

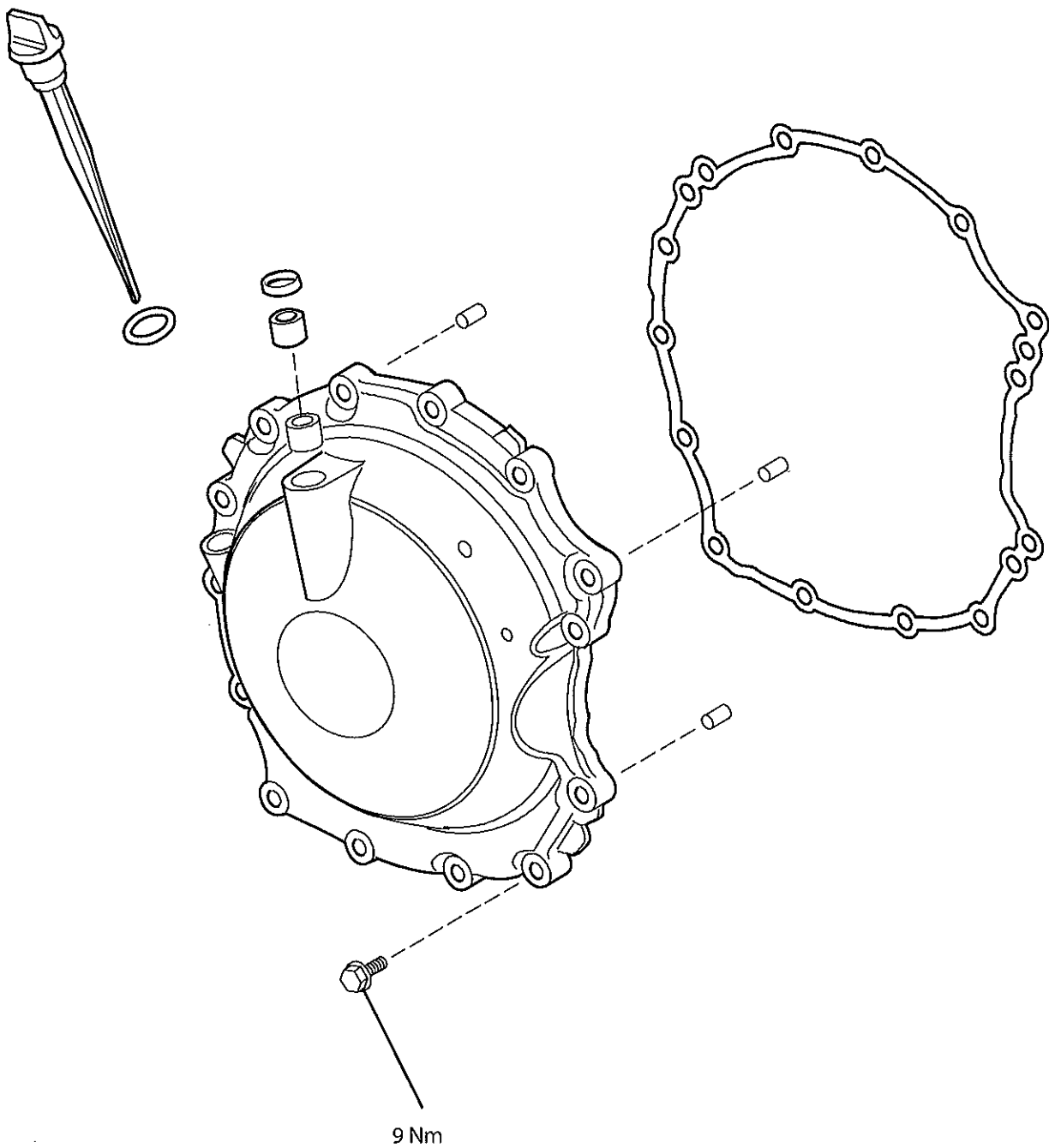
4 Clutch

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