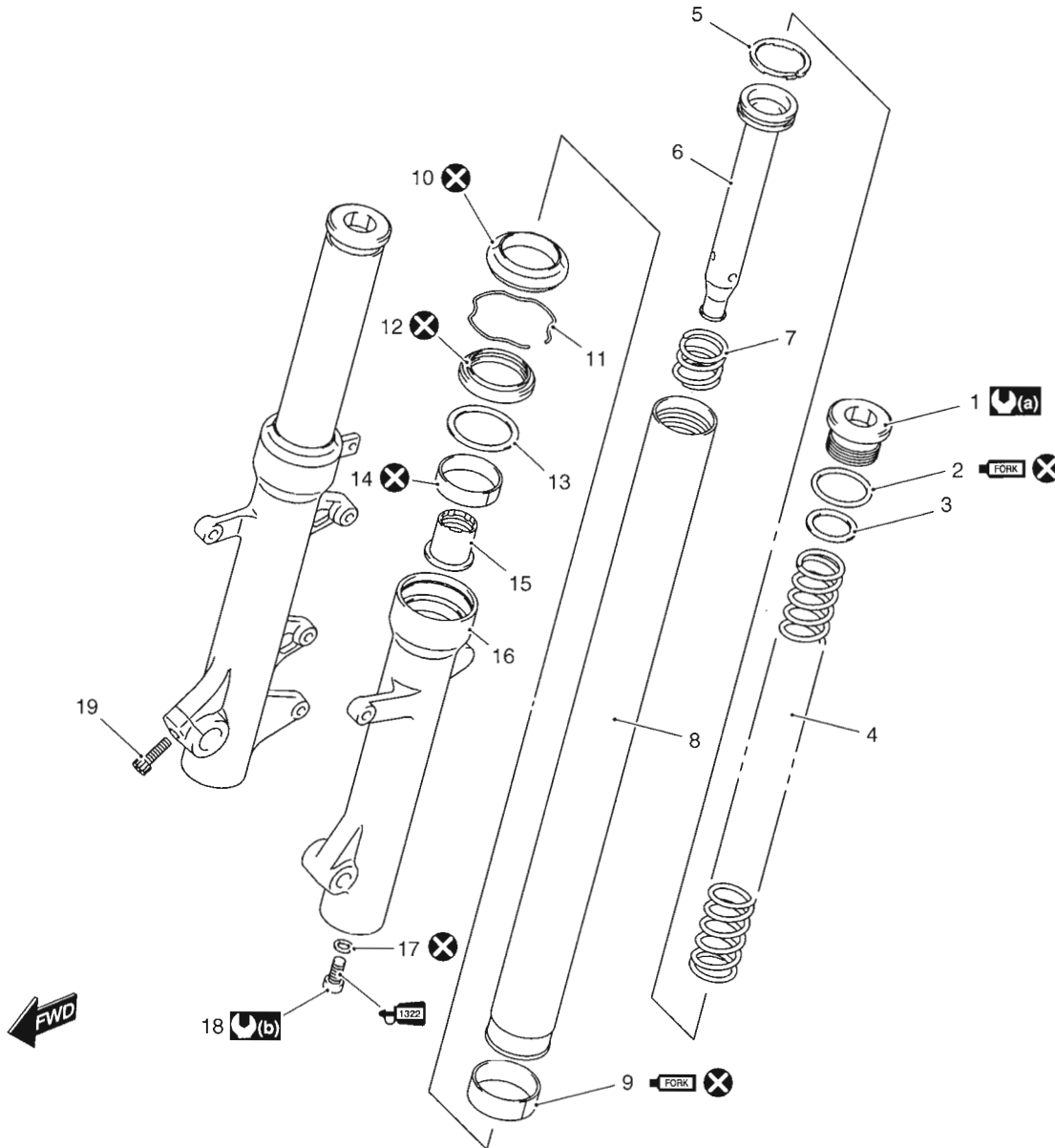


Front Suspension

Repair Instructions

Front Fork Components

B705H22206001



I705H1220035-06

1. Front fork top cap	7. Rebound spring	13. Oil seal retainer	19. Front axle pinch bolt
2. O-ring	8. Inner tube	14. Guide metal	: 45 N·m (4.5 kgf·m, 32.5 lb-ft)
3. Washer	9. Inner tube slide metal	15. Oil lock piece	: 30 N·m (3.0 kgf·m, 21.5 lb-ft)
4. Front fork spring	10. Dust seal	16. Outer tube	: Apply thread lock to thread part.
5. Cylinder ring	11. Oil seal stopper ring	17. Gasket	: Apply fork oil.
6. Cylinder	12. Oil seal	18. Cylinder bolt	: Do not reuse.

Front Fork Removal and Installation

B705H22206002

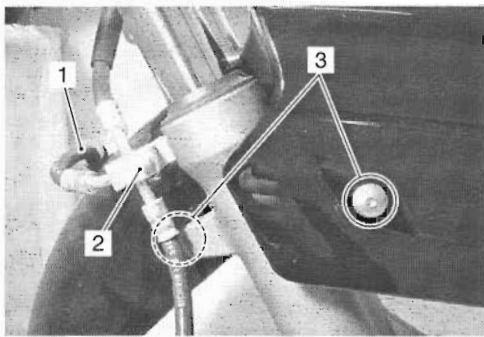
Removal

- 1) Remove the front leg shield. Refer to "Front Leg Shield Removal and Installation in Section 9D (Page9D-14)".
- 2) Remove the front wheel assembly. Refer to "Front Wheel Assembly Removal and Installation in Section 2D (Page2D-4)".

⚠ CAUTION

- Make sure that the motorcycle is supported securely.
- Do not operate the front brake lever with the front wheel removed.

- 3) Disconnect the brake hose clamp (1) from the front fender.
- 4) Remove the brake hose clamp bolt (2).
