

Wheels and Tires

Precautions

Precautions for Wheel and Tire

B705H22400001

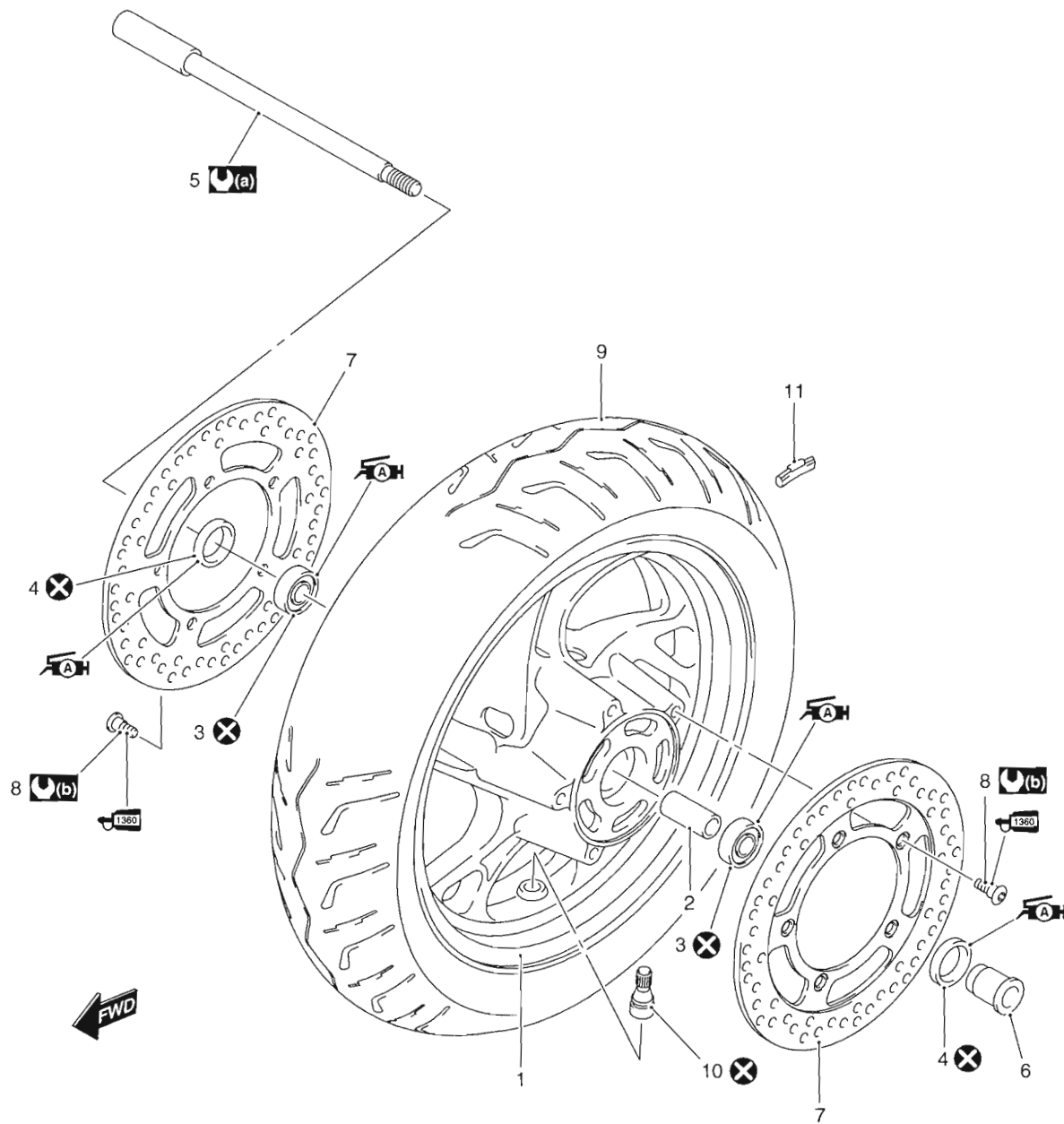
▲ WARNING

- Proper tire pressure and proper tire loading are important factors. Over loading tire can lead to tire failure and loss of motorcycle control.
- Under-inflated tires make smooth cornering difficult, and can result in rapid tire wear.
- Over-inflated tires have a smaller amount of tire in contact with the road, which can contribute to skidding and loss of control.
- Replace the wheel when wheel runout exceed the service limit or if find damage such as distortion, crack, nick or scratch.
- When tire replacement is necessary, the original equipment type tire should be used.
- Do not mix different types of tires on the same vehicle such as radial and bias-belted tires except in emergencies, because handling may be seriously affected and may result in loss of control.
- Replacement wheel must be equivalent to the original equivalent wheel.