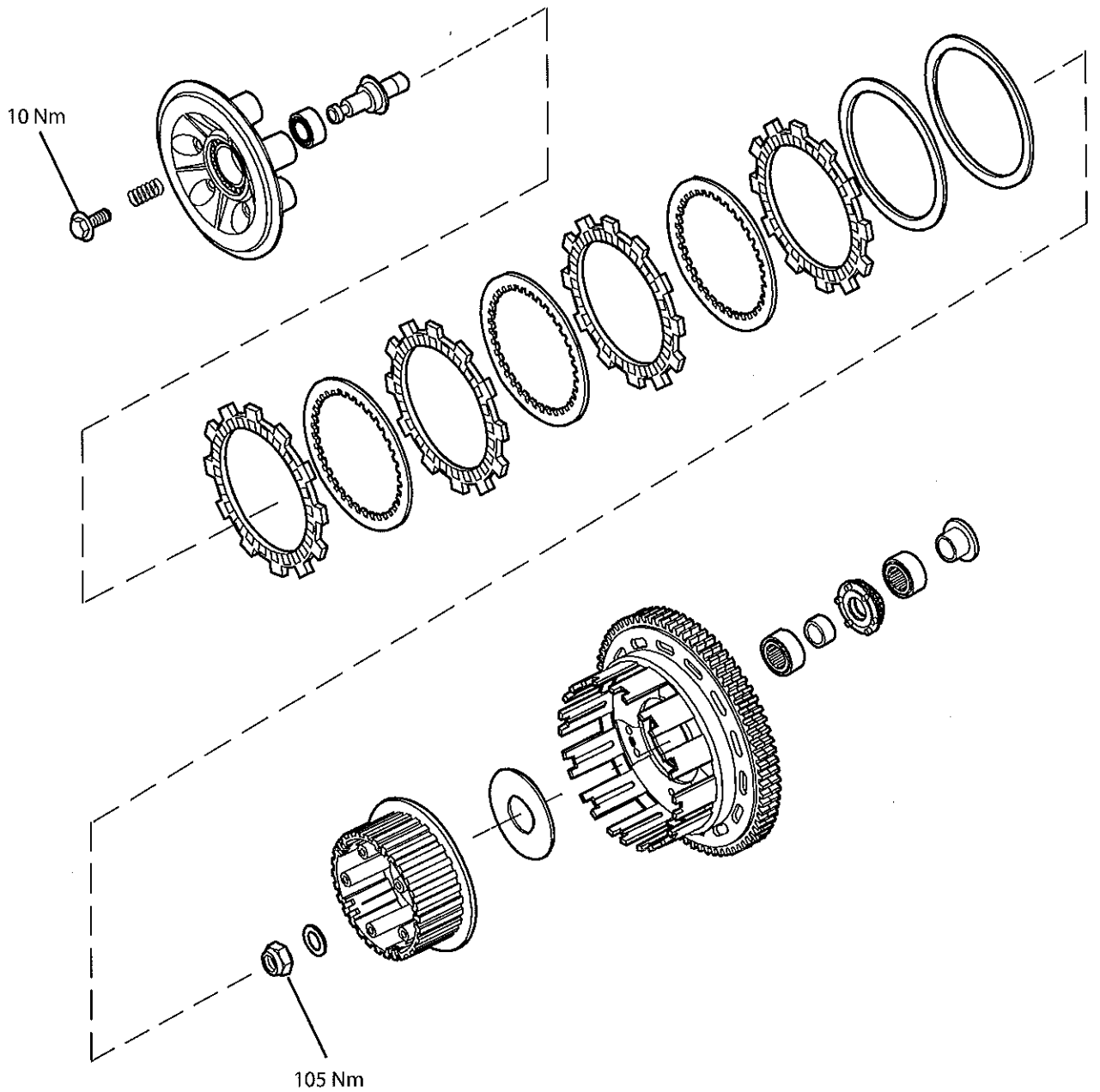
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Clutch