- 5) Remove the front fender by removing the bolts (3) (L & R).



I705H1220001-01

- 6) Remove the front fork cap bolt (4) and washer using the special tool.

⚠ CAUTION

Use caution when removing the front fork cap bolt since the spring force is applied to the cap bolt.

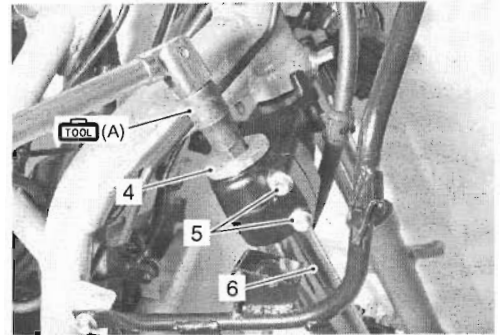
Special tool

TOOL (A): 09940-30230 (Socket hexagon (17 mm))

- 7) Loosen the front fork clamp bolts (5) and remove the front fork (6).

NOTE

Hold the front fork by the hand to prevent sliding out of the steering stem.



I705H1220002-02

Installation

- 1) Insert the front fork inner tube top end into the steering stem all the way until the step of mounting hole has been contacted and tighten the clamp bolts temporarily.



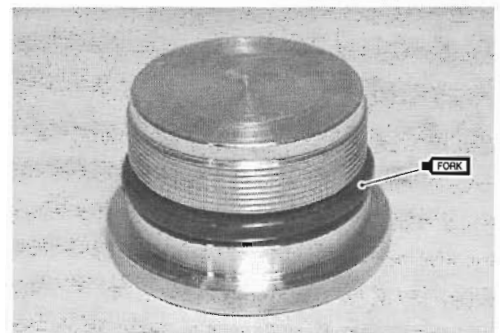
I705H1220003-01

- 2) Replace the O-ring of the front fork cap bolt and apply fork oil.

⚠ CAUTION

Use a new O-ring to prevent oil leakage.

FORK : Fork Oil 99000-99044-10G (FORK OIL or equivalent)



I705H1220004-01

2B-3 Front Suspension:


- 3) Install the washer and temporarily tighten the front fork cap bolt and tighten the front fork clamp bolts (1) to the specified torque.

