

4. MAINTENANCE

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MAINTENANCE

SERVICE INFORMATION

GENERAL

- Support the motorcycle on level ground before starting any work.
- Serious burns may result if the exhaust system is not allowed to cool before components are removed or serviced.
- Gasoline is extremely flammable and is explosive under certain conditions.
- Work in a well ventilated area. Smoking or allowing flames or sparks in the work area or where the gasoline is stored can cause a fire or explosion.
- The exhaust contains poisonous carbon monoxide gas that may cause loss of consciousness and may lead to death. Run the engine in an open area or with an exhaust evacuation system in an enclosed area.

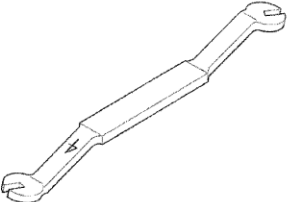
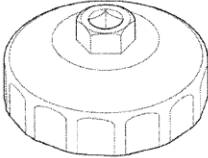
SPECIFICATIONS

| ITEM | | SPECIFICATIONS | |
|-----------------------------|--|---|---|
| Throttle grip freeplay | | 2 – 6 mm (1/16 – 1/4 in) | |
| Spark plug | Standard | DCPR6E (NGK), XU20EPR-U (DENSO) | |
| | For extended high speed riding | DCPR7E (NGK), XU22EPR-U (DENSO) | |
| Spark plug gap | | 0.8 – 0.9 mm (0.03 – 0.04 in) | |
| Valve clearance | IN | 0.15 ± 0.02 mm (0.006 ± 0.001 in) | |
| | EX | 0.30 ± 0.02 mm (0.012 ± 0.001 in) | |
| Recommended engine oil | | Pro Honda GN4 4-stroke oil (U.S.A. and Canada) or equivalent motor oil API service classification SG or Higher JASO T 903 standard: MA Viscosity: SAE 10W-30 | |
| Engine oil capacity | At draining | 3.5 liters (3.7 US qt, 3.1 Imp qt) | |
| | At filter change | 3.7 liters (3.9 US qt, 3.3 Imp qt) | |
| | At disassembly | 4.3 liters (4.5 US qt, 3.8 Imp qt) | |
| Oil filter boss length | | 16.0 – 18.0 mm (0.63 – 0.71 in) | |
| Engine idle speed | | 930 ± 100 rpm | |
| Recommended antifreeze | | Pro Honda HP Coolant or an equivalent high quality ethylene glycol antifreeze containing silicate-free corrosion inhibitors | |
| Recommended final drive oil | | Hypoid gear oil, SAE #80 | |
| Final drive oil capacity | At draining | 130 cm ³ (4.4 US oz, 4.6 Imp oz) | |
| | At disassembly | 170 cm ³ (5.7 US oz, 6.0 Imp oz) | |
| Recommended brake fluid | | DOT 4 brake fluid | |
| Clutch lever freeplay | | 10 – 20 mm (3/8 – 13/16 in) | |
| Shock absorber | Spring pre-road adjuster standard position | 6 clicks out from full soft | |
| | Rebound damping adjuster standard position | 3/4 turns out from full hard | |
| Cold tire pressure | Up to 90 kg (200 lbs) load | Front | 225 kPa (2.25 kgf/cm ² , 33 psi) |
| | | Rear | 280 kPa (2.80 kgf/cm ² , 41 psi) |
| | Up to maximum weight capacity | Front | 225 kPa (2.25 kgf/cm ² , 33 psi) |
| | | Rear | 280 kPa (2.80 kgf/cm ² , 41 psi) |
| Tire size | Front | 90/90-21M/C 54H | |
| | Rear | 200/50R18M/C 76H | |
| Tire brand | Front | ELITE3 (DUNLOP) | |
| | Rear | ELITE3 (DUNLOP) | |
| Minimum tire tread depth | Front | 1.5 mm (0.06 in) | |
| | Rear | 2.0 mm (0.08 in) | |

TORQUE VALUES

| | | |
|---|---------------------------------|----------------------------------|
| Air cleaner cover socket screw | 1.5 N·m (0.2 kgf·m, 1.1 lbf·ft) | |
| Spark plug | 18 N·m (1.8 kgf·m, 13 lbf·ft) | |
| Valve adjusting screw lock nut | 23 N·m (2.3 kgf·m, 17 lbf·ft) | Apply engine oil to the threads. |
| Exhaust valve adjusting hole cap | 15 N·m (1.5 kgf·m, 11 lbf·ft) | Apply grease to the threads. |
| Timing hole cap | 18 N·m (1.8 kgf·m, 13 lbf·ft) | Apply grease to the threads. |
| Timing hole cap cover socket bolt | 10 N·m (1.0 kgf·m, 7 lbf·ft) | |
| Engine oil filter cartridge | 26 N·m (2.7 kgf·m, 19 lbf·ft) | Apply engine oil to the threads. |
| Engine oil filter boss | — | See page 4-14 |
| Engine oil drain bolt | 30 N·m (3.1 kgf·m, 22 lbf·ft) | |
| Final drive oil filler cap | 12 N·m (1.2 kgf·m, 9 lbf·ft) | |
| Final drive oil drain bolt | 12 N·m (1.2 kgf·m, 9 lbf·ft) | |
| Front master cylinder reservoir cap screw | 1.5 N·m (0.2 kgf·m, 1.1 lbf·ft) | |
| Rear brake reservoir mounting bolt | 10 N·m (1.0 kgf·m, 7 lbf·ft) | |
| Sidestand pivot bolt | 10 N·m (1.0 kgf·m, 7 lbf·ft) | |
| Sidestand pivot lock nut | 30 N·m (3.1 kgf·m, 22 lbf·ft) | U-nut |