Exploded View - Clutch Cover

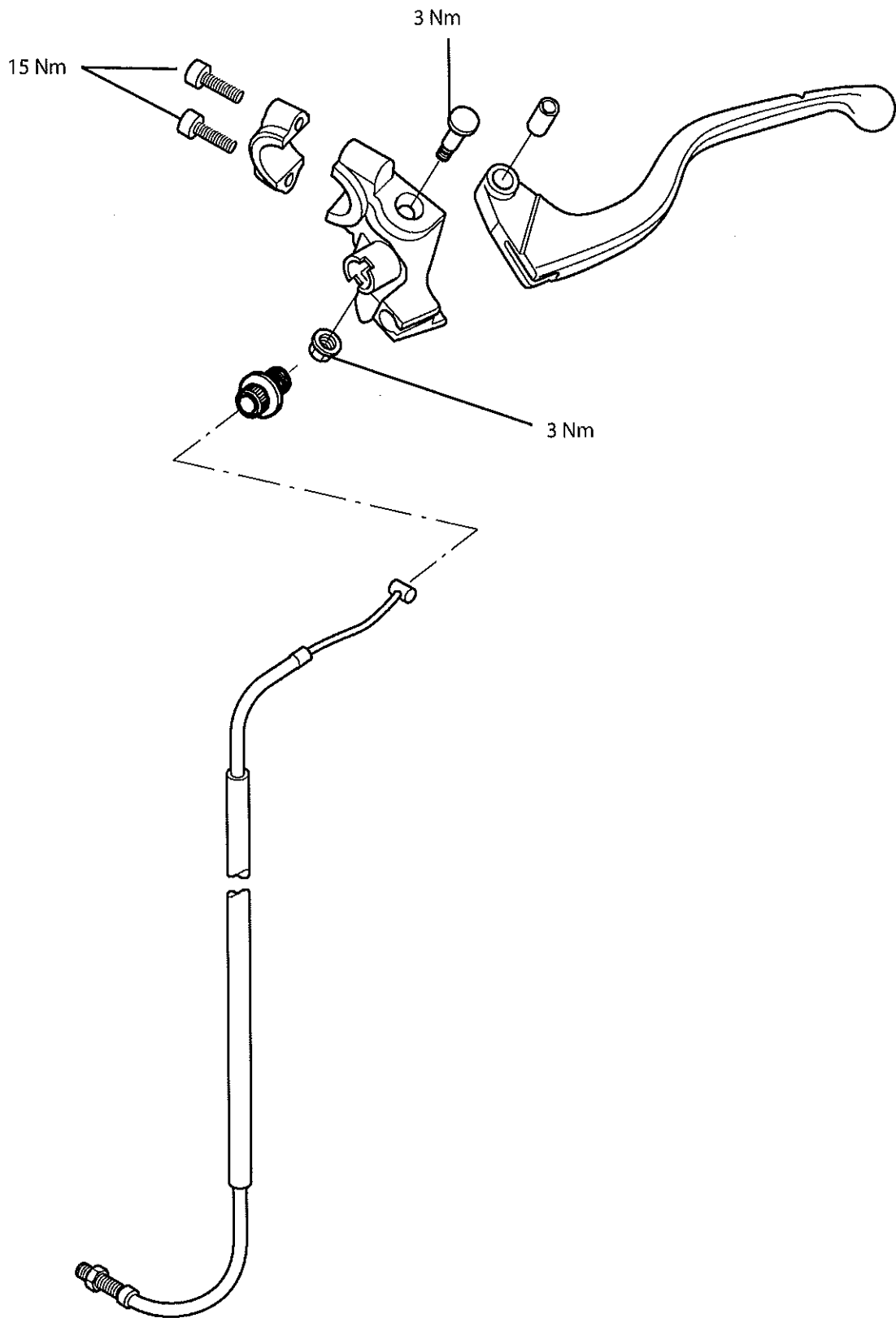


Exploded View - Clutch Assembly



Clutch

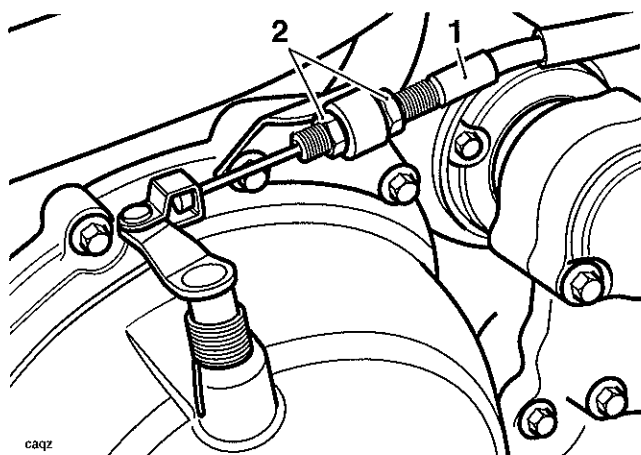
Exploded View - Clutch Controls



Clutch Cable

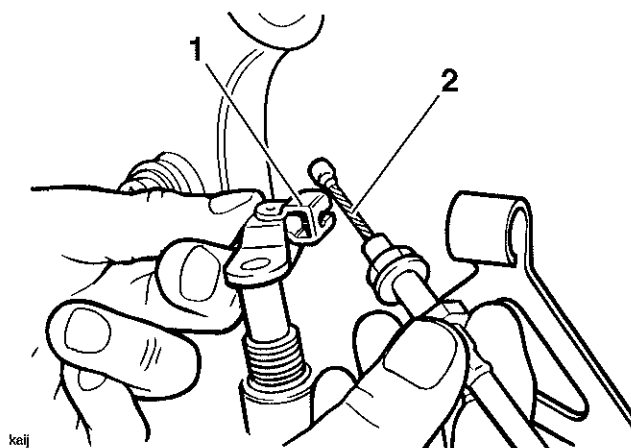
Removal

1. Remove the seat (see page 16-8).
2. Disconnect the battery (see page 17-8).
3. Slacken the cable locknut and release the adjuster at the clutch cover end to give maximum play in the cable.



1. Clutch Cable
2. Adjuster

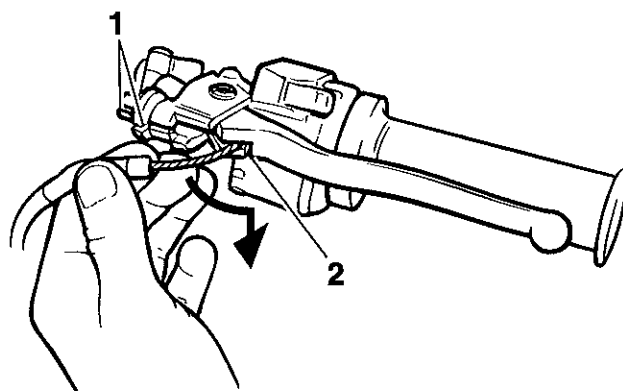
4. Release the clutch cable from the actuating arm by pushing the inner cable nipple through the arm and sliding the cable out of the slot. Detach the cable from the bracket.



1. Actuating Arm
2. Inner Cable

5. Align the lever adjuster and locknut slots.

