

Drive Chain / Drive Train / Drive Shaft

Diagnostic Information and Procedures

Drive Chain and Sprocket Symptom Diagnosis

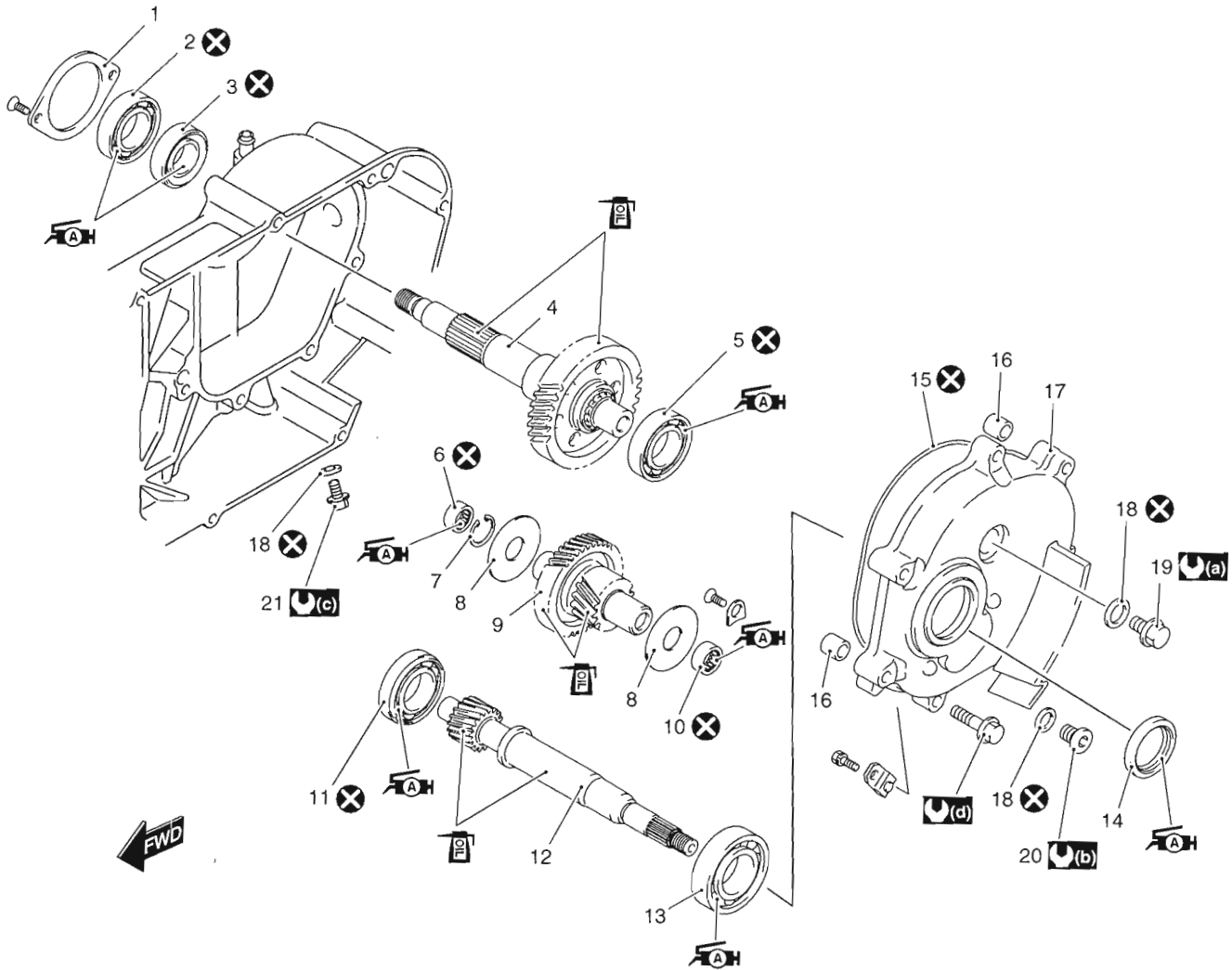
B705H23104001

Condition	Possible cause	Correction / Reference Item
<i>Noisy drive chain (Noise seems to come from final gear case)</i>	Worn or rubbing gears.	<i>Replace.</i>
	Worn splines.	<i>Replace.</i>
	Worn bearing.	<i>Replace.</i>

