

# Clutch

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## Exploded View

No.	Fastener	Torque			Remarks
		N·m	kgf·m	ft·lb	
1	Clutch Lever Pivot Bolt	1.0	0.10	8.9 in·lb	Si
2	Clutch Master Cylinder Bleed Valve	5.4	0.55	48 in·lb	
3	Clutch Lever Pivot Bolt Locknut	5.9	0.60	52 in·lb	
4	Clutch Master Cylinder Clamp Bolts	11	1.1	97 in·lb	S
5	Electronic Cruise Control Cancel Switch (Clutch) Screw	0.30	0.03	2.7 in·lb	L
6	Starter Lockout Switch Screw	0.70	0.07	6.2 in·lb	
7	Clutch Hose Banjo Bolts	25	2.5	18	
8	Clutch Pipe Joint Nuts	18	1.8	13	
9	Clutch Cover Damper Plate Bolts	10	1.0	89 in·lb	L
10	Clutch Cover Bolts	12	1.2	106 in·lb	L (1), S
11	Oil Filler Plug	Hand-tighten	–	–	
12	Crankshaft Timing Plug	25	2.5	18	
13	Clutch Cover Plate Bolts	5.0	0.51	44 in·lb	L
14	Clutch Stopper Bolts	10	1.0	89 in·lb	
15	Clutch Hub Nut	130	13.3	95.9	R
16	Clutch Slave Cylinder Mounting Bolts (L = 25 mm)	10	1.0	89 in·lb	L
17	Clutch Slave Cylinder Mounting Bolt (L = 70 mm)	10	1.0	89 in·lb	L
18	Clutch Slave Cylinder Bleed Valve	8.5	0.87	75 in·lb	

C: Apply clutch fluid.

EO: Apply engine oil.

G: Apply grease.

L: Apply a non-permanent locking agent.

M: Apply molybdenum disulfide grease.

MO: Apply molybdenum disulfide oil solution.

(mixture of the engine oil and molybdenum disulfide grease in a weight ratio 10:1)

R: Replacement Parts

S: Follow the specified tightening sequence.

Si: Apply silicone grease.

WL: Apply soap and water solution or rubber lubricant.

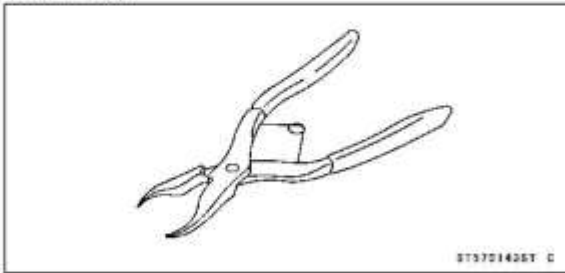
## 6-4 CLUTCH

### Specifications

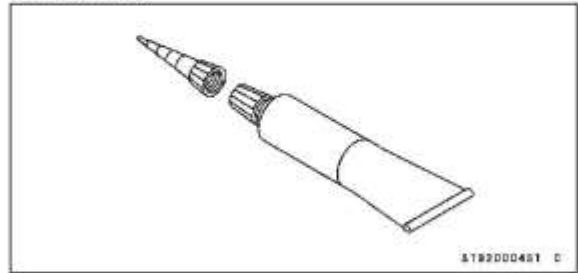
Item	Standard	Service Limit
<b>Clutch Lever</b>		
Clutch Lever Position	5-way adjustable (to suit rider)	---
Clutch Lever Free Play	Non-adjustable	---
<b>Clutch Fluid</b>		
Grade	DOT4	---
<b>Clutch</b>		
Clutch Plate Assembly Length	(Reference) 50.4 ~ 51.4 mm (1.98 ~ 2.02 in.)	---
Friction Plate Thickness	3.22 ~ 3.38 mm (0.127 ~ 0.133 in.)	2.9 mm (0.11 in.)
Friction and Steel Plate Warp	0.15 mm (0.0059 in.) or less	0.3 mm (0.01 in.)

**Special Tools and Sealant**

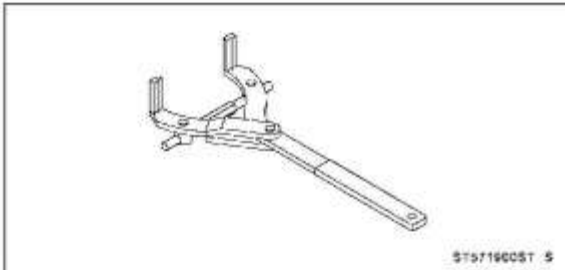
**Inside Circlip Pliers:**  
**57001-143**



**Liquid Gasket, TB1211F:**  
**92104-0004**



**Clutch Holder:**  
**57001-1900**



## 6-6 CLUTCH

### Clutch Master Cylinder

#### Clutch Lever Installation

#### WARNING

If the starter lockout switch pin has been damaged the starter lockout system will not work properly. This allows the motorcycle to be started in gear with the clutch lever released (clutch engaged), creating sudden forward movement that can result in an accident or injury. Check that the starter lockout switch operates properly when installing the clutch lever.

- Insert the push rod [A] of the master cylinder to the hole [B] of the clutch lever.

#### NOTICE

The pin [C] of the starter lockout switch may be damaged in the projection of a clutch lever.

- Apply silicone grease to the sliding surface of the clutch lever pivot bolt [A].
- Tighten the clutch lever pivot bolt and clutch lever pivot bolt locknut [B].

**Torque - Clutch Lever Pivot Bolt: 1.0 N·m (0.10 kgf·m, 8.9 in·lb)**

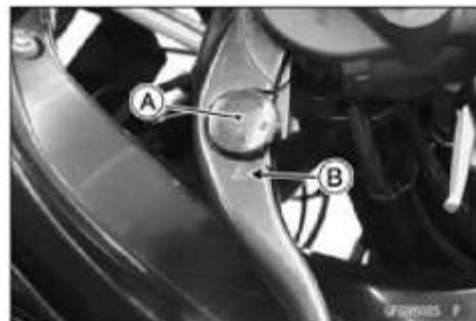
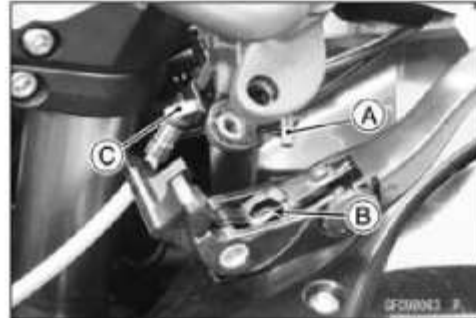
**Clutch Lever Pivot Bolt Locknut: 5.9 N·m (0.60 kgf·m, 52 in·lb)**

- Check that the pin [C] of the starter lockout switch moves smoothly.