TOOLS

| | |
|---|--|
| <p>Valve adjusting wrench, 4 mm 07908-KE90100</p>  | <p>Oil filter wrench 07HAA-PJ70101</p>  <p>or 07AAA-PLCA100 (U.S.A. only)</p> |
|---|--|

MAINTENANCE

MAINTENANCE SCHEDULE

Perform the Pre-ride inspection in the Owner's Manual at each scheduled maintenance period.

I: Inspect and clean, adjust, lubricate or replace if necessary. C: Clean. R: Replace. A: Adjust. L: Lubricate.

The following items require some mechanical knowledge. Certain items (particularly those marked * and **) may require more technical information and tools. Consult an authorized Honda dealer.

| ITEMS | FREQUENCY | WHICHEVER COMES FIRST | ODOMETER READING (NOTE 1) | | | | | | | | REFER TO PAGE | |
|---------------------------------------|-----------|-----------------------|---------------------------|-----------|---|----|-----|-----|-----|-----|---------------|-----|
| | | | | X1,000 mi | 0.6 | 4 | 8 | 12 | 16 | 20 | | 24 |
| | | | NOTE | X100 km | 10 | 64 | 128 | 192 | 256 | 320 | | 384 |
| * FUEL LINE | | | | | I | | I | | I | | 4-5 | |
| * THROTTLE OPERATION | | | | | I | | I | | I | | 4-5 | |
| AIR CLEANER | | NOTE 2 | | | | R | | | | R | 4-6 | |
| CRANKCASE BREATHER | | NOTE 3 | | | C | C | C | C | C | C | 4-7 | |
| SPARK PLUG | | | | | I | R | I | R | I | R | 4-8 | |
| * VALVE CLEARANCE | | | | | I | | I | | I | | 4-9 | |
| ENGINE OIL | | | | | Initial = 600 mi (1,000 km) or 1 month: R Regular = Every 8,000 mi (12,800 km) or 12 months: R | | | | | | 4-12 | |
| ENGINE OIL FILTER | | | | | R | | R | | R | | 4-14 | |
| * ENGINE IDLE SPEED | | | | | I | I | I | I | I | I | 4-15 | |
| RADIATOR COOLANT | | NOTE 5 | | | | | I | | | R | 4-15 | |
| * COOLING SYSTEM | | | | | | | I | | | I | 4-16 | |
| * SECONDARY AIR SUPPLY SYSTEM | | | | | | | I | | | I | 4-17 | |
| * EVAPORATIVE EMISSION CONTROL SYSTEM | | NOTE 4 | | | | | I | | | I | 4-18 | |
| FINAL DRIVE OIL | | | | | | | I | | | R | 4-19 | |
| BRAKE FLUID | | NOTE 5 | | | | | I | | I | R | 4-20 | |
| BRAKE PADS WEAR | | | | | | | I | | I | I | 4-22 | |
| BRAKE SYSTEM | | | | | | | I | | I | I | 4-22 | |
| * BRAKE LIGHT SWITCH | | | | | | | I | | I | I | 4-23 | |
| * HEADLIGHT AIM | | | | | | | I | | I | I | 4-24 | |
| CLUTCH SYSTEM | | | | | I | I | I | I | I | I | 4-24 | |
| SIDESTAND | | | | | | | I | | | I | 4-25 | |
| * SUSPENSION | | | | | | | I | | I | I | 4-26 | |
| * NUTS, BOLTS, FASTENERS | | | | | I | | I | | I | I | 4-27 | |
| ** WHEELS/TIRES | | | | | | | I | | I | I | 4-27 | |
| ** STEERING HEAD BEARINGS | | | | | | | I | | I | I | 4-28 | |

* Should be serviced by an authorized Honda dealer, unless the owner has proper tools and service data and is mechanically qualified.