Repair Instructions

Final Gear Components

B705H23106001



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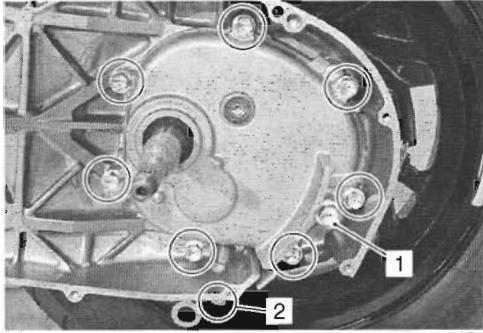
1. Bearing retainer	11. Bearing	21. Oil drain bolt.
2. Bearing	12. Drive shaft	(a) : 23 N·m (2.3 kgf-m, 16.5 lb-ft)
3. Oil seal	13. Bearing	(b) : 16 N·m (1.6 kgf-m, 11.5 lb-ft)
4. Rear axle shaft	14. Oil seal	(c) : 12 N·m (1.2 kgf-m, 8.5 lb-ft)
5. Bearing	15. O-ring	(d) : 22 N·m (2.2 kgf-m, 16.0 lb-ft)
6. Bearing	16. Dowel pin	☞ : Apply oil.
7. Snap ring	17. Final gear cover	☞ : Apply grease.
8. Washer	18. Gasket	⊗ : Do not reuse.
9. Idle shaft	19. Oil filler bolt	
10. Bearing	20. Oil level bolt	

Final Gear Assembly Removal and Installation

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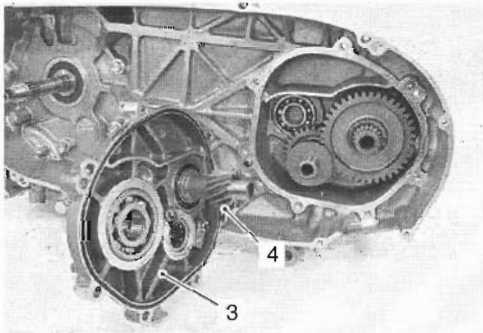
Removal

- 1) Remove the drive V-belt. Refer to "Drive V-belt Removal and Installation in Section 0B (Page0B-11)".
- 2) Remove the oil level bolt (1).
- 3) Remove the oil drain bolt (2) and drain oil.
- 4) Remove the final gear cover bolts.



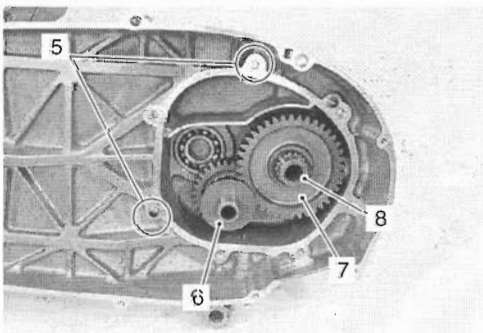
I705H1310003-04

- 5) Remove the rear wheel. Refer to "Rear Wheel Assembly Removal and Installation in Section 2D (Page2D-9)".
- 6) Remove the final gear cover (3) along with the drive shaft (4).



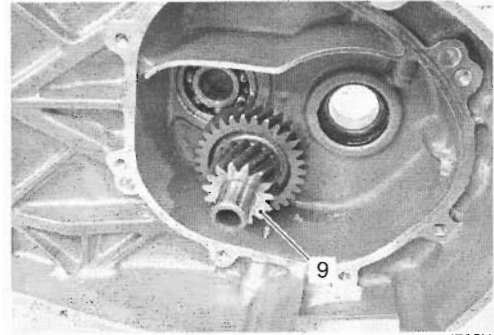
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- 7) Remove the dowel pins (5) and washer (6).
- 8) Remove the final driven gear (7) and rear axle shaft (8).



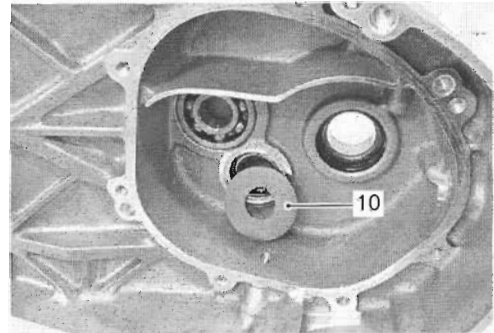
I705H1310005-01

- 9) Remove the idle shaft (9).