#### Clutch Lever Adjustment

The adjuster has 5 positions so that the clutch lever position can be adjusted to suit the operator's hand.

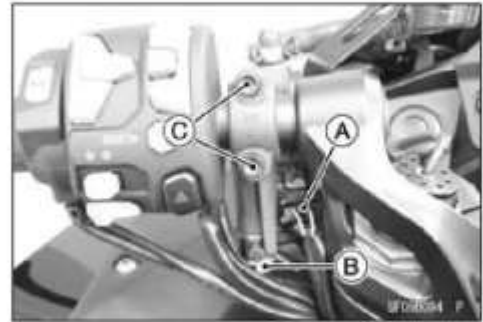
- Push the lever forward and turn the adjuster [A] to align the number with the triangular mark [B] on the lever holder.
- The distance from the grip to the lever is minimum at number 5 and maximum at number 1.



## Clutch Master Cylinder

### Clutch Master Cylinder Removal

- Disconnect the starter lockout switch connector [A].
- Drain the clutch fluid from the reservoir (see [Clutch Fluid Change\(2-38\)](#)).
- Remove the banjo bolt [B] to disconnect the clutch hose from the master cylinder.
- Remove the clamp bolts [C], and take off the master cylinder as an assembly with the clutch reservoir, clutch lever and starter lockout switch installed.



### NOTICE

**Clutch fluid quickly damages painted surface; any spilled fluid should be completely washed away immediately.**

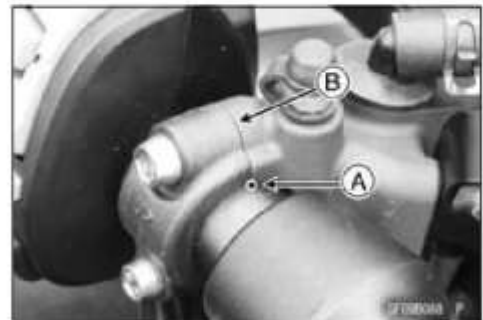
### Clutch Master Cylinder Installation

- Install the master cylinder clamp so that the triangular mark [A] faces upward.



- Align the punch mark [A] on the handlebar with the mating surface [B] of the master cylinder clamp.
- Tighten the upper clamp bolt first, and then the lower clamp bolt.

**Torque - Clutch Master Cylinder Clamp Bolts: 11 N·m (1.1 kgf·m, 97 in·lb)**



- Replace the washers that are on each side of the clutch hose fitting with new ones.
- Tighten:

**Torque - Clutch Hose Banjo Bolt: 25 N·m (2.5 kgf·m, 18 ft·lb)**

- Connect the starter lockout switch connector [A].
- Replenish the clutch fluid into the reservoir and bleed the clutch line (see [Bleeding the Clutch Line\(6-11\)](#)).
- Check that the clutch line has proper fluid pressure and no fluid leakage.



### Clutch Master Cylinder Disassembly

- Refer to the Rubber Parts of Clutch Master Cylinder/Slave Cylinder Replacement (see [Rubber Parts of Clutch Master Cylinder/Slave Cylinder Replacement\(2-39\)](#)).

## 6-8 CLUTCH

### Clutch Master Cylinder

#### **Clutch Master Cylinder Assembly**

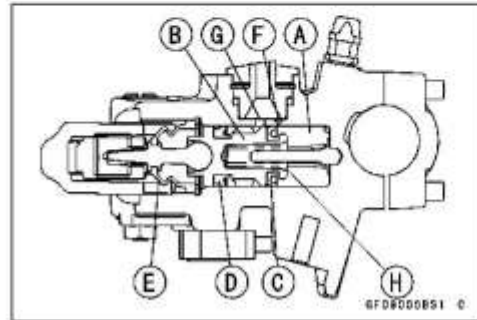
- Refer to the Rubber Parts of Clutch Master Cylinder/Slave Cylinder Replacement (see Rubber Parts of Clutch Master Cylinder/Slave Cylinder Replacement(2-39)).

#### **Clutch Master Cylinder Inspection**

- Disassemble the clutch master cylinder (see Rubber Parts of Clutch Master Cylinder/Slave Cylinder Replacement(2-39)).

##### **Special Tool - Inside Circlip Pliers: 57001-143**

- Check that there are no scratches, rust or pitting on the inside of the master cylinder [A] and on the outside of the piston [B].
- ★ If the master cylinder or piston shows any damage, replace them.
- Inspect the primary cup [C] and secondary cup [D].
- ★ If a cup is worn, damaged, softened (rotted), or swollen, the piston assembly should be replaced to renew the cup.
- ★ If fluid leakage is noted at the clutch lever, the piston assembly should be replaced to renew the cup.
- Check the dust cover [E] for damage.
- ★ If it is damaged, replace the piston assembly.
- Check that the relief [F] and supply [G] ports are not plugged.
- ★ If the small relief port becomes plugged, the clutch will drag. Blow the ports clean with compressed air.
- Check the piston return spring [H] for any damage.
- ★ If the spring is damaged, replace it.





## Clutch Slave Cylinder

### Clutch Slave Cylinder Removal

- Remove:
  - Left Lower Fairing (see Lower Fairing Removal(15-14))
  - Banjo Bolt [A]
  - Clutch Slave Cylinder Bolts [B]
  - Slave Cylinder [C]

#### NOTICE

**Immediately wash away any clutch fluid that spills. It may damage painted surfaces.**

- Perform the following if the clutch slave cylinder is to be removed but not disassembled.