6. Pull in the clutch lever and turn the inner cable, anti-clockwise through the slots in the adjuster and locknut, until the cable can be detached from the lever by pushing downwards.



1. Nut/locknut Slots
2. Cable Release Point

7. Remove the cable from the motorcycle noting the cable routing, particularly where it passes through the air deflector shield.

Inspection

1. Check the inner cable for free movement through the outer cable.
2. Examine the inner cable for frayed strands.
3. Examine the two inner cable nipples for signs of looseness and damage. Replace the cable if necessary.

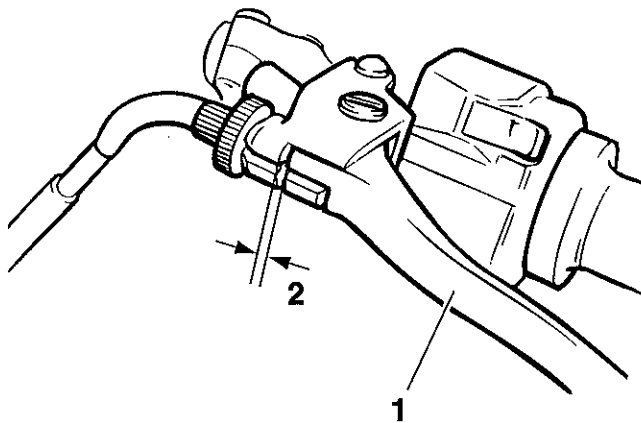
Clutch

Assembly

1. Position the cable to the motorcycle using the same routing as noted during removal.
2. Attach the inner cable to the clutch lever and actuating arm using a reversal of the removal process.
3. Refit the outer cable to the adjuster bracket at the clutch end.

