

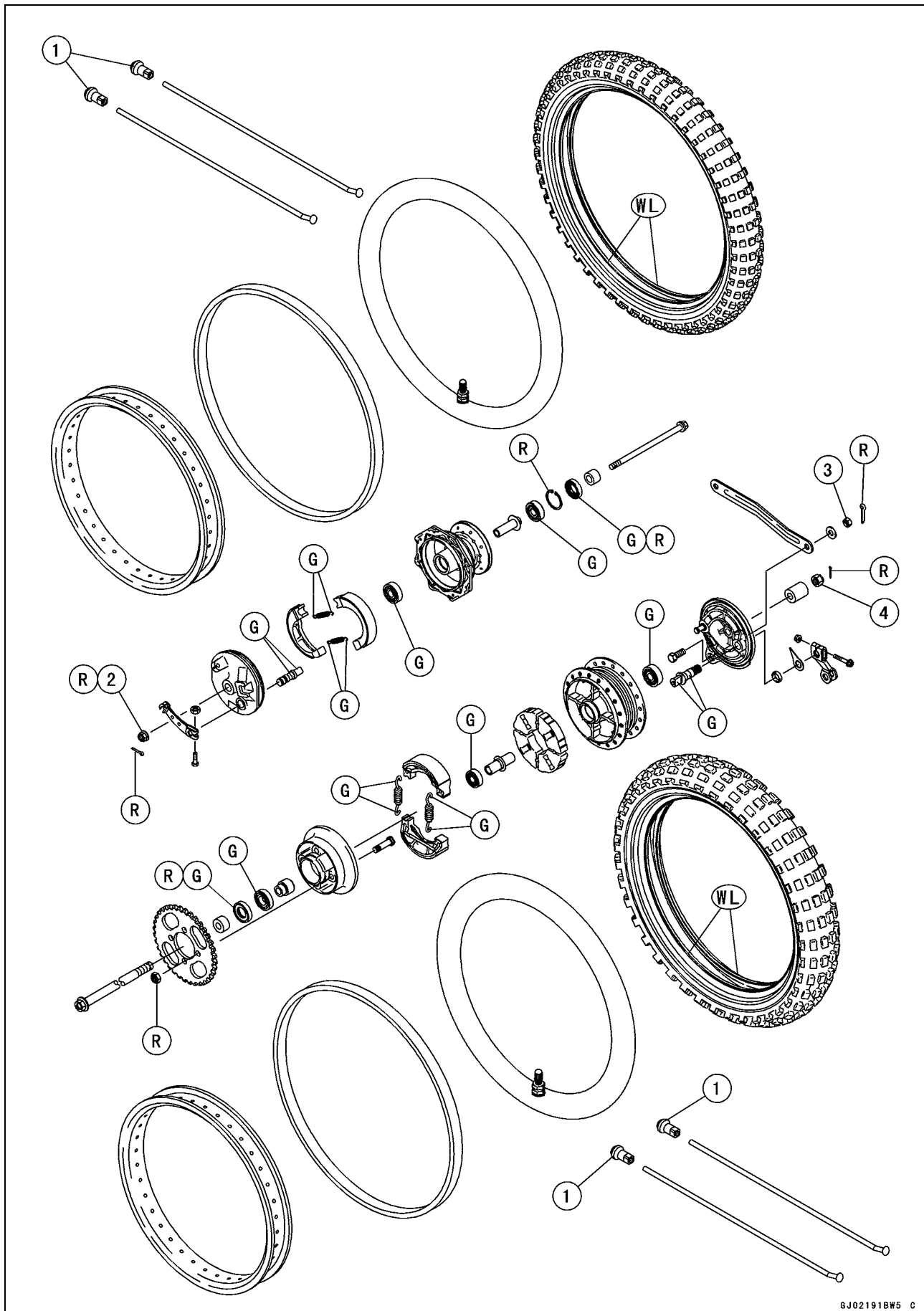
Wheels/Tires

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9-2 WHEELS/TIRES

Exploded View



Exploded View

No.	Fastener	Torque			Remarks
		N·m	kgf·m	ft·lb	
1	Spoke Nipples	4.0	0.41	35 in·lb	
2	Front Axle Nut	44	4.5	32	R
3	Torque Link Nuts	25	2.5	18	
4	Rear Axle Nut	64	6.5	47	

G: Apply grease.