Tightening torque

Front fork clamp bolt (a): 23 N·m (2.3 kgf-m, 16.5 lb-ft)

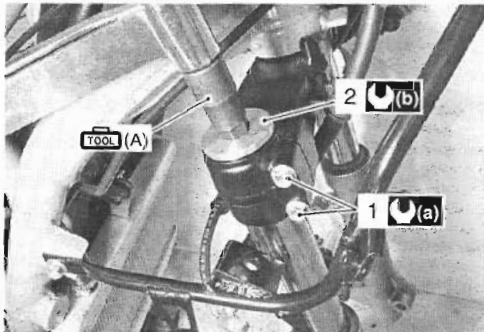
- 4) Tighten the front fork cap bolt (2) to the specified torque using the special tool.

Special tool

 (A): 09940-30230 (Socket hexagon (17 mm))

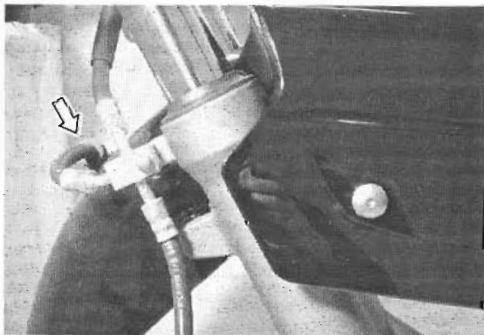
Tightening torque

Front fork cap bolt (b): 45 N·m (4.5 kgf-m, 32.5 lb-ft)



I705H1220005-01

- 5) Install the front fender.
- 6) Tighten the brake hose clamp bolt.
- 7) Connect the brake hose clamp to the front fender.



I705H1220006-03

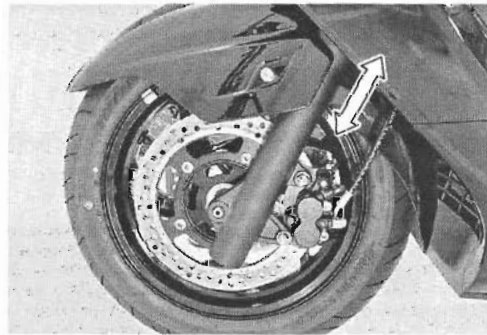
- 8) Install the front wheel assembly. Refer to "Front Wheel Assembly Removal and Installation in Section 2D (Page2D-4)".

▲ WARNING

After remounting the brake caliper, pump the brake lever until the pistons push the pads correctly.

NOTE

Before tightening the front axle and front axle pinch bolts, move the front fork up and down four or five times.



I705H1240027-01

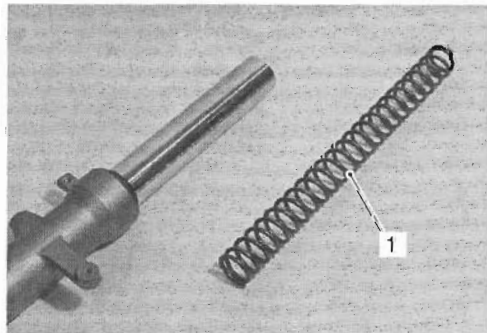
Front Fork Disassembly and Assembly

B705H22206003

Refer to "Front Fork Removal and Installation (Page2B-2)".

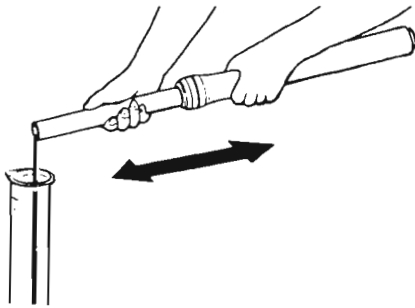
Disassembly

- 1) Remove the front fork spring (1).



I705H1220007-01

- 2) Invert the fork and stroke it several times to drain out fork oil.
- 3) Hold the fork inverted for a few minutes to drain oil.