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- 10) Remove the washer (10).



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Installation

Install the final gear assembly in the reverse order of removal. Pay attention to the following points:

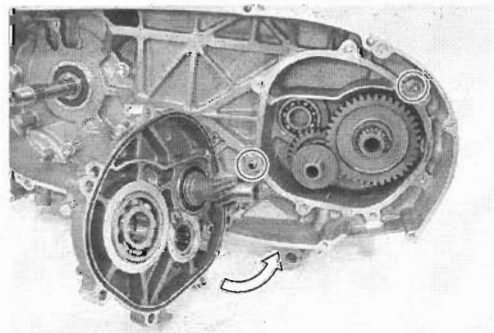
⚠ CAUTION

Apply engine oil to each gears and shaft part.

- Install the dowel pin to the case side.
- Install the final gear cover and drive shaft.

⚠ CAUTION

- **Replace the O-ring with a new one.**
- **Care should be used not to allow the O-ring to be come off when installing the transmission cover.**



I705H1310009-01

3A-4 Drive Chain / Drive Train / Drive Shaft:

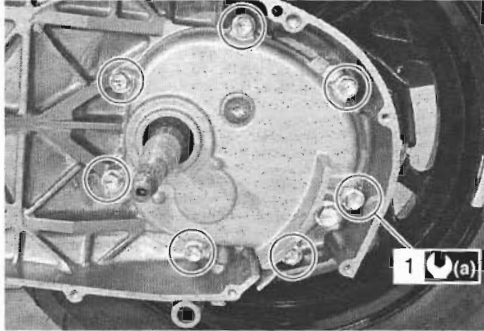
- Tighten the final gear cover bolt (1) to the specified torque.

⚠ CAUTION

Tighten the final gear cover bolts diagonally and evenly.

Tightening torque

Final gear cover bolt (a): 22 N·m (2.2 kgf-m, 16.0 lb-ft)



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- Tighten the oil drain plug (2) to the specified torque and after filling oil through the level hole, also tighten the level bolt (3) to the specified torque.

⚠ CAUTION

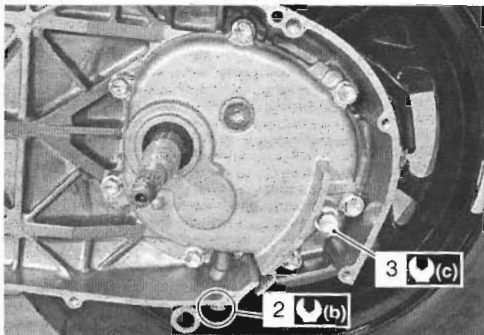
Replace the gasket washer with a new one.

Tightening torque

Oil drain plug (b): 12 N·m (1.2 kgf-m, 8.5 lb-ft)

Oil level bolt (c): 16 N·m (1.6 kgf-m, 11.5 lb-ft)

**Final gear capacity (when replacing)
190 ml**



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Final Gear Disassembly and Assembly

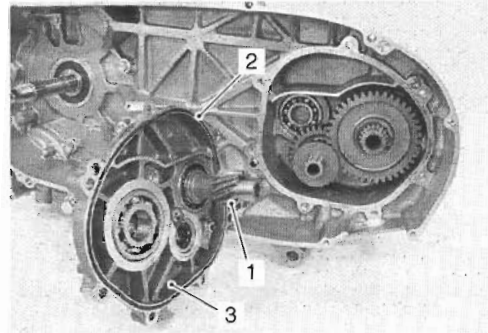
B705H23106003

Refer to "Final Gear Assembly Removal and Installation (Page3A-3)".

Disassembly

Final gear cover

- 1) Remove the drive shaft (1) and O-ring (2) from the final gear cover (3).

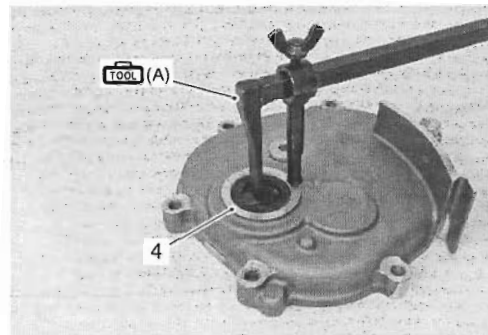


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- 2) Remove the oil seal (4) using the special tool.

