

PERIODIC MAINTENANCE

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PERIODIC MAINTENANCE SCHEDULE

The chart below lists the recommended intervals for all the required periodic service work necessary to keep the motorcycle operating at peak performance and economy. Maintenance intervals are expressed in terms of kilometer, miles and months, whichever comes first.

IMPORTANT (USA only):

The periodic maintenance intervals and service requirements have been established in accordance with EPA regulations. Following these instructions will ensure that the motorcycle will not exceed emission standards and it will also ensure the reliability and performance of the motorcycle. The chart below lists the recommended intervals for all the required periodic service work necessary to keep the motorcycle operating at peak performance and economy. Mileages are expressed in terms of kilometer, miles and time for your convenience.

NOTES:

More frequent servicing may be performed on motorcycles that are used under severe conditions.

PERIODIC MAINTENANCE CHART

| Item | Interval | km | 1 000 | 6 000 | 12 000 | 18 000 | 24 000 |
|---|----------|-----------------------------------|-------|-------|--------|--------|--------|
| | | miles | 600 | 4 000 | 7 500 | 11 000 | 15 000 |
| | | months | 1 | 6 | 12 | 18 | 24 |
| Air cleaner element | | - | I | I | R | I | |
| Spark plugs | | - | I | R | I | R | |
| Valve clearance | | I | - | I | - | I | |
| Engine oil | | R | R | R | R | R | |
| Engine oil filter | | R | - | - | R | - | |
| Fuel line | | - | I | I | I | I | |
| | | Replace fuel hose every 4 years. | | | | | |
| Idle speed | | I | I | I | I | I | |
| Evaporative emission control system (E-33 only) | | - | - | I | - | I | |
| | | Replace vapor hose every 4 years. | | | | | |
| PAIR (air supply) system | | - | - | I | - | I | |
| Throttle cable play | | I | I | I | I | I | |
| Clutch | | - | I | I | I | I | |
| Radiator hoses | | - | I | I | I | I | |
| Engine coolant | | Replace every 2 years. | | | | | |
| Final gear oil | | R | - | I | - | I | |
| Brakes | | I | I | I | I | I | |
| Brake hoses | | - | I | I | I | I | |
| | | Replace every 4 years. | | | | | |
| Brake fluid | | - | I | I | I | I | |
| | | Replace every 2 years. | | | | | |
| Tires | | - | I | I | I | I | |
| Steering | | I | - | I | - | I | |
| Front forks | | - | - | I | - | I | |
| Rear suspension | | - | - | I | - | I | |
| Exhaust pipe bolts and muffler bolt and nut | | T | - | T | - | T | |
| Chassis bolts and nuts | | T | T | T | T | T | |

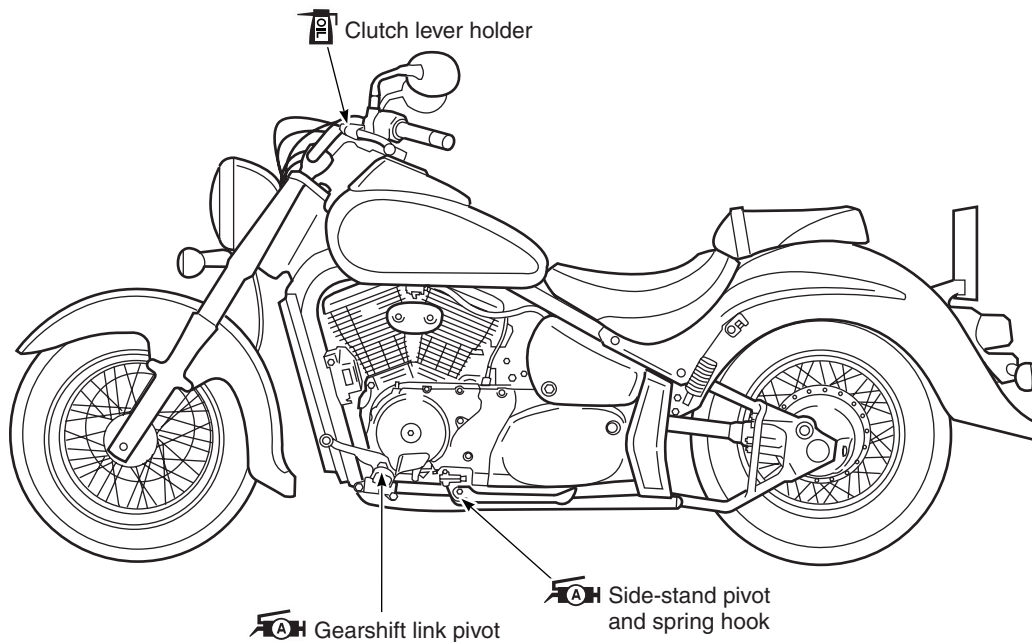
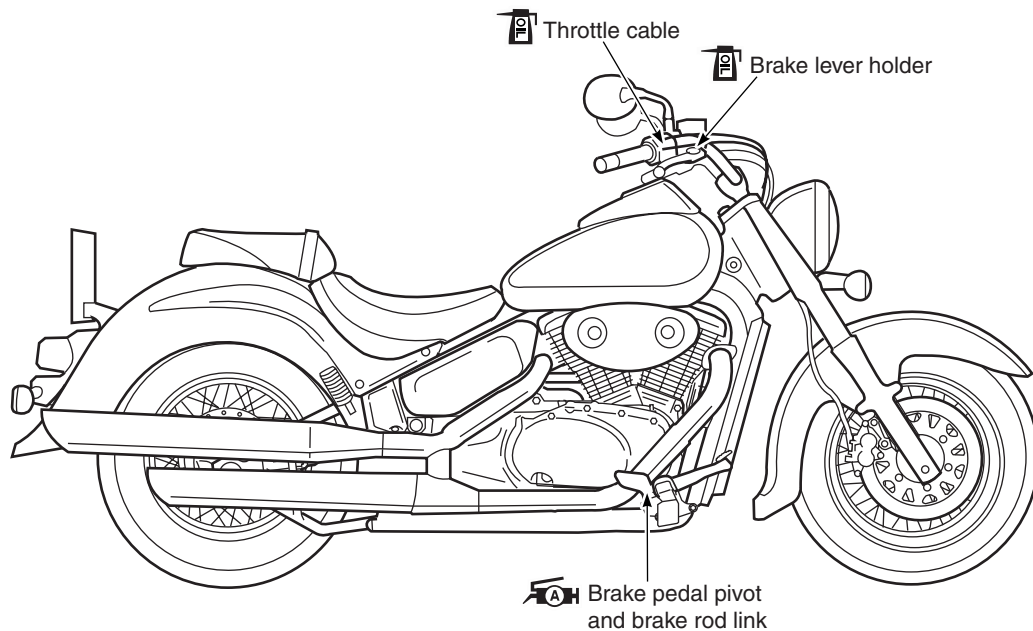
I = Inspect and adjust, clean, lubricate or replace as necessary.

R = Replace

T = Tighten

LUBRICATION POINTS

Proper lubrication is important for smooth operation and long life of each working part of the motorcycle. Major lubrication points are indicated below.



NOTE:

- * Before lubricating each part, clean off any rusty spots and wipe off any grease, oil, dirt or grime.
- * Lubricate exposed parts which are subject to rust, with a rust preventative spray, especially whenever the motorcycle has been operated under wet or rainy conditions.

MAINTENANCE AND TUNE-UP PROCEDURES

This section describes the servicing procedures for each item mentioned in the Periodic Maintenance chart.



AIR CLEANER

- Remove the screws and air cleaner case cover.
- Remove the air cleaner element.



- Carefully use air hose to blow the dust from the cleaner element.

NOTE:

Always apply air pressure on the engine side of the air cleaner element. If air pressure is applied improperly, dirt will be forced into the pores of the air cleaner element thus restricting air flow through the air cleaner element.