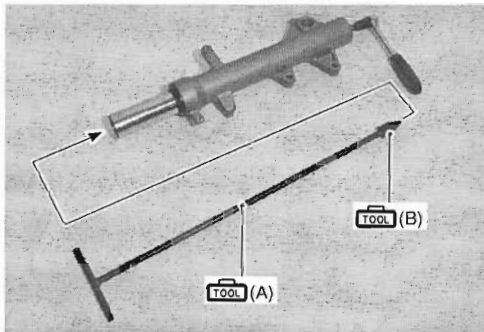


I649G1220012-01

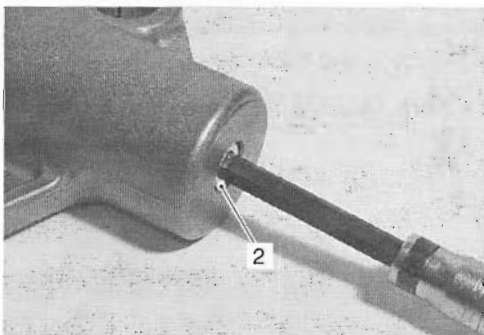
- 4) Remove the cylinder bolt (2) using the special tools.

Special tool

- TOOL (A): 09940-34520 (T handle)**
- TOOL (B): 09940-34531 (Attachment A)**

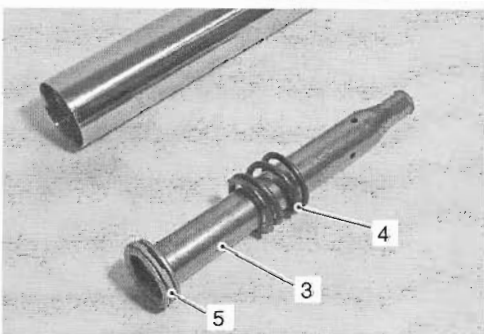


I705H1220008-01



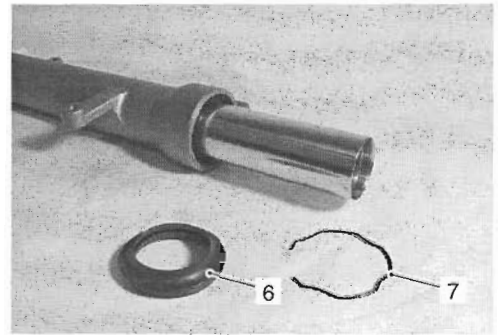
I705H1220009-01

- 5) Remove the cylinder (3), rebound spring (4) and cylinder ring (5).



I705H1220010-02

- 6) Remove the dust seal (6) and oil seal stopper ring (7).

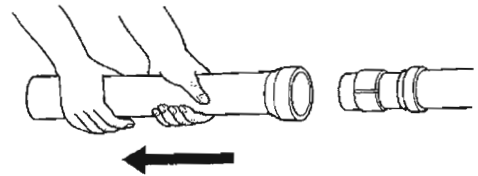


I705H1220011-02

- 7) Pull the outer tube out of the inner tube.

NOTE

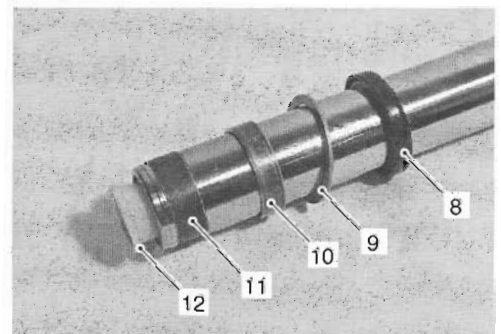
Be careful not to damage the inner tube.



I310G1220012-01

- 8) Remove the following parts.

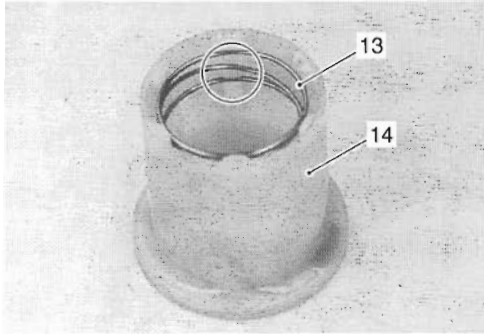
- Oil seal (8)
- Oil seal retainer (9)
- Guide metal (10)
- Slide metal (11)
- Oil lock piece (12)



I705H1220012-02

2B-5 Front Suspension:

- 9) Remove the spring (13) from the oil lock piece (14).