Repair Instructions

Front Wheel Components

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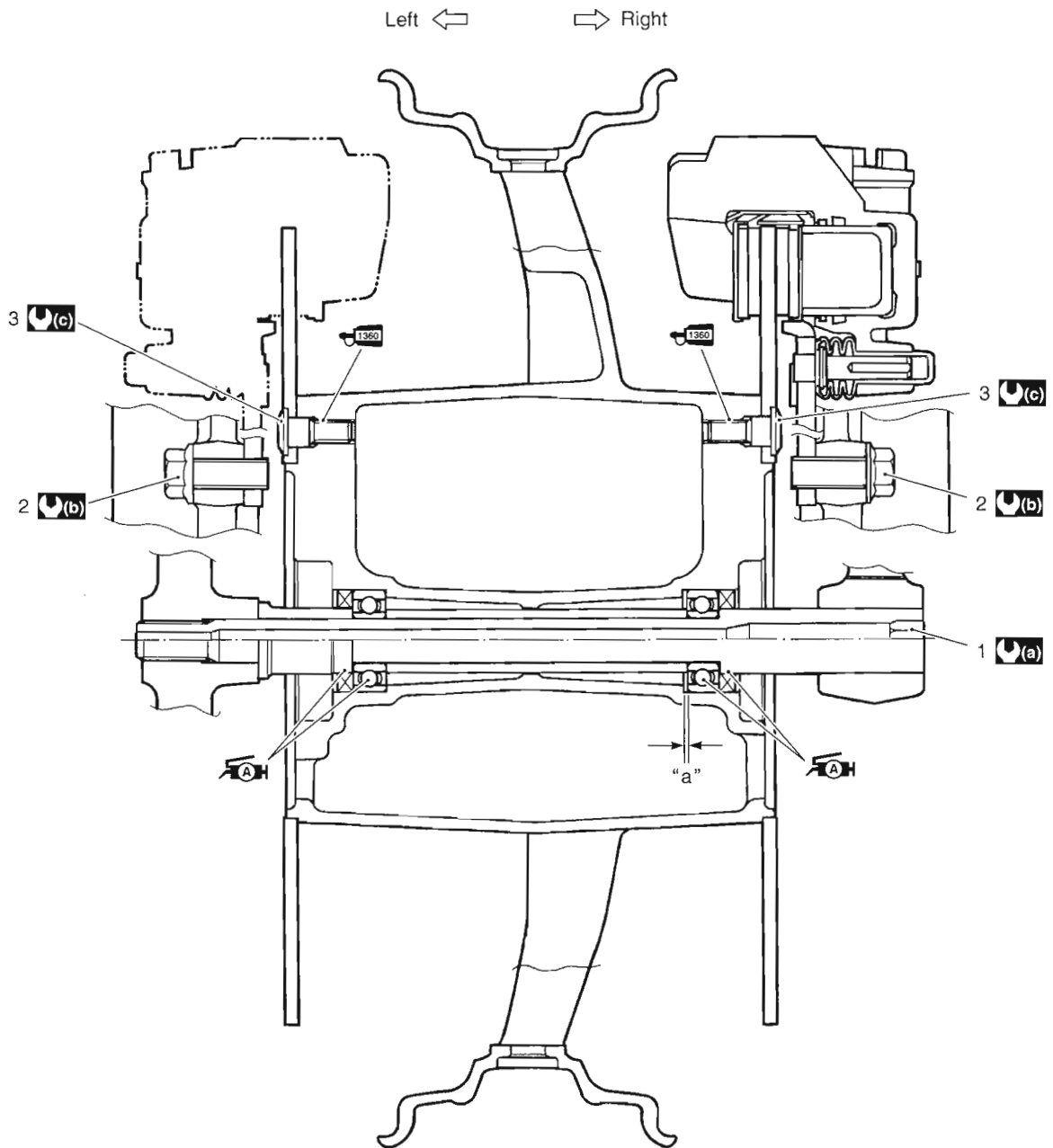


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| | | |
|----------------|--------------------------------------|--|
| 1. Front wheel | 7. Brake disc | (b) : 23 N·m (2.3 kgf·m, 16.5 lb-ft) |
| 2. Spacer | 8. Brake disc bolt | AH : Apply grease. |
| 3. Bearing | 9. Tire | 1360 : Apply thread lock to thread part. |
| 4. Dust seal | 10. Air valve | X : Do not reuse. |
| 5. Front axle | 11. Wheel balancer | |
| 6. Collar | (a) : 65 N·m (6.5 kgf·m, 47.0 lb-ft) | |

Front Wheel Assembly Construction

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| | | |
|--------------------------------------|--------------------------------------|--|
| 1. Front axle | "a": Clearance | (c) : 23 N-m (2.3 kgf-m, 16.5 lb-ft) |
| 2. Front brake caliper mounting bolt | (a) : 65 N-m (6.5 kgf-m, 47.0 lb-ft) | (A) : Apply grease. |
| 3. Front brake disc bolt | (b) : 35 N-m (3.5 kgf-m, 25.5 lb-ft) | 1360 : Apply thread lock to thread part. |

2D-4 Wheels and Tires:

Front Wheel Assembly Removal and Installation

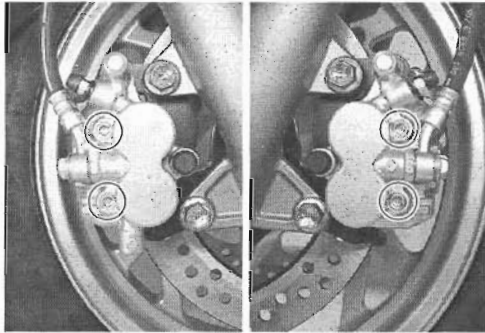
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Removal

- 1) Support the motorcycle with a jack or a wooden block.
- 2) Remove the brake calipers. Refer to "Front Brake Caliper Removal and Installation in Section 4B (Page4B-3)".

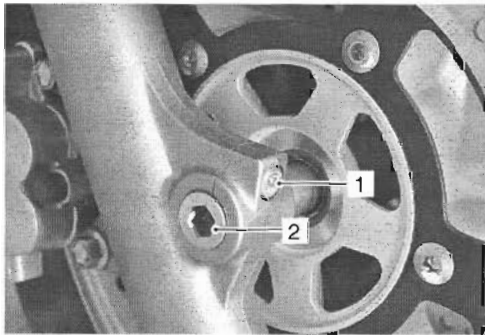
⚠ CAUTION

Do not operate the brake lever while removing the caliper.



I705H1240001-03

- 3) Loosen the axle pinch bolt (1) on the right front fork leg.
- 4) Loosen the front axle (2).



I705H1240002-02

- 5) Raise the front wheel off the ground and support the motorcycle with a jack or a wooden block.

⚠ CAUTION

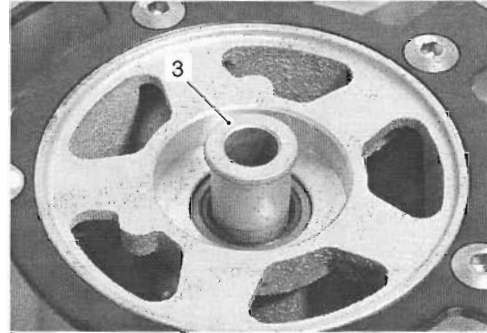
Do not carry out the work with the motorcycle resting on the side-stand. Do not support the motorcycle with the fuel tank and the radiator. Make sure that the motorcycle is supported securely.

- 6) Draw out the front axle and remove the front wheel.

NOTE

After removing the front wheel, install the calipers temporarily to the original positions.

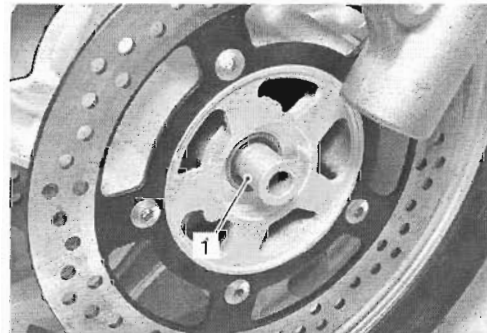
- 7) Remove the collar (3).



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Installation

- 1) Install the collar (1) into the left side of the wheel.



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- 2) Install the front wheel with the front axle.

⚠ WARNING


The directional arrow on the tire should point to the wheel rotation, when remounting the wheel.



