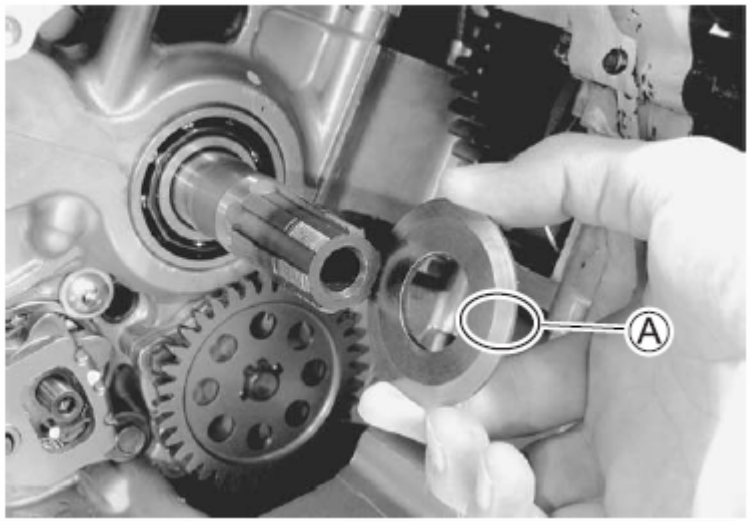
Cleaning all the metal shavings after drilling can be a pain staking and takes some time to get it all so here is what I did. One of the tools I recommended was air compressor which helps take most of the metal shavings out but not all. The second half of taking all the metal out is using water which works perfectly. Just make sure you dry it after well with an air compressor and towels, especially in between the springs. Make sure you flow water through all the holes to make sure you get any metal left behind.




I used CO2 compressed air and air compressor for those tight spots.

- Now Assembling the Clutch

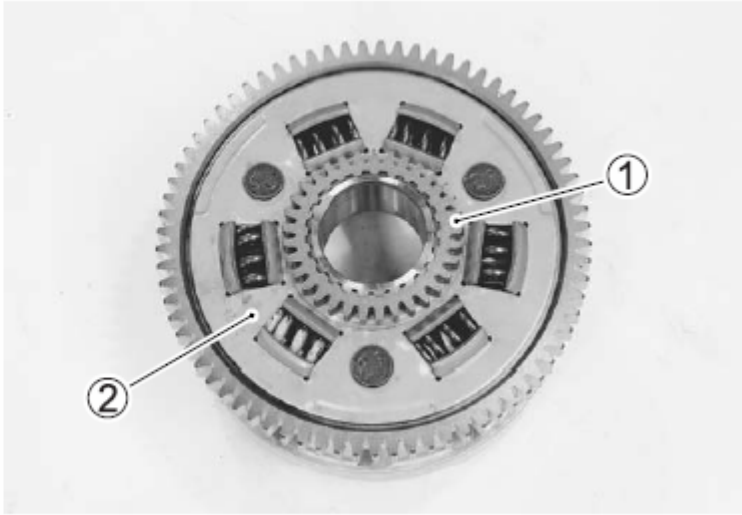
CLUTCH



- Install the thrust washer onto the countershaft.

NOTE:
The chamfer side Ⓐ of thrust washer faces inside.

- Install the oil pump drive gear ① to the primary driven gear assembly ②.

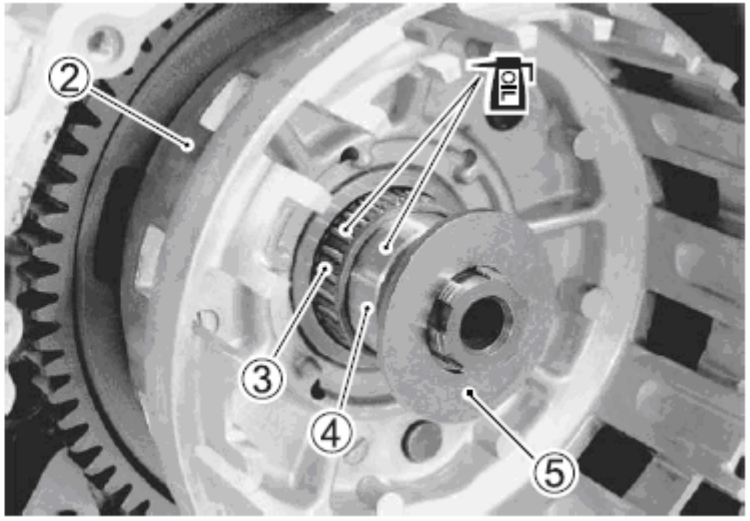


- Install the primary driven gear assembly ②.