R: Replacement Parts

WL: Apply soap and water solution, or rubber lubricant.

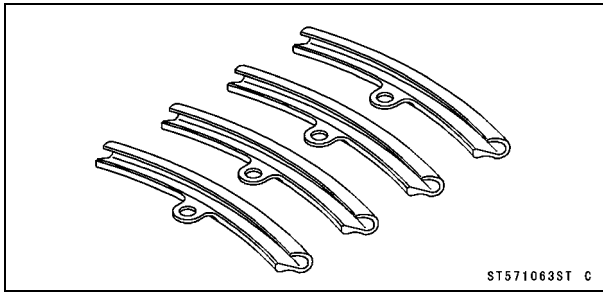
9-4 WHEELS/TIRES

Specifications

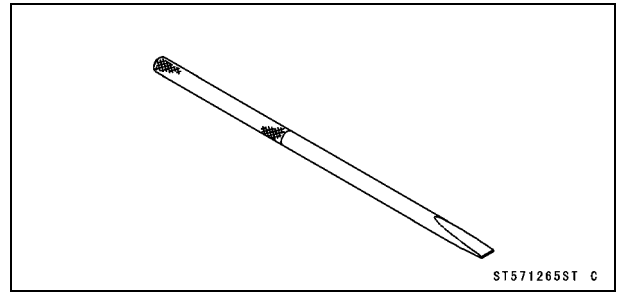
Item	Standard	Service Limit
Wheels (Rims)		
Rim Size:		
Front	14 × 1.40	- - -
Rear	12 × 1.60	- - -
Rim Runout:		
Axial	TIR 0.8 mm (0.031 in.) or less	TIR 2.0 mm (0.08 in.)
Radial	TIR 1.2 mm (0.047 in.) or less	TIR 2.0 mm (0.08 in.)
Front Axle Runout/100 mm (3.94 in.)	TIR 0.1 mm (0.004 in.) or less	TIR 0.2 mm (0.008 in.)
Rear Axle Runout/110 mm (4.33 in.)	TIR 0.1 mm (0.004 in.) or less	TIR 0.2 mm (0.008 in.)
Tires		
Air Pressure (when cold):		
Front and Rear	100 kPa (1.0 kgf/cm ² , 14 psi)	- - -
Standard Tire:		
Front:		
Size	2.50-14 4P.R.	- - -
Make	IRC	- - -
Type	GS-45F	- - -
Rear:		
Size	3.00-12 4P.R.	- - -
Make	IRC	- - -
Type	GS-45F	- - -

Special Tools

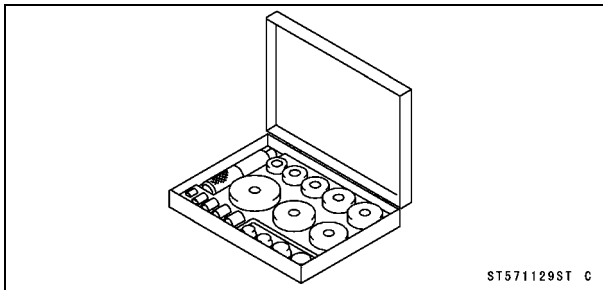
Rim Protector:
57001-1063



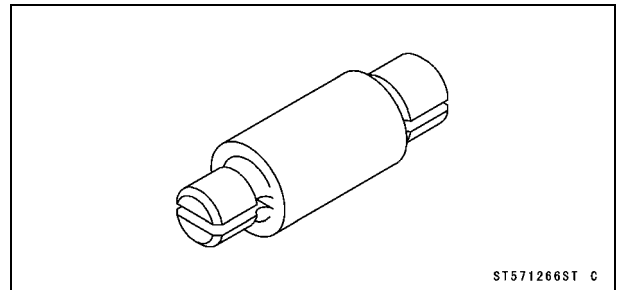
Bearing Remover Shaft, $\phi 9$:
57001-1265