Note:

- **Ensure that the two adjuster nuts are positioned, one either side of the bracket.**
4. Set the lever adjuster to a point where an equal adjustment is possible in both directions.
 5. Set the adjuster at the clutch end to give a preliminary setting of 2-3 mm of free play as measured at the lever. Tighten the locknut.
 6. Operate the clutch lever several times and recheck the amount of free-play present.
 7. Set the final adjustment of the cable to give 2-3 mm of free-play at the lever by turning the adjuster nut and locknut at the lever end. Secure the setting with the knurled locknut.



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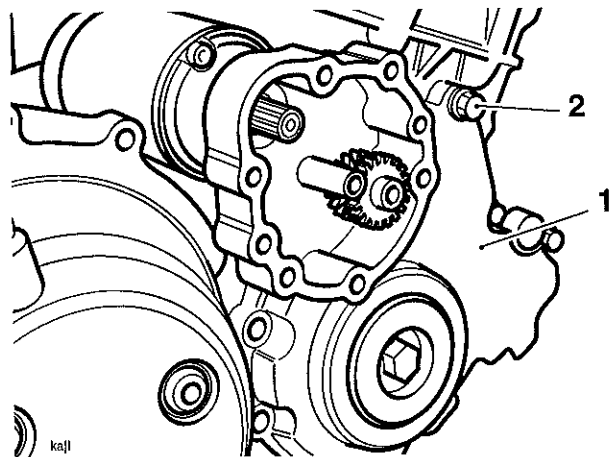
1. Clutch Lever
2. Correct Setting, 2-3 mm

8. Reconnect the battery positive (red) lead first.
9. Refit the seat (see page 16-8).

Clutch

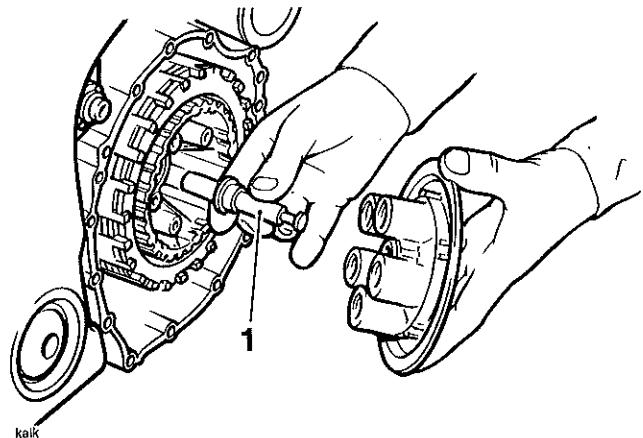
Disassembly

1. Release the clutch cable from the actuating arm (see page 4-5).
2. Remove the starter cover, right hand crank cover and associated starter gears to gain access to the clutch cover bolt at the centre-right hand side.



1. Right hand crank cover (starter cover removed)
2. Aluminium washer position

3. Remove the clutch cover.
4. Undo the bolts and springs and remove the clutch pressure plate.
5. Remove the clutch pull rod.



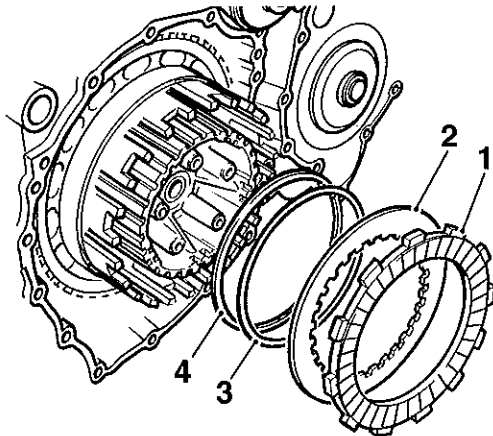
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1. Clutch pull rod

- Remove all the clutch friction plates and steel plates together with the anti-judder spring and anti-judder seat washer.

Note:

- Record the orientation of all components as they are removed. The plates must be assembled in the same order.