** In the interest of safety, we recommend these items be serviced only by an authorized Honda dealer.

NOTES:

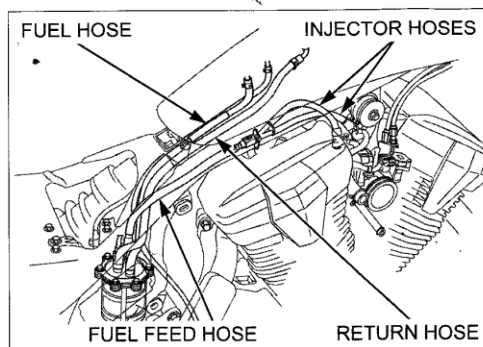
1. At higher odometer reading, repeat at the frequency interval established here.
2. Service more frequently when riding in unusually wet or dusty areas.
3. Service more frequently when riding in rain or at full throttle.
4. California type only.
5. Replace every 2 years, or at indicated odometer interval, whichever comes first. Replacement requires mechanical skill.

FUEL LINE

Check the fuel feed hose, injector hoses and fuel quick connect fittings for deterioration, damage or leakage.

Also check the fuel hose and fuel vapor return hose.

Replace the fuel feed hose, injector hoses, fuel hose and fuel vapor return hose if necessary.



THROTTLE OPERATION

Check for any deterioration or damage to the throttle cables.

Check the throttle grip for smooth operation.

Check that the throttle opens and automatically closes in all steering positions.

If the throttle grip does not return properly, lubricate the throttle cables and overhaul and lubricate the throttle grip housing.

For cable lubrication: Disconnect the throttle cables at their upper ends. Thoroughly lubricate the cables and their pivot points with a commercially available cable lubricant or a light weight oil.

If the throttle grip still does not return properly, replace the throttle cables.

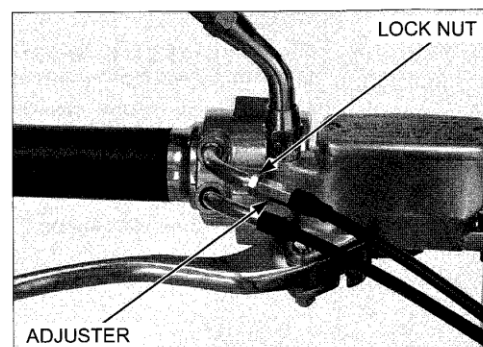
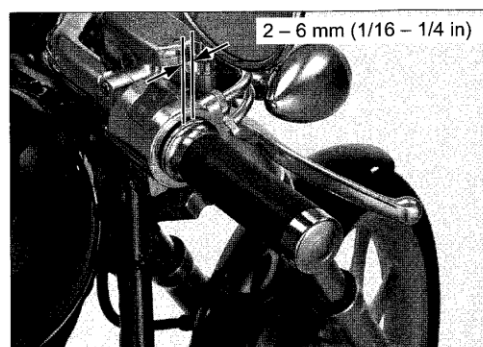
With the engine idling, turn the handlebar all the way to the right and left to ensure that the idle speed does not change. If idle speed increases, check the throttle grip freeplay and the throttle cable connection.

Measure the throttle grip freeplay at the throttle grip flange.

FREEPLAY: 2 – 6 mm (1/16 – 1/4 in)

Throttle grip freeplay can be adjusted at either end of the throttle cable. Minor adjustments are made with the upper adjuster.

Loosen the lock nut, turn the adjuster as required and tighten the lock nut.



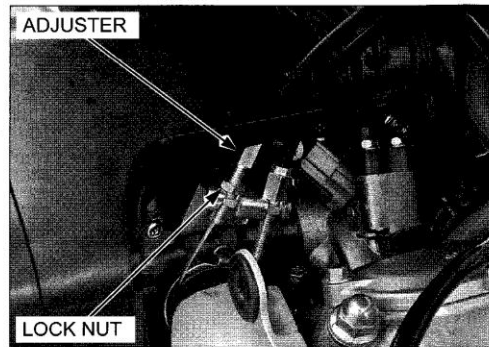
MAINTENANCE

Major adjustments are made with the lower adjuster.

Remove the front over head cover (page 3-5).

Loosen the lock nut, turn the adjuster as required and tighten the lock nut.

Recheck the throttle operation and install the front over head cover (page 3-5).

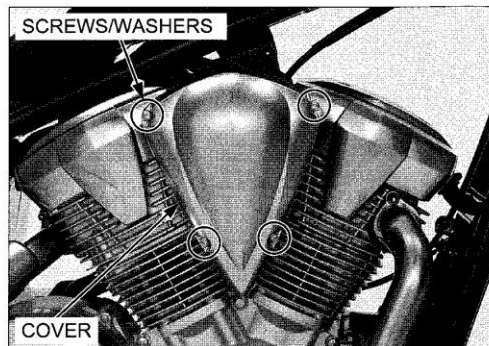


AIR CLEANER

NOTE:

- The viscous paper element type air cleaner can not be cleaned because the element contains a dust adhesive.
- If the motorcycle is used in unusually wet or dusty areas, more frequent inspections are required.

Remove the socket screws, washers and air cleaner cover.



Remove the air cleaner element from the air cleaner housing.