NOTE:

* *If it is difficult to install the primary driven gear, rotate the crankshaft.*
* *Be sure to engage the oil pump driven gear with the drive gear and the primary driven gear with the drive gear.*

- Install the bearing ③ and spacer ④, and apply engine oil to them.
- Install the thrust washer ⑤.



Apply a small amount of the Valvoline Grease between 3 & 4

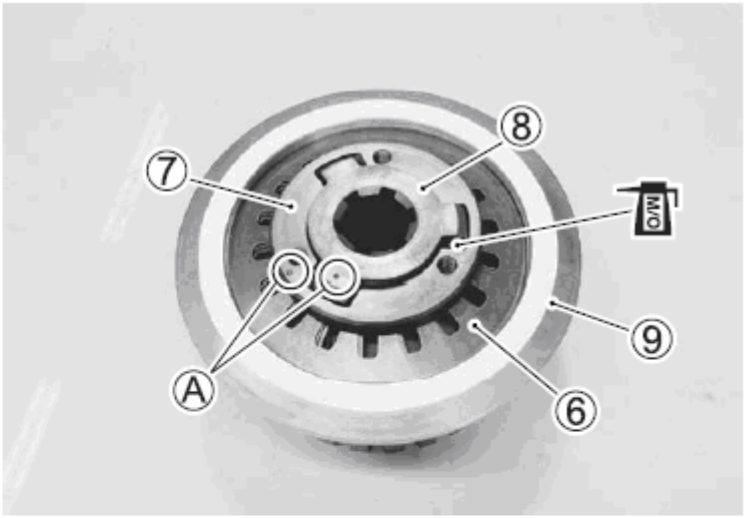
Apply some Valvoline grease between 7 & 8. Just rub it around the inner rim of 7 and outer rim of 8 as indicated by the manual.

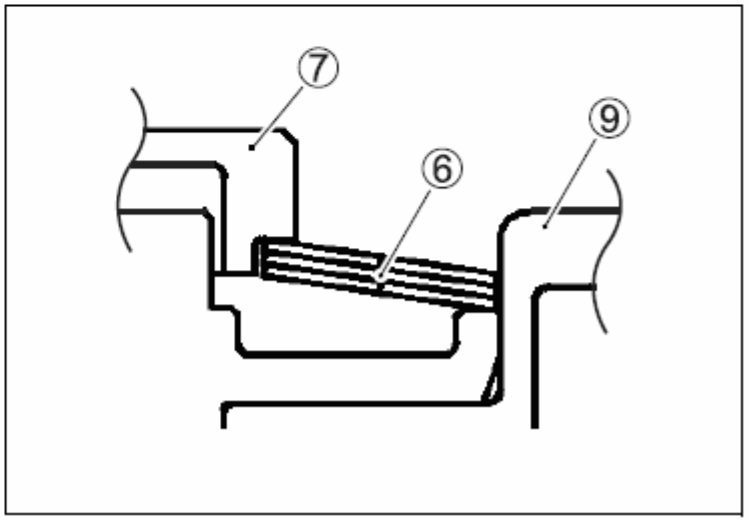
- Install the wave spring washers ⑥, clutch lifter driven cam ⑦ and clutch lifter drive cam ⑧ to the clutch sleeve hub ⑨.