I705H1220032-02

Assembly

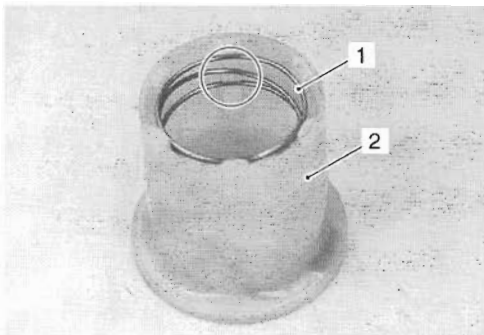
Assemble the front fork in the reverse order of disassembly. Pay attention to the following points:

⚠ CAUTION

- Thoroughly wash all the component parts being assembled. Insufficient washing can result in oil leakage or premature wear of the parts.
- When reassembling the front fork, use new fork oil.
- Use the specified fork oil for the front fork.
- When reassembling, replace the slide metal, guide metal, oil seal, dust seal and cylinder bolt gasket with the new ones.
- Use care not to cause damage to the slide metal surfaces since the surfaces are teflon coated.

Oil lock piece

- Install the spring (1) into the oil lock piece (2) securely.



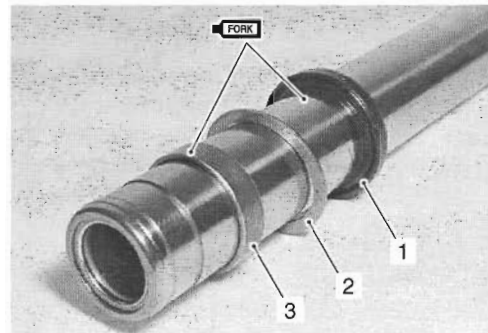
I705H1220013-01

Inner tube

- Apply fork oil to the guide metal and oil seal lip.
 - ▣ **FORK** : Fork Oil 99000-99044-10G (FORK OIL or equivalent)
- Install the following parts onto the inner tube.
 - Oil seal (1)
 - Oil seal retainer (2)
 - Guide metal (3)

⚠ CAUTION

When installing the oil seal to inner tube, be careful not to damage the oil seal lip.



I705H1220014-02

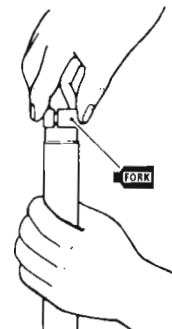
- Hold the inner tube vertically, clean the metal groove and install the slide metal by hand.

⚠ CAUTION

Do not damage the Teflon coated surface of the inner tube's slide metal when mounting it.

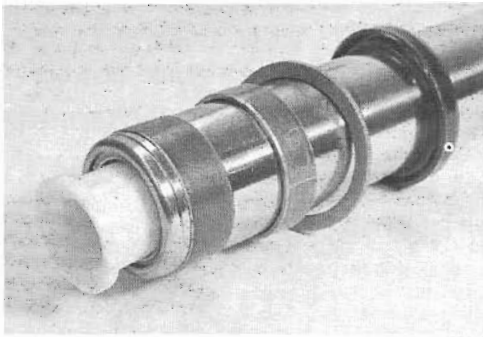
- Apply fork oil to the slide metal.

▣ **FORK** : Fork Oil 99000-99044-10G (FORK OIL or equivalent)



I649G1220021-01

- Install the oil lock piece into the inner tube.



I705H1220018-02


- Install the inner tube into the outer tube with care not to drop the oil lock piece out.

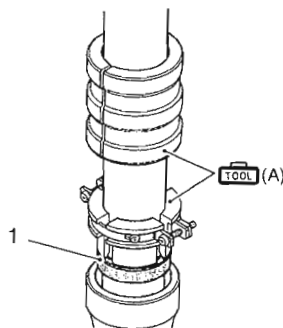
NOTE

After installing the inner tube into the outer tube, keep the oil lock piece into the inner tube by compressing the front fork fully.