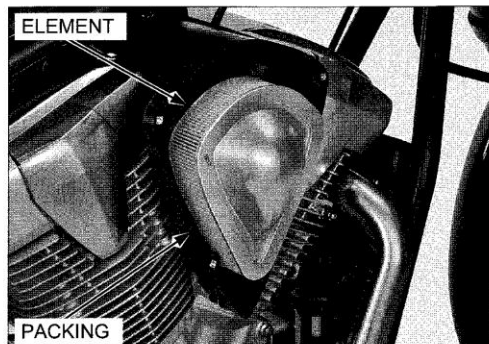
Replace the element in accordance with the maintenance schedule or any time it is excessively dirty or damaged.

Check the packing is installed in position and is in good condition, replace it with a new one if necessary.

Install the air cleaner element, air cleaner cover, washers and socket screws.

Tighten the air cleaner cover socket screws to the specified torque.

TORQUE: 1.5 N·m (0.2 kgf·m, 1.1 lbf·ft)



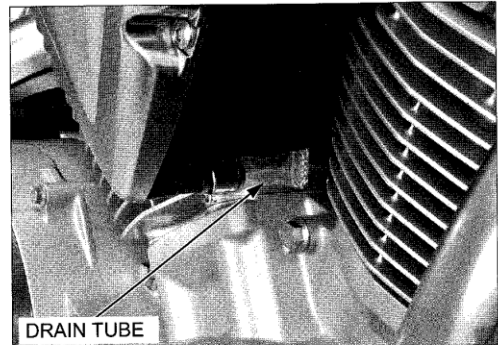
CRANKCASE BREATHER

NOTE:

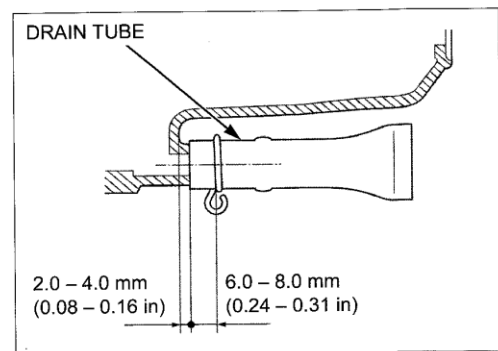
- Service more frequently when ridden in rain, at full throttle, or after the motorcycle is washed or overturned. Service if the deposit level can be seen in the transparent section of the drain tube.

Check the drain tube.

If deposits have been collected, remove the drain tube from the air cleaner housing and drain the deposits into a suitable container.



Install the drain tube as shown.

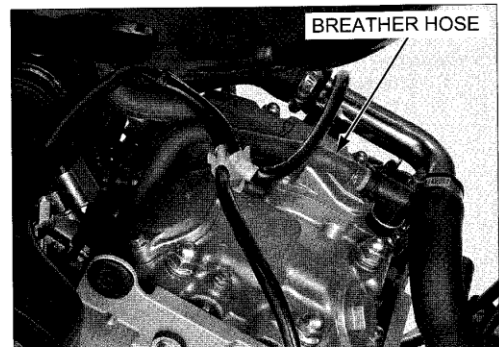


Remove the front over head cover (page 3-5).

Check the crankcase breather hose for deterioration, damage or loose connection. Make sure that the hose is not kinked, pinched or cracked.

Replace the crankcase breather hose if necessary.

Install the front over head cover (page 3-5).



MAINTENANCE

SPARK PLUG

REMOVAL

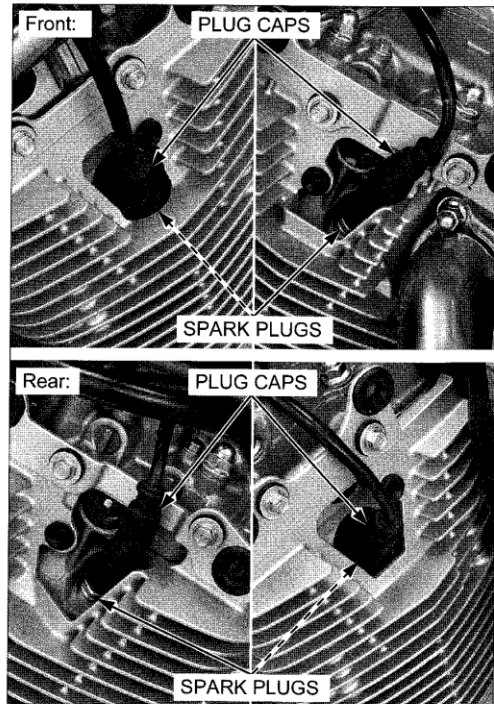
Remove the over head cover (page 3-5).

Disconnect the spark plug caps and clean around the spark plug bases.

NOTE:

- Clean around the spark plug bases with compressed air before removing the spark plugs, and be sure that no debris is allowed to enter into the combustion chamber.

Remove the spark plugs.



INSPECTION

Clean the spark plug electrodes with a wire brush or special plug cleaner.

Always use the recommended spark plug on this motorcycle.

Check the following and replace if necessary.