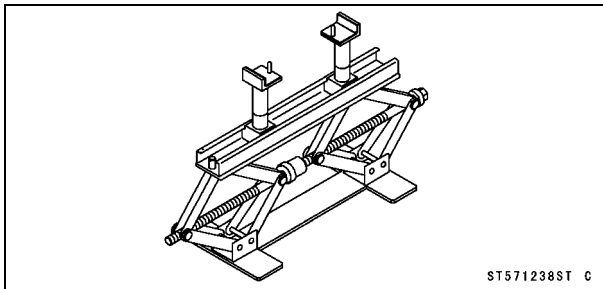
Bearing Driver Set:
57001-1129



Bearing Remover Head, $\phi 10 \times \phi 12$:
57001-1266



Jack:
57001-1238

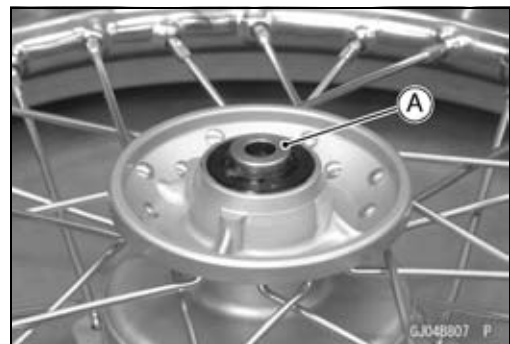
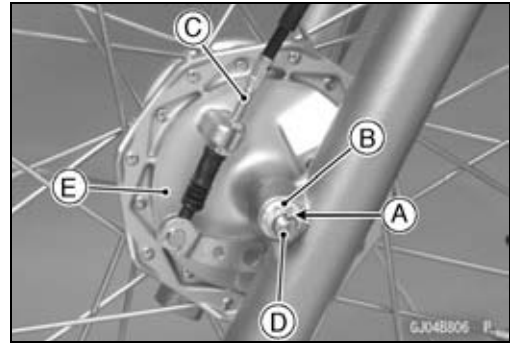


9-6 WHEELS/TIRES

Wheels (Rims)

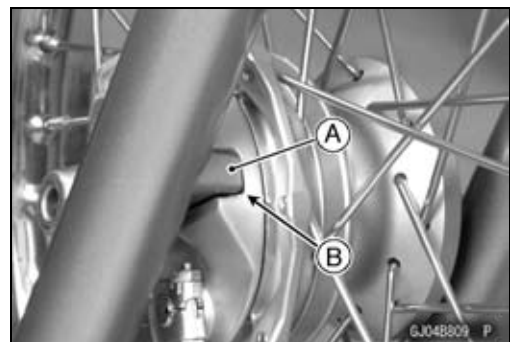
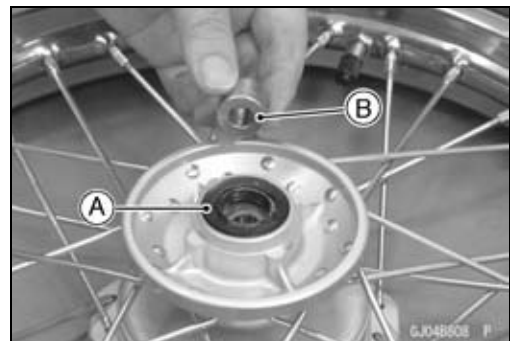
Front Wheel Removal

- Stabilize the motorcycle with the jack.
 - **Special Tool - Jack: 57001-1238**
- Apply the rear brake so that the rear wheel does not turn.
- Remove:
 - Cotter Pin [A]
 - Front Axle Nut [B]
- Raise the front wheel off the ground with the jack.
- Remove:
 - Front Brake Cable [C] (see Brake Cable Removal in the Brakes chapter)
 - Front Axle [D]
 - Front Wheel
 - Front Brake Panel [E]
- Remove the collar [A] on the right side of the hub.