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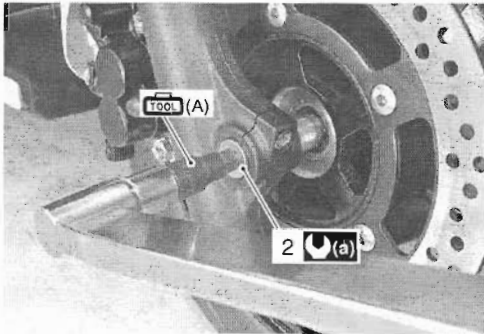
- 3) Tighten the front axle (2) to the specified torque using the special tool.

Special tool

 (A): 09900-18710 (Hexagon socket (12 mm))

Tightening torque

Front axle (a): 65 N·m (6.5 kgf-m, 47.0 lb-ft)



I705H1240005-04

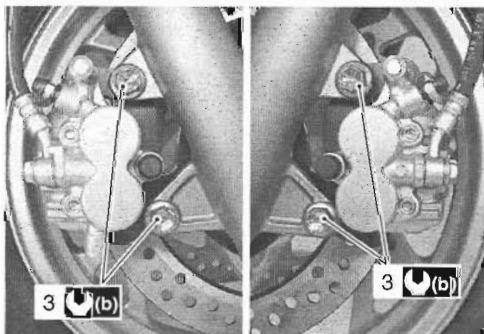
- 4) Tighten the brake caliper mounting bolts (3) to the specified torque.

Tightening torque

Front brake caliper mounting bolt (b): 35 N·m (3.5 kgf-m, 25.5 lb-ft)

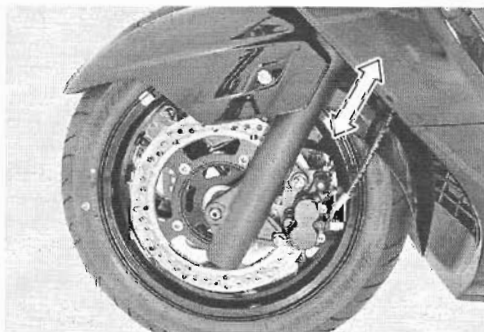
▲ WARNING

After remounting the brake calipers, pump the brake lever until the pistons push the pad correctly.



I705H1240006-04

- 5) Move the front fork up and down 4 or 5 times.

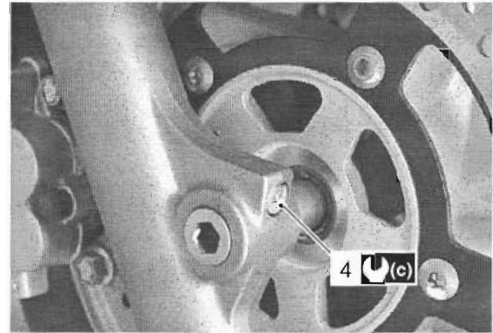


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- 6) Tighten the axle pinch bolt (4) on the right front fork leg to the specified torque.

Tightening torque

Front axle pinch bolt (c): 23 N·m (2.3 kgf-m, 16.5 lb-ft)



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Front Wheel Related Parts Inspection

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Refer to "Front Wheel Assembly Removal and Installation (Page2D-4)"
Inspect the following parts.

Tire

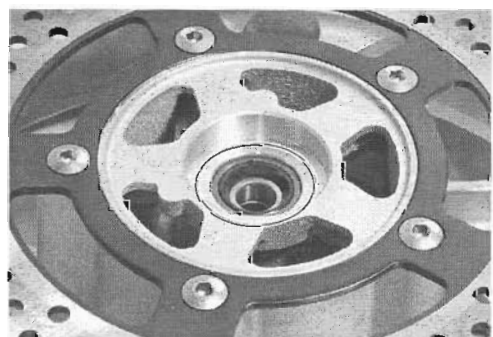
Refer to "Tire Inspection in Section 0B (Page0B-15)".

Front Brake Disc

Refer to "Front Brake Disc Inspection in Section 4B (Page4B-6)".

Dust Seal

Inspect the dust seal lips for wear or damage. If any defects are found, replace the dust seal with the new ones. Refer to "Front Wheel Dust Seal / Bearing Removal and Installation (Page2D-6)".



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2D-6 Wheels and Tires:

Axle Shaft

Using a dial gauge, check the axle shaft for runout. If the runout exceeds the limit, replace the axle shaft.

Special tool

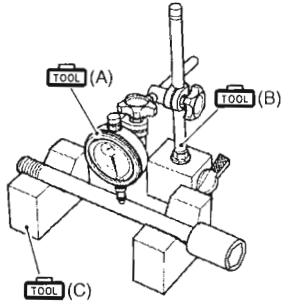
TOOL (A): 09900-20607 (Dial gauge (1/100 mm, 10 mm))

TOOL (B): 09900-20701 (Magnetic stand)

TOOL (C): 09900-21304 (V-block (100 mm))

Axle shaft runout

Service limit: 0.25 mm (0.010 in)



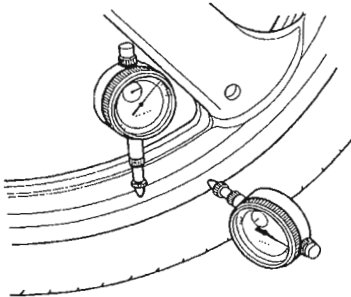
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Wheel

Make sure that the wheel runout checked as shown does not exceed the service limit. An excessive runout is usually due to worn or loosened wheel bearings and can be reduced by replacing the bearings. If bearing replacement fails to reduce the runout, replace the wheel.

Wheel runout

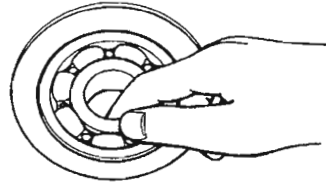
Service limit (Axial and Radial): 2.0 mm (0.08 in)



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Wheel Bearing

Inspect the play of the wheel bearings by finger while they are in the wheel. Rotate the inner race by finger to inspect for abnormal noise and smooth rotation. Replace the bearing in the following procedures if there is anything unusual. Refer to "Front Wheel Dust Seal / Bearing Removal and Installation (Page2D-6)".



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Front Wheel Dust Seal / Bearing Removal and Installation

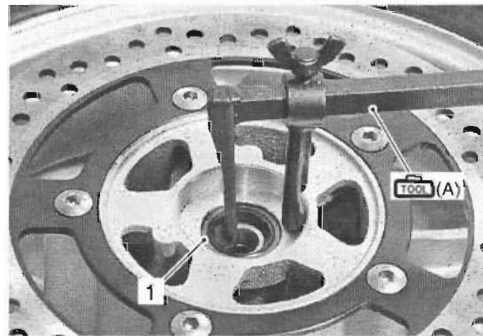
B705H22406005

Removal

- 1) Remove the front wheel assembly. Refer to "Front Wheel Assembly Removal and Installation (Page2D-4)".
- 2) Remove the dust seals (1) using the special tool (LH & RH).

