



TAF 5-Speed Transmission Kit Instruction Manual

Item No. : 0 2 - 0 4 - 0 0 6 6 **Super Touring**

: 0 2 - 0 4 - 0 0 8 9 **Super street**

Applicable engine : LIFAN and other Chinese Engines

1P52FMI-2B10

1P55FMJ-2E10

1P56FMJ-2E10

Takegawa complete engine

- Thank you for purchasing one of our TAKEGAWA's products. Please strictly follow the following instructions in installing and using the Kit.
- Before installing the Kit, please be sure to check its contents. Should you have any questions about the Kit, please contact your local TAKEGAWA dealer.

Please note: Illustrations and photos may vary from actual hardware.

Please read the following before starting the installation.

The explanation of the installation is under the condition which the engine is removed from the vehicle, and cylinder head, cylinder, piston, flywheel, crankcase cover, clutch ASSY., oil pump, crank ASSY. and cam chain are disassembled and removed.

We do not have any information or service data for the combination of our products with other manufacturers'.

Please check the individual note for application.

Features

- The center gear shift fork has more durability.
- The movement of the shift fork became shorter stroke so that the gear could be thicker and more durable.
- Stock or Takegawa's clutch can be used.
- R crankcase cover gasket and crankcase gasket are included in the kit.
- Each portion of the mating gear designed the new dog shape so that the effect to avoid missing shifting.

Gear Ratio

Item No.	02-04-0066	02-04-0089
Kind	Super Touring	Super street
1st speed	2.357 (33 / 14)	2.357 (33 / 14)
2nd speed	1.611 (29 / 18)	1.764 (30 / 17)
3rd speed	1.190 (25 / 21)	1.400 (28 / 20)
4th speed	0.958 (23 / 24)	1.136 (25 / 22)
5th speed	0.807 (21 / 26)	1.000 (24 / 24)

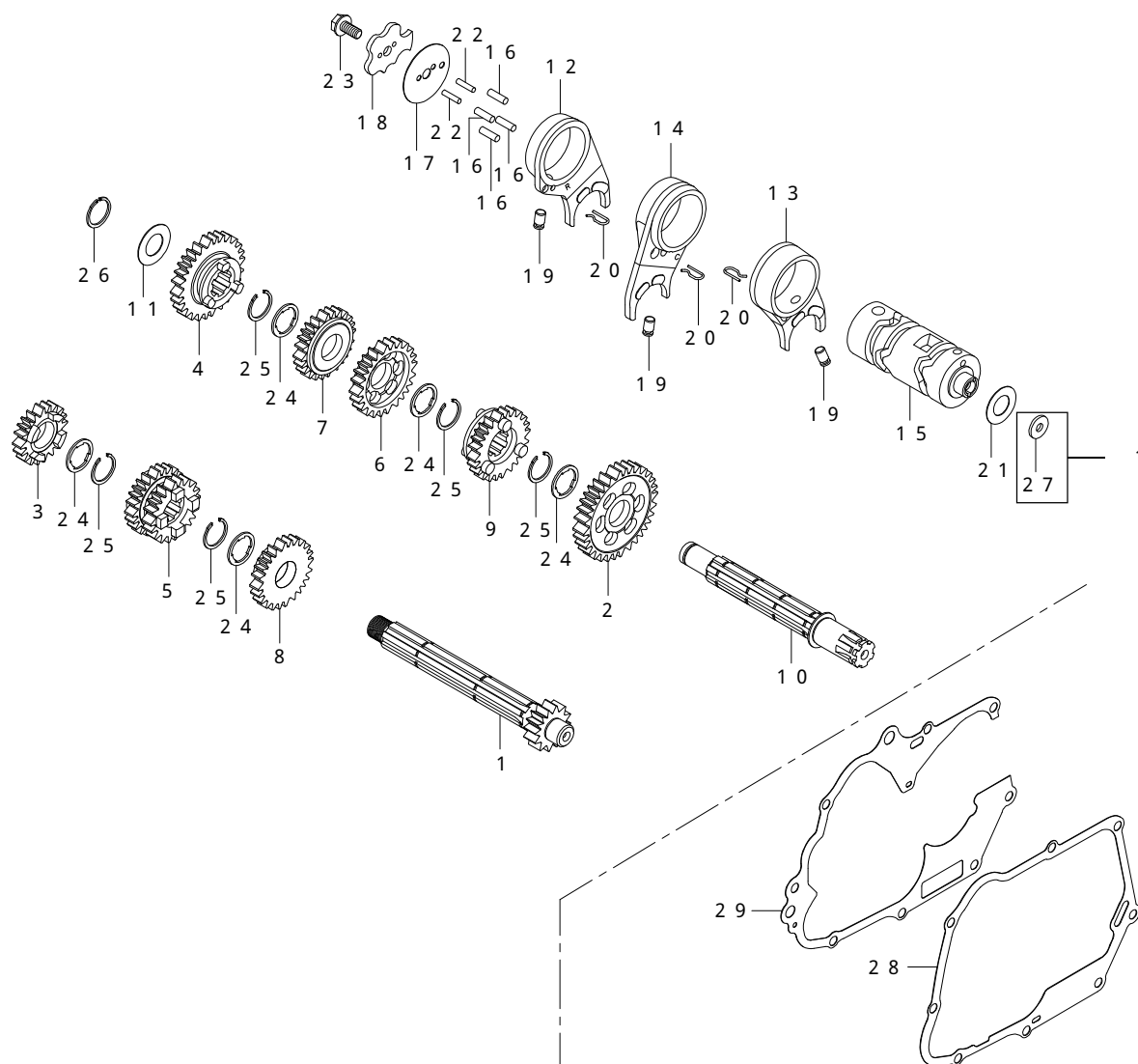
CAUTION The following show the envisioned possibility of injuries to human bodies or property damage as a result of disregarding the following cautions.