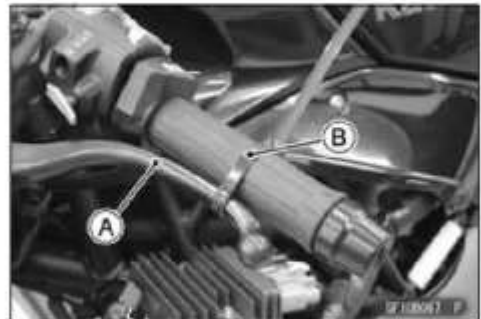
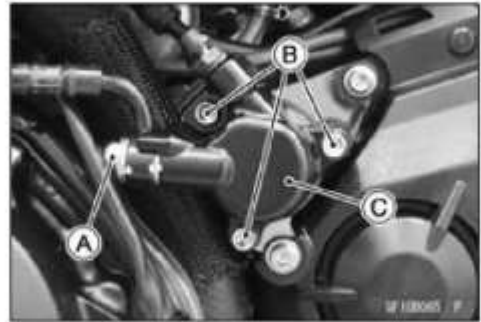
#### NOTICE

**If the clutch slave cylinder is removed and left alone, the piston will be pushed out by spring force and the clutch fluid will drain out.**

- Remove the clutch slave cylinder from the engine with the pipe installed. Push [A] the piston into the cylinder as far as it will go.
- Apply the clutch lever [A] slowly with the piston pushed and hold it with a band [B].

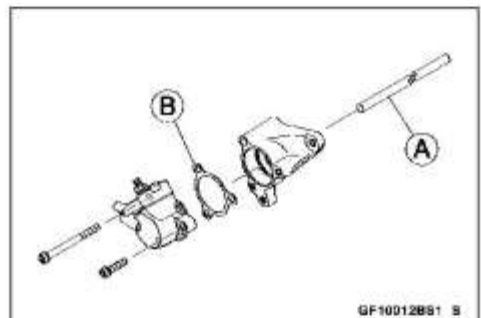
#### NOTE

- Holding the clutch lever keeps the piston from coming out.



### Clutch Slave Cylinder Installation

- Apply molybdenum disulfide grease to either end [A] of the push rod, and install the push rod so that the greased end faces in.
- Apply molybdenum disulfide grease more than 30 mm (1.2 in.) from the distal end.
- Replace the clutch slave cylinder gasket [B] with a new one.



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## 6-10 CLUTCH

### Clutch Slave Cylinder

- Apply a non-permanent locking agent to the threads of the slave cylinder mounting bolts.

Clutch Slave Cylinder Mounting Bolts (L = 25 mm ) [A]

Clutch Slave Cylinder Mounting Bolt (L = 70 mm ) [B]

- Finger tighten all the clutch slave cylinder mounting bolts.
- Remove the band from the clutch lever and release the clutch lever.
- Tighten the clutch slave cylinder mounting bolts.

**Torque - Clutch Slave Cylinder Mounting Bolts: 10 N·m (1.0 kgf·m, 89 in·lb)**

- Replace the washers that are on each side of the hose fitting with new ones.
- Install the clutch hose (see [Cable, Wire, and Hose Routing section \(18-2\)](#)).
- Tighten:

**Torque - Clutch Hose Banjo Bolt [C]: 25 N·m (2.5 kgf·m, 18 ft·lb)**

- Check the fluid level in the clutch master cylinder reservoir, and bleed the air in the clutch line.
- Check the clutch operation.



## Clutch Fluid

### Clutch Fluid Level Inspection

- Refer to the Clutch Fluid Level Inspection (see Clutch Fluid Level Inspection(2-37)).

### Clutch Fluid Change

- Refer to the Clutch Fluid Change (see Clutch Fluid Change(2-38)).

### Bleeding the Clutch Line

#### WARNING

Air in the clutch lines diminish clutch performance and can cause an accident resulting in injury or death. If the clutch lever has a soft or “spongy” feeling mushy when it is applied, there might be air in the clutch lines or the clutch may be defective. Do not operate the vehicle and service the clutch system immediately.

#### NOTICE

Clutch fluid quickly damages painted or plastic surfaces; any spilled fluid should be completely wiped up immediately with wet cloth.

- Remove:
  - Clutch Reservoir Cap [A]
  - Diaphragm Plate
  - Diaphragm
- Fill the reservoir with fresh clutch fluid to the upper level line in the reservoir.

#### NOTE

○ Tap the clutch hose lightly going from the lower end to upper end and bleed the air off the reservoir.

- Slowly pump the clutch lever several times until no air bubbles can be seen rising up through the fluid from the hole at the bottom of the reservoir.
- Remove the rubber cap from the bleed valve on the clutch master cylinder.
- Attach a clear plastic hose [A] to the bleed valve, and run the other end of the hose into a container.



## 6-12 CLUTCH

### Clutch Fluid

- Bleed the clutch line and the master cylinder.
- Repeat this operation until no more air can be seen coming out into the plastic hose.
- 1. Pump the clutch lever until it becomes hard, and apply the clutch lever and hold it [A].
- 2. Quickly open and close [B] the bleed valve while holding the clutch lever applied.
- 3. Release the clutch lever [C].

#### NOTE

○ The fluid level must be checked often during the bleeding operation and replenished with fresh clutch fluid as necessary. If the fluid in the reservoir runs completely out any time during bleeding, the bleeding operation must be done over again from the beginning since air will have entered the line.

- Remove the clear plastic hose.
- Tighten the bleed valve, and install the rubber cap.

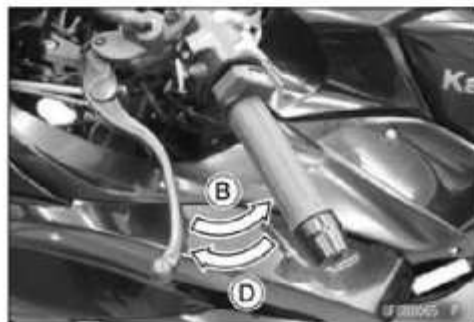
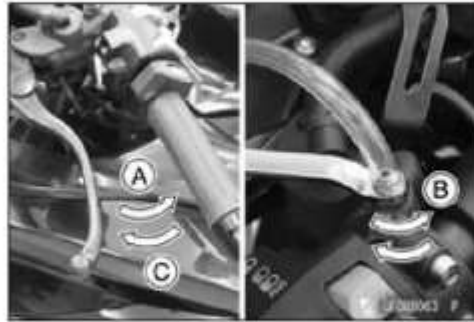
**Torque - Clutch Master Cylinder Bleed Valve: 5.4 N·m (0.55 kgf·m, 48 in·lb)**

- Remove the rubber cap from the bleed valve.
- Attach a clear plastic hose [A] to the bleed valve on the clutch slave cylinder, and run the other end of the hose into a container.
- Bleed the clutch line as follows.
- Repeat this operation until no more air can be seen coming out into the plastic hose.
- 1. Pump the clutch lever until it becomes hard, and apply the clutch lever and hold it [B].
- 2. Quickly open and close [C] the bleed valve while holding the clutch lever applied.
- 3. Release the clutch lever [D].