Special tool

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

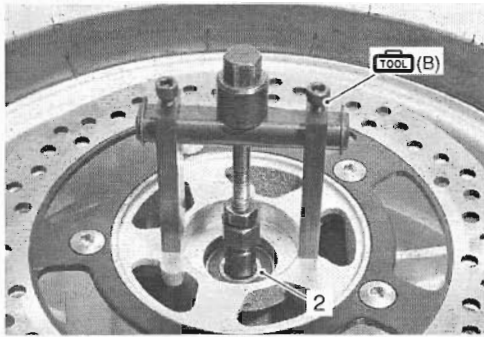


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3) Remove the bearings (2) using the special tool.

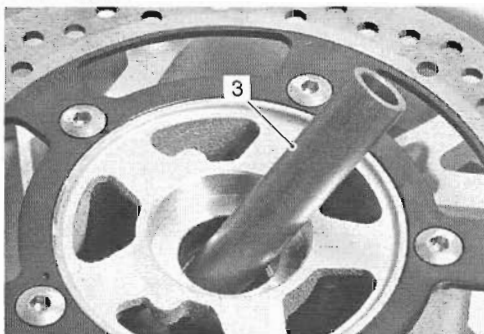
Special tool

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



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4) Remove the spacer (3).



I705H1240011-01

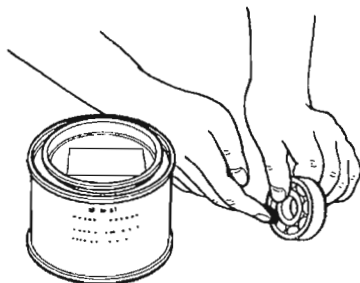
Installation

CAUTION

The removed dust seals and bearings must be replaced with the new ones.

1) Apply grease to the wheel bearings.

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



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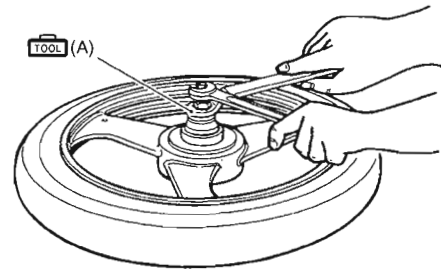
2) First install the right wheel bearing, then install the spacer (1) and left wheel bearing.

Special tool

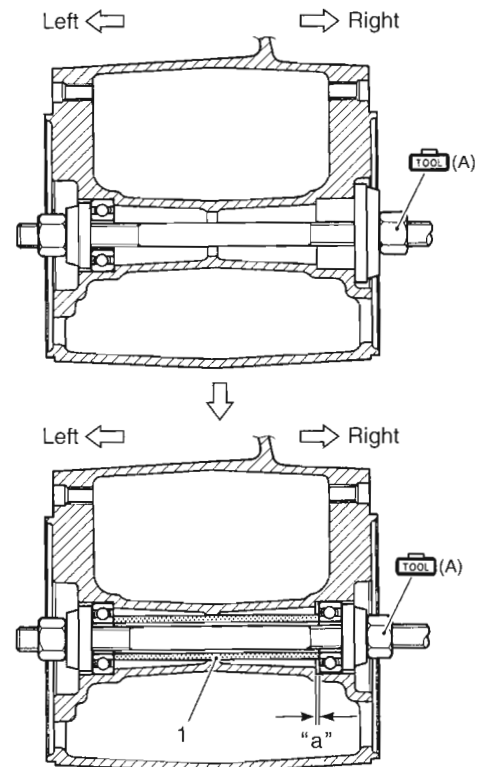
TOOL (A): 09941-34513 (Steering race installer)

CAUTION

The sealed cover of the bearing must face outside.



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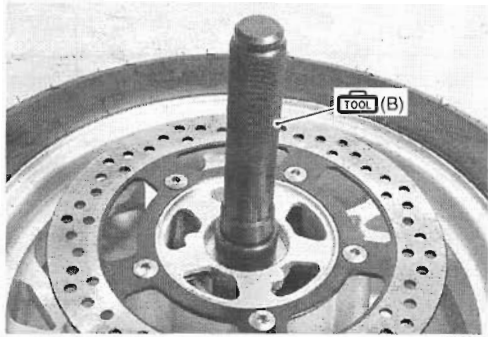
| | |
|-----------|----------------|
| 1. Spacer | "a": Clearance |
|-----------|----------------|

2D-8 Wheels and Tires:

3) Install the dust seals using the special tool.


Special tool

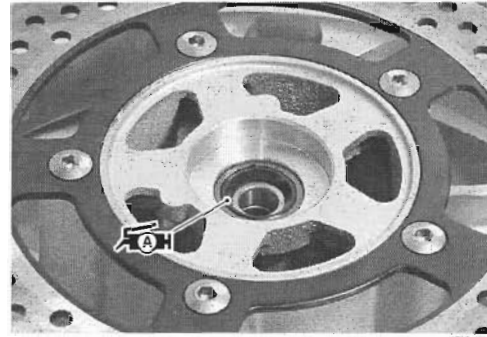
 (B): 09913-70210 (Bearing installer set)



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4) Apply grease to the lip of dust seals.

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

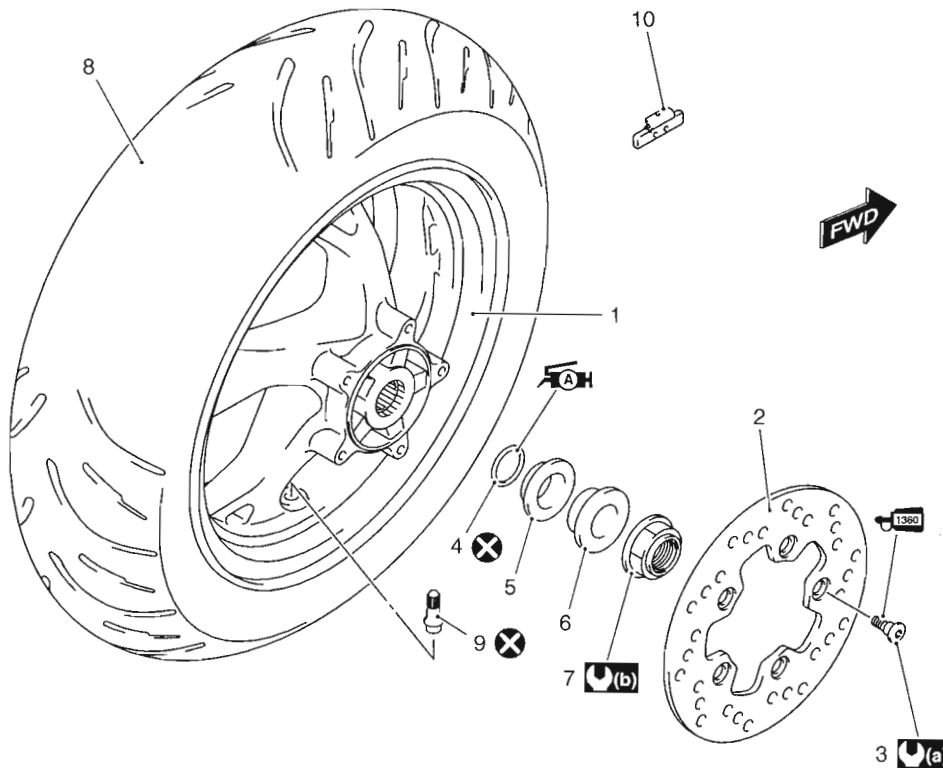


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

5) Install the front wheel assembly. Refer to "Front Wheel Assembly Removal and Installation (Page 2D-4)".

Rear Wheel Components

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| | | |
|--------------------|--------------------|--|
| 1. Rear wheel | 6. Collar |  (a) : 23 N·m (2.3 kgf·m, 16.5 lb-ft) |
| 2. Brake disc | 7. Rear axle nut |  (b) : 120 N·m (12.0 kgf·m, 87.0 lb-ft) |
| 3. Brake disc bolt | 8. Tire |  : Apply grease. |
| 4. O-ring | 9. Air valve |  : Apply thread lock to thread part. |
| 5. Collar | 10. Wheel balancer |  : Do not reuse. |

Rear Wheel Assembly Removal and Installation

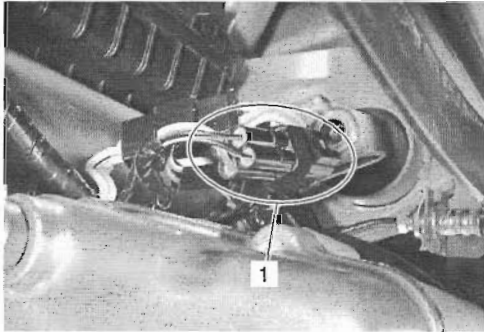
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Refer to "Exhaust Pipe / Muffler Removal and Installation in Section 1K (Page1K-2)".

Refer to "Rear Brake Caliper Removal and Installation in Section 4C (Page4C-3)".

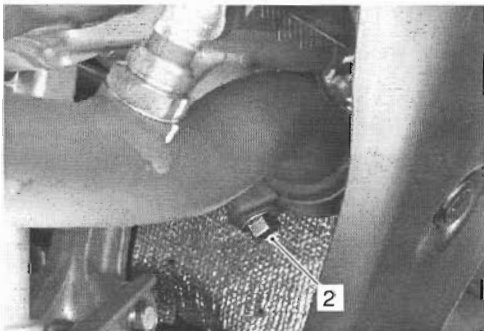
Removal

- 1) Remove the helmet box front cover. Refer to "Helmet Box Front Cover Removal and Installation in Section 9D (Page9D-16)".
- 2) Disconnect the HO2 sensor lead wire coupler (1).



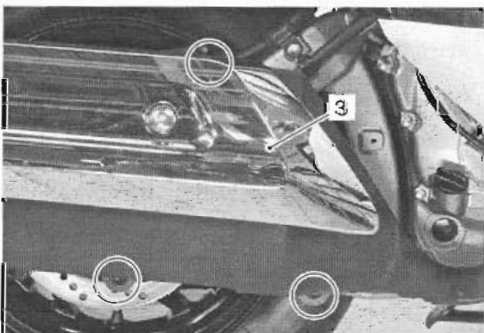
I705H1240016-02

- 3) Remove the exhaust pipe connecting bolt (2).



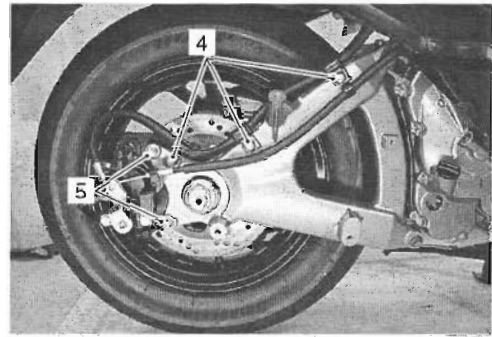
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- 4) Remove the muffler (3).



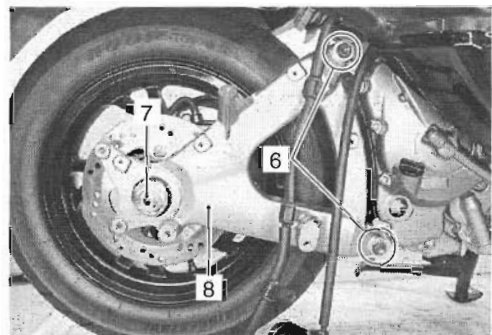
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- 5) Remove the rear brake hose clamps (4) and rear brake caliper (5).



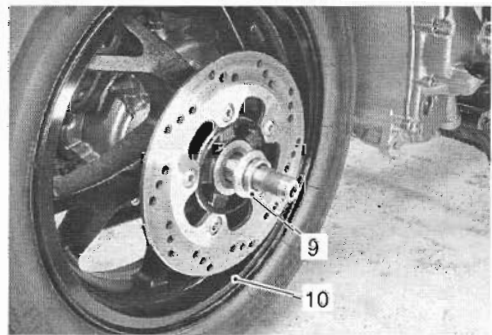
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- 6) Remove the rear swingarm mounting bolts (6), rear axle nut (7) and remove the rear swing arm (8).



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- 7) Remove the inner color (9) and the rear wheel (10).



I705H1240020-01

⚠ CAUTION

Do not operate the brake lever while removing the rear wheel.

2D-10 Wheels and Tires:

Installation

Refer to "Rear Wheel Related Parts Inspection (Page2D-11)" and "Wheel/Tire/Air Valve Inspection and Cleaning (Page2D-13)"

Install the rear wheel in the reverse order of removal. Pay attention to the following points:

- Install the rear swingarm mounting bolts and rear wheel nut temporarily.
- Tighten the rear swingarm mounting bolts (1) to the specified torque.