- Reinstall the cleaned or new air cleaner element in the reverse order of removal.

NOTE:

If driving under dusty conditions, clean the air cleaner element more frequently. Make sure that the air cleaner is in good condition at all times. The life of the engine depends largely on this component.

- Remove the drain plugs from the air cleaner box to allow any water to drain out.

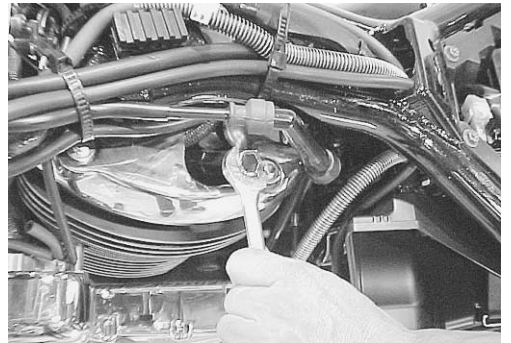


SPARK PLUG

SPARK PLUG AND IGNITION COIL/PLUG CAP REMOVAL

- Remove the front and rear seat. (☞7-2)
- Remove the fuel tank. (☞5-3)

- Remove the spark plug caps.
- Remove the spark plugs with a spark plug wrench.



HEAT RANGE

- Check spark plug heat range by observing electrode color. If the electrode of the spark plug is wet appearing or dark color, replace the spark plug with hotter type one. If it is white or glazed appearing, replace the spark plug with colder type one.

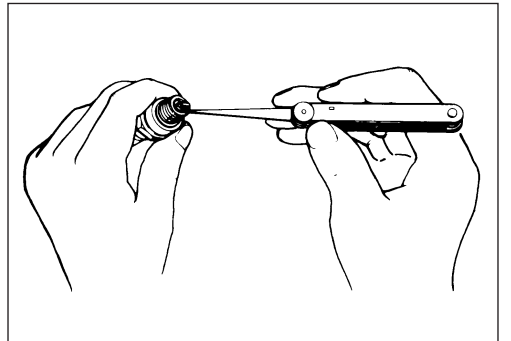
| | NGK | DENSO |
|-------------|----------|-----------|
| Standard | DPR7EA-9 | X22EPR-U9 |
| Colder type | DPR8EA-9 | X24EPR-U9 |

NOTE:

“R” type spark plug has a resistor located at the center electrode to prevent radio noise.

CARBON DEPOSITS

- Check carbon deposits on the spark plug.
- If carbon is deposited, remove it using a spark plug cleaner machine or carefully use a tool with a pointed end.



SPARK PLUG GAP

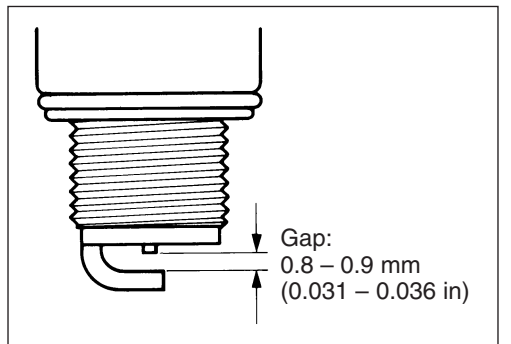
- Measure the spark plug gap with a thickness gauge.
- Adjust the spark plug gap if necessary.

DATA Spark plug gap:
Standard: 0.8 – 0.9 mm (0.031 – 0.036 in)

TOOL 09900-20803: Thickness gauge

ELECTRODE’S CONDITION

- Check the condition of the electrode.
- If it is extremely worn or burnt, replace the spark plug. Replace the spark plug if it has a broken insulator, damaged thread, etc.



▲ CAUTION

Check the thread size and reach when replacing the spark plug. If the reach is too short, carbon will be deposited on the screw portion of the spark plug hole and engine damage may result.

SPARK PLUG AND IGNITION COIL/PLUG CAP INSTALLATION

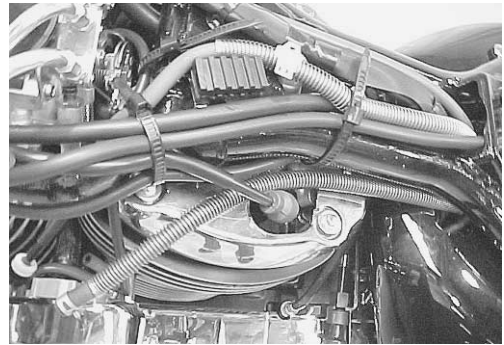
- Install the spark plugs to the cylinder head with fingers, and then tighten them to the specified torque with a wrench.

 Spark plug: 11 N·m (1.1 kgf·m, 8.0 lb-ft)

▲ CAUTION

Do not crossthread or over tighten the spark plug, or the spark plug will damage the aluminum threads of the cylinder head.

- Install the spark plug caps.



VALVE CLEARANCE

Valve clearance must be checked and adjusted when:

- (1) the valve mechanism is service, and
- (2) the camshafts are serviced.

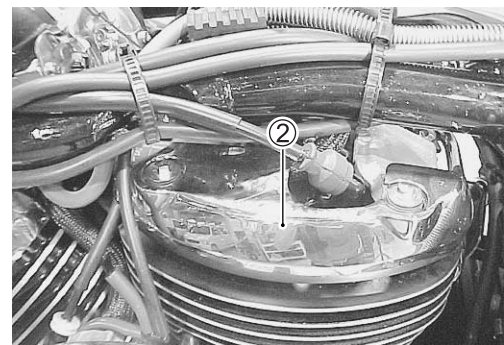
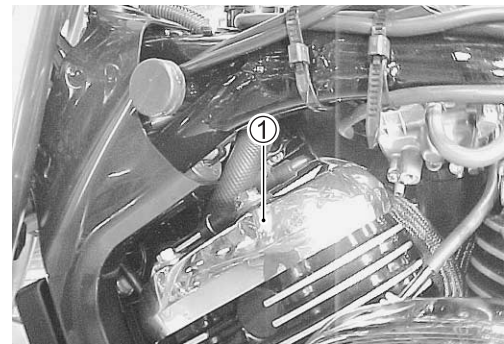
Check and adjust the clearance to the specification.

DATA Valve clearance (when cold): IN. 0.08 – 0.13 mm
(0.003 – 0.005 in)
EX. 0.17 – 0.22 mm
(0.007 – 0.009 in)

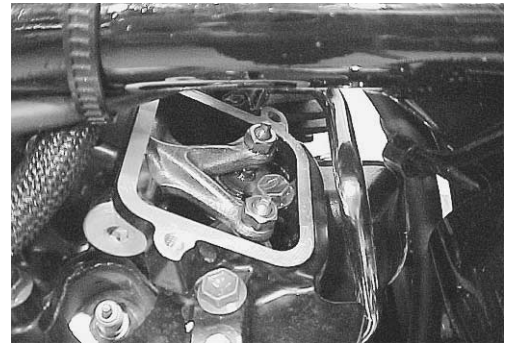
NOTE:

- * The clearance specification is for COLD state.
- * Both intake and exhaust valves must be checked and adjusted when the piston is at Top Dead Center (TDC) of the compression stroke.

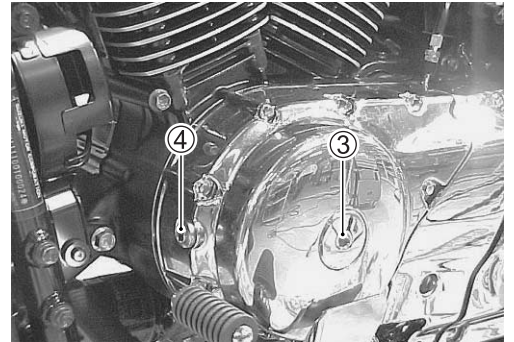
- Remove the front and rear seats. (☞ 7-2)
- Remove the fuel tank. (☞ 5-3)
- Remove the cylinder head cover caps (①, ②).
- Remove the spark plug caps.