#### NOTE

○ Check the fluid level in the reservoir often, replenishing it as necessary.

○ If the fluid in the reservoir runs completely out any time during bleeding, the bleeding operation must be done over again from the beginning since air will have entered the line.



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**Clutch Fluid**

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** WARNING**

Mixing brands and types of hydraulic fluid lowers the fluid's boiling point, cause rubber part to deteriorate and can reduce the hydraulic clutch system's effectiveness and cause an accident resulting in injury or death. Do not mix two brands of brake fluid. Change the fluid in the hydraulic clutch system completely if the fluid must be refilled but the type and brand of the hydraulic fluid that is already in the reservoir are unidentified.

- Remove the clear plastic hose.
- Tighten the bleed valve, and install the rubber cap.  
**Torque - Clutch Slave Cylinder Bleed Valve: 8.5 N·m (0.87 kgf·m, 75 in·lb)**
- Install:
  - Diaphragm
  - Diaphragm Plate
  - Clutch Reservoir Cap
- After bleeding the clutch line, check the clutch for good clutching effectiveness and no fluid leakage.
- ★ If necessary, bleed the air from the line again.

***Clutch Hose Removal/Installation***

- Refer to the Clutch Hose Replacement (see Clutch Hose Replacement(2-38)).

***Clutch Hose Inspection***

- Refer to the Clutch System Inspection (see Clutch System Inspection(2-36)).

## 6-14 CLUTCH

### Clutch Cover

#### Clutch Cover Removal

- Drain the engine oil (see [Engine Oil Change\(2-40\)](#)).
- Remove:
  - Coolant Reserve Tank ((see [Coolant Reserve Tank Removal\(4-10\)](#)))
  - Clutch Cover Bolts [A]
  - Bracket [B]
  - Clamp [C]
  - Clutch Cover [D]



#### Clutch Cover Installation

- Using a cleaning fluid, clean off any oil or dirt that may be on the mating surface. Dry them with a clean cloth.
- Apply liquid gasket to the area [A] where the mating surface of the crankcase touches the clutch cover gasket and circumference of the crankshaft sensor grommet.

**Sealant - Liquid Gasket, TB1211F: 92104-0004**



- Replace the clutch cover gasket with a new one.
- Install the bracket [A].
- Apply a non-permanent locking agent to only one clutch cover bolt [B].
- Tighten the clutch cover bolts following the specified tightening sequence [1 ~ 19].
- Tighten the clutch cover bolts while pushing the clutch cover rearward.

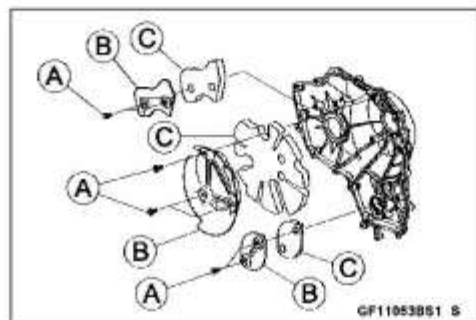
**Torque - Clutch Cover Bolts: 12 N·m (1.2 kgf·m, 106 in·lb)**

- Install the clamp [C].

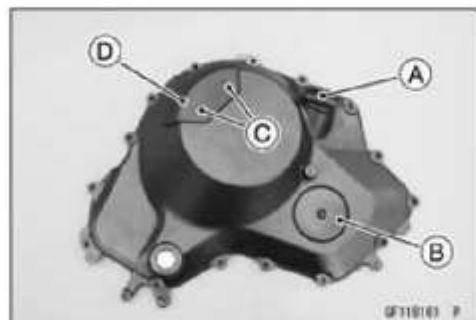


#### Clutch Cover Disassembly

- Remove:
  - Clutch Cover (see [Clutch Cover Removal\(6-14\)](#))
  - Clutch Cover Damper Plate Bolts [A]
  - Clutch Cover Damper Plates [B]
  - Dampers [C]

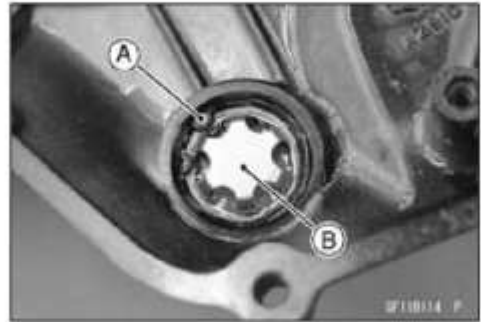


- Remove:
  - Oil Filler Plug [A]
  - Crankshaft Timing Plug [B]
  - Clutch Cover Plate Bolts [C]
  - Clutch Cover Plate [D]



## Clutch Cover

- Remove:
    - Circlip [A]
    - Oil Level Inspection Window [B]
- Special Tool - Inside Circlip Pillers: 57001-143**

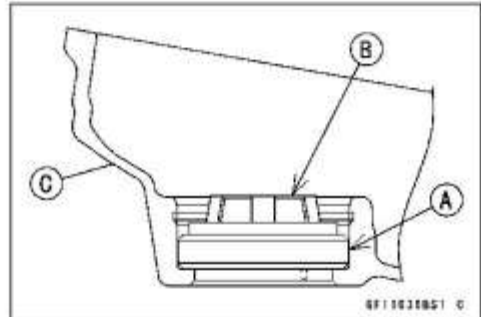


### Clutch Cover Assembly

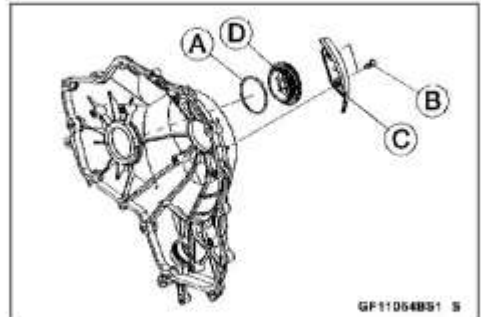
- Replace the circlip and oil level inspection window with new ones.
- Apply soap and water solution to the rubber portion [A] of the oil level inspection window.
- Press the oil level inspection window until the bottom so that its projection [B] faces inside of the clutch cover [C].
- Install the circlip.