NOTE:

* *Apply a small quantity of MOLYBDENUM OIL SOLUTION to the contact surfaces of the clutch lifter drive cam ⑧ and driven cam ⑦.*
* *Be sure to align the punch marks Ⓐ on the clutch lifter drive cam ⑧ and driven cam ⑦.*

M/O **MOLYBDENUM OIL SOLUTION**





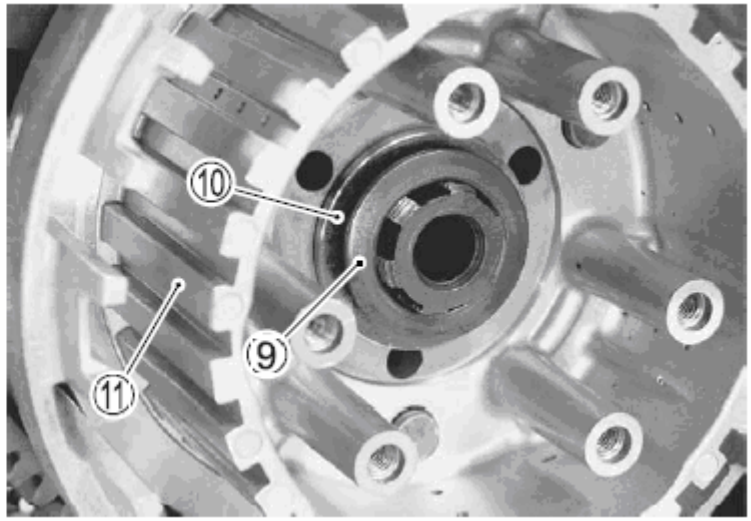
Reassemble the washers

This is where the Service manual might confuse people b/c they change the numbers of the parts from the past diagrams so i made the changes to match.

Basically install the Flat Washer #10 which we had marked earlier in the above setups when we took it apart onto #11 the hub. Then install #9 on top of #10 which is Convex. meaning your looking at it convex.

Concave

Convex



- Hold the clutch sleeve hub with the special tool.

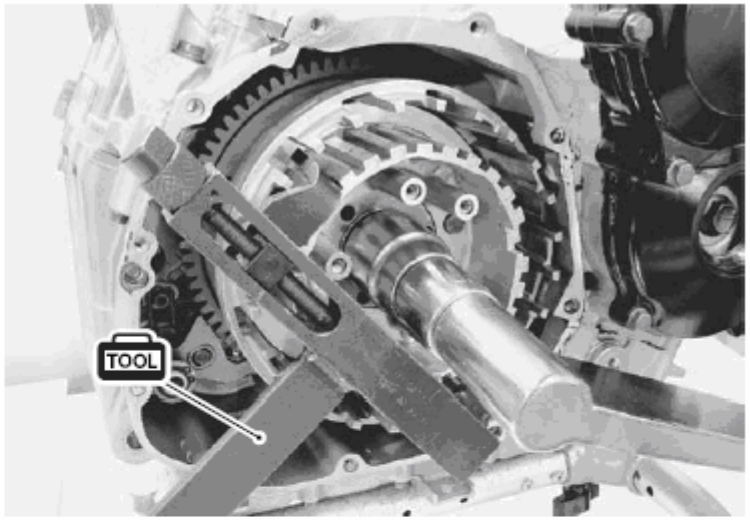
09920-53740: Clutch sleeve hub holder

Rear brake is fine
no need for tool

- Tighten the clutch sleeve hub nut to the specified torque.

Clutch sleeve hub nut: 95 N·m (9.5 kgf-m, 68.5 lb-ft)

Do not use and impact gun here. Use the Torque Wrench to tighten down here and use a center punch to lock it down after your done tightening it.