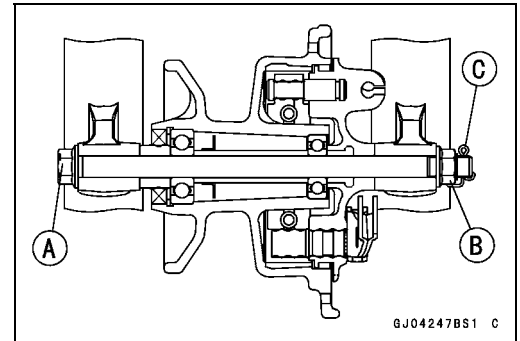
Front Wheel Installation

- Apply high-temperature grease to the oil seal [A].
- Install the collar [B] on the right side of the hub.
- Install the front brake panel.
- Fit the tongue [A] on the fork leg into the groove [B] on the front brake panel.



Wheels (Rims)

- Replace the axle nut [B] with a new one.
- Insert the axle [A] from right side, and tighten the axle nut.
Torque - Front Axle Nut: 44 N·m (4.5 kgf·m, 32 ft·lb)
- Insert a new cotter pin [C] to the front axle, and bend it to both sides.

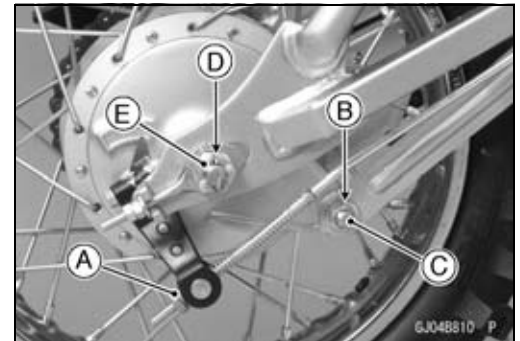


- Install the front brake cable and adjust the brake lever free play (see Brake Lever Free Play Adjustment in the Periodic Maintenance chapter).
- Remove the jack.

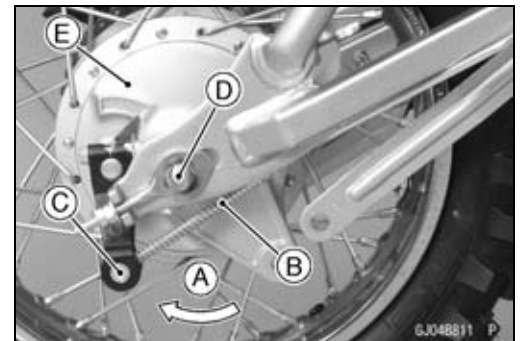
Rear Wheel Removal

- Raise the rear wheel off the ground with the jack.
Special Tool - Jack: 57001-1238

- Remove:
 - Adjusting Nut [A]
 - Cotter Pin [B]
 - Rear Torque Link Nut [C], Washer and Bolt
 - Cotter Pin [D]
 - Rear Axle Nut [E]



- To remove the brake rod end from the brake cam lever, first turn the brake panel clockwise [A] as far as it will go, then depress the brake pedal lightly, the brake rod [B] will be separated from the brake cam lever joint [C].
- Remove the rear axle [D].
- Disengage the drive chain from the rear sprocket.
- Hang the chain on the swingarm.
- Remove:
 - Rear Wheel
 - Rear Brake Panel [E]
- Remove the collar [A] on the left side of the hub.

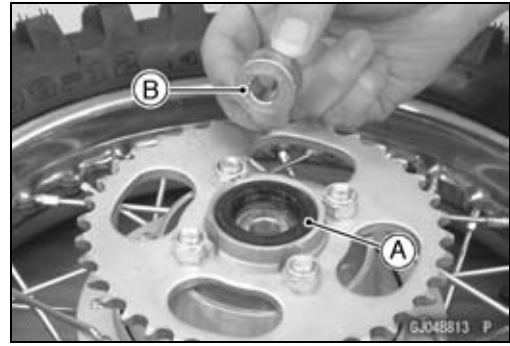


9-8 WHEELS/TIRES

Wheels (Rims)

Rear Wheel Installation

- Apply high-temperature grease to the oil seal [A].
- Install the collar [B] on the left side of the hub.
- Install the rear brake panel.
- Engage the drive chain with the rear sprocket, and set the rear wheel to the motorcycle.
- Insert the axle from the left side.
- Turn the brake panel clockwise until the brake cam lever joint goes beyond the brake rod end then insert the brake rod end into the joint hole.