Special tool

TOOL (A): 09913-50121 (Oil seal remover)

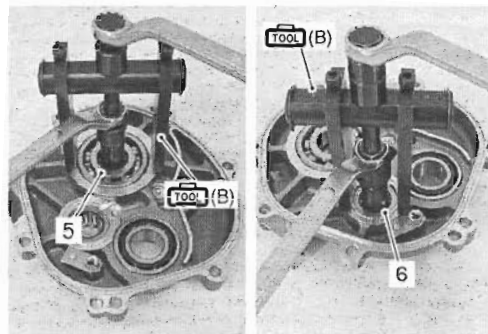


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- 3) Remove the bearing (5) and (6) using the special tool.

Special tool


TOOL (B): 09921-20240 (Bearing remover set)

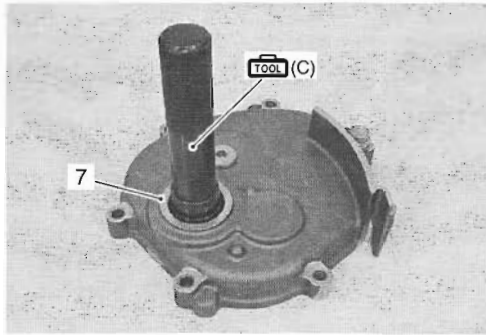


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4) Remove the bearing (7) using the special tool.

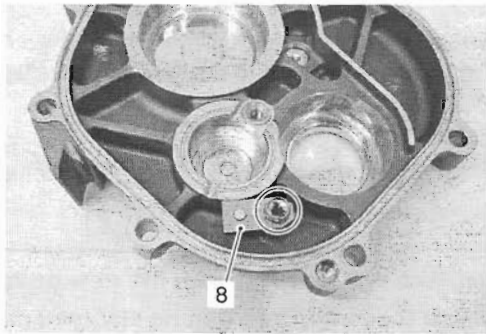
Special tool

 (C): 09913-70210 (Bearing installer set)



I705H1310014-05

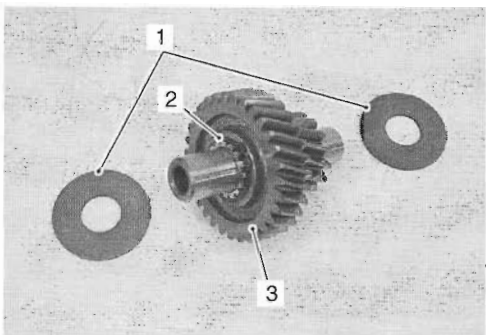
5) Remove the magnet (8).



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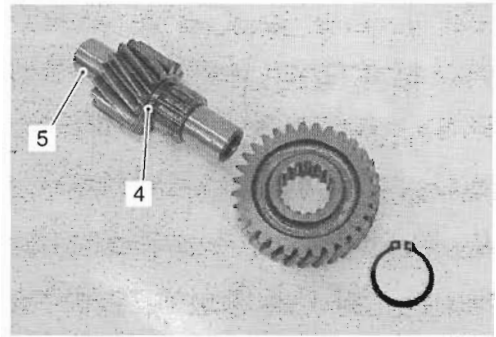
Idle gear / Idle shaft

1) Remove the washers (1), snap ring (2) and idle gear (3).



I705H1310018-01

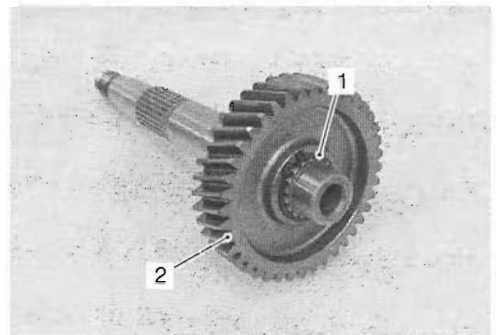
2) Remove the snap ring (4) and idle shaft (5).



I705H1310019-02

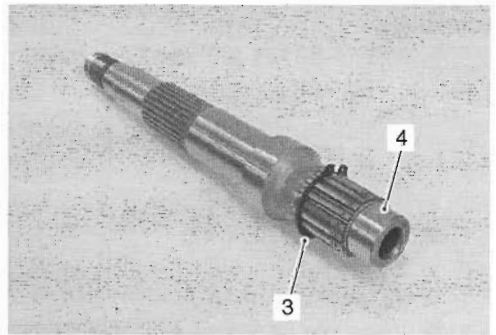
Final driven gear / Rear axle shaft

1) Remove the snap ring (1) and final driven gear (2).