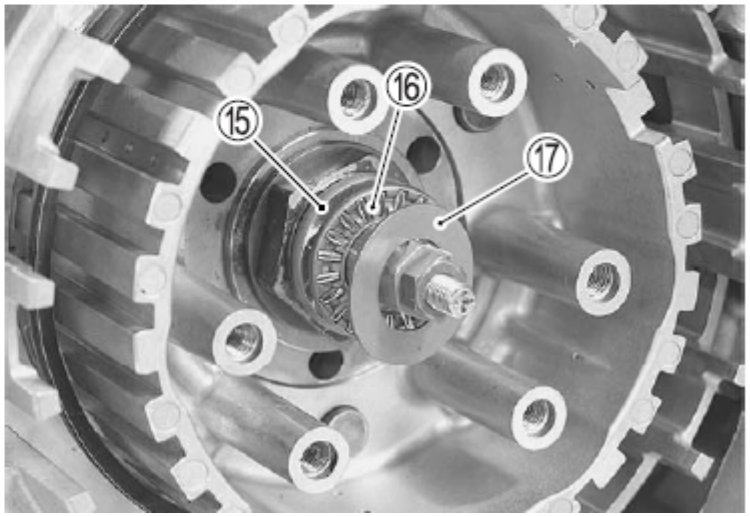


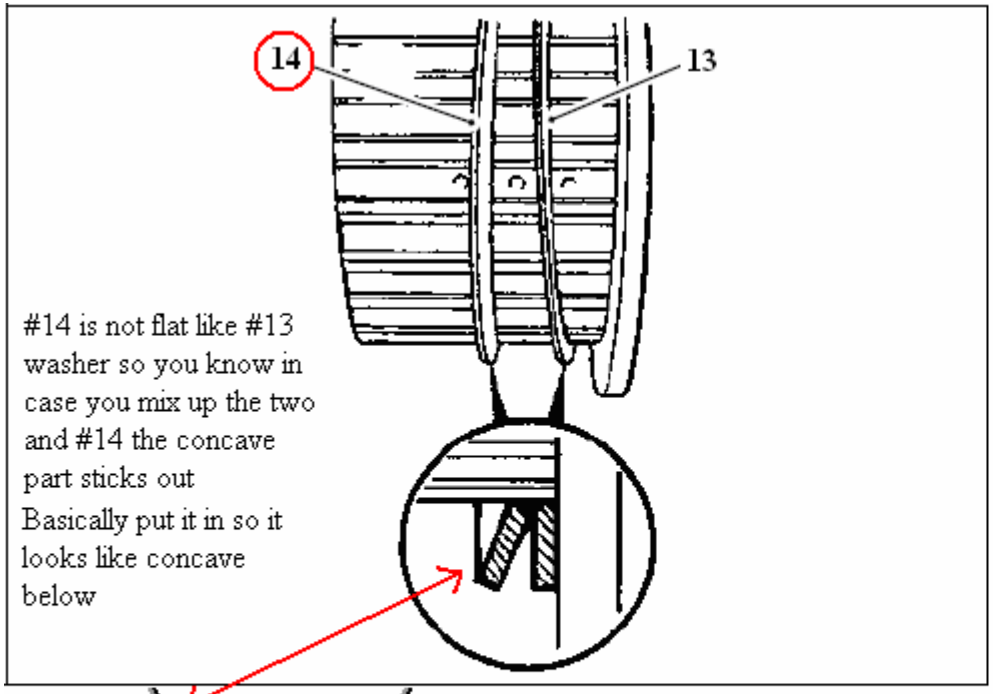
- Lock the clutch sleeve hub nut with a center punch.

- Install the clutch push rod ⑭ into the countershaft.