NOTICE

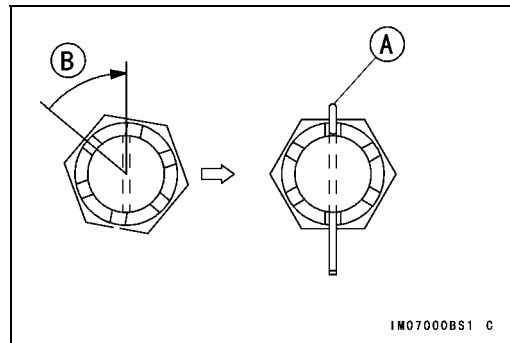
Do not insert the brake rod into the cam lever joint by depressing the brake pedal deeply, this will extend the brake spring beyond its allowable spring extension.

- Tighten:
Torque - Rear Axle Nut: 64 N·m (6.5 kgf·m, 47 ft·lb)
Torque Link Nut: 25 N·m (2.5 kgf·m, 18 ft·lb)

- Insert a new cotter pin [A].

NOTE

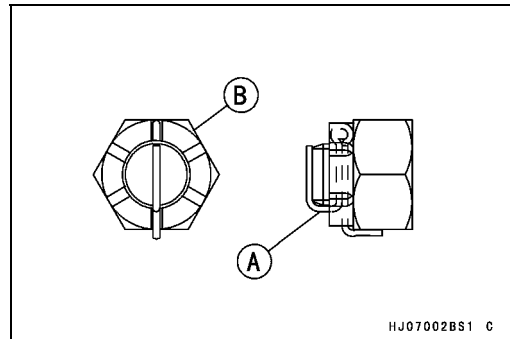
- When inserting the cotter pin, if the slots in the nut do not align with the cotter pin hole in the axle, tighten the nut clockwise [B] up to next alignment.
- It should be within 30 degrees.
- Loosen once and tighten again when the slot goes past the nearest hole.



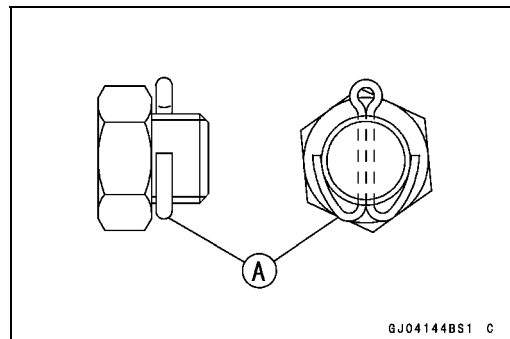
- Bend the cotter pin [A] over the nut [B].

⚠ WARNING

A loose axle nut can lead to an accident resulting in serious injury or death. Tighten the axle nut to the proper torque and install a new cotter pin.



- Insert the cotter pin [A] into the torque link bolt hole and spread its ends.
- Adjust:
Drive Chain Slack (see Drive Chain Slack Adjustment in the Periodic Maintenance chapter)
Brake Pedal Free Play (see Brake Pedal Free Play Adjustment in the Periodic Maintenance chapter)
- Remove the jack.



Wheels (Rims)

Wheels Inspection

- Raise the front/rear wheel off the ground with the jack.

Special Tool - Jack: 57001-1238

- Spin the wheel lightly, and check for roughness or binding.
- ★ If the roughness or binding is found, replace the hub bearings.
- Visually inspect the front and rear axles for damage.
- ★ If the axle is damaged or bent, replace it.

Spoke Tightness Inspection

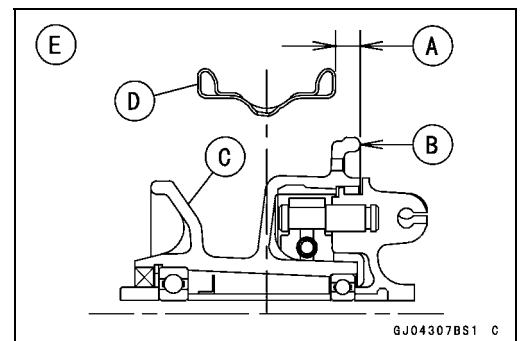
- Refer to the Spoke Tightness Inspection in the Periodic Maintenance chapter.