- Install the oil seal (1) into the outer tube using the special tool.

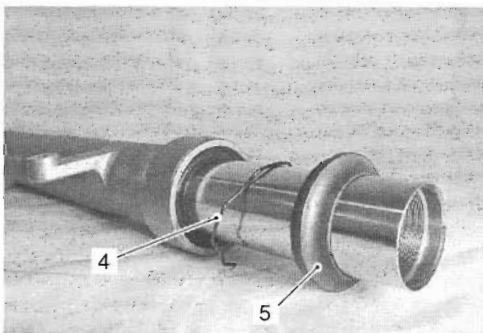
Special tool

 (A): 09940-52861 (Front fork oil seal installer)

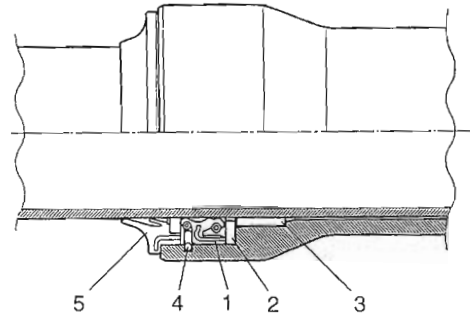


I705H1220016-03

- Install the oil seal stopper ring (4) and the dust seal (5).



I705H1220017-03

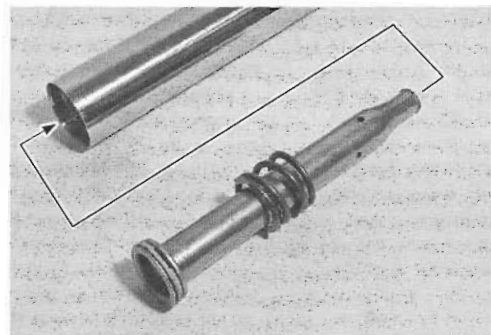


I705H1220034-02

- Dust seal (5)
- Oil seal stopper ring (4)
- Oil seal (1)
- Oil seal retainer (2)
- Guide metal (3)

Cylinder / Rebound spring / Cylinder ring

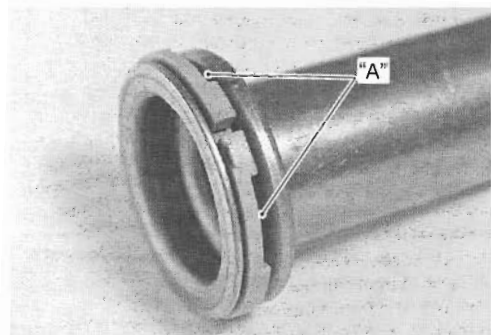
- Install the rebound spring and the cylinder ring to the cylinder and install them together to the inner tube.



I705H1220019-01

NOTE

The cylinder ring should be installed onto the cylinder with its oil passage notches "A" facing downward.



I705H1220025-02

2B-7 Front Suspension:


- Apply thread lock to the cylinder bolt and tighten it to the specified torque using the special tools.

⚠ CAUTION


Use a new cylinder bolt gasket to prevent oil leakage.

NOTE

Check the front fork for smoothness by stroking it after installing the cylinder.

 : Thread lock cement 99000-32050 (Thread Lock Cement 1342 or equivalent)

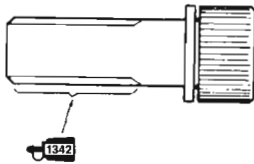
Special tool

 (A): 09940-34520 (T handle)

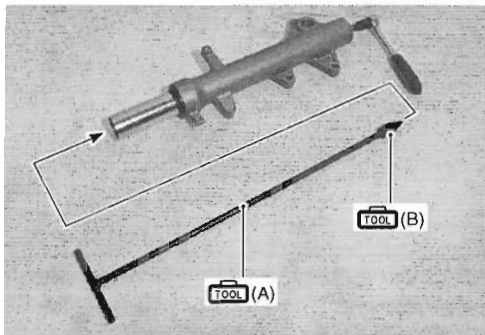
 (B): 09940-34531 (Attachment A)