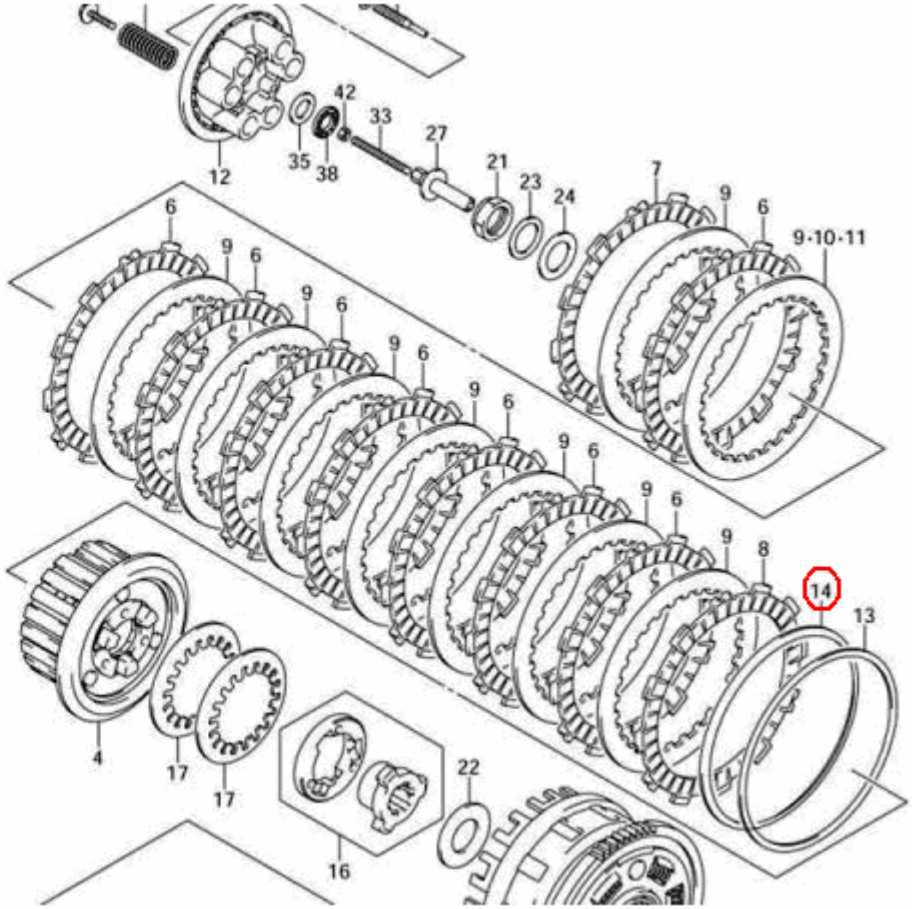
- Install the clutch push piece ⑮, bearing ⑯ and thrust washer ⑰ to the countershaft.

NOTE:
Thrust washer ⑰ is located between the pressure plate and bearing ⑯.





#14 needs to be replaced




Concave Washer #14


Flat washer #13

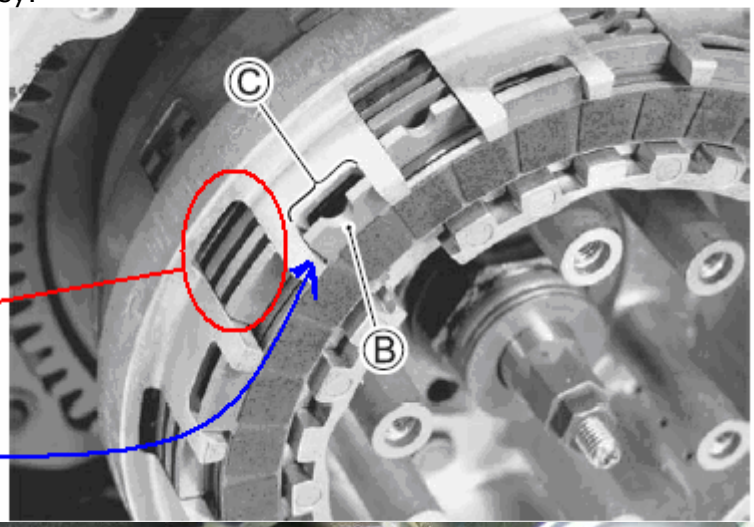
Reinstall all fibers and steel plates in same order and since they were marked should be easy to reinstall. Note last fiber with blue mark is in diff slit. This is why I marked everything when taking it apart so putting it back together would be easy.

- Insert the clutch drive plates and driven plates one by one into the clutch sleeve hub in the prescribed order.

NOTE:

Insert the outermost No. 2 drive plate claws Ⓑ to the other slits Ⓒ of clutch housing as shown.