**Special Tool - Inside Circlip Pillers: 57001-143**

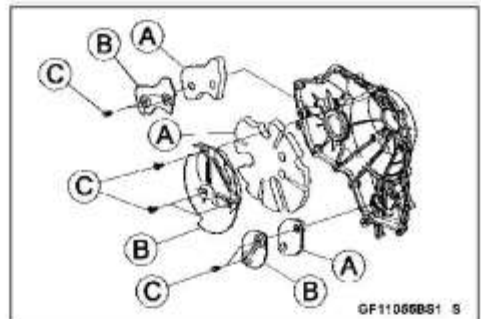
- Fit the circlip into the groove of the clutch cover securely.



- Replace the O-ring [A] with new one.
- Apply grease to the O-ring.
- Apply a non-permanent locking agent to the threads of the clutch cover plate bolts [B].
- Install the clutch cover plate [C].
- Tighten:
  - Torque - Crankshaft Timing Plug [D]: 25 N·m (2.5 kgf·m, 18 ft·lb)**
  - Clutch Cover Plate Bolts: 5.0 N·m (0.51 kgf·m, 44 in·lb)**



- Install:
  - Dampers [A]
  - Clutch Cover Damper Plates [B]
- Apply a non-permanent locking agent to the threads of the clutch cover damper plate bolts [C].
- Tighten:
  - Torque - Clutch Cover Damper Plate Bolts: 10 N·m (1.0 kgf·m, 89 in·lb)**
- Pour in the specified type and amount of oil (see Engine Oil Change(2-40)).



## 6-16 CLUTCH

### Clutch

#### Clutch Removal

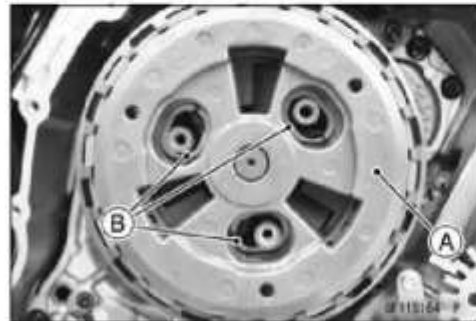
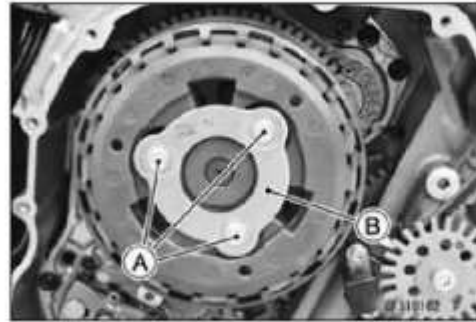
- Remove:
  - Clutch Cover (see Clutch Cover Removal(6-14))
  - Clutch Slave Cylinder (see Clutch Slave Cylinder Removal(6-9))
- Loosen the three clutch stopper bolts [A] alternately with little by little (1/4 turn at a time) to prevent tilting the clutch stopper plate [B].

#### NOTICE

**Do not loosen the one or two clutch stopper bolt at once to prevent clutch stopper plate from warpage by the spring force.**

- Remove:
    - Clutch Stopper Bolts [A]
    - Clutch Stopper Plate [B]
    - Clutch Springs [C]
  - Visually inspect the clutch stopper plate.
  - ★ If the clutch stopper plate is warped, replace it with a new one.
- 
- Remove the clutch pressure plate [A] together with the spring seats [B].

- Remove:
  - Washer [A]
  - Thrust Bearing [B]
  - Pusher [C]
  - Friction Plate and Steel Plates
  - Spring and Spring Seat

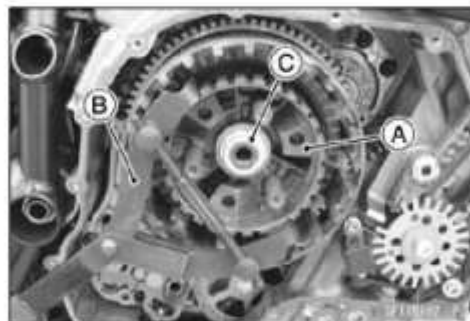




## Clutch

- Hold the sub clutch hub [A] steady with the clutch holder [B], and remove the nut [C].

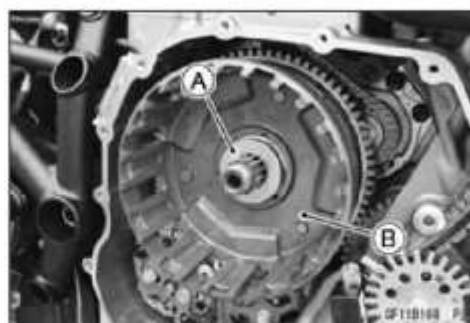
**Special Tool - Clutch Holder: 57001-1900**



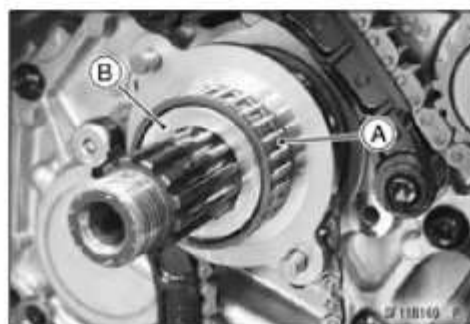
- Remove:  
Toothed Washer [A]  
Clutch Hub [B]



- Remove:  
Spacer [A]  
Clutch Housing [B]

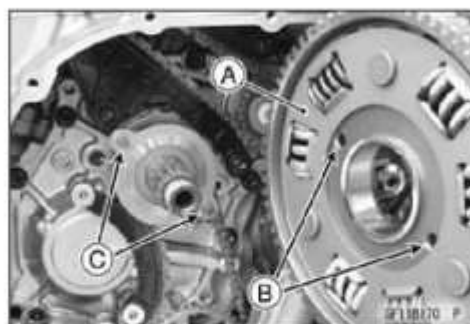


- Remove:  
Needle Bearing [A]  
Sleeve [B]



### **Clutch Installation**

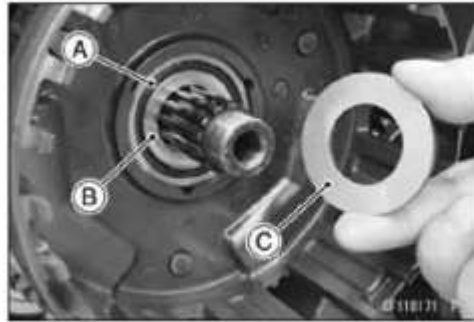
- Install the clutch housing [A].
- Fit the holes [B] to the projections [C].
- Engage the clutch housing gear with the crankshaft primary gear.