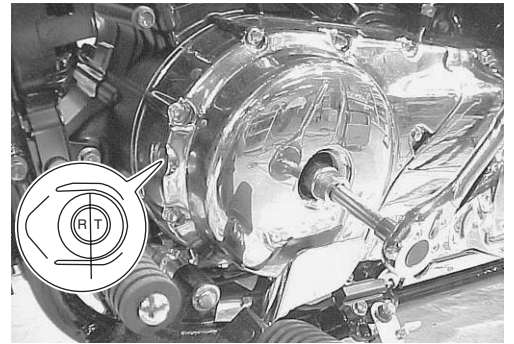
- Remove all the inspection caps.
- Remove all the spark plugs.



- Remove the generator cover plug ③ and the timing inspection plug ④.



- Rotate the generator rotor to set the No.1 engine's piston at TDC of the compression stroke. (Rotate the rotor until the "R I T" line on the rotor is aligned with the center of hole on the generator cover.



- To inspect the No.1 engine's valve clearance, insert the thickness gauge to the clearance between the valve stem end and the adjusting screw on the rocker arms.

TOOL 09900-20806: Thickness gauge

- If the clearance is out of the specification, bring it into the specified range by using the special tool.

TOOL 09917-10410: Valve adjust driver



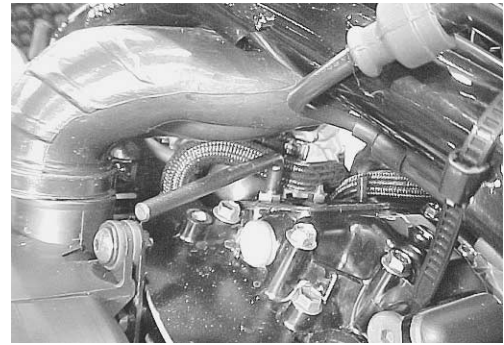
▲ CAUTION

Both right and left valve clearances should be as closely set as possible.

- Rotate the generator rotor 450 degrees (1-¼ turns) and align the "F I T" line on the rotor with the center of hole on the generator cover.

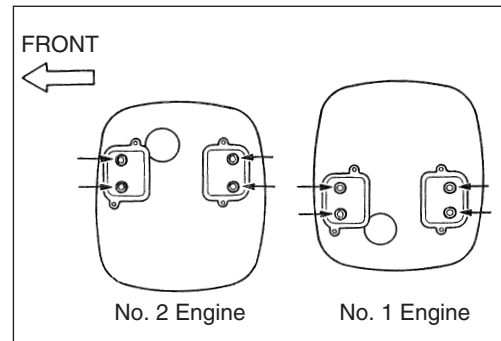


Inspect the No.2 engine's valve clearance as the same manner above.



NOTE:

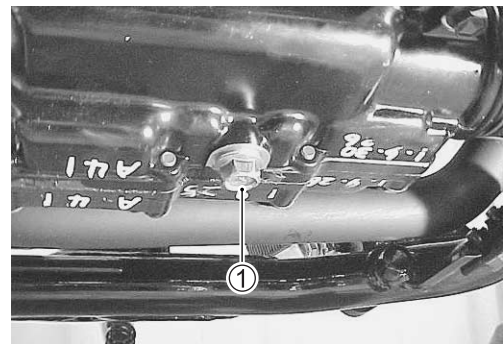
Use the thickness gauge from the arrow marks as shown in the illustration.



ENGINE OIL AND OIL FILTER

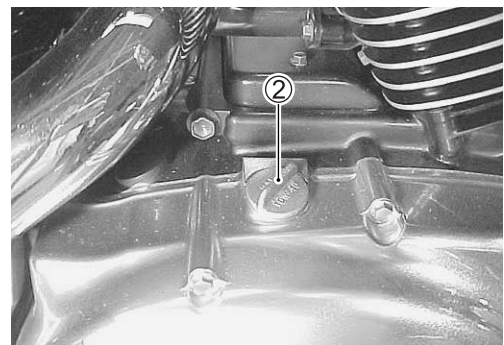
ENGINE OIL REPLACEMENT

- Keep the motorcycle upright.
- Place an oil pan below the engine, and drain oil by removing the oil drain plug ① and filler cap ②.

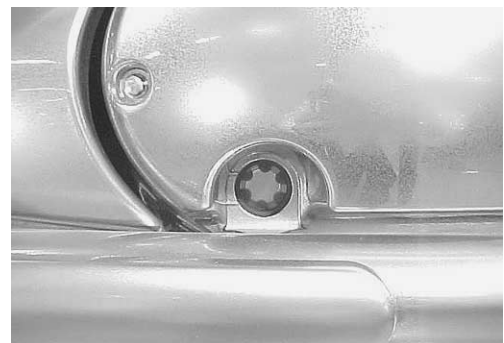


- Tighten the drain plug ① to the specified torque, and pour fresh oil through the oil filler. The engine will hold about 3.0 L (3.2/2.6 US/Imp qt) of oil. Use an API classification of SF or SG oil with SAE 10W/40 viscosity.

 **Oil drain plug: 23 N·m (2.3 kgf·m, 16.5 lb-ft)**



- Start up the engine and allow it to run for several minutes at idling speed.
- Turn off the engine and wait about three minutes, then check the oil level through the inspection window. If the level is below mark “L”, add oil to “F” level. If the level is above mark “F”, drain oil to “F” level.



OIL FILTER REPLACEMENT

- Drain the engine oil as described in the engine oil replacement procedure.
- Remove the oil filter with the special tool.

TOOL 09915-40610: Oil filter wrench

- Apply engine oil lightly to the gasket of the new oil filter before installation.
- Install the new oil filter. Turn it by hand until you feel that the oil filter gasket contacts the oil filter mounting surface. Then, tighten the oil filter two full turns with the special tool.

NOTE:

To properly tighten the oil filter, use the special tool. Never tighten the oil filter by hand.

- Add new engine oil and check the oil level as described in the engine oil replacement procedure.

DATA NECESSARY AMOUNT OF ENGINE OIL:

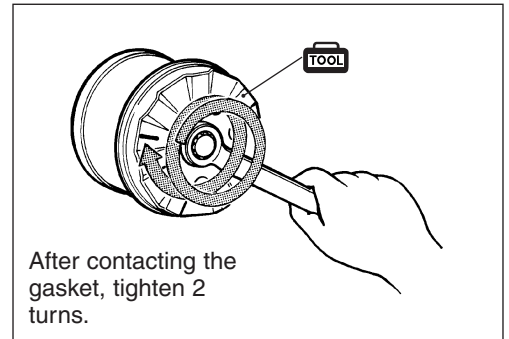
Oil change: 3.0 L (3.2/2.6 US/Imp qt)

Oil and filter change: 3.4 L (3.6/3.0 US/Imp qt)

Engine overhaul: 3.7 L (3.9/3.3 US/Imp qt)

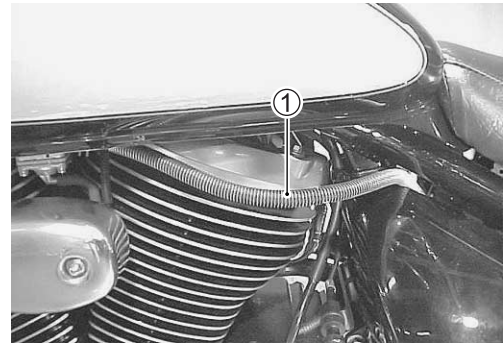
▲ CAUTION

ONLY USE A GENUINE SUZUKI MOTORCYCLE OIL FILTER. Other manufacturer's oil filters may differ in thread specifications (thread diameter and pitch), filtering performance and durability which may lead to engine damage or oil leaks. Also, do not use a genuine Suzuki automobile oil filter on this motorcycle.