I705H1310016-01

2) Remove the snap ring (3) from the rear axle shaft (4).

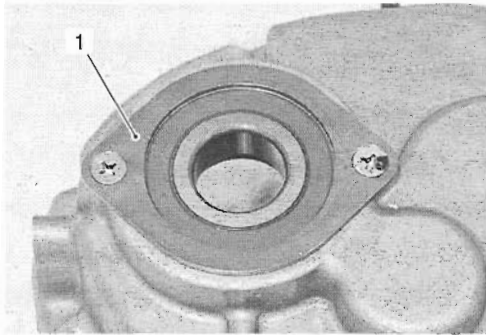


I705H1310034-04

3A-6 Drive Chain / Drive Train / Drive Shaft:

Final gear case

- 1) Remove the bearing retainer (1).

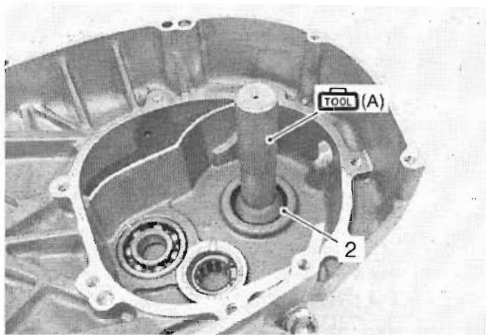


I705H1310035-02

- 2) Remove the bearing (2) using the special tool.

Special tool

TOOL (A): 09913-75830 (Bearing installer)

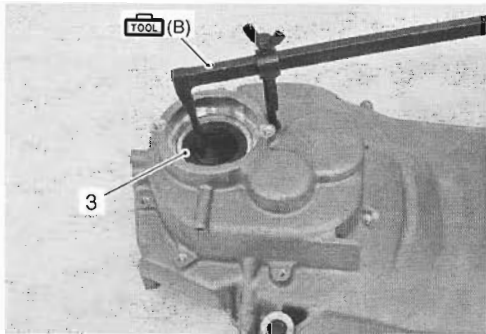


I705H1310020-01

- 3) Remove the oil seal (3) using the special tool.

Special tool

TOOL (B): 09913-50121 (Oil seal remover)

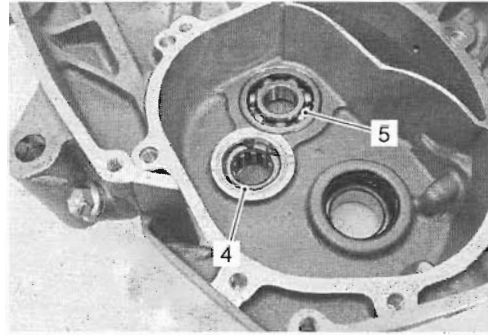


I705H1310021-01

- 4) Remove the bearings (4) and (5) using the special tool.

Special tool

TOOL : 09921-20240 (Bearing remover set)



I705H1310022-01

Assembly

Assemble the final gear assembly in the reverse order of disassembly. Pay attention to the following points:

Final gear case

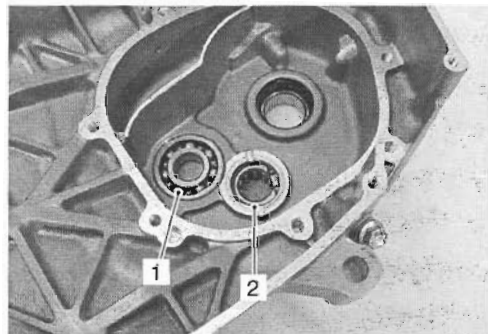
- Install the bearings (1) and (2) using the special tool.

⚠ CAUTION

- Replace the bearings with the new ones.
- Install the bearing so that its stamped mark faces outside.

Special tool

TOOL : 09913-70210 (Bearing installer set)




I705H1310023-01

- Install the oil seal (3) and bearings (4) using the special tool.