- Do the work correctly using right special tools when required. And be sure to apply engine oil or grease to the specified portions.
- Be sure to tighten bolts and nuts with a torque wrench to the specified torque.
- As for gaskets and sealings, always use new ones. And as for other parts to be reused, carefully check them for wear or damage, and in case wear or damage is detected, always replace these worn or damaged parts with new ones.
- The installation of this Kit will change the gear-change pattern to the return system of 1-down-4-up. Change gear only when you have let throttle fully back to idle position. Changing gears forcibly or at high engine revolutions will cause the gear to get damaged or worn out.
- Before riding, always check every hardware like screws and nuts for slack and for unusual sounds. When you notice something unusual with your motorcycle while riding down a road, immediately stop riding and check what has gone wrong with the motorcycle.
- When you start the engine with a kick starter, press down the starter arm hard at the time you feel some resistance on the starter arm, or at the time the starter pinion and ratchet fit into each other. Otherwise, the gear will be damaged. And in the case of a racing motorcycle, if you start the engine by moving it forward, disengage the clutch after the gear change, and push it forward. A violent shock to the gear may cause gear to get damaged.
- Please never use this Kit in combination with other manufacturers' ignition-system parts, because it is likely that, if ignition-system parts of other manufacturers' make are used, the gear may get damaged owing to impact shock felt at the time of starting the engine with a kick starter.

Please be informed that, mainly because of improvement in performance, design changes, and cost increase, the product specifications and prices are subject to change without prior notice.

This manual should be retained for future reference.

~ The transmission contains ~



02-04-0066 (Super Touring)

No.	Part name	Qty	Repair part item No.	In packs of
1	Main shaft	1	23211-086-T00	1
2	Counter shaft first gear (33T)	1	23421-086-T00	1
3	Main shaft second gear (18T)	1	23431-086-T00	1
4	Counter shaft second gear (29T)	1	23441-086-T00	1
5	Main shaft third/fourth gear (21T/24T)	1	23451-086-T00	1
6	Counter shaft third gear (25T)	1	23461-086-T00	1
7	Counter shaft fourth gear (23T)	1	23481-086-T00	1
8	Main shaft fifth gear (26T)	1	23491-086-T00	1
9	Counter shaft fifth gear (21T)	1	23501-086-T00	1
10	Counter shaft	1	23221-086-T51	1

02-04-0089 (Super street)

No.	Part name	Qty	Repair part item No.	In packs of
1	Main shaft	1	23211-086-T00	1
2	Counter shaft first gear (33T)	1	23421-086-T00	1
3	Main shaft second gear (17T)	1	23431-GEL-T00	1
4	Counter shaft second gear (30T)	1	23441-GEL-T00	1
5	Main shaft third/fourth gear (20T/22T)	1	23451-GEL-T00	1
6	Counter shaft third gear (28T)	1	23461-GEL-T00	1
7	Counter shaft fourth gear (25T)	1	23481-GEL-T00	1
8	Main shaft fifth gear (24T)	1	23491-GEL-T00	1
9	Counter shaft fifth gear (24T)	1	23501-GEL-T00	1
10	Counter shaft	1	23221-086-T51	1

Common Parts

11	Thrust washer, 14mm	1	00-02-0047	1
12	Right gear shift fork	1	00-02-0014	1
13	Left gear shift fork	1	00-02-0016	1
14	Center gear shift fork	1	24231-181-T02	1
15	Gear shift drum	1	24301-181-T21	1
16	Shift drum pin, 4x10	4	00-02-0049	5
17	Gear shift drum side plate	1	00-02-0018	1
18	Gear shift drum stopper plate	1	24411-051-T01	1
19	Gear shift fork guide pin	3	00-02-0048	3
20	Gear shift fork guide pin clip	3	24263-165-T00	1
21	Shim ring, 13X19X0.3	1	00-02-0096	1
22	Stopper plate setting pin	2	00-02-0054	1
23	Knock bolt, 6mm	1	00-02-0013	1
24	Spline washer, 17mm	5	00-02-0023	5
25	External circlip, 17mm	5	00-02-0005	5
26	Snap ring, 14mm	1	00-02-0204	6
27	Gear shift drum side washer	1	00-02-0050	1
28	Right crankcase cover gasket	1	11394-086-T00	1
29	Crankcase gasket	1	11191-TCC-T00	1

Please note that in ordering repair parts, be sure to quote the Repair Part Item No. Otherwise, we may not be able to accept your orders.

There are some parts, however, for which we are not in a position to accept your order in just the quantity to be used. In this case, please take them in the quantity packed.

1 Lifan and some other engine do not use this side washer.

For Lifan engine.

The modification of L&R crankcases is required to install this transmission kit. Make sure that the installation is correct with following the figure.

(ATTENTION: The modified area may vary with the engine type.)

Inspect the engine case before modifying. If necessary, replace it with the new one.

The neutral switch rotor is NOT used with this kit so that the neutral indicator lamp does not work.

~ On processing ~



CAUTION

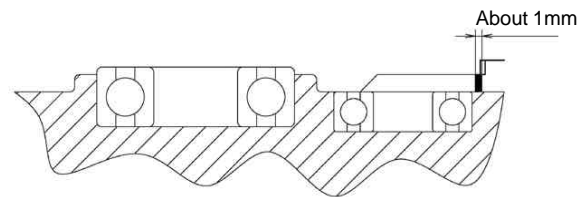
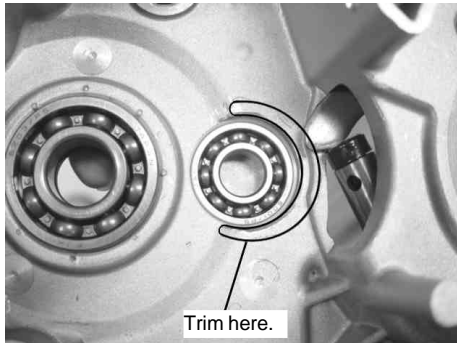
Always work with gloves on to protect your hands. Otherwise, you may suffer injuries.

Left side crankcase

Trim about 1mm in the marked portion of the L crankcase, refer to the photo and figure below.

We recommend removing the bearing before working.

Always wear gloves to avoid injury when you work.