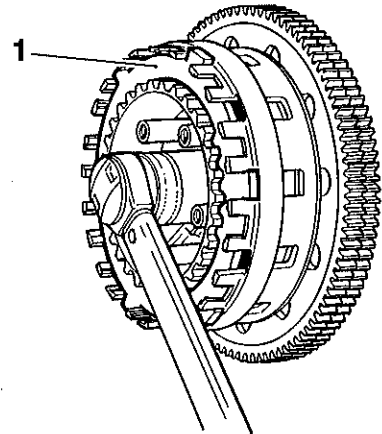
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- Friction Plate
- Steel Plate
- Anti-judder Spring
- Anti-judder Seat Washer

Note:

- The outermost and innermost friction plates differ from all others and must not be fitted in any other positions. They are thicker and are also darker in colour.
- Refer to the following page of this section for details of clutch friction plate checking.
- It is not normally necessary to disassemble the clutch further, but if the clutch inner and outer drums are to be removed, proceed as follows:

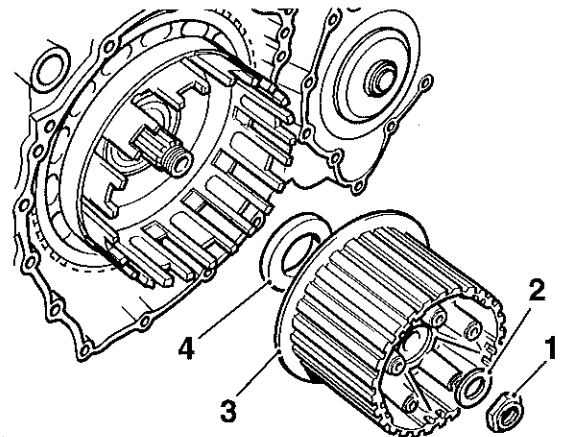
- Engage second gear and lock the inner and outer clutch drums together using service tool T3880305.



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1. Service Tool T3880305

- Depress the rear brake pedal to prevent the engine from turning, then release the clutch centre nut.
- Remove the centre nut, belleville washer, clutch inner drum and thrust washer.

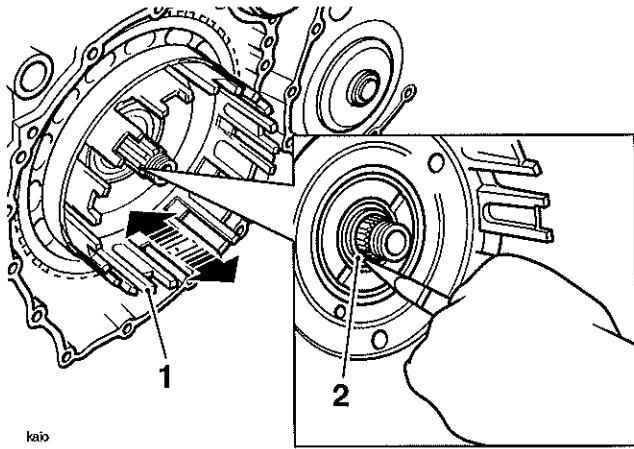


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- Centre Nut
- Belleville Washer
- Inner Drum
- Thrust Washer

Clutch

- Slide the clutch outer drum assembly gently backwards and forwards to dislodge the inner bearing sleeve. Carefully remove the bearing sleeve while supporting clutch drum.



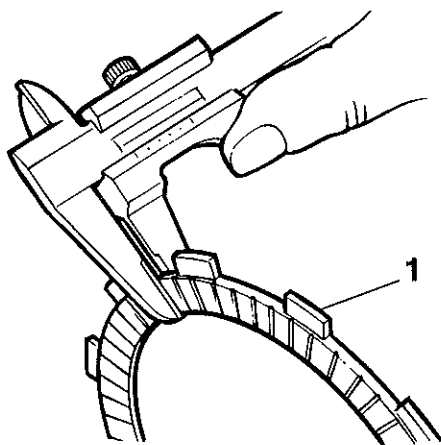
- Outer drum
- Bearing sleeve

- Remove clutch outer drum leaving the oil pump drive sprocket, bearing and sleeve in place on the input shaft.

Friction Plate Inspection

Thickness

- If any friction plate thickness is outside the service limit, replace the friction plates as a set.