FUEL HOSE

Inspect the fuel hose ① for damage and fuel leakage. If any defects are found, replace the fuel hose.



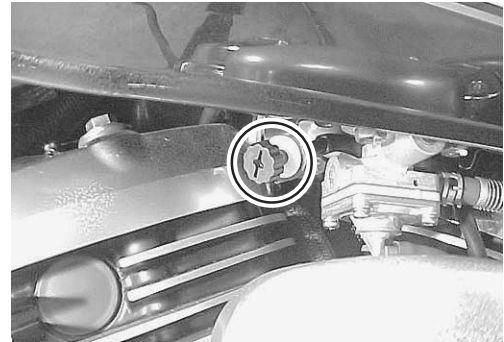
ENGINE IDLE SPEED

NOTE:

Warm up the engine before adjusting the engine idle speed.

- Start the engine, turn the throttle stop screw and set the engine idle speed as follows.

DATA Engine idle speed: $1\ 100 \pm 100$ rpm

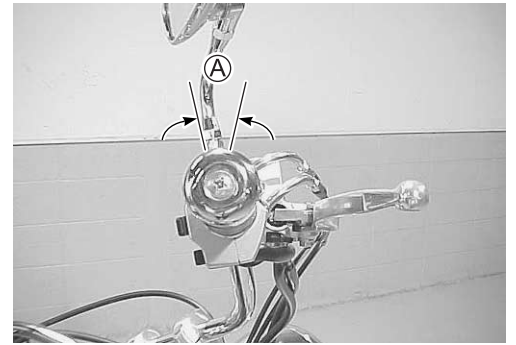


PAIR (AIR SUPPLY) SYSTEM

Inspect the PAIR (air supply) system periodically. (☞ 5-27)

THROTTLE CABLE PLAY

Adjust the throttle cable play \textcircled{A} as follows.



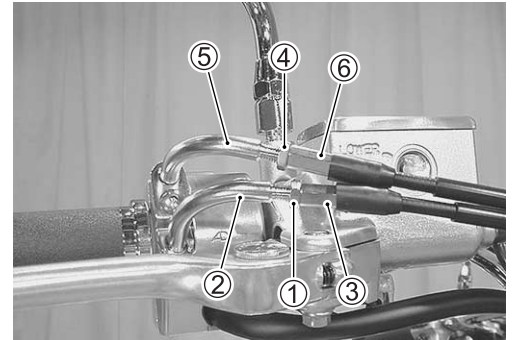
MINOR ADJUSTMENT

1st step:

- Loosen the lock nut $\textcircled{1}$ of the throttle returning cable $\textcircled{2}$ and fully turn in the adjuster $\textcircled{3}$.

2nd step:

- Loosen the lock nut $\textcircled{4}$ of the throttle pulling cable $\textcircled{5}$.
- Turn the adjuster $\textcircled{6}$ in or out until the throttle cable play (at the throttle grip) \textcircled{A} is between 2.0 – 4.0 mm (0.08 – 0.16 in).
- Tighten the lock nut $\textcircled{4}$ while holding the adjuster $\textcircled{6}$.



DATA Throttle cable play \textcircled{A} : 2.0 – 4.0 mm (0.08 – 0.16 in)

3rd step:

- While holding the throttle grip at the fully closed position, slowly turn out the adjuster $\textcircled{3}$ of the throttle returning cable $\textcircled{2}$ until resistance is felt.
- Tighten the lock nut $\textcircled{1}$ while holding the adjuster $\textcircled{3}$.

⚠ WARNING

After the adjustment is completed, check that handlebar movement does not raise the engine idle speed and that the throttle grip returns smoothly and automatically.

NOTE:

Major adjustment can be made at the throttle body side adjuster.

MAJOR ADJUSTMENT

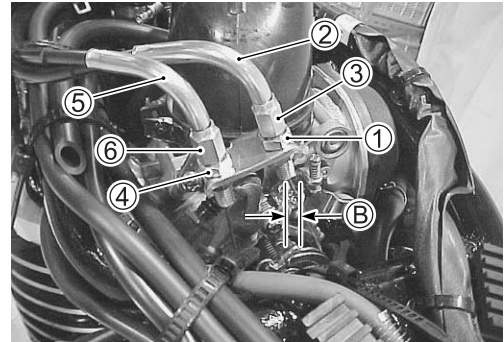
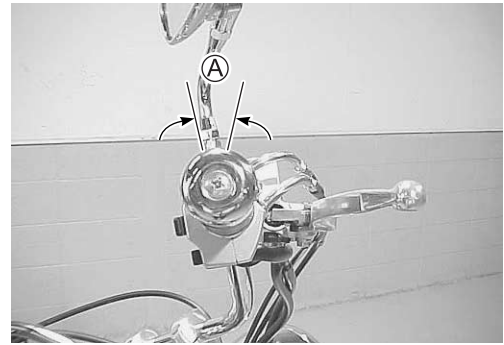
- Remove the fuel tank. (☞ 5-3)
- Loosen the lock nuts ① of the throttle returning cable ②.
- Turn the returning cable adjuster ③ to obtain proper cable play.
- Loosen the lock nuts ④ of the throttle pulling cable ⑤.
- Turn the pulling cable adjuster ⑥ in or out until the throttle cable play ① should be 2.0 – 4.0 mm (0.08 – 0.16 in) at the throttle grip.
- Tighten the lock nuts ④ securely while holding the adjuster ⑥.

DATA Throttle cable play ①: 2.0 – 4.0 mm (0.08 – 0.16 in)

- While holding the throttle grip at the fully closed position, slowly turn the returning cable adjuster ③ to obtain a cable slack ② of 1.0 mm (0.04 in).
- Tighten the lock nuts ① securely.

⚠ WARNING

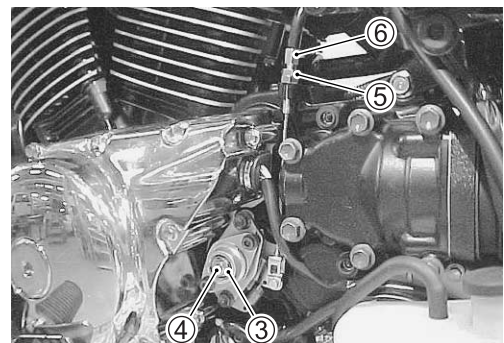
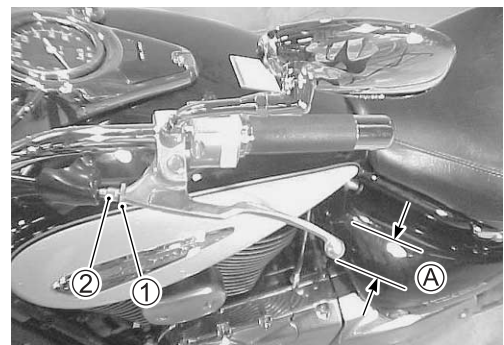
After the adjustment is completed, check that handlebar movement does not raise the engine idle speed and that the throttle grip returns smoothly and automatically.



CLUTCH

- Loosen the lock nut ①.
- Turn in the adjuster ② all the way into the clutch lever assembly.
- Remove the clutch release cover.
- Loosen the lock nut ③ and turn out the adjusting screw ④ two or three rotations.
- From that position, slowly turn in the adjusting screw ④ to feel resistance.
- From this position, turn out the adjusting screw ④ ¼ rotations, and tighten the lock nut ③.
- Loosen the lock nut ⑤, and turn the cable adjuster ⑥ to obtain 10 – 15 mm (0.4 – 0.6 in) of free play ① at the clutch lever end.
- Tighten the lock nuts ⑤.
- Tighten the lock nut ①.

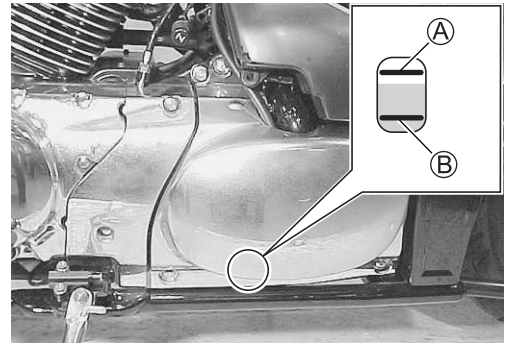
DATA Clutch lever play ①: 10 – 15 mm (0.4 – 0.6 in)
Clutch release screw: ¼ turn out



COOLING SYSTEM

ENGINE COOLANT LEVEL CHECK

- Keep the motorcycle upright.
 - Check the engine coolant level by observing the full and lower lines on the engine coolant reservoir.
- Ⓐ Full line Ⓑ Lower line
- If the level is below the lower line, add engine coolant to the full line from the engine coolant reservoir filler.



ENGINE COOLANT CHANGE

- Remove the fuel tank.
- Remove the radiator cap ①.
- Drain engine coolant by disconnecting the radiator hose ② from the pump.

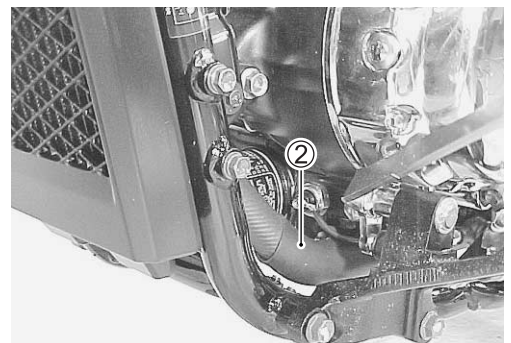
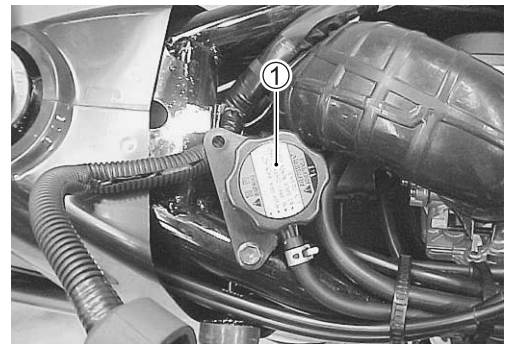
⚠ WARNING

- * Do not open the radiator cap when the engine is hot, as you may be injured by escaping hot liquid or vapor.
- * Engine coolant may be harmful if swallowed or if it comes in contact with skin or eyes. If engine coolant gets into the eyes or in contact with the skin, flush thoroughly with plenty of water. If swallowed, induce vomiting and call physician immediately!

- Flush the radiator with fresh water if necessary.
- Connect the radiator hose ② securely.
- Pour the specified engine coolant up to the radiator inlet.

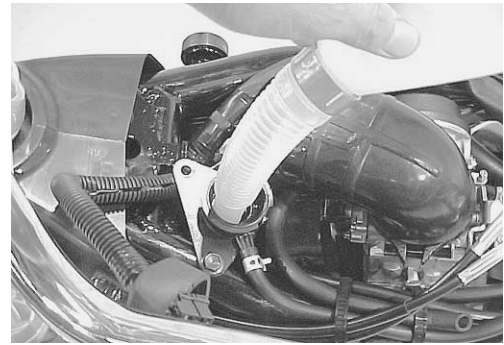
LLC Engine coolant capacity (without reservoir):
1 500 ml (1.6/1.3 Us/lmp qt)

ENGINE COOLANT INFORMATION:  6-2



AIR BLEEDING THE COOLING CIRCUIT

- Add engine coolant up to the radiator inlet.
- Support the motorcycle upright.
- Slowly swing the motorcycle, right and left, to bleed the air trapped in the cooling circuit.
- Add engine coolant up to the radiator inlet.
- Start up the engine and bleed air from the radiator inlet completely.
- Add engine coolant up to the radiator inlet.
- Repeat the above procedure until bleed no air from the radiator inlet.
- Close the radiator cap securely.
- After warming up and cooling down the engine several times, add the engine coolant up to the full level of the reservoir.



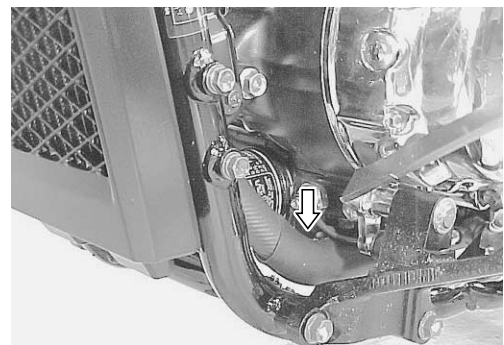
▲ CAUTION

Repeat the above procedure several times and make sure that the radiator is filled with engine coolant up to the reservoir full level.

**■ LLC Engine coolant capacity (Without reservoir):
1 500 ml (1.6/1.3 US/Imp qt)**

RADIATOR HOSES

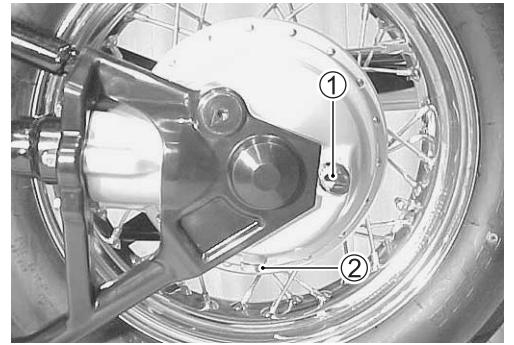
- Check to see the radiator hoses for crack, damage or engine coolant leakage.
- If any defects are found, replace the radiator hoses with new ones.



FINAL GEAR OIL

- Keep the motorcycle upright.
- Place an oil pan under the final gear case.
Remove the filler cap ① and drain plug ② to drain oil.
- Refit the drain plug ②. Pour the specified oil (SAE 90 hypoid gear oil with GL-5 under API classification) through the filler hole until the oil level reaches the filler hole.
- Refit the filler cap ①.

DATA Final gear oil: 200 – 220 ml (6.8/7.0 – 7.4/7.7 US/Imp oz)



BRAKE

BRAKE FLUID LEVEL CHECK

- Keep the motorcycle upright and place the handlebars straight.
- Check the brake fluid level by observing the lower limit lines on the front and rear brake fluid reservoirs.
- When the level is below the lower limit line, replenish with brake fluid that meets the following specification.

BF Specification and Classification: DOT 4



⚠ WARNING

- * The brake system of this motorcycle is filled with a glycol-based brake fluid. Do not use or mix different types of fluid such as silicone-based and petroleum-based fluids. Do not use any brake fluid taken from old, used or unsealed containers. Never re-use brake fluid left over from the last servicing or stored for a long period of time.
- * Brake fluid, if it leaks, will interfere with safe running and immediately discolor painted surfaces. Check the brake hoses and hose joints for cracks and fluid leakage before riding.

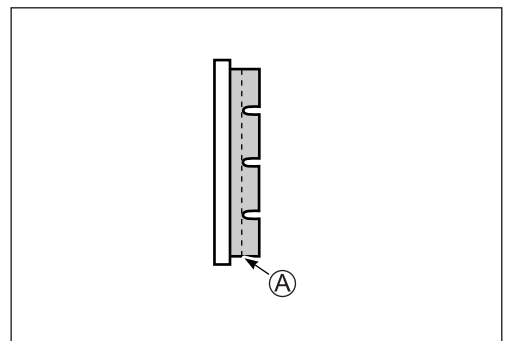
BRAKE PADS

FRONT BRAKE

- The extent of brake pad wear can be checked by observing the grooved limit line (A) on the pad. When the wear exceeds the grooved limit line, replace the pads with new ones. (👉7-10)

⚠ CAUTION

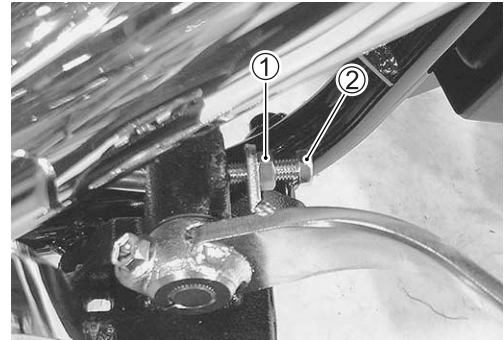
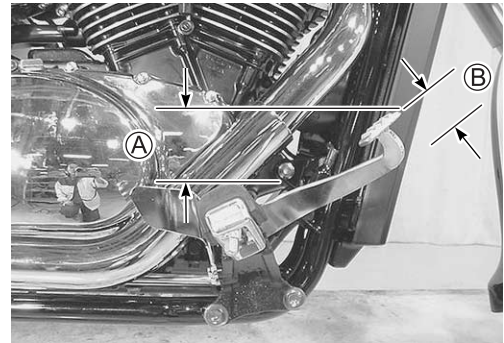
Replace the brake pads as a set, otherwise braking performance will be adversely affected.



REAR BRAKE PEDAL HEIGHT

- Loosen the lock nut ①.
- Adjust the brake pedal height ② by turning the adjuster ③.

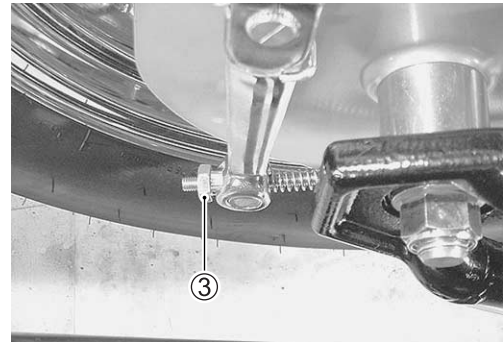
DATA Rear brake pedal height : 75 – 85 mm



REAR BRAKE ADJUSTING

- Adjust the free travel ④ to 20 – 30 mm by turning the adjusting nut ③.

DATA Rear brake pedal free travel ④: 20 – 30 mm

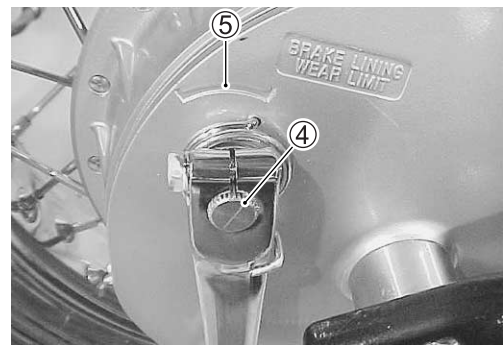


REAR BRAKE SHOE WEAR

This motorcycle is equipped with brake lining wear limit indicator on the rear brake.

To check brake lining wear, perform the following steps.

- Make sure that the rear brake is properly adjusted.
- Depress the rear brake pedal. Make sure that the index mark ④ is within the range ⑤ embossed on the brake panel.
- If the index mark goes beyond the range, the brake shoe assembly should be replaced with a new set of shoes.



BRAKE LIGHT SWITCH

- Adjust the rear brake light switch so that the brake light will come on just before pressure is felt when the brake pedal is depressed.

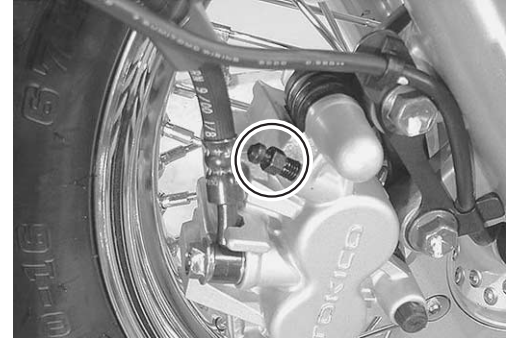


AIR BLEEDING THE BRAKE FLUID CIRCUIT

Air trapped in the brake fluid circuit acts like a cushion to absorb a large proportion of the pressure developed by the master cylinder and thus interferes with the full braking performance of the brake caliper. The presence of air is indicated by “sponginess” of the brake lever and also by lack of braking force. Considering the danger to which such trapped air exposes the machine and rider, it is essential that after remounting the brake and restoring the brake system to the normal condition, the brake fluid circuit be purged of air in the following manner:

FRONT BRAKE

- Fill the master cylinder reservoir to the top of the inspection window. Replace the reservoir cap to prevent dirt from entering.
- Attach a hose to the air bleeder valve and insert the free end of the hose into a receptacle.
- Squeeze and release the brake lever several times in rapid succession and squeeze the lever fully without releasing it. Loosen the air bleeder valve by turning it a quarter of a turn so that the brake fluid runs into the receptacle, this will remove the tension of the brake lever causing it to touch the handlebar grip. Then, close the air bleeder valve, pump and squeeze the lever, and open the valve. Repeat this process until fluid flowing into the receptacle no longer contains air bubbles.



NOTE:

While bleeding the brake system, replenish the brake fluid in the reservoir as necessary. Make sure that there is always some fluid visible in the reservoir.

- Close the air bleeder valve and disconnect the hose. Fill the reservoir with brake fluid to the top of the inspection window.

 **Air bleeder valve: 8 N·m (0.8 kgf·m, 6.0 lb-ft)**

CAUTION

Handle brake fluid with care: the fluid reacts chemically with paint, plastics, rubber materials, etc.

TIRES

TIRE TREAD CONDITION

Operating the motorcycle with excessively worn tires will decrease riding stability and consequently invite a dangerous situation. It is highly recommended to replace a tire when the remaining depth of tire tread reaches the following specification.

TOOL 09900-20805: Tire depth gauge

DATA Tire tread depth:

Service Limit: FRONT 1.6 mm (0.06 in)
REAR 2.0 mm (0.08 in)

TIRE PRESSURE

If the tire pressure is too high or too low, steering will be adversely affected and tire wear will increase. Therefore, maintain the correct tire pressure for good roadability and a longer tire life. Cold inflation tire pressure is as follows.

DATA Cold inflation tire pressure

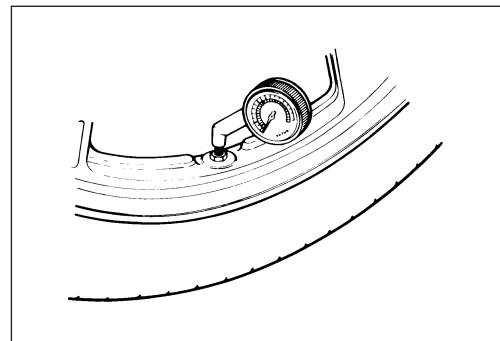
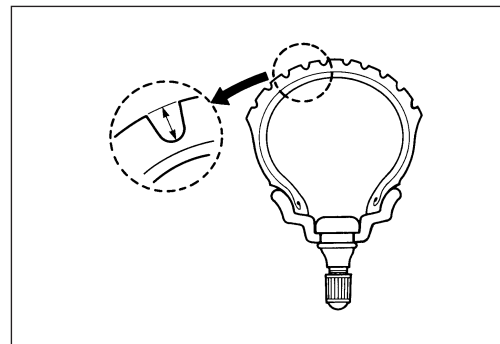
Solo riding: Front: 200 kPa (2.00 kgf/cm², 29 psi)
Rear: 250 kPa (2.50 kgf/cm², 36 psi)
Dual riding: Front: 200 kPa (2.00 kgf/cm², 29 psi)
Rear: 250 kPa (2.50 kgf/cm², 36 psi)

⚠ CAUTION

The standard tire fitted on this motorcycle is a 130/90-15 67H for the front and a 170/80-15 H/C 77H for the rear. The use of tires other than those specified may cause instability. It is highly recommended to use the specified tires.

DATA TIRE TYPE

IRC
FRONT: GS-23F
REAR : GS-23R



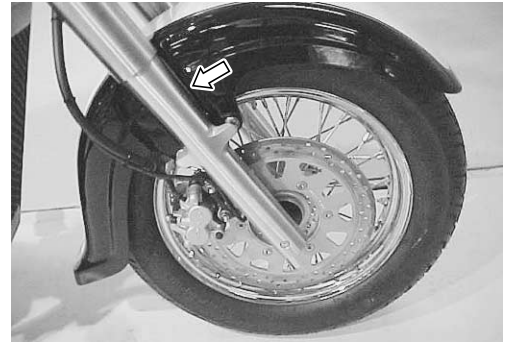
STEERING

The steering should be adjusted properly for smooth turning of the handlebars and safe operation. Overtight steering prevents smooth turning of the handlebars and too loose steering will cause poor stability. Check that there is no play in the front fork. Support the motorcycle so that the front wheel is off the ground. With the wheel facing straight ahead, grasp the lower fork tubes near the axle and pull forward. If play is found, readjust the steering. (👉 7-35)



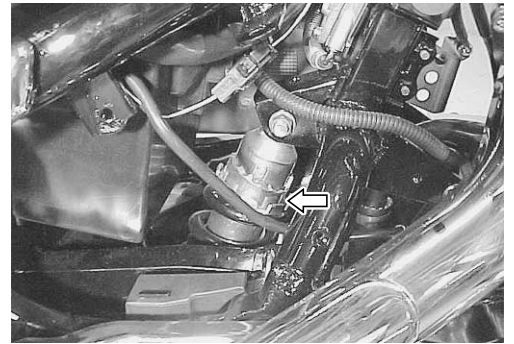
FRONT FORK

Inspect the front forks for oil leakage, scoring or scratches on the outer surface of the inner tubes. Replace any defective parts, if necessary. (👉 7-18)



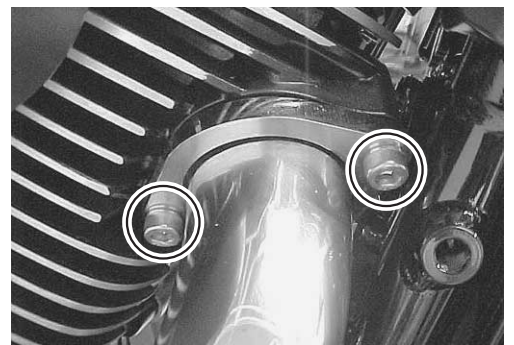
REAR SUSPENSION

Inspect the rear shock absorbers for oil leakage and check that there is no play in the swingarm. Replace any defective parts if necessary. (👉 7-46)



EXHAUST PIPE BOLT AND NUT

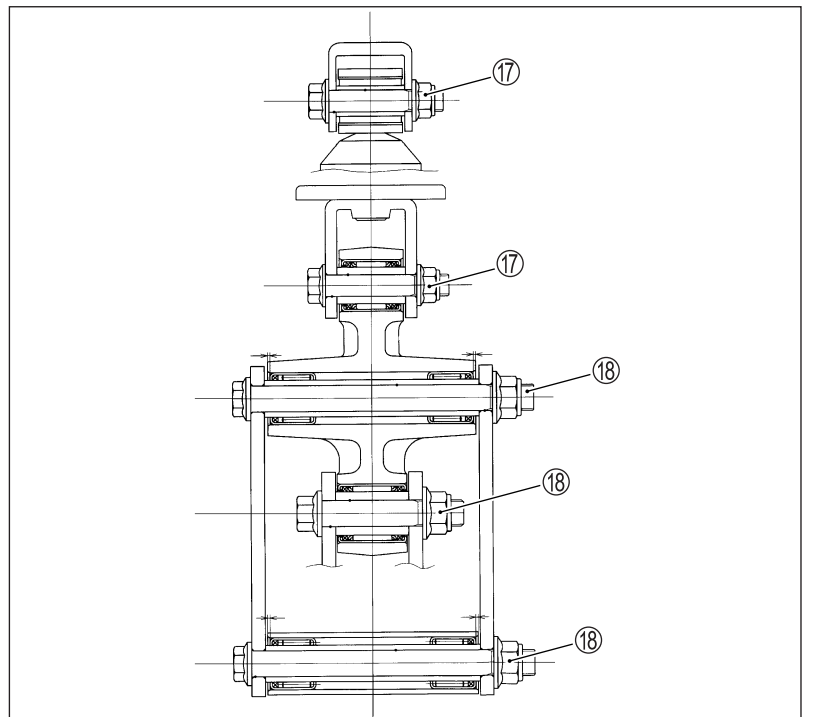
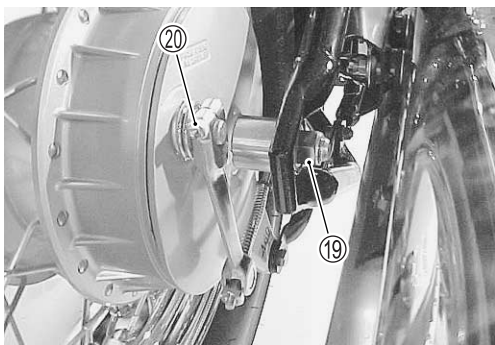
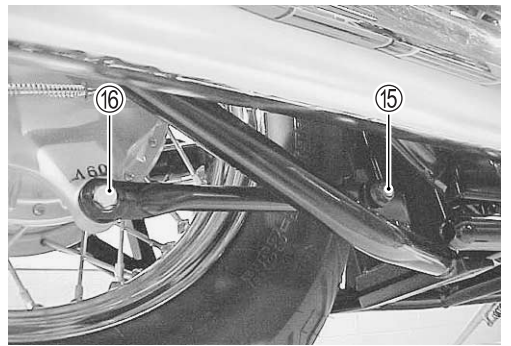
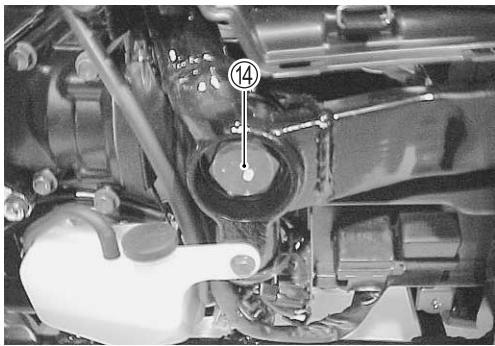
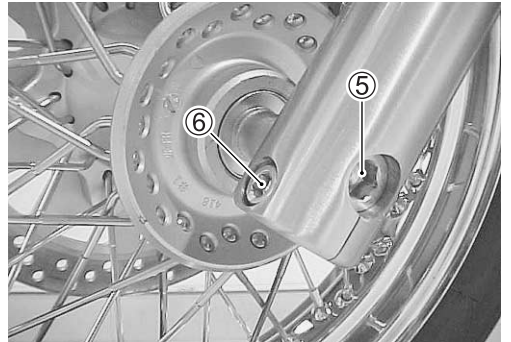
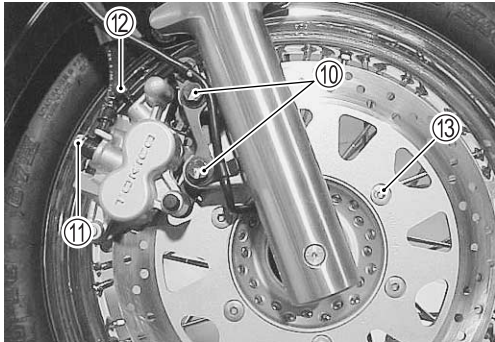
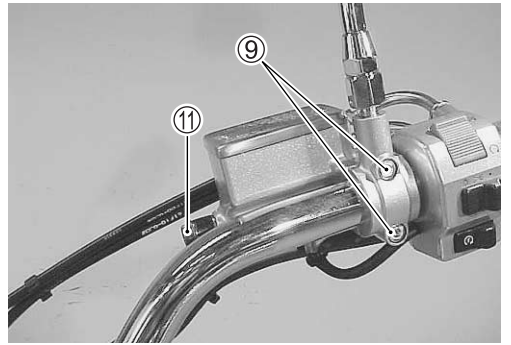
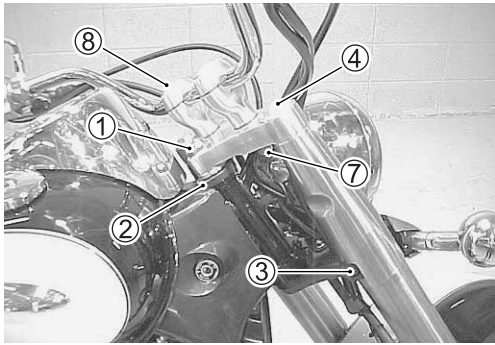
Tighten the exhaust pipe bolts and muffler bolts and nuts.