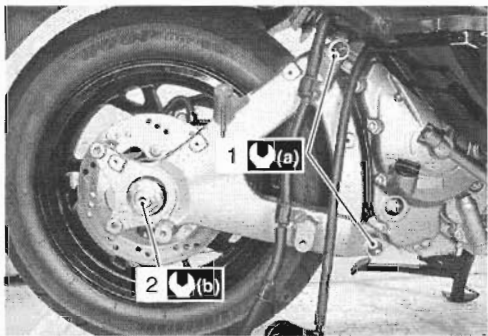
Tightening torque

Rear swingarm mounting bolt (a): 50 N·m (5.0 kgf-m, 36.0 lb-ft)

- Tighten the rear wheel nut (2) to the specified torque.

Tightening torque

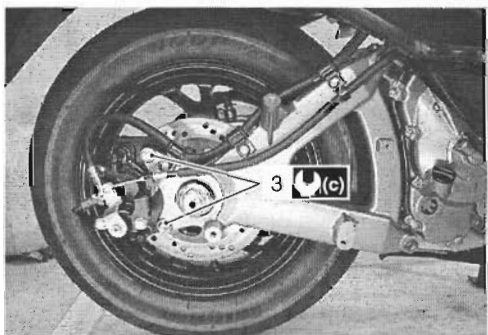
Rear wheel nut (b): 120 N·m (12.0 kgf-m, 87.0 lb-ft)



- Tighten the rear brake caliper mounting bolts (3) to the specified torque.

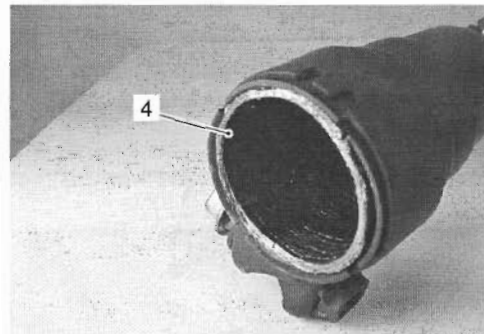
Tightening torque

Rear brake caliper mounting bolt (c): 23 N·m (2.3 kgf-m, 16.5 lb-ft)



⚠ CAUTION

Replace the exhaust pipe connector (4) with a new one.



4. Exhaust pipe connector

- Insert the exhaust pipe connecting bolt and the muffler mounting bolt temporarily.
- Tighten the exhaust pipe connecting bolts (5) to the specified torque.

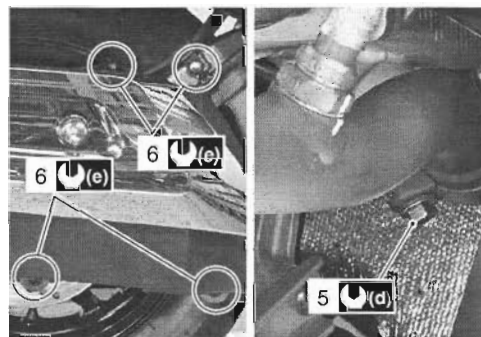
Tightening torque

Exhaust pipe connecting bolt (d): 23 N·m (2.3 kgf-m, 16.5 lb-ft)

- Tighten the muffler mounting bolts (6) to the specified torque.

Tightening torque

Muffler mounting bolt (e): 23 N·m (2.3 kgf-m, 16.5 lb-ft)



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Rear Wheel Related Parts Inspection

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Refer to "Rear Wheel Assembly Removal and Installation (Page2D-9)".

Refer to "Rear Wheel Components (Page2D-8)".
Inspect the rear wheel related parts.

Tire

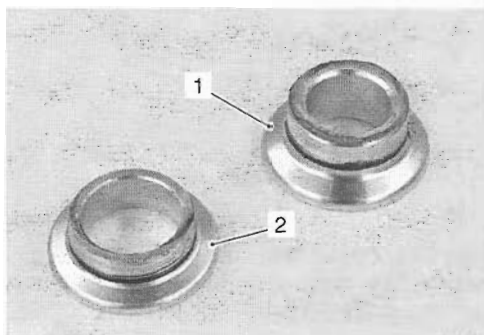
Refer to "Tire Inspection in Section 0B (Page0B-15)".

Rear Brake Disc

Refer to "Rear Brake Disc Removal and Installation in Section 4C (Page4C-9)".

Collar

Inspect the collars for wear or damage. If any defects are found, replace it with a new one.



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- | |
|-------------------------------------|
| 1. Collar for lock-nut (Outer side) |
| 2. Collar for wheel (Inner side) |

Rear Swingarm

Refer to "Rear Suspension Components in Section 2C (Page2C-1)".

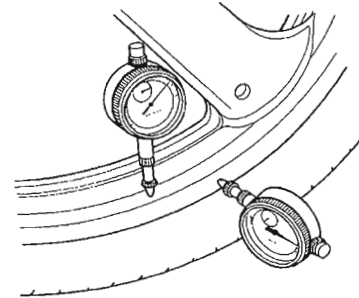
Wheel

Make sure that the wheel runout checked as shown does not exceed the service limit. An excessive runout is usually due to worn or loosened wheel bearings and can be reduced by replacing the bearings. If bearing replacement fails to reduce the runout, replace the wheel.

Wheel runout

Service limit (Axial and Radial): 2.0 mm (0.08 in)

Wheel clean and check. Refer to "Wheel/Tire/Air Valve Inspection and Cleaning (Page2D-13)".



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Tire Removal and Installation

B705H22406009

Removal

The most critical factor of a tubeless tire is the seal between the wheel rim and the tire bead. For this reason, it is recommended to use a tire changer that can satisfy this sealing requirement and can make the operation efficient as well as functional.

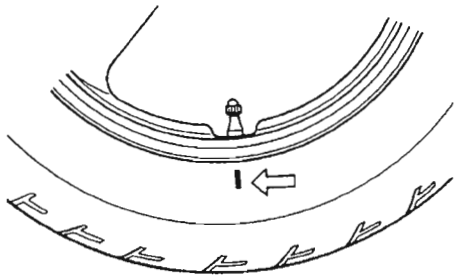
- 1) Remove the wheel assembly. Refer to "Front Wheel Assembly Removal and Installation (Page2D-4)" and "Rear Wheel Assembly Removal and Installation (Page2D-9)".
- 2) Remove the valve core.
- 3) Remove the tire using the tire changer.

⚠ CAUTION

For operating procedures, refer to the instructions supplied by the tire changer manufacturer.