- Clutch friction Plate

Friction plate thickness - inner and outermost plates

Standard	3.80 mm
Service limit	3.60 mm

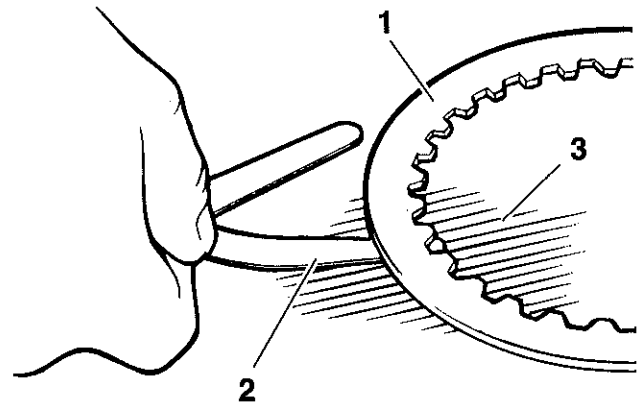
Friction plate thickness - all other plates

Standard	3.30 mm
Service limit	3.10 mm

Bend/warp

Check all plates for bend and warp as follows:

- Place the plate being checked on a clean surface plate and attempt to pass a feeler gauge of the maximum specified thickness between the friction plate and surface plate at several points around the plate. If the feeler gauge can be passed beneath the friction plate at any point, renew the plates as a set.



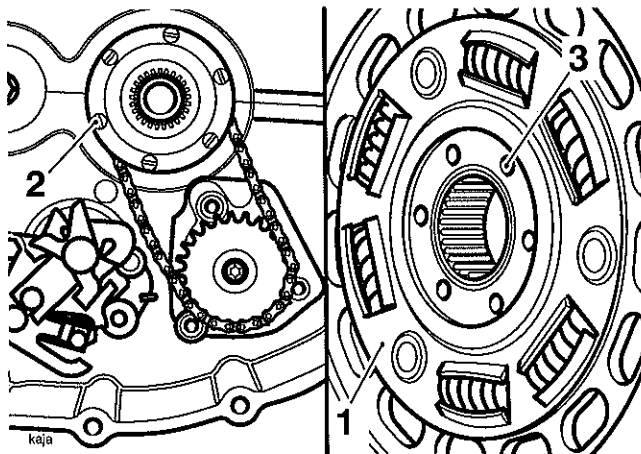
- Friction Plate
- Feeler Gauge
- Surface Plate

Friction plate bend/warp

Standard	up to 0.15 mm
Service limit	0.20 mm

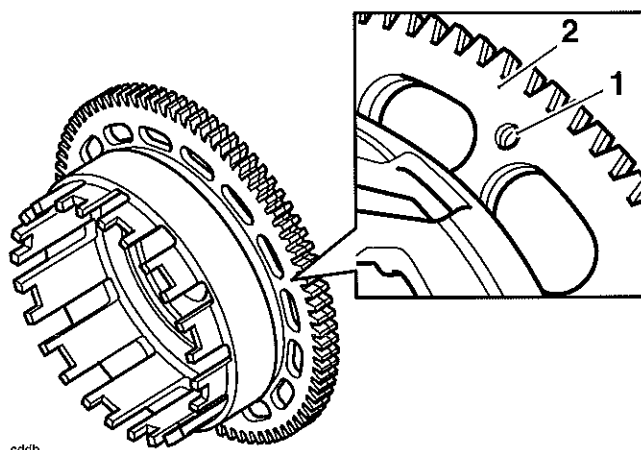
Assembly

1. Position the clutch outer drum assembly to the input shaft and align the oil pump drive pegs with the corresponding holes in the rear of the clutch outer drum.



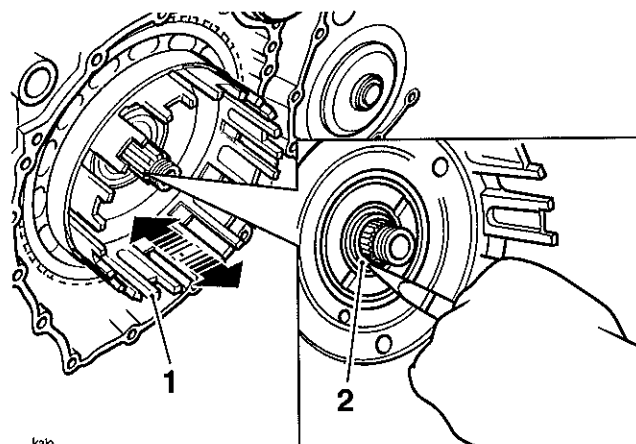
1. Clutch outer drum
2. Oil pump sprocket drive pegs
3. Oil pump drive holes

2. To fully engage the outer drum, insert a suitable tool to preload and align the primary gear and backlash eliminator gear through the hole shown in the illustration below.