Rim Runout Inspection

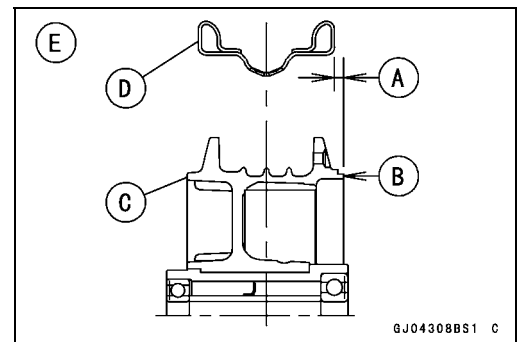
- Refer to the Rim Runout Inspection in the Periodic Maintenance chapter.

Rim Installation Position

- When installing the rim, set the rim following position.
- The distance [A] from the left end [B] of the front hub [C] to left end of the front rim [D] should be as follows.
View from Front [E]
Distance: 9.0 ±0.5 mm (0.35 ±0.020 in.)



- The distance [A] from the right end [B] of the rear hub [C] to right end of the rear rim [D] should be as follows.
View from Rear [E]
Distance: 4.0 ±0.5 mm (0.16 ±0.020 in.)



- Check the rim runout (see Rim Runout Inspection in the Periodic Maintenance chapter).

9-10 WHEELS/TIRES

Wheels (Rims)

Axle Inspection

- Visually inspect the front and rear axle for damages.
- ★ If the axle is damaged or bent, replace it.
- Place the front axle in V blocks that are 100 mm (3.94 in.) (Rear Axle: 110 mm (4.33 in.)) [A] apart, and set a dial gauge [B] on the axle at a point halfway between the blocks. Turn [C] the axle to measure the runout. The difference between the highest and lowest dial readings is the amount of runout.
- ★ If the runout exceeds the service limit, replace the axle.

Front Axle Runout: 100 mm (3.94 in.)

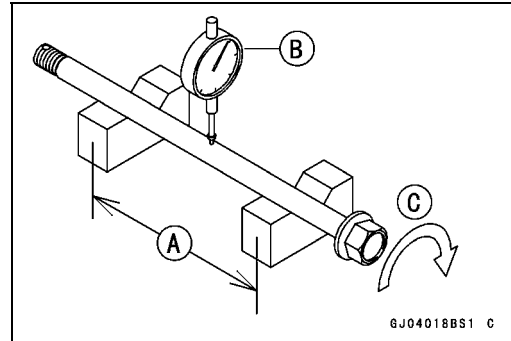
Standard: 0.1 mm (0.004 in.) or less

Service Limit: 0.2 mm (0.008 in.)

Rear Axle Runout: 110 mm (3.94 in.)

Standard: 0.1 mm (0.004 in.) or less

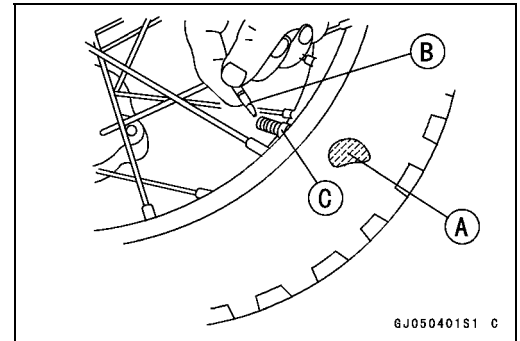
Service Limit: 0.2 mm (0.008 in.)



Tires

Tire Removal

- Remove the wheel (see Front/Rear Wheel Removal).
- To maintain wheel balance, mark [A] the valve stem position on the tire with chalk so that the tire can be reinstalled in the same position.
- Take out the valve core [B] to let out the air.
- Remove the valve stem nut [C].
- When handling the rim, be careful not to damage the rim flanges.



- Lubricate the tire beads and rim flanges on both sides with a soap and water solution or rubber lubricant. This helps the tire beads slip off the rim flanges.

NOTICE

Never lubricate with engine oil or petroleum distillates because they will deteriorate the tire.