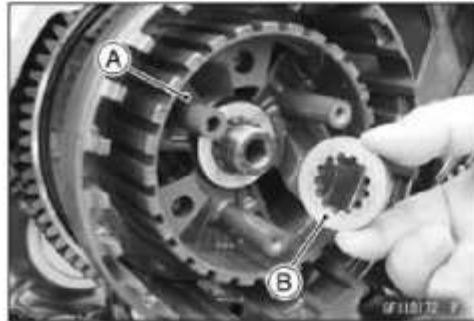
## 6-18 CLUTCH

### Clutch

- Apply molybdenum disulfide oil solution to the needle bearing [A].
- Apply engine oil to the sleeve [B] and spacer [C].
- Install:
  - Needle Bearing
  - Sleeve
  - Spacer



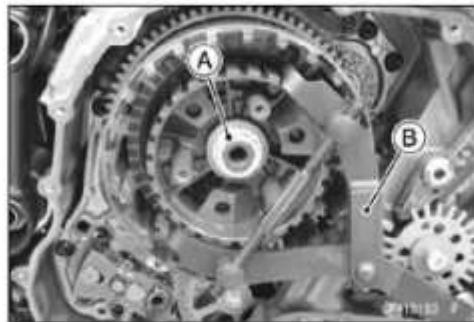
- Install:
  - Clutch Hub [A]
  - Toothed Washer [B]



- Replace the clutch hub nut [A] with a new one.
- Hold the sub clutch hub steady with the clutch holder [B], and tighten the clutch hub nut.

**Special Tool - Clutch Holder: 57001-1900**

**Torque - Clutch Hub Nut: 130 N·m (13.3 kgf·m, 95.9 ft·lb)**



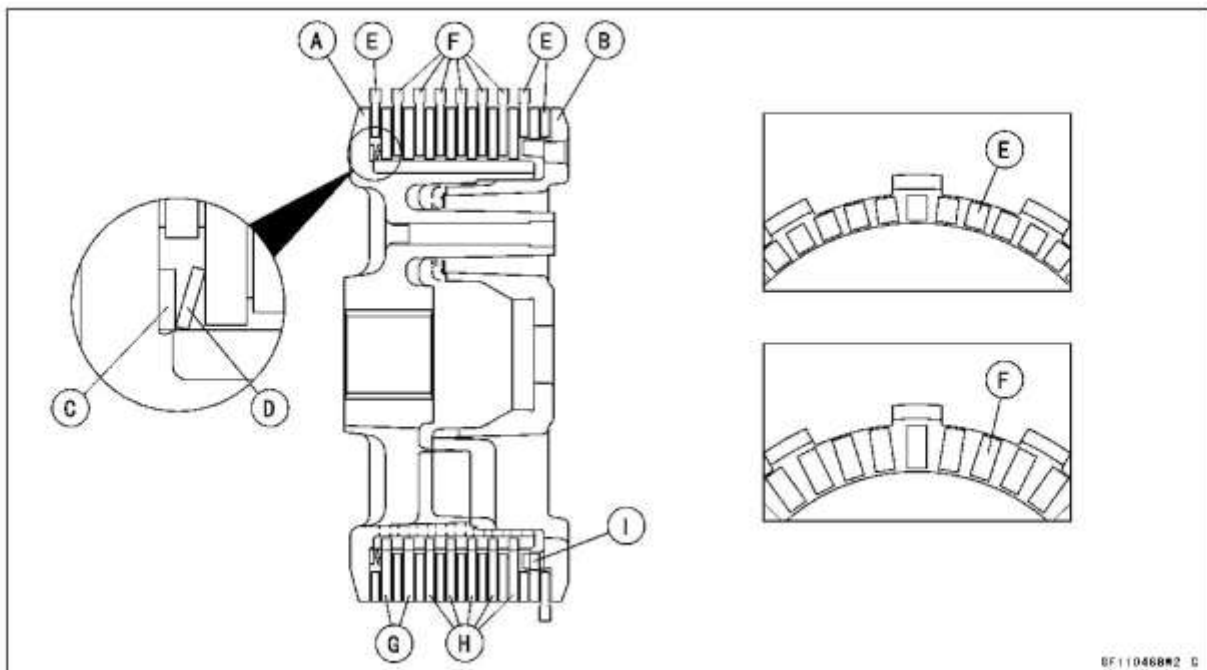
## Clutch

- Install the friction plates and steel plate alternately as shown.

Clutch Hub [A]  
 Clutch Pressure Plate [B]  
 Spring Seat [C]  
 Spring [D]  
 Friction Plates [E] (Smaller Lining Blocks)  
 Friction Plate [F]  
 Steel Plates [G] (T = 2.9 mm)  
 Steel Plate [H] (T = 2.6 mm)  
 Steel Plate [I] (T = 2.6 mm, Larger Inside Diameter)

### NOTICE

If new dry friction plates and steel plates are installed, apply engine oil to the surfaces of each plate to avoid clutch plate seizure.



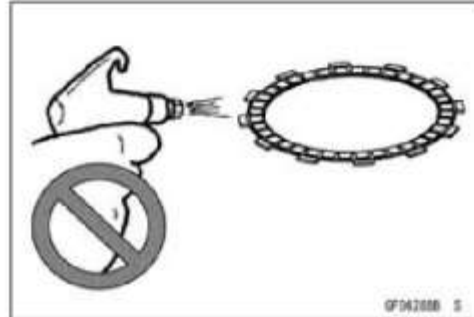
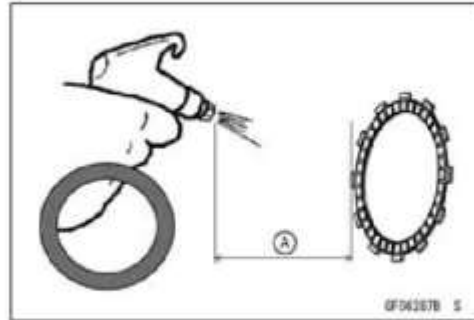
## 6-20 CLUTCH

### Clutch

#### NOTICE

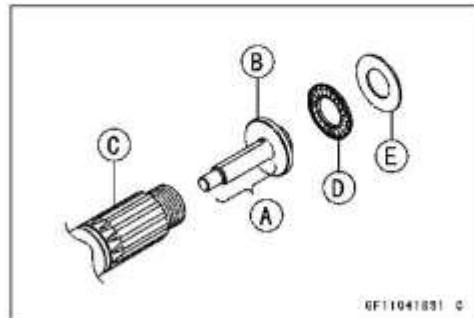
High pressure air blasts may detach clutch friction material from the friction plate. To prevent material detachment, set air pressure lower than 0.5 MPa (5 kgf/cm<sup>2</sup>, 73 psi), do not place air nozzle closer than 30 cm (12 in.) to friction plate and only blow air at a right angle to the plate, facing the friction material. Do not blow air from the side (horizontally) of the plate since it is more likely to detach the friction material.

more than 30 cm (12 in.) [A]

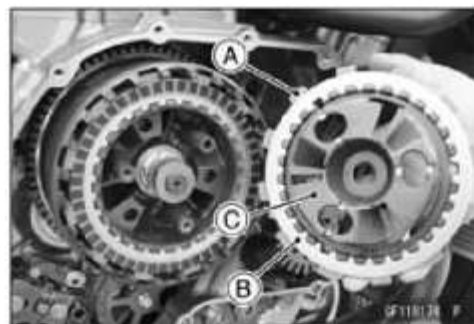


○ Install the last friction plate and steel plate later with the clutch pressure plate.

- Apply molybdenum disulfide grease to the outside surface [A] of the pusher [B].
- Install the pusher into the drive shaft [C].
- Apply molybdenum disulfide grease to the thrust bearing [D] and washer [E].
- Install:
  - Thrust Bearing
  - Washer



- Put the last friction plate [A] and steel plate [B] on the clutch pressure plate [C] and install them.

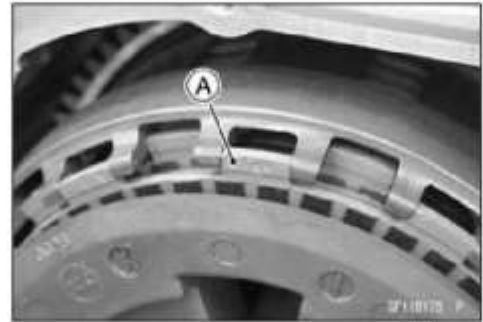


## Clutch

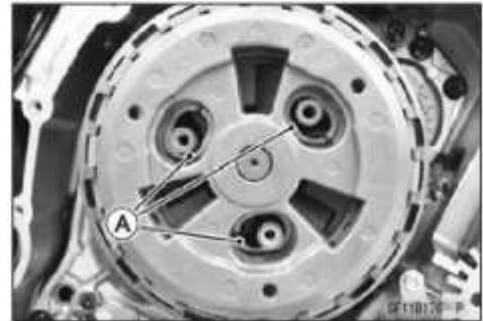
- Install the last friction plate so that the tangs [A] fit into the grooves in the housing as shown.

### NOTE

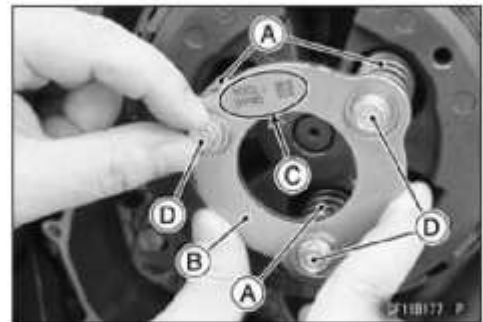
○ Make sure that the clutch pressure plate is installed without a gap.



- Be sure to install the spring seats [A] on the clutch pressure plate.



- Install:
  - Clutch Springs [A]
  - Clutch Stopper Plate [B]
- The clutch stopper plate faces the mark [C] to outside.
- Tighten the three clutch stopper bolts [D] by hand until they just begin to press each clutch spring.
- Hold the clutch pressure plate by hand while tightening the clutch stopper bolts.



- Tighten the three clutch stopper bolts [A] alternately with little by little (1/4 turn at a time) to prevent tilting the clutch stopper plate [B].



### NOTICE

**Do not tighten the one or two clutch stopper bolt at once to prevent the clutch stopper plate from warpage by the spring force.**

- Tighten:
  - Torque - Clutch Stopper Bolts: 10 N·m (1.0 kgf·m, 89 in·lb)
- Install:
  - Clutch Cover (see Clutch Cover Installation(6-14))

## 6-22 CLUTCH

### Clutch

#### Clutch Plate Assembly Length Measurement

- Assemble the friction plates and steel plates (see Clutch Installation(6-17)).
- Assemble the following parts.
  - Clutch Hub [A]
  - Clutch Pressure Plate [B]
  - Spring Seats [C]
  - Clutch Springs [D]
  - Clutch Stopper Plate [E]
  - Clutch Stopper Bolts [F]

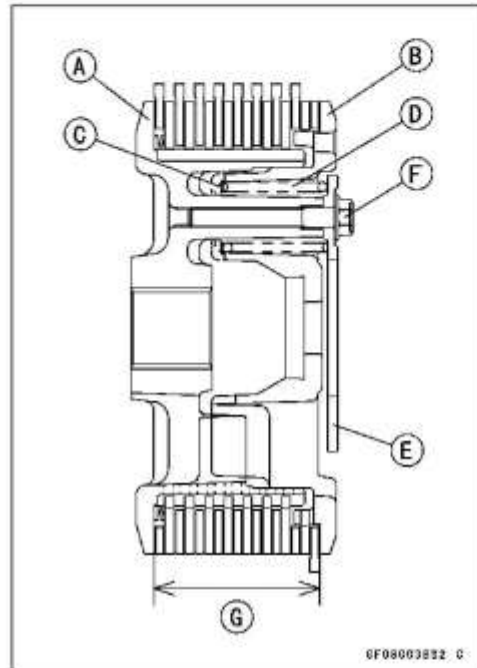
**Torque - Clutch Stopper Bolts: 10 N·m (1.0 kgf·m, 89 in·lb)**

- Measure the clutch plate assembly length [G].

#### Clutch Plate Assembly Length (Reference)

50.4 ~ 51.4 mm (1.98 ~ 2.02 in.)

- ★ If the length is not within the specified range, adjust the length (see Clutch Plate Assembly Adjustment(6-22)).



#### Clutch Plate Assembly Adjustment

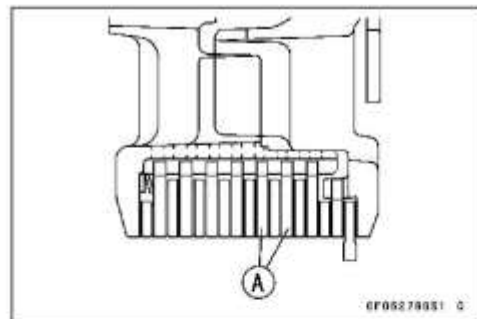
- Inspect the clutch plate assembly length, and then replace the steel plate(s) which brings the length within the specified range.
- Remove:
  - Clutch Stopper Bolts
  - Clutch Stopper Plates
  - Clutch Springs
  - Clutch Pressure Plate
  - Spring Seats
- Replace the following steel plate(s).

Thickness	Part Number
2.3 mm (0.091 in.)	13089-0027
2.6 mm (0.102 in.) (STD)	13089-0028
2.9 mm (0.114 in.)	13089-0030

#### NOTE

- Do not use the steel plate of 2.0 mm (0.079 in.) and 2.6 mm (0.102 in.) thickness at the same time.
- When adjusting the clutch plate assembly, install the steel plate of 2.3 mm (0.091 in.) or 2.9 mm (0.114 in.) in the two steel plate positions [A].
- Install the removed parts, and inspect the clutch plate assembly length.

**Torque - Clutch Stopper Bolts: 10 N·m (1.0 kgf·m, 89 in·lb)**



## Clutch

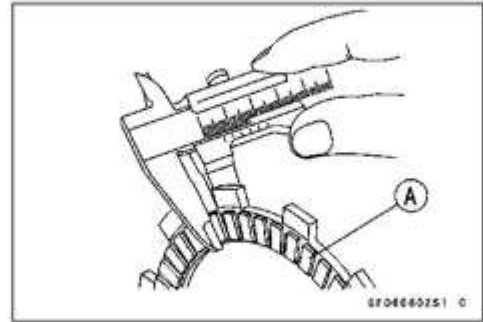
### **Clutch Plate, Wear, Damage Inspection**

- Visually inspect the friction and steel plates for signs of seizure, overheating (discoloration), or uneven wear.
- Measure the thickness of each friction plate [A] at several points.
- ★ If any plates show signs of damage, or if they have worn past the service limit, replace them with new ones.

#### **Friction Plate Thickness**

**Standard:** 3.22 ~ 3.38 mm (0.127 ~ 0.133 in.)

**Service Limit:** 2.9 mm (0.11 in.)



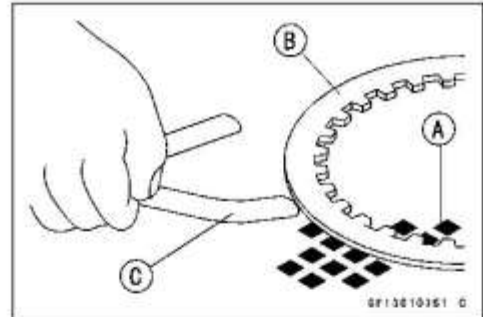
### **Clutch Plate Warp Inspection**

- Place each friction plate or steel plate on a surface plate and measure the gap between the surface plate [A] and each friction plate or steel plate [B] with a thickness gauge [C]. The gap is the amount of friction or steel plate warp.
- ★ If any plate is warped over the service limit, replace it with a new one.

#### **Friction and Steel Plate Warp**

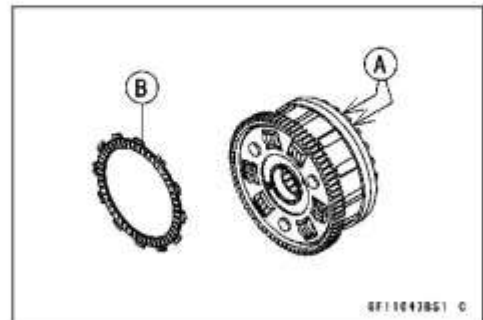
**Standard:** 0.15 mm (0.0059 in.) or less

**Service Limit:** 0.3 mm (0.01 in.)



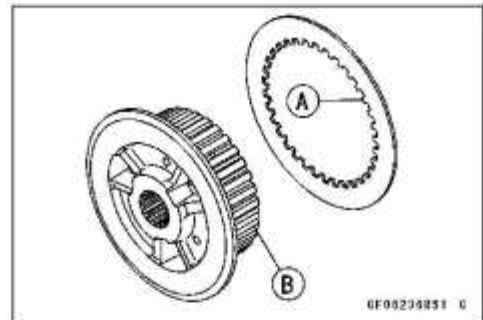
### **Clutch Housing Finger Inspection**

- Visually inspect the clutch housing fingers [A] where the friction plate tangs [B] hit them.
- ★ If they are badly worn or if there are groove cuts where the tangs hit, replace the housing. Also, replace the friction plates if their tangs are damaged.



### **Clutch Housing Spline Inspection**

- Visually inspect where the teeth [A] on the steel plates wear against the sub clutch hub splines [B].
- ★ If there are notches worn into the splines, replace the sub clutch hub. Also, replace the steel plates if their teeth are damaged.

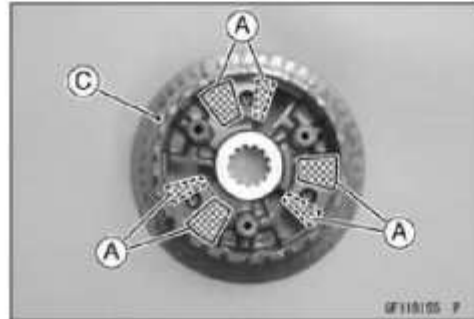
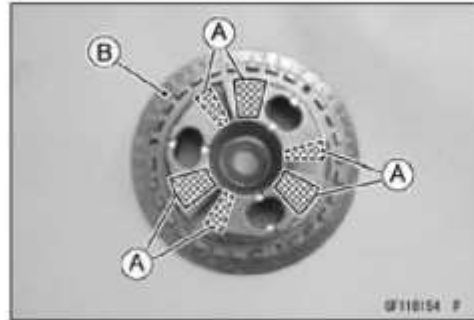


## 6-24 CLUTCH

### Clutch

#### **Clutch Pressure Plate and Clutch Hub Inspection**

- Visually inspect the contact areas [A] of the clutch pressure plate [B] and clutch hub [C] for damage.
- ★ If the contact areas are damaged replace them with new ones.



#### **Clutch Spring Inspection**

- ★ If all the components are good, but the problem still exists, replace the clutch springs.