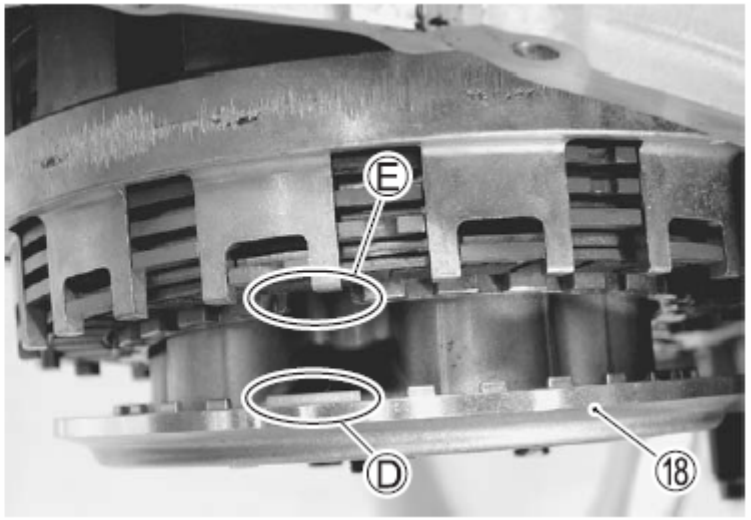
All previous plates and fibers in these slots expect last one goes in Slot C



- Install the pressure plate ⑱.

NOTE:

When install the pressure plate, fit the convex part Ⓓ of the pressure plate onto the concave part Ⓔ of the clutch sleeve hub.



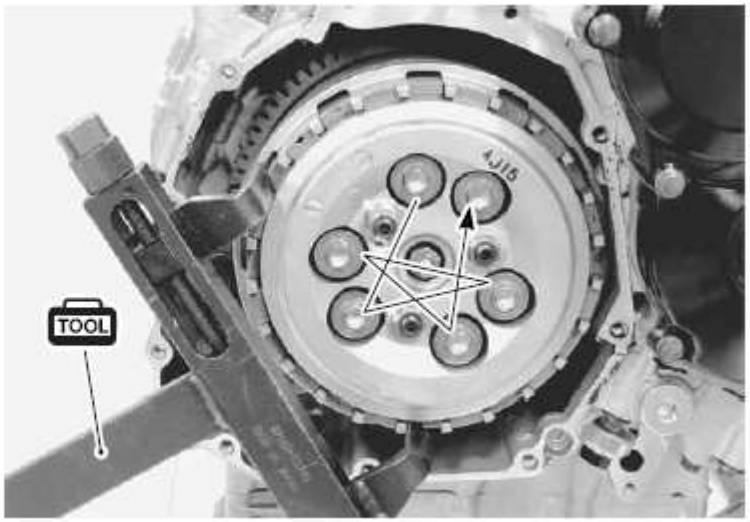
- Install the clutch springs.

- Tighten the clutch spring set bolts to the specified torque.

Clutch spring set bolt: 10 N·m (1.0 kgf-m, 7.0 lb-ft)

NOTE:

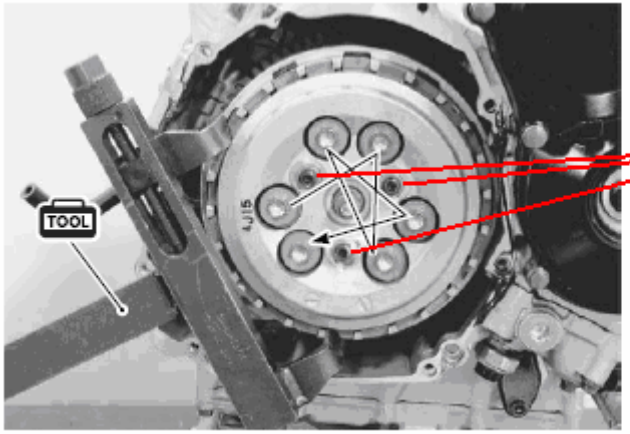
** Tighten the clutch spring set bolts diagonally.*



Lastly adjust the lifter pins now that it's almost done. You can assemble the whole thing and take clutch adjust cover off or just do it now while you got the entire cover off. Turn the lift pins in till they bottom then back out 2 ¼ turns and lock the nuts.