- Break the beads away from both sides of the rim with a suitable bead breaker.
- Step on the side of the tire opposite air valve, and pry the tire off the rim with the tire iron [A] protecting the rim with rim protectors [B].

Special Tool - Rim Protector: 57001-1063

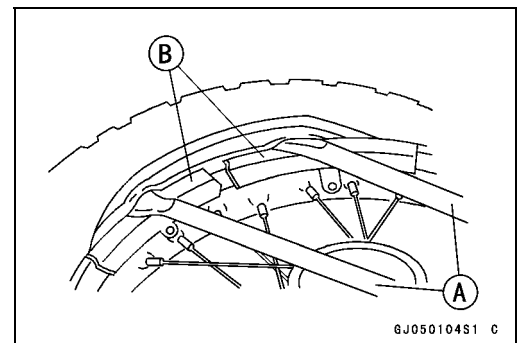
NOTICE

Take care not to insert the tire irons so deeply that the tube gets damaged.

- Remove the tube when one side of the tire is pried off.
- Pry the tire off the rim.
- Remove the rim protector.

Tire Installation

- Inspect the rim and the tire before installing the tire, and replace them if necessary.
- Apply a soap and water solution or rubber lubricant to both the tire bead and the rim flange.



9-12 WHEELS/TIRES

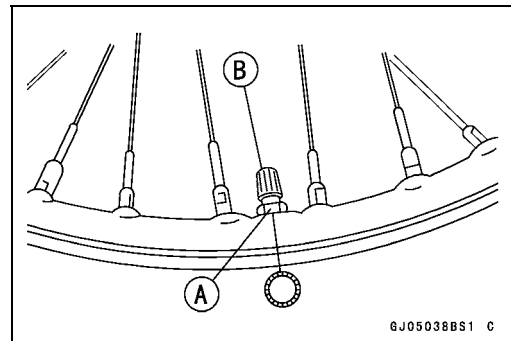
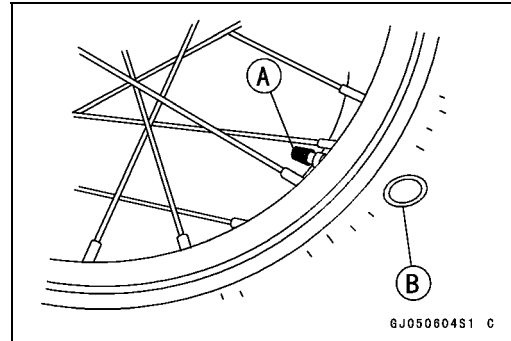
Tires

- Position the tire on the rim so that the air valve [A] is at the tire balance mark [B] (the chalk mark made during removal, or the paint mark on a new tire).
- Insert the valve stem into the rim, and screw the nut on loosely.
- Fit the rim protectors and use suitable tire irons to install the tire bead.

NOTE

○ *To prevent rim damage, be sure to place the rim protectors at any place the tire irons are applied.*

- Replace the tire back on the rim from the opposite side of the valve.
- Insert the tire irons so deeply that the tube is not damaged.
- Similarly, slip the tire bead back over the rim on the other side.
- Check that the tube is not pinched between the tire and rim.
- Tighten the valve stem nut [A], and put on the valve cap [B].
- Check and adjust the air pressure after installing.



Air Pressure Inspection/Adjustment

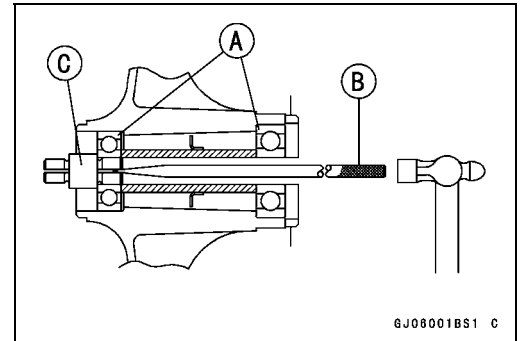
- Refer to the Air Pressure Inspection in the Periodic Maintenance chapter.

Hub Bearings

Hub Bearing Removal

- Remove the wheel (see Front/Rear Wheel Removal).
- To remove the grease seals, pry out the grease seal using a screwdriver.
- Using the bearing remover shaft and bearing remover head, remove the hub bearings [A].