Tightening torque

Cylinder bolt: 30 N·m (3.0 kgf·m, 21.5 lb-ft)




1649G1220025-01



1705H1220008-01

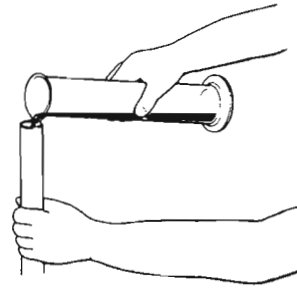
Front fork oil

- Place the front fork vertically without spring.
- Compress the front fork fully.
- Pour the specified front fork oil into the front fork.

 : Fork Oil 99000-99044-10G (FORK OIL or equivalent)

Front fork oil capacity (each leg)

301 ml (10.17/10.60 US/lmp oz)

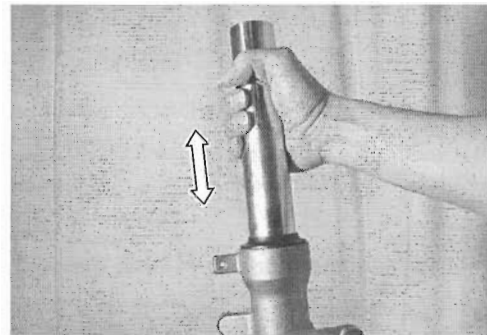


1649G1220026-01

- Move the inner tube up and down slowly several strokes until no more bubbles come out from the oil.
- Keep the front fork vertically and leave it during 5 – 6 minutes.

NOTE

Take extreme attention to pump out air completely.



1705H1220020-01

- Hold the front fork vertically and adjust the fork oil level using the special tool.

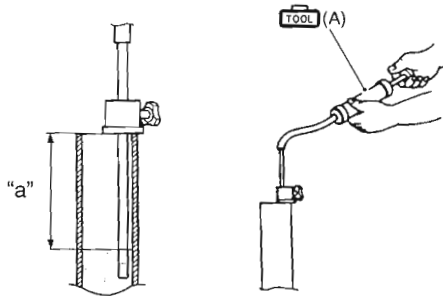
NOTE

When adjusting the fork oil level, remove the fork spring and compress the inner tube fully.

Special tool

TOOL (A): 09943-74111 (Fork oil level gauge)

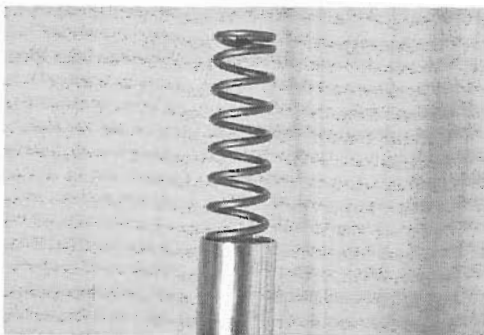
Fork oil level "a"
87 mm (3.43 in)



1705H1220021-01

Front fork spring

- Install the fork spring into the front fork.



1705H1220022-01

Front Fork Inspection

B705H22206004

Refer to "Front Fork Inspection in Section 0B (Page0B-16)".

Front Fork Parts Inspection

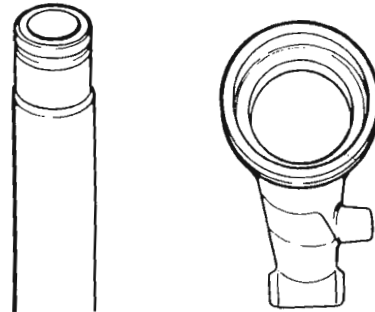
B705H22206005

Refer to "Front Fork Disassembly and Assembly (Page2B-3)".

Inspect the following parts.

Inner / Outer Tubes

Inspect the inner tube sliding surface and outer tube sliding surface for scuffing. If any defects are found, replace them with the new ones.

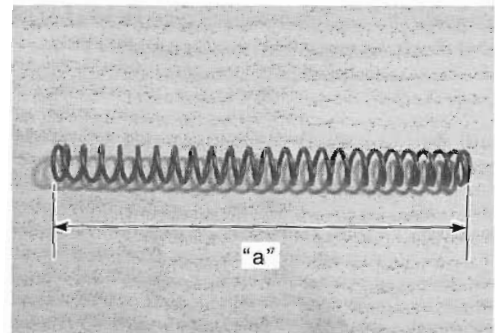


1649G1220035-02

Fork Spring

Measure the fork spring free length. If it is shorter than the service limit, replace it with a new one.

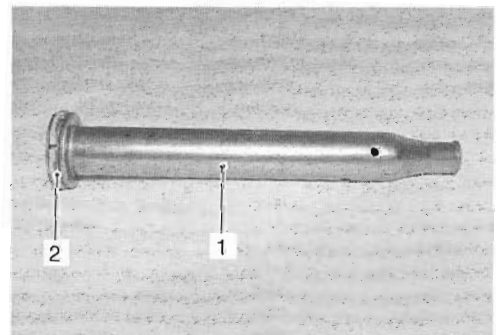
Front fork spring free length "a"
347.6 mm (13.39 in)



1705H1220023-01

Cylinder / Cylinder Ring

Inspect the cylinder (1) and cylinder ring (2) for wear or damage. If any defects are found, replace the cylinder or cylinder ring with a new one.



1705H1220024-01

Specifications

Service Data

B705H22207001

Suspension

Unit: mm (in)

Item	Standard	Item
Front fork stroke	110 (4.33)	—
Front fork spring free length	347.6 (13.69)	340
Front fork oil type	G-10	—
Front fork oil capacity (each leg)	301 ml (10.17/10.60 US/lmp oz)	—
Front fork oil level	87 (3.43) (without spring, inner/outer tube fully pressed)	—
Front fork inner tube O.D.	41 (1.61)	

Tightening Torque Specifications

B705H22207002

Fastening part	Tightening torque			Note
	N·m	kgf·m	lb·ft	
Front fork clamp bolt	23	2.3	16.5	☞ (Page2B-3)
Front fork cap bolt	45	4.5	32.5	☞ (Page2B-3)
Cylinder bolt	30	3.0	21.5	☞ (Page2B-7)

NOTE

The specified tightening torque is also described in the following.
 “Front Fork Components (Page2B-1)”

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

B705H22208001

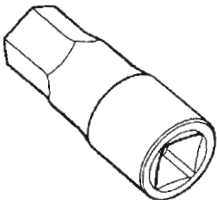
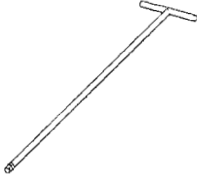
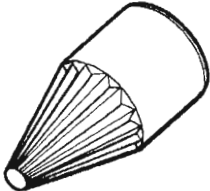
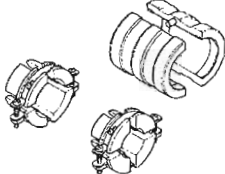
Material	SUZUKI recommended product or Specification		Note
Fork Oil	FORK OIL or equivalent	P/No.: 99000-99044-10G	☞(Page2B-2) / ☞(Page2B-5) / ☞(Page2B-5) / ☞(Page2B-7)
Thread lock cement	Thread Lock Cement 1342 or equivalent	P/No.: 99000-32050	☞(Page2B-7)

NOTE

Required service material is also described in the following.
 "Front Fork Components (Page2B-1)"

Special Tool

B705H22208002

09940-30230 Socket hexagon (17 mm) ☞(Page2B-2) / ☞(Page2B-3)		09940-34520 T handle ☞(Page2B-4) / ☞(Page2B-7)	
09940-34531 Attachment A ☞(Page2B-4) / ☞(Page2B-7)		09940-52861 Front fork oil seal installer ☞(Page2B-6)	
09943-74111 Fork oil level gauge ☞(Page2B-8)	