1. Alignment hole
2. Outer drum

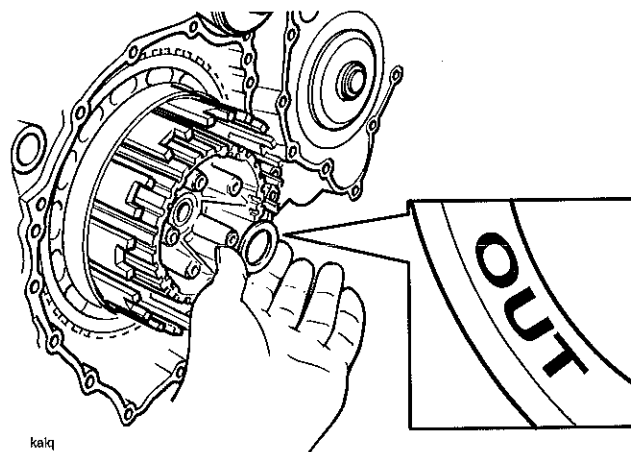
3. While holding the clutch outer drum in position and ensuring correct engagement with the oil pump drive, refit the bearing sleeve.



1. Outer drum
2. Bearing sleeve

Note:

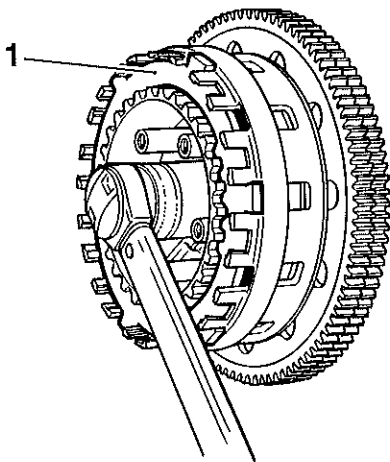
- When the bearing sleeve is correctly fitted, it will be a flush fit with the clutch drum face. In addition, a groove around the input shaft will be visible.
4. Fit the thrust washer to the shaft.
 5. Fit the clutch inner drum.
 6. Fit a new belleville washer ('out' mark facing outwards), and refit the centre nut.



Belleville Washer 'Out' Mark

Clutch

- Lock the inner and outer drums together using service tool T3880305. Depress the rear brake pedal to prevent the engine from turning, and tighten the clutch centre nut to **105 Nm**. Remove the service tool.



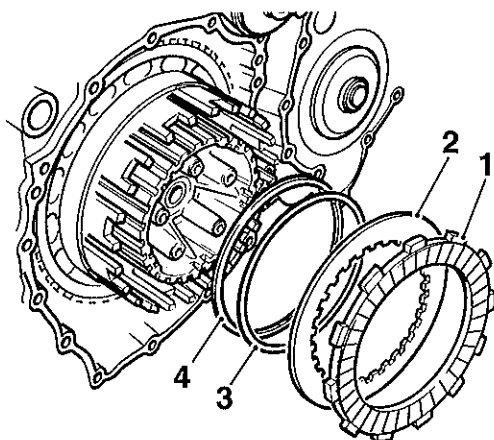
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1. Service Tool T3880305

- Disengage second gear and check for free rotation of the clutch inner drum.
- Coat all clutch friction plates in clean engine oil before fitting the friction plates, steel plates, anti-judder spring and anti-judder seat washer to the clutch basket in the same order and orientation as noted during removal.

Note:

- The innermost and outermost friction plates are different to the remainder. For identification, they are darker in colour and are thicker.
- The outermost clutch friction plate is fitted such that the outer tags of the plate are engaged with the corresponding individual tags in the clutch outer drum.



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- Outer Clutch Friction Plate
- Outer Drum
- Individual Tags

- Refit the clutch pullrod.
- Refit the clutch pressure plate together with the springs and bolts. Tighten the bolts to **10 Nm**.

Note:

- The pull rod should be free to move in and out and also it should be free to turn.
- Clean and refit the clutch cover incorporating a new gasket. Tighten the clutch cover bolts to **9 Nm**.
 - Refit the starter cover and gears (see page 7-22).
 - Refit the outer cable to the adjuster bracket at the clutch end (see page 4-6).
 - Set the clutch adjustment (see page 4-6).