CHASSIS BOLTS AND NUTS

Check that all chassis bolts and nuts are tightened to their specified torque. The locations of the following nuts and bolts on the motorcycle.

| Item | N·m | kgf·m | lb·ft |
|---|-----|-------|-------|
| ① Steering stem head nut | 90 | 9.0 | 65.0 |
| ② Steering stem lock nut | 80 | 8.0 | 58.0 |
| ③ Front fork lower clamp bolt | 33 | 3.3 | 24.0 |
| ④ Front fork cap bolt | 35 | 3.5 | 25.5 |
| ⑤ Front axle | 65 | 6.5 | 47.0 |
| ⑥ Front axle pinch bolt | 33 | 3.3 | 24.0 |
| ⑦ Handlebar set bolt | 70 | 7.0 | 50.5 |
| ⑧ Handlebar clamp bolt | 23 | 2.3 | 16.5 |
| ⑨ Front brake master cylinder mounting bolt | 10 | 1.0 | 7.0 |
| ⑩ Front brake caliper mounting bolt | 39 | 3.9 | 28.0 |
| ⑪ Brake hose union bolt | 23 | 2.3 | 16.5 |
| ⑫ Caliper air bleeder valve | 8 | 0.8 | 6.0 |
| ⑬ Brake disc bolt | 23 | 2.3 | 16.5 |
| ⑭ Swingarm pivot nut | 100 | 10.0 | 72.5 |
| ⑮ Torque link bolt and nut (Front) | 35 | 3.5 | 25.5 |
| ⑯ Torque link bolt and nut (Rear) | 25 | 2.5 | 18.0 |
| ⑰ Rear shock absorber mounting bolt/nut (Upper & Lower) | 50 | 5.0 | 36.0 |
| ⑱ Rear cushion lever/rod mounting nut | 78 | 7.8 | 56.5 |
| ⑲ Rear axle nut | 65 | 6.5 | 47.0 |
| ⑳ Brake cam lever nut | 10 | 1.0 | 7.0 |



COMPRESSION PRESSURE CHECK

The compression pressure reading of a cylinder is a good indicator of its internal condition.

The decision to overhaul the cylinder is often based on the results of a compression test. Periodic maintenance records kept at your dealership should include compression readings for each maintenance service.

COMPRESSION PRESSURE SPECIFICATION

| Standard | Limit | Difference |
|---|--|---|
| 1 300 – 1 700 kPa (13 – 17 kgf/cm ²) (185 – 242 psi) | 1 100 kPa (11 kgf/cm ²) (156 psi) | 200kPa (2 kgf/cm ²) (28 psi) |

Low compression pressure can indicate any of the following conditions:

- * Excessively worn cylinder walls
- * Worn piston or piston rings
- * Piston rings stuck in grooves
- * Poor valve seating
- * Ruptured or otherwise defective cylinder head gasket

Overhaul the engine in the following cases:

- * Compression pressure in one of the cylinders is less than 900 kPa (9 kgf/cm², 128 psi).
- * The difference in compression pressure between any two cylinders is more than 200 kPa (2 kgf/cm², 28 psi).
- * All compression pressure readings are below 1 100 kPa (11 kgf/cm², 156 psi) even when they measure more than 900 kPa (9 kgf/cm², 128 psi).

COMPRESSION TEST PROCEDURE

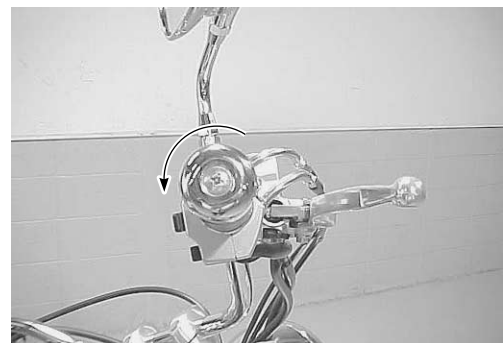
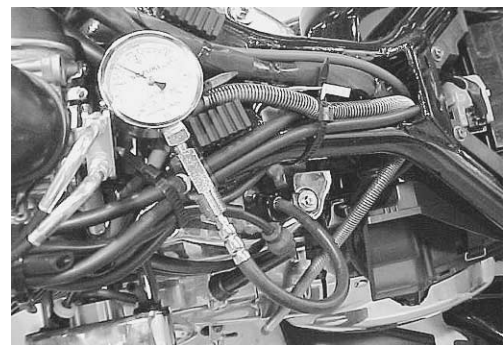
NOTE:

- * *Before testing the engine for compression pressure, make sure that the cylinder head nuts are tightened to the specified torque values and the valves are properly adjusted.*
- * *Have the engine warmed up before testing.*
- * *Make sure that the battery is fully-charged.*

Remove the related parts and test the compression pressure in the following manner.

- Remove the fuel tank. (☞ 5-3)
- Remove all the spark plugs. (☞ 2-4)
- Install the compression gauge and adaptor in the spark plug hole. Make sure that the connection is tight.
- Keep the throttle grip in the fully opened position.
- Press the starter button and crank the engine for a few seconds. Record the maximum gauge reading as the cylinder compression.
- Repeat this procedure with the other cylinders.

TOOL 09915-64510: Compression gauge set
09915-63210: Adaptor



OIL PRESSURE CHECK

Check the engine oil pressure periodically. This will give a good indication of the condition of the moving parts.

OIL PRESSURE SPECIFICATION

350 – 650 kPa (3.5 – 6.5 kgf/cm², 50 – 92 psi) at 3 000 r/min., Oil temp. at 60°C (140°F)

If the oil pressure is lower or higher than the specification, the following causes may be considered.

LOW OIL PRESSURE

- * Clogged oil filter
- * Oil leakage from the oil passage
- * Damaged O-ring
- * Defective oil pump
- * Combination of the above items

HIGH OIL PRESSURE

- * Engine oil viscosity is too high
- * Clogged oil passage
- * Combination of the above items

OIL PRESSURE TEST PROCEDURE

Start the engine and check if the oil pressure indicator light is turned on. If the light stays on, check the oil pressure indicator light circuit. If the circuit is OK, check the oil pressure in the following manner.

- Remove the main oil gallery plug ①.
- Install the oil pressure gauge and adaptor into the main oil gallery.
- Warm up the engine as follows:
Summer: 10 min. at 2 000 r/min.
Winter: 20 min. at 2 000 r/min.
- After warming up, increase the engine speed to 3 000 r/min. (observe the tachometer), and read the oil pressure gauge.

TOOL 09915-74510: Oil pressure gauge hose
09915-74531: Oil pressure gauge attachment
09915-77330: Meter (for high pressure)