- Insulator for damage
- Side electrodes for wear
- Burning condition, coloration

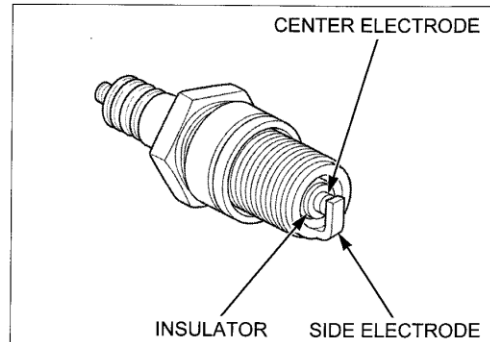
RECOMMENDED SPARK PLUG:

Standard:

DCPR6E (NGK), XU20EPR-U (DENSO)

For extended high speed riding:

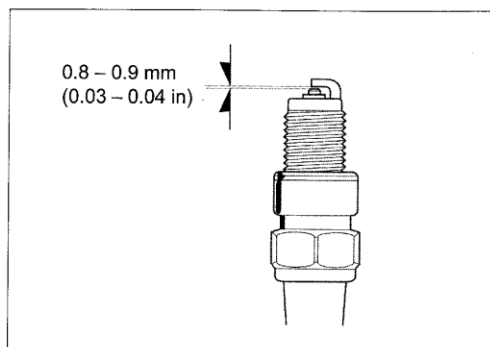
DCPR7E (NGK), XU22EPR-U (DENSO)



Check the gap between the center and side electrodes with a feeler gauge.

SPARK PLUG GAP: 0.8 – 0.9 mm (0.03 – 0.04 in)

If necessary, adjust the gap by bending the side electrode carefully.



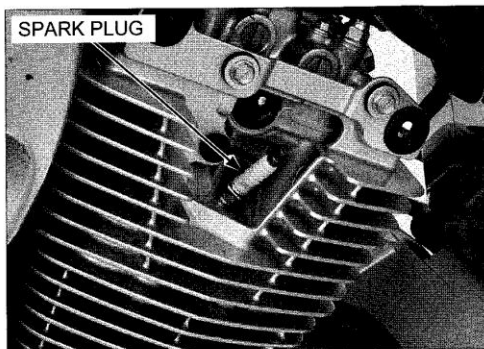
INSTALLATION

Install and hand tighten the spark plug to the cylinder head, then tighten them to the specified torque.

TORQUE: 18 N·m (1.8 kgf·m, 13 lbf·ft)

Connect the spark plug caps.

Install the over head cover (page 3-5).



VALVE CLEARANCE

INSPECTION

NOTE:

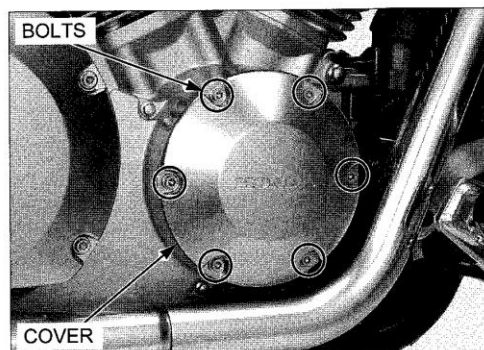
- Inspect and adjust the valve clearance while the engine is cold (below 35°C/95°F).
- After this valve clearance inspection, check the engine idle speed (page 4-15).

Front: Remove the front over head cover (page 3-5).

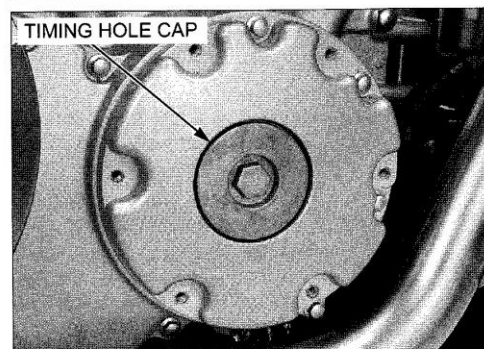
Rear: Remove the following:

- Fuel tank (page 6-43)
- PAIR control solenoid valve (page 6-65)

Remove the socket bolts and the timing hole cap cover.

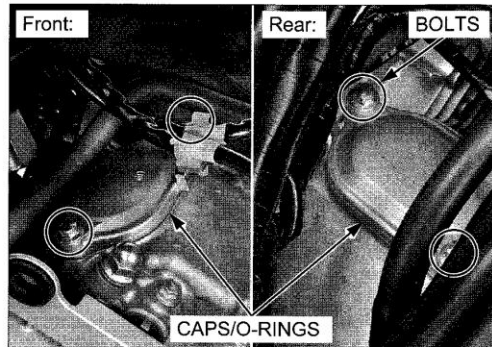


Remove the timing hole cap.