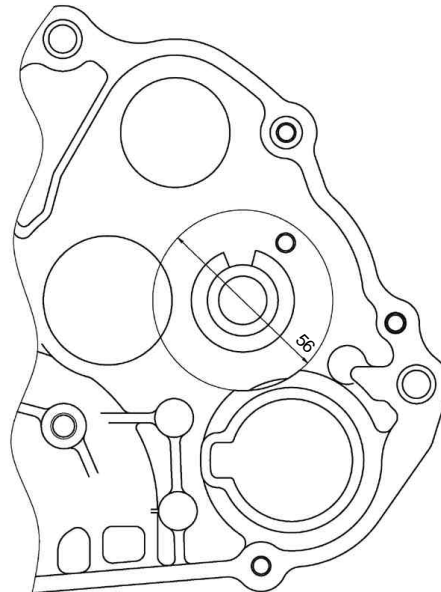
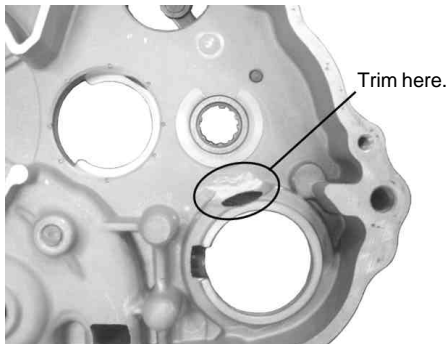


Right side crankcase

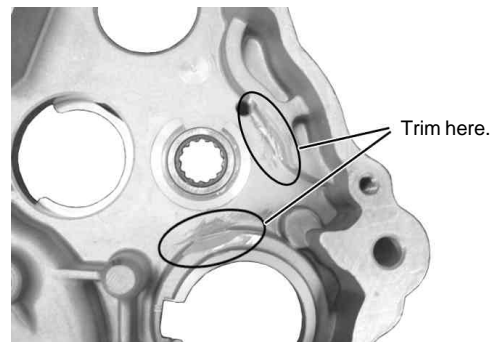
Trim in the marked portion as required, refer to the photo and the figure below.

Always wear gloves to avoid injury when you work.

Cover the bearing not to get the dirt or powder while working.



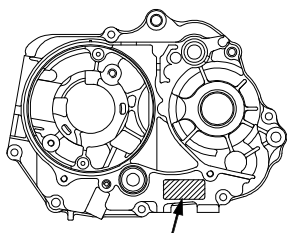
Need trimming as shown.



For Takegawa Complete Engine.

Please check engine number if applicable.

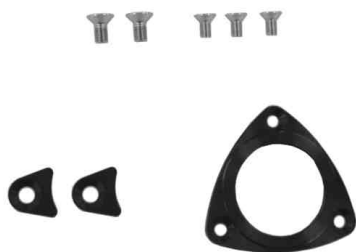
Applicable engine No. : CSMP-00001 ~



An engine No. is stamped here.

For 4 speed transmission, use bearing hold plate.

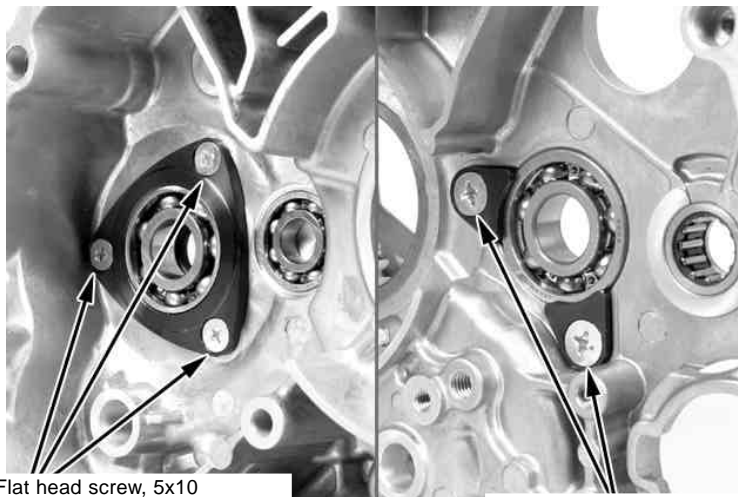
Item No. : 00-01-1042



How to place the bearing hold plate.

Left side crankcase for counter shaft.

Right side crankcase for main shaft.