NOTE

When removing the tire in case of repair or inspection, mark the tire with a chalk to indicate the tire position relative to the valve position. Even though the tire is refitted to the original position after repairing puncture, the tire may have to be balanced again since such a repair can cause imbalance.



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Installation

⚠ CAUTION

Do not reuse the air valve which has been once removed.

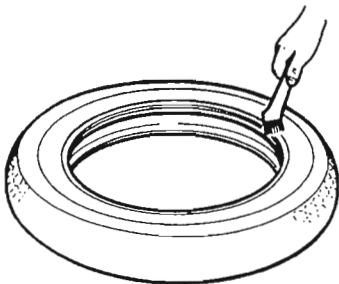
NOTE

It is recommended to replace the air valve with a new one together with a tire replacement.

- 1) Apply tire lubricant to the tire bead.

⚠ CAUTION

Never use oil, grease or gasoline on the tire bead in place of tire lubricant.



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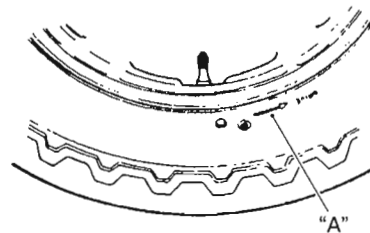
- 2) Install the tire onto the wheel.

⚠ CAUTION

For installation procedures of tire onto the wheel, follow the instructions given by the tire changer manufacturer.

NOTE

- When installing the tire, the arrow "A" on the side wall should point to the direction of wheel rotation.
- Align the chalk mark put on the tire at the time of removal with the valve position.



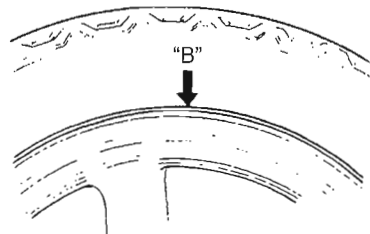
I649G1240039-01

- 3) Bounce the tire several times while rotating. This makes the tire bead expand outward to contact the wheel, thereby facilitating air inflation.
- 4) Install the valve core and inflate the tire.

⚠ WARNING

- Do not inflate the tire to more than 400 kPa (4.0 kgf/cm²). If inflated beyond this limit, the tire can burst and possibly cause injury. Do not stand directly over the tire while inflating.
- In the case of preset pressure air inflator, pay special care for the set pressure adjustment.

- 5) In this condition, check the "grim line" "B" cast on the tire side walls. The line must be equidistant from the wheel rim all around.
- 6) If the distance between the rim line and wheel rim varies, this indicates that the bead is not properly seated. If this is the case, deflate the tire completely and unseat the bead for both sides. Coat the bead with lubricant and fit the tire again.



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- 7) When the bead has been fitted properly, adjust the pressure to specification.
- 8) As necessary, adjust the tire balance. Refer to "Wheel Balance Check and Adjustment (Page2D-14)".

Cold inflation tire pressure

| | Front | Rear |
|-------------|--|--|
| Solo riding | 175 kPa (1.75 kgf/cm ²) | 200 kPa (2.00 kgf/cm ²) |
| Dual riding | 175 kPa (1.75 kgf/cm ²) | 250 kPa (2.50 kgf/cm ²) |

- 9) Install the wheel assembly. Refer to "Front Wheel Assembly Removal and Installation (Page2D-4)" and "Rear Wheel Assembly Removal and Installation (Page2D-9)".

Wheel/Tire/Air Valve Inspection and Cleaning

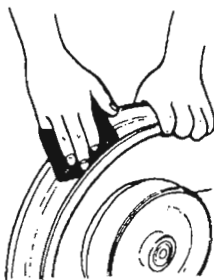
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Refer to "Tire Removal and Installation (Page2D-11)".

Wheel

Wipe the wheel clean and check for the following points:

- Distortion and crack
- Any flaws and scratches at the bead seating area.
- Wheel rim runout. Refer to "Front Wheel Assembly Removal and Installation (Page2D-4)" and "Rear Wheel Assembly Removal and Installation (Page2D-9)".



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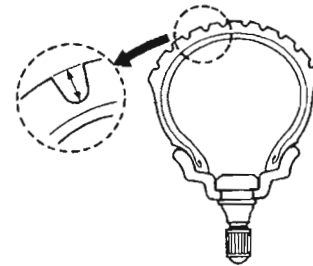
Tire

Tire must be checked for the following points:

- Nick and rupture on side wall
- Tire tread depth (Refer to "Tire Inspection in Section 0B (Page0B-15)".)
- Tread separation
- Abnormal, uneven wear on tread
- Surface damage on bead
- Localized tread wear due to skidding (Flat spot)
- Abnormal condition of inner liner



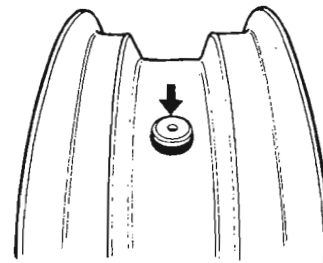
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Air Valve

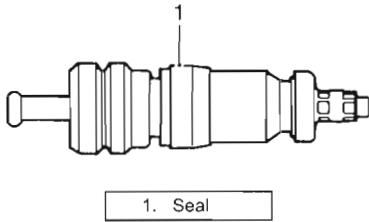
Inspect the air valve for peeling and damage. If any defect is found, replace the air valve with a new one. Refer to "Air Valve Removal and Installation (Page2D-14)".



I649G1240044-01

2D-14 Wheels and Tires:

Inspect the valve core seal (1) for wear and damage. If any defect is found, replace the valve core with a new one. Refer to "Air Valve Removal and Installation (Page2D-14)".



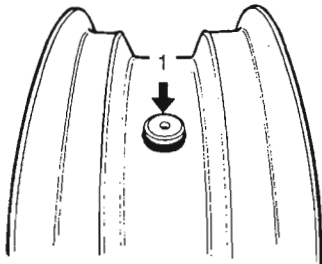
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Air Valve Removal and Installation

B705H22406011

Removal

- 1) Remove the wheel assembly. Refer to "Front Wheel Assembly Removal and Installation (Page2D-4)" and "Rear Wheel Assembly Removal and Installation (Page2D-9)".
- 2) Remove the tire. Refer to "Tire Removal and Installation (Page2D-11)".
- 3) Remove the air valve (1) from the wheel.

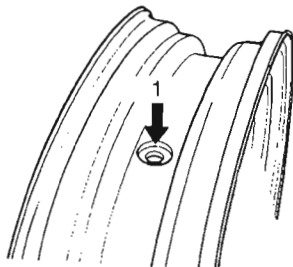


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Installation

Install the air valve in the reverse order of removal. Pay attention to the following points:

- Any dust or rust around the valve hole (1) must be cleaned off.



I705H1240032-01

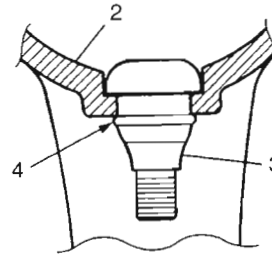
- Install the air valve in the wheel.

⚠ CAUTION

- Be careful not to damage the lip of valve.
- Replace the air valve with a new one.

NOTE

To properly install the valve into the valve hole, apply a special tire lubricant or neutral soapy liquid to the valve.



I705H1240033-01

Wheel Balance Check and Adjustment

B705H22406012

Check and adjust the wheel balance in the following procedures:

- 1) Remove the wheel assembly. Refer to "Front Wheel Assembly Removal and Installation (Page2D-4)" and "Rear Wheel Assembly Removal and Installation (Page2D-9)".
- 2) Check the wheel balance using the balancer and adjust the wheel balance if necessary.

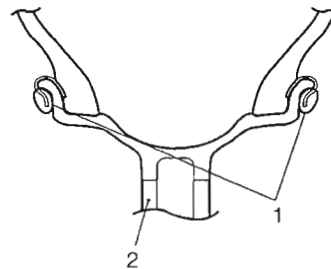
⚠ CAUTION

For operating procedures, refer to the instructions supplied by the wheel balancer manufacturer.

- 3) When installing the balancer weights (1) to the wheel (2), set the two balancer weights on both sides of wheel rim.

⚠ CAUTION

Weight difference between the two balancer weights must be less than 10 g.



I649G1240049-01

- 4) Recheck the wheel balance.
- 5) Install the wheel assembly. Refer to "Front Wheel Assembly Removal and Installation (Page2D-4)" and "Rear Wheel Assembly Removal and Installation (Page2D-9)".

Specifications

Service Data

B705H22407001

Wheel

Unit: mm (in)

| Item | Standard | | Limit |
|-------------------|----------|-----------------|-------------|
| | | | |
| Wheel rim runout | Axial | — | 2.0 (0.08) |
| | Radial | — | 2.0 (0.08) |
| Wheel axle runout | Front | — | 0.25 (0.01) |
| | Rear | — | 0.25 (0.01) |
| Wheel rim size | Front | 14 M/C x MT3.00 | — |
| | Rear | 13 M/C x MT4.00 | — |

Tire

| Item | Standard | | Limit | |
|--------------------------------------|-------------|-----------------------|---|---|
| | | | | |
| Cold inflation tire pressure | Solo riding | Front | 175 kPa (1.75 kgf/cm ² , 25 psi) | — |
| | | Rear | 200 kPa (2.00 kgf/cm ² , 29 psi) | — |
| | Dual riding | Front | 175 kPa (1.75 kgf/cm ² , 25 psi) | — |
| | | Rear | 250 kPa (2.50 kgf/cm ² , 36 psi) | — |
| Tire size | Front | 120/80-14M/C 58S | — | |
| | Rear | 150/70-13M/C 64S | — | |
| Tire type | Front | BRIDGESTONE HOOP B03G | — | |
| | Rear | BRIDGESTONE HOOP B02G | — | |
| Tire tread depth (Recommended depth) | Front | — | 1.6 mm (0.06 in) | |
| | Rear | — | 2.0 mm (0.08 in) | |

Tightening Torque Specifications

B705H22407002

| Fastening part | Tightening torque | | | Note |
|-----------------------------------|-------------------|-------|-------|--------------|
| | N·m | kgf·m | lb·ft | |
| Front axle | 65 | 6.5 | 47.0 | ☞(Page2D-5) |
| Front brake caliper mounting bolt | 35 | 3.5 | 25.5 | ☞(Page2D-5) |
| Front axle pinch bolt | 23 | 2.3 | 16.5 | ☞(Page2D-5) |
| Rear swingarm mounting bolt | 50 | 5.0 | 36.0 | ☞(Page2D-10) |
| Rear wheel nut | 120 | 12.0 | 87.0 | ☞(Page2D-10) |
| Rear brake caliper mounting bolt | 23 | 2.3 | 16.5 | ☞(Page2D-10) |
| Exhaust pipe connecting bolt | 23 | 2.3 | 16.5 | ☞(Page2D-10) |
| Muffler mounting bolt | 23 | 2.3 | 16.5 | ☞(Page2D-10) |

NOTE

The specified tightening torque is also described in the following.

“Front Wheel Components (Page2D-2)”

“Front Wheel Assembly Construction (Page2D-3)”

“Rear Wheel Components (Page2D-8)”

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

B705H22408001

| Material | SUZUKI recommended product or Specification | | Note |
|----------|---|--------------------|-------------------------|
| Grease | SUZUKI SUPER GREASE A or equivalent | P/No.: 99000-25010 | (Page2D-7) / (Page2D-8) |

NOTE

Required service material is also described in the following.

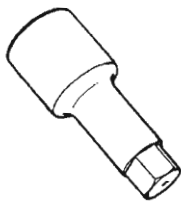
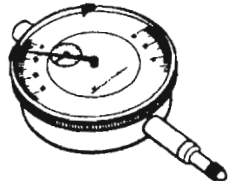
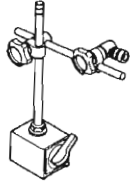
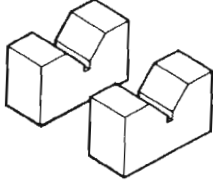
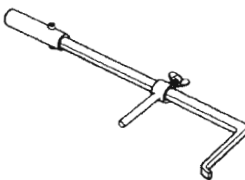

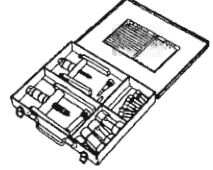

“Front Wheel Components (Page2D-2)”

“Front Wheel Assembly Construction (Page2D-3)”

“Rear Wheel Components (Page2D-8)”

Special Tool

B705H22408002

| | | | |
|---|---|---|---|
| 09900-18710 Hexagon socket (12 mm) (Page2D-5) |  | 09900-20607 Dial gauge (1/100 mm, 10 mm) (Page2D-6) |  |
| 09900-20701 Magnetic stand (Page2D-6) |  | 09900-21304 V-block (100 mm) (Page2D-6) |  |
| 09913-50121 Oil seal remover (Page2D-6) |  | 09913-70210 Bearing installer set (Page2D-8) |  |
| 09921-20240 Bearing remover set (Page2D-7) |  | 09941-34513 Steering race installer (Page2D-7) |  |