Oem is 3 threads showing after 2 ¼ it's about 1.99 threads showing (2nd thread just shows so 1.99=2)

Note: For tuning purposes, the farther in you screw the 3 lifter pins in the more the clutch will slip and if you go too far in it will slip under gas.

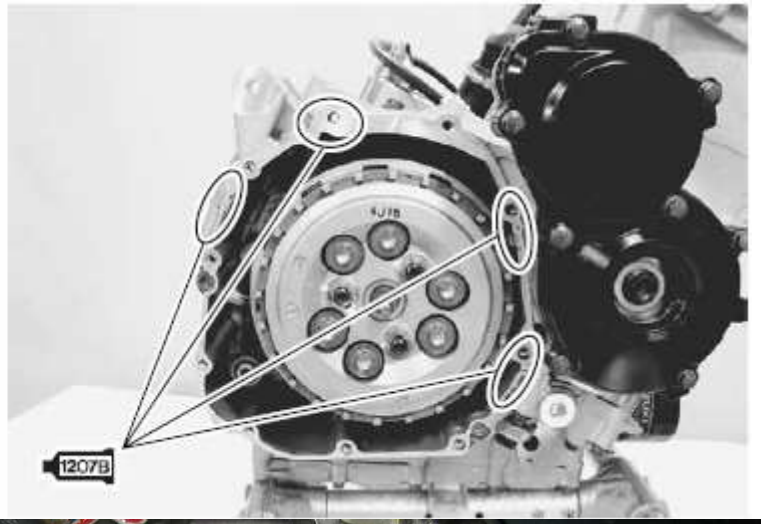


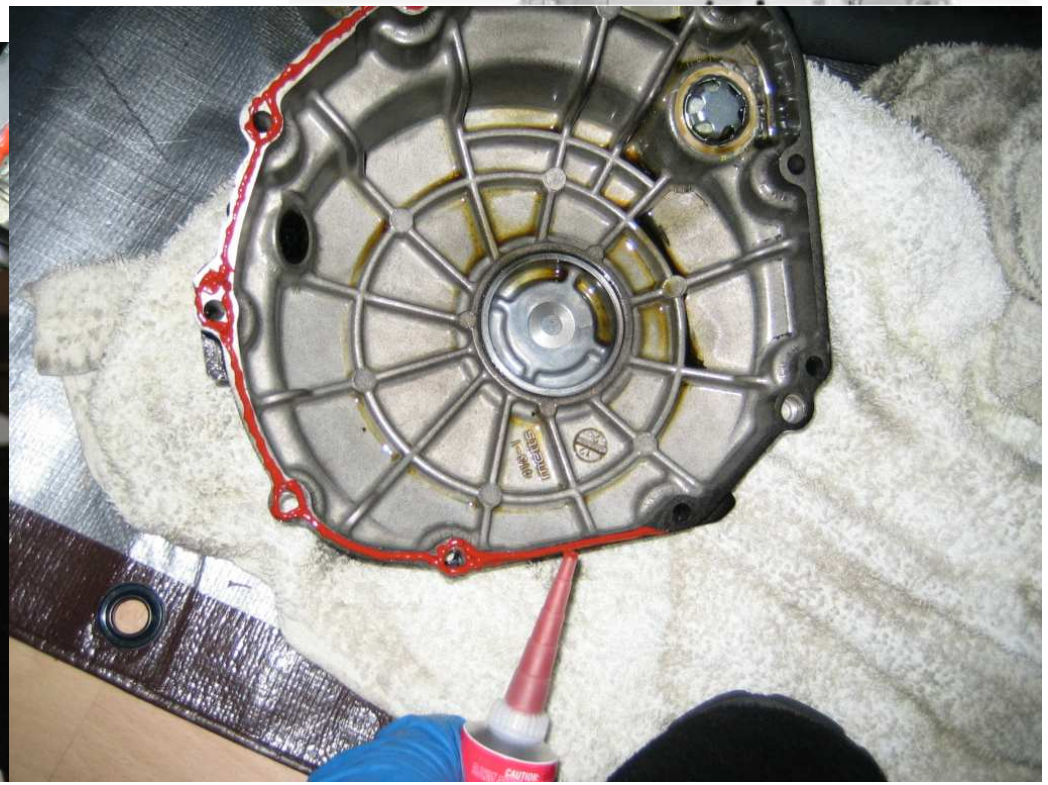

This is after all have been adjusted to 2 ¼ .