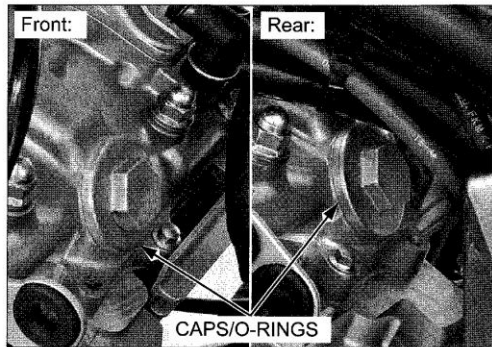


MAINTENANCE

Remove the bolts and intake valve adjusting hole caps.
Remove the O-rings from the intake valve adjusting hole caps.



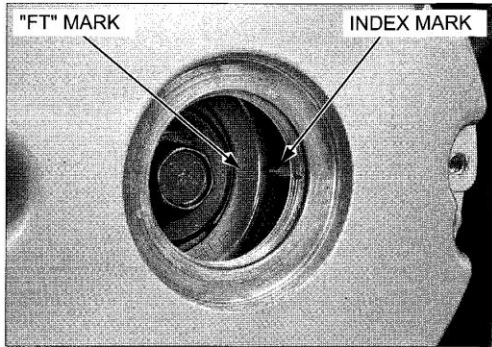
Remove the exhaust valve adjusting hole caps.
Remove the O-rings from the exhaust valve adjusting hole caps.



Front: Rotate the crankshaft clockwise and align the "FT" mark on the primary drive gear with the index mark on the right crankcase cover.

Make sure the front cylinder piston is at TDC (Top Dead Center) on the compression stroke.

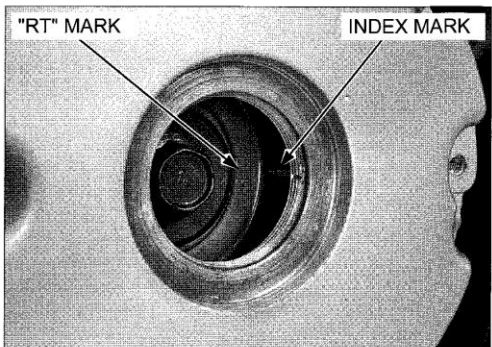
This position can be obtained by confirming that there is slack in the rocker arms. If there is no slack, rotate the crankshaft clockwise one full turn and align the "FT" mark with the index mark again.



Rear: Rotate the crankshaft clockwise and align the "RT" mark on the primary drive gear with the index mark on the right crankcase cover.

Make sure the rear cylinder piston is at TDC (Top Dead Center) on the compression stroke.

This position can be obtained by confirming that there is slack in the rocker arms. If there is no slack, rotate the crankshaft clockwise one full turn and align the "RT" mark with the index mark again.

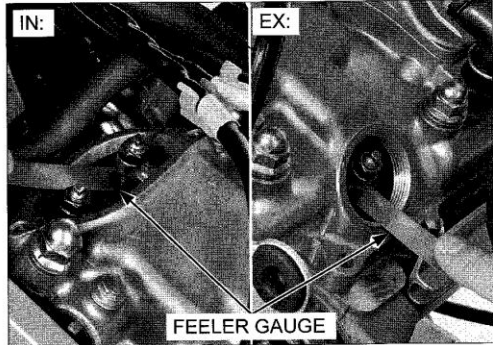


When checking the clearance, slide the feeler gauge from the center toward the outside.

Check the valve clearances of each cylinder by inserting a feeler gauge between the adjusting screw and valve stem.

VALVE CLEARANCES:

- IN:** 0.15 ± 0.02 mm (0.006 ± 0.001 in)
- EX:** 0.30 ± 0.02 mm (0.012 ± 0.001 in)



Loosen the lock nut and apply engine oil to the adjusting screw threads and seating surface.

Adjust by turning the adjusting screw until there is a slight drag on the feeler gauge.

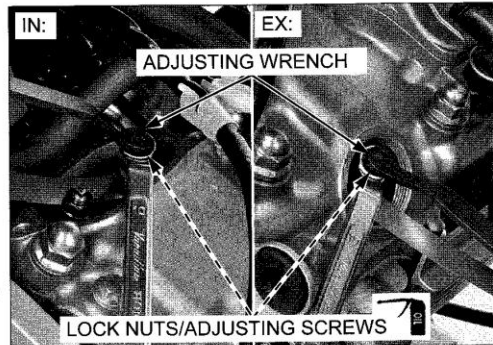
TOOL:

Valve adjusting wrench, 4 mm 07908-KE90100

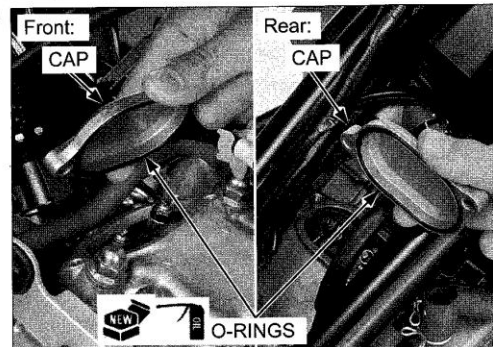
Hold the adjusting screw and tighten the lock nut to the specified torque.

TORQUE: 23 N·m (2.3 kgf·m, 17 lbf·ft)

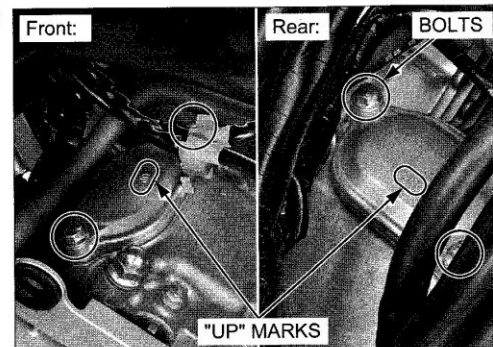
After tightening the lock nut, recheck the valve clearance.



Apply engine oil to new O-rings and install them into the intake valve adjusting hole cap grooves.



Install the intake valve adjusting hole caps with their "UP" marks facing up and tighten the bolts.

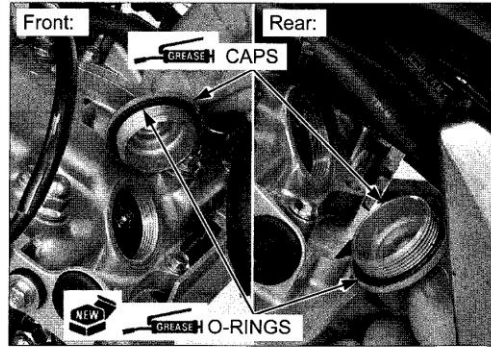


MAINTENANCE

Apply grease to new O-rings and install them into the exhaust valve adjusting hole cap grooves.
Apply grease to the exhaust valve adjusting hole cap threads.

Install and tighten the exhaust valve adjusting hole caps to the specified torque.

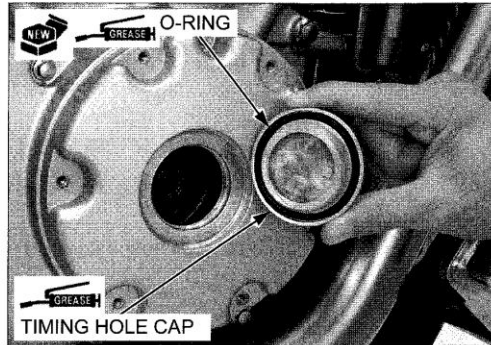
TORQUE: 15 N·m (1.5 kgf·m, 11 lbf·ft)



Apply grease to a new O-ring and install it into the timing hole cap groove.
Apply grease to the timing hole cap threads.

Install and tighten the timing hole cap to the specified torque.

TORQUE: 18 N·m (1.8 kgf·m, 13 lbf·ft)



Install the timing hole cap cover and socket bolts.
Tighten the socket bolt to the specified torque.

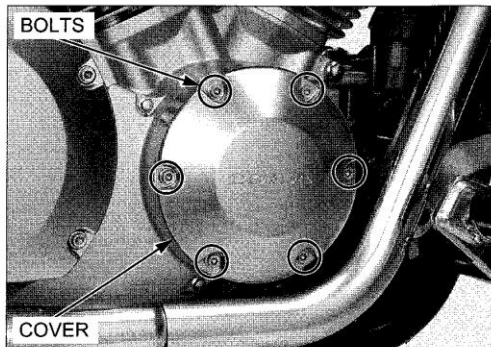
TORQUE: 10 N·m (1.0 kgf·m, 7 lbf·ft)

Front: Install the front over head cover.

Rear: Install the following:

- PAIR control solenoid valve (page 6-65)
- Fuel tank (page 6-43)

Check the engine idle speed (page 4-15).



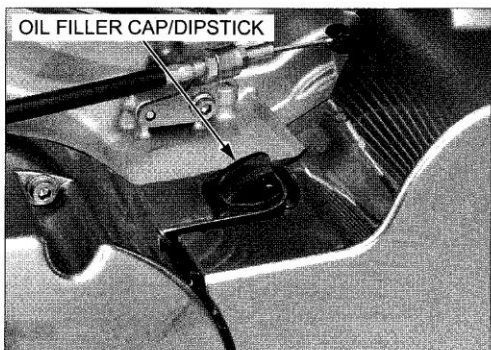
ENGINE OIL

OIL LEVEL INSPECTION

Support the motorcycle using a safety stand or hoist in an upright position.

Start the engine and let it idle for 3 – 5 minutes.
Stop the engine and wait 2 – 3 minutes.

Remove the oil filler cap/dipstick and wipe it clean.
Reinstall the oil filler cap/dipstick, but do not screw it.
Remove the oil filler cap/dipstick and check the oil level.



If the level is below or near the lower level on the dipstick, fill the recommended engine oil to the upper level (page 4-13).

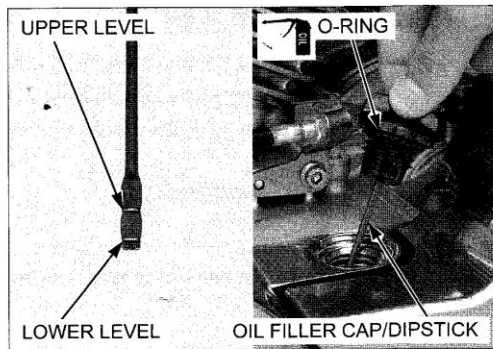
Check that the O-ring is in good condition, replace it if necessary.

Apply engine oil to the O-ring.

Install the oil filler cap/dipstick.

Recheck the engine oil level.

Make sure there are no engine oil leaks.



OIL CHANGE

ENGINE OIL DRAINING

Remove the oil filler cap/dipstick.

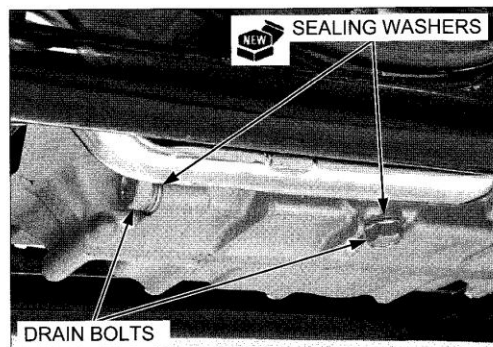
Place an oil pan under the engine to catch the engine oil, then remove the engine oil drain bolts and sealing washers.

Drain the engine oil completely.

Reinstall the engine oil drain bolts with new sealing washers and tighten them to the specified torque.

TORQUE: 30 N·m (3.1 kgf·m, 22 lbf·ft)

Fill the recommended engine oil (page 4-13).



ENGINE OIL FILLING

Remove the oil filler cap/dipstick.

Fill the specified amount of recommended engine oil into the engine.

Other viscosities of oil may be used depending upon the average temperature in your riding area. Use the chart as a guide.

RECOMMENDED ENGINE OIL:

Pro Honda GN4 4-stroke oil (U.S.A. and Canada) or equivalent motor oil
API service classification: SG or Higher
JASO T 903 standard: MA
Viscosity: 10W-30

OIL CAPACITY:

- 3.5 liters (3.7 US qt, 3.1 Imp qt) at draining**
- 3.7 liters (3.9 US qt, 3.3 Imp qt) at filter change**
- 4.3 liters (4.5 US qt, 3.8 Imp qt) at disassembly**

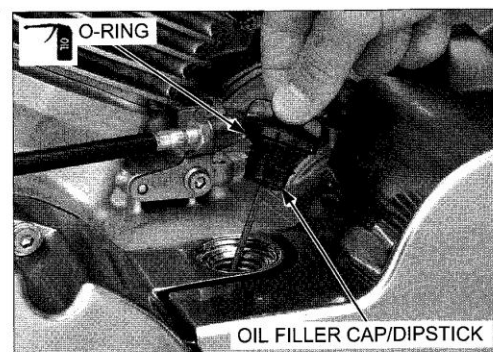
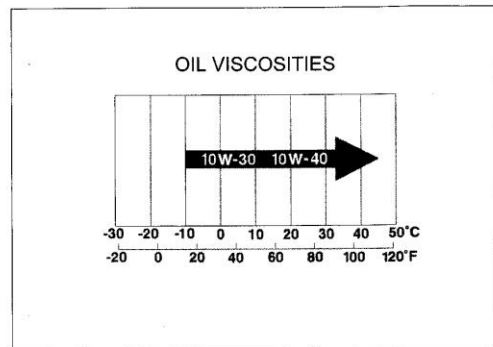
Check that the O-ring is in good condition, replace it if necessary.

Apply engine oil to the O-ring.

Install the oil filler cap/dipstick.

Check the engine oil level (page 4-12).

Make sure there are no engine oil leaks.



MAINTENANCE

ENGINE OIL FILTER

CALIFORNIA Remove the EVAP canister (page 6-66).

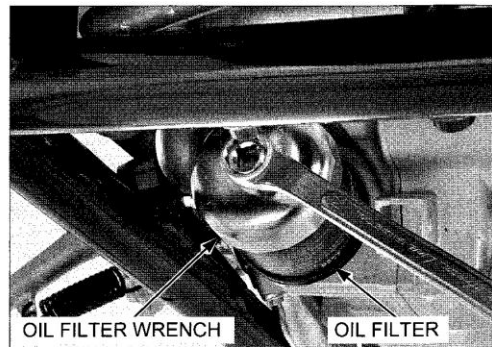
TYPE: Drain the engine oil (page 4-13).

Loosen the oil filter cartridge using the special tool.

TOOL:

Oil filter wrench 07HAA-PJ70101 or
07AAA-PLCA100
(U.S.A. only)

Remove and let the remaining engine oil drain out.