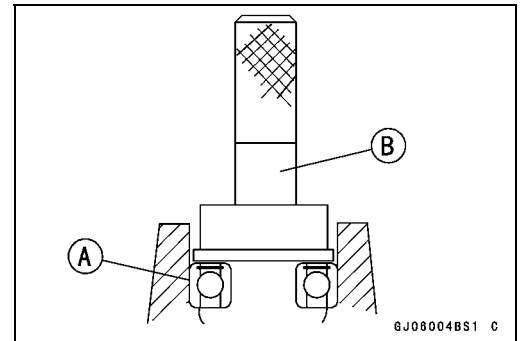
**Special Tools - Bearing Remover Shaft, $\phi 9$: 57001-1265 [B]
 Bearing Remover Head, $\phi 10 \times \phi 12$: 57001-1266 [C]**



Hub Bearing Installation

- Before installing the hub bearings, blow any dirt or foreign particles out the hub with compressed air to prevent contamination of the bearings.
- Replace the bearings with new ones.
- Install the bearings [A] using the bearing driver set [B] so that the marked or shield sides face out.
- Press in the bearings until they bottom out.

Special Tool - Bearing Driver Set: 57001-1129

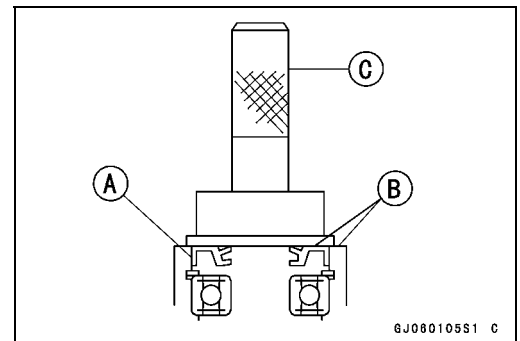


NOTE

○ For correct tire alignment, the right bearing must be installed first rather than left bearing in both front and rear hubs.

- Replace the grease seal [A] with new ones.
- Apply high-temperature grease to the grease seal lips.
- Press in the grease seal so that the seal surface is flush [B] with the end of the hole using the bearing driver set [C].

Special Tool - Bearing Driver Set: 57001-1129



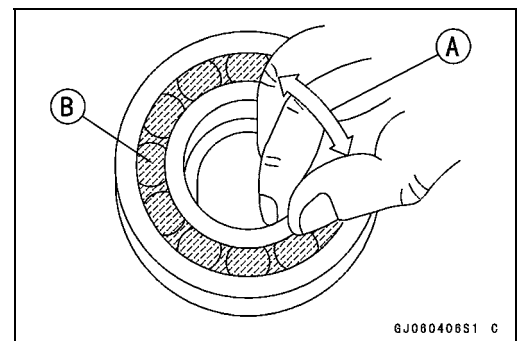
Bearing Inspection

Since the hub bearings are made to extremely close tolerances, the clearance cannot normally be measured.

NOTICE

Do not remove any bearings for inspection. If any bearings are removed, they will need to be replaced with new ones.

- Turn each bearing in the hub back and forth [A] while checking for plays, roughness, or binding. If bearing play, roughness, or binding is found, replace the bearing.
- Examine the bearing seal [B] for damage or leakage.
- ★ If the seal is damaged or is leaking, replace the bearing.



9-14 WHEELS/TIRES

Hub Bearings

Bearing Lubrication

- Remove the hub bearings on the front and rear wheel hubs.
- Wash the bearings with a high flash-point solvent, dry them (do not spin them while they are dry), and oil them.
- Spin each bearings by hand to check its condition.
- ★ If it is noisy, does not spin smoothly, or has any rough spots, it must be replaced.
- If the same bearing is to be used again, re-wash it with a high flash-point solvent, and dry it.
- Pack each bearings with good quality bearing grease [A] before installation. Turn each bearing around by hand a few times to make sure the grease is distributed uniformly inside the bearing, and wipe the old grease out of the bearing housings on the wheel hub before bearing installation.
- Install the bearings.