CLUTCH COVER

- Apply SUZUKI BOND lightly to the mating surfaces at the parting line between the upper, middle and lower crankcases as shown.

1207B **99104-31140: SUZUKI BOND "1207B" (USA)**
99000-31140: SUZUKI BOND "1207B" (Others)

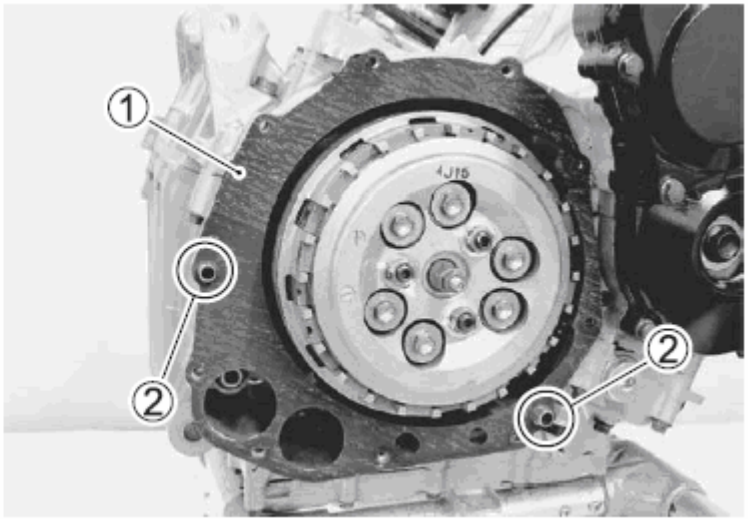




- Install the gasket ① and dowel pins ②.

CAUTION

Use a new gasket to prevent oil leakage.



- Install the clutch cover and tighten its bolts to the specified torque.

Clutch cover bolt: 10 N·m (1.0 kgf-m, 7.0 lb-ft)

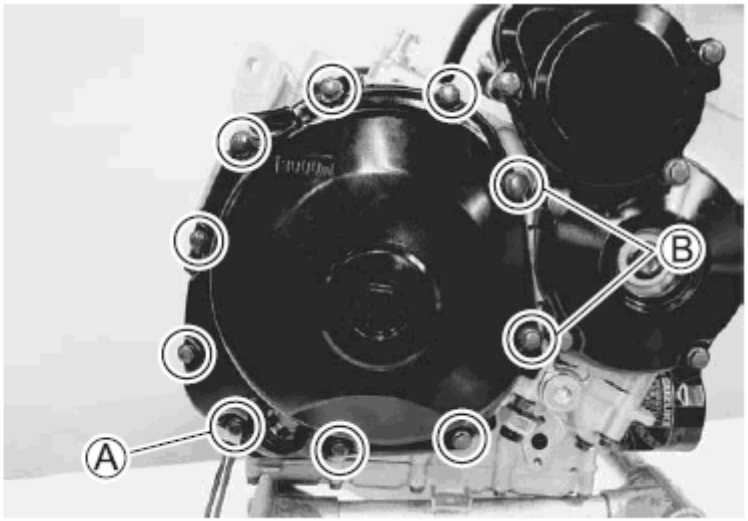
NOTE:

** Fit the clamp to the bolt Ⓐ as shown.*

** Fit the new gasket washers to the bolts Ⓑ as shown.*

CAUTION

Use a new gasket washer to prevent oil leakage.



ALL DONE !!!

Don’t forget to fill her back up with your favorite Oil and new Suzuki oil filter.

Got to give credit where it’s due so Thanks to Gerard (Stocky) for the info on this mod and others who contributed!