⚠ CAUTION

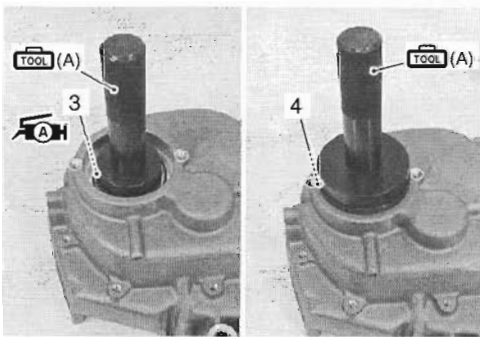
- Replace the O-ring with a new one.
- Replace the bearings with the new ones.
- Install the bearing so that its stamped mark faces outside.

Special tool

 (A): 09913-70210 (Bearing installer set)

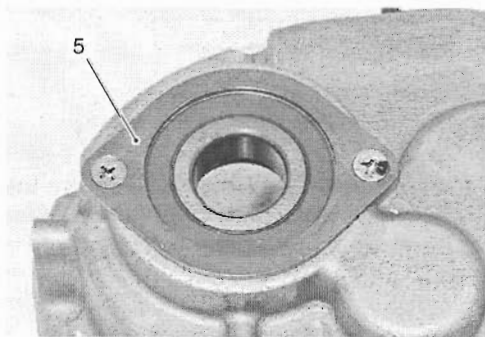
- Apply the grease to the oil seal lip.

 : Grease 99000-25010 (SUZUKI SUPER GREASE A or equivalent)



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- Install the bearing retainer (5).



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Final gear cover

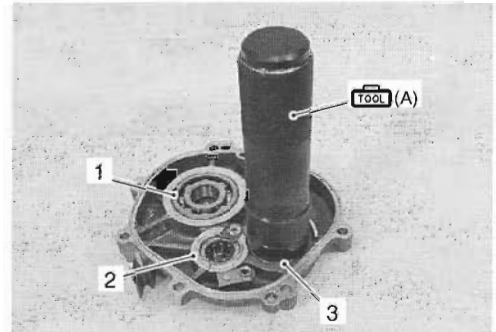
- Install the bearings (1), (2) and (3) using the special tool.

⚠ CAUTION

- Replace the bearing with a new one.
- Install the bearing so that its stamped mark faces outside.

Special tool

 (A): 09913-70210 (Bearing installer set)




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- Install the oil seal (4) using the special tool.


⚠ CAUTION

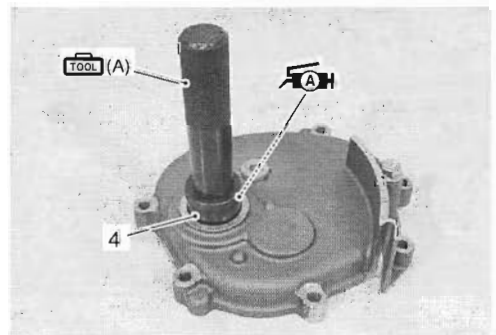
Replace the oil seal with a new one.

Special tool

 (A): 09913-70210 (Bearing installer set)

- Apply the supper grease to the oil seal lip.

 : Grease 99000-25010 (SUZUKI SUPER GREASE A or equivalent)



I705H1310028-02

3A-8 Drive Chain / Drive Train / Drive Shaft:

- Tighten the oil level bolt (5), oil filler bolt (6) and final gear cover bolts (7) to the specified torque.

⚠ CAUTION

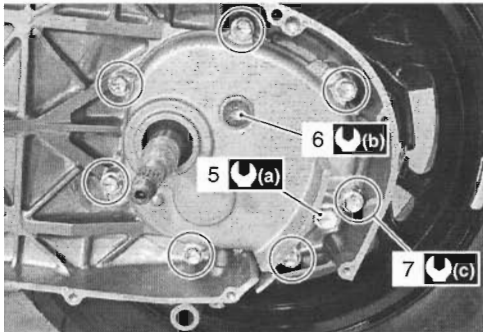
- Replace the gasket washer with a new one.
- Apply engine oil to each gear and bearing.
- Tighten the final gear cover bolts diagonally.

Tightening torque

Oil level bolt (a): 16 N·m (1.6 kgf-m, 11.5 lb-ft)

Oil filler bolt (b): 23 N·m (2.3 kgf-m, 16.5 lb-ft)

Final gear cover bolt (c): 22 N·m (2.2 kgf-m, 16.0 lb-ft)



I705H1310029-02

Final Drive Gear Bearing Inspection

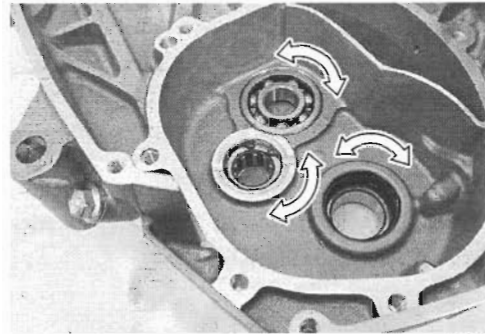
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Refer to "Final Gear Disassembly and Assembly (Page3A-4)".