Flat head screw, 5x10

Torque: 4 N · m (0.4 kgf · m)

Apply lock tight

Flat head screw, 6x12

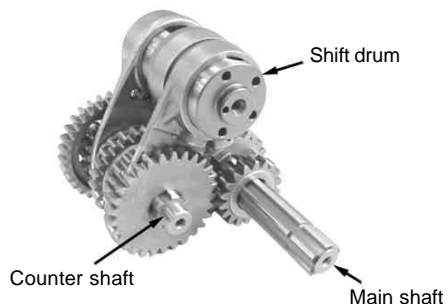
Torque: 6 ~ 8 N · m (0.6 ~ 0.8 kgf · m)

Apply lock tight

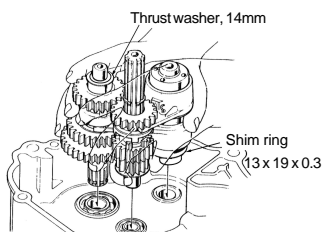
Hold plate face outside.

~ On installation ~

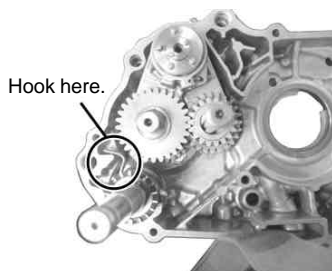
- 1 . Apply grease to the lips of the oil seal of the left side crankcase shift spindle. Apply oil to the bearings of the right and left side crankcases. And place the left side crankcase on the pedestal. Apply oil to the rubbing surfaces of the gears on the sides of the mainshaft and countershaft. And mesh together the gears of the mainshaft and countershaft, and fit the hook of the shift fork into the grooves on the gear.



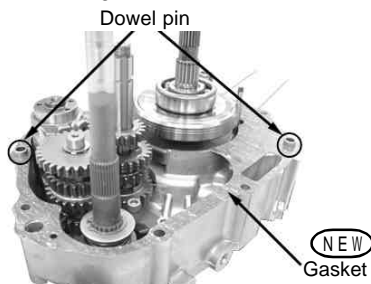
- 2 . Install into crankcase the main shaft, counter shaft and shift drum all together as a unit. Install the kit with the transmission in Neutral. Never forget to install the thrust washer. As the stock washer is not to be used, remove it.
Install the shaft with care so the lip of the countershaft oil seal may not turn up. When the stock shift drum has the neutral switch, it does not work.



- 3 . Hook the spring of the kick starter spindle to the case.



- 4 . Degrease the mating surfaces of the right and left side crankcases. And set a dowel pin and attach new gaskets.

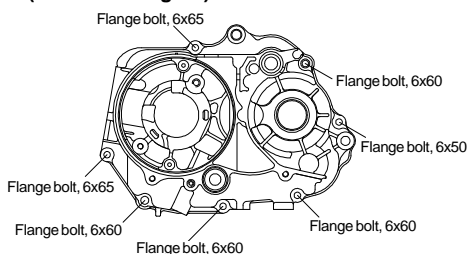


- 5 . Put together the right and left side crankcases. With the left side crankcase up, place the crankcase bolts on the crankcase, and tighten them diagonally in a few steps to the specified torque.

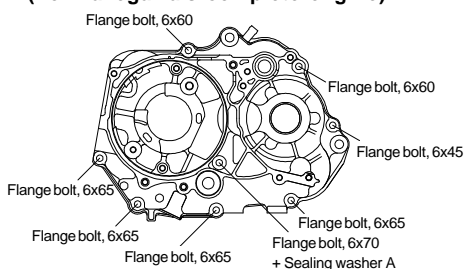
⚠ Caution: Apply the specified torque.

Torque: 10 N · m (1.0 kgf · m)

(For Lifan engine)



(For Takegawa's complete engine)



- 6 . Install the gear shift drum side washer included in the kit and tighten the stock bolt.

⚠ Caution: Apply the specified torque.

Torque: 12 N · m (1.2 kgf · m)

(For Lifan engine)

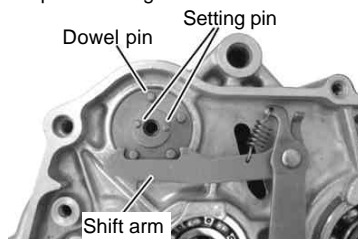
The stock neutral switch rotor or the stock contact switch plate is not used. So the neutral lump does not work.

(For Takegawa's complete engine)

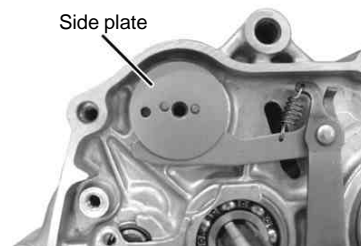
Use stock contact switch.

When finished tightening, install the stock rubber plug or the stock neutral switch.

- 7 . Install the four dowel pins and the two stopper plate setting pins on the shift drum and then install the gear shift arm. Apply engine oil to the sliding surface of the shift spindle and gear shift arm.



- 8 . Install the shift-drum side plate on the shift drum, meshing the holes on the shift drum side plate with the shift drum setting pin.

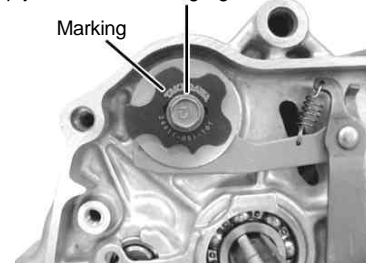


- 9 . Fit the shift drum stopper plate into the shift drum setting pin, keeping the marking on the plate visible. And then, apply thread lock cement to the thread of the dowel bolt, and tighten it to the specified torque.

⚠ Caution: Apply the specified torque.

Torque: 16 N · m (1.6 kgf · m)

Apply the screw locking agent.

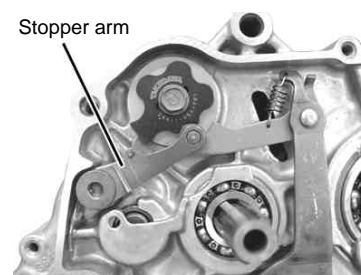


- 10 . Place the spring in the stopper arm, fit them into the stopper plate on the case, and tighten the bolt to the specified torque.

⚠ Caution: Apply the specified torque.

Torque: 10 N · m (1.0 kgf · m)

Be careful not to get your fingers caught when fitting the spring into the case.



- 11 . Turning the mainshaft with hands, turn the knock bolt on the stopper plate with a socket wrench, and check if the gears can shift smoothly.

Check that there is some free play in the mainshaft and countershaft in the direction of thrusting.

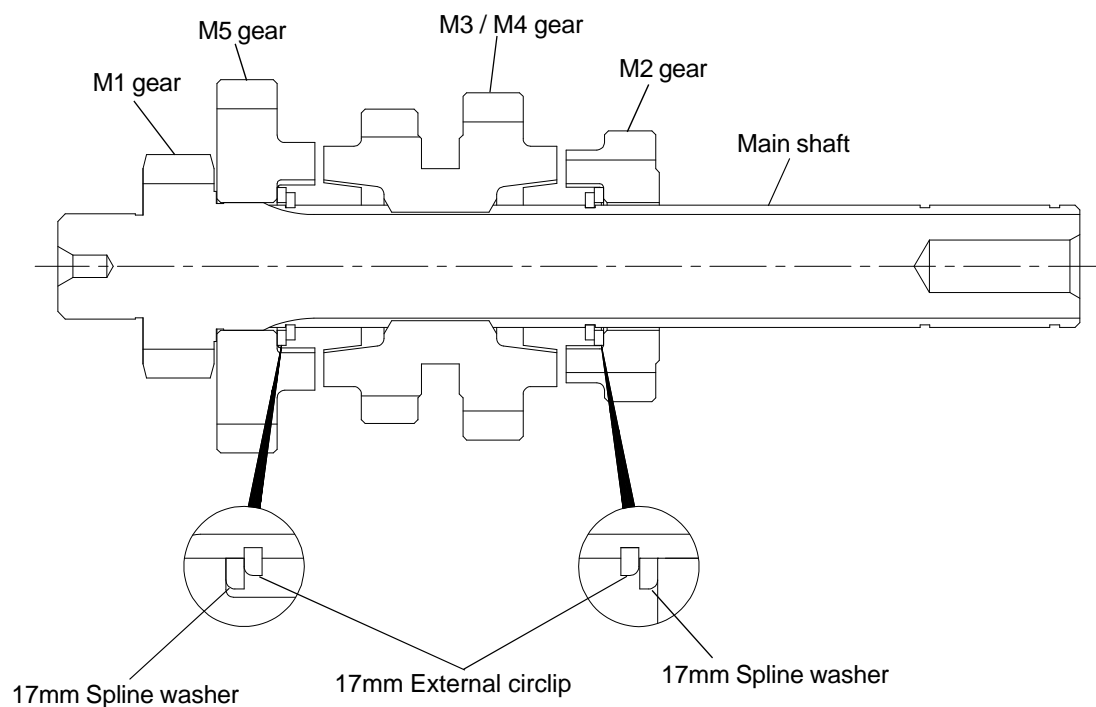
Do not turn the shift drum forcibly.

Reinstall the removed parts.

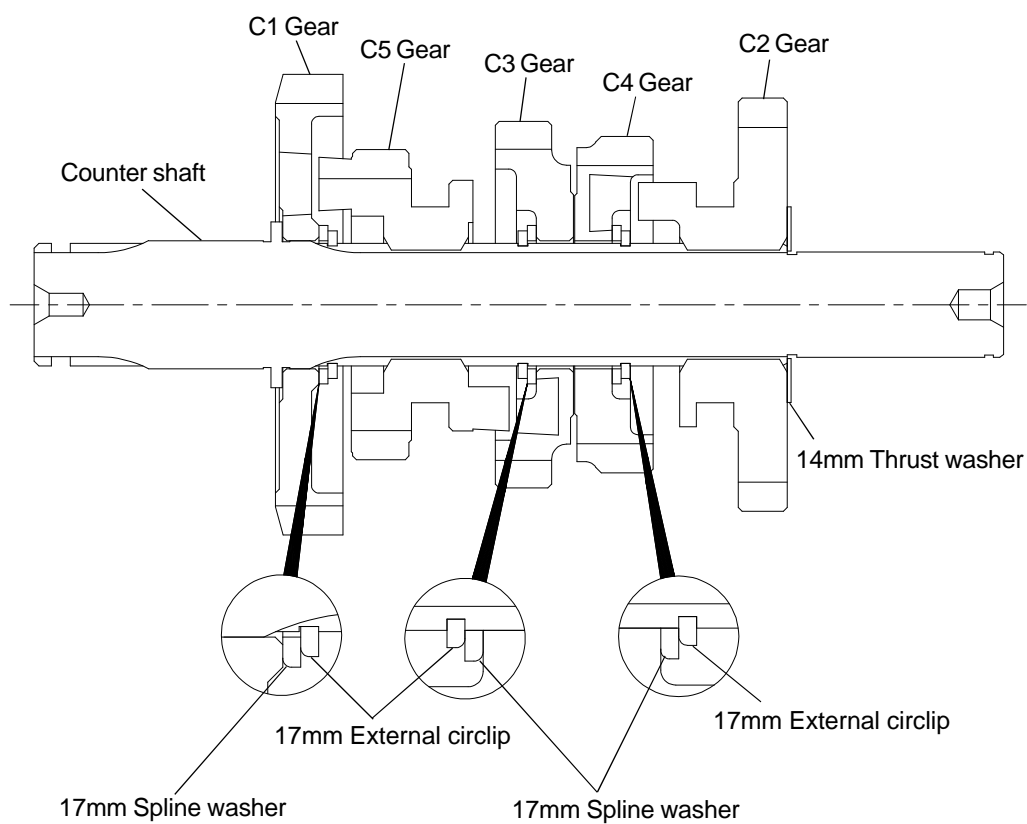
Shift the transmission into NEUTRAL, and start the engine. Then check every component for oil leak. If nothing is wrong, do a test run at slow speed in a safe place to check how the transmission works.

Transmission assembly drawing:

Main shaft assembly



Counter shaft assembly



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