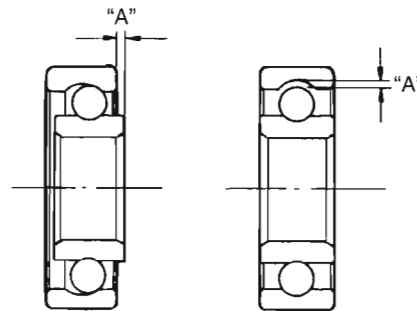
Inspect the following items.

Final gear case side

Inspect the play of the bearings by hand while they are in the case. Rotate the inner race by hand to inspect for abnormal noise and smooth rotation. Replace the bearing if there is anything unusual. Refer to "Final Gear Assembly Removal and Installation (Page3A-3)".



I705H1310030-01

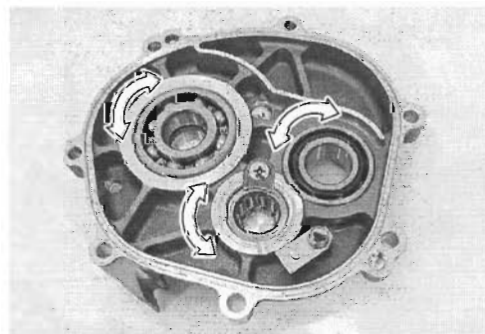


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"A": Play

Final gear cover side

Inspect the play of the bearings by hand while they are in the cover. Rotate the inner race by hand to inspect for abnormal noise and smooth rotation. Replace the bearing if there is anything unusual. Refer to "Final Gear Assembly Removal and Installation (Page3A-3)".



I705H1310032-01

Specifications

Tightening Torque Specifications

B705H23107001

Fastening part	Tightening torque			Note
	N·m	kgf·m	lb·ft	
Final gear cover bolt	22	2.2	16.0	☞ (Page3A-4) / ☞ (Page3A-8)
Oil drain plug	12	1.2	8.5	☞ (Page3A-4)
Oil level bolt	16	1.6	11.5	☞ (Page3A-4) / ☞ (Page3A-8)
Oil filler bolt	23	2.3	16.5	☞ (Page3A-8)

NOTE

The specified tightening torque is also described in the following.
 “Final Gear Components (Page3A-2)”

Reference:

For the tightening torque of fastener not specified in this section, refer to “Tightening Torque Specifications in Section 0C (Page0C-7)”.

Special Tools and Equipment

Recommended Service Material

B705H23108001

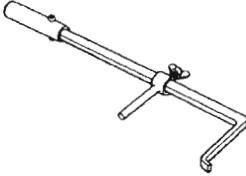
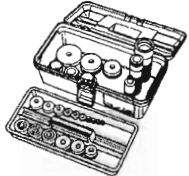
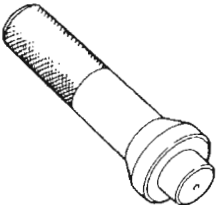
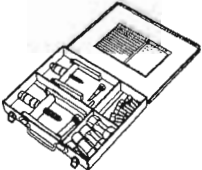
Material	SUZUKI recommended product or Specification		Note
Grease	SUZUKI SUPER GREASE A or equivalent	P/No.: 99000-25010	☞ (Page3A-7) / ☞ (Page3A-7)

NOTE

Required service material is also described in the following.
 “Final Gear Components (Page3A-2)”

Special Tool

B705H23108002

09913-50121 Oil seal remover ☞ (Page3A-4) / ☞ (Page3A-6)		09913-70210 Bearing installer set ☞ (Page3A-5) / ☞ (Page3A-6) / ☞ (Page3A-7) / ☞ (Page3A-7) / ☞ (Page3A-7)	
09913-75830 Bearing installer ☞ (Page3A-6)		09921-20240 Bearing remover set ☞ (Page3A-4) / ☞ (Page3A-6)	

3A-10 Drive Chain / Drive Train / Drive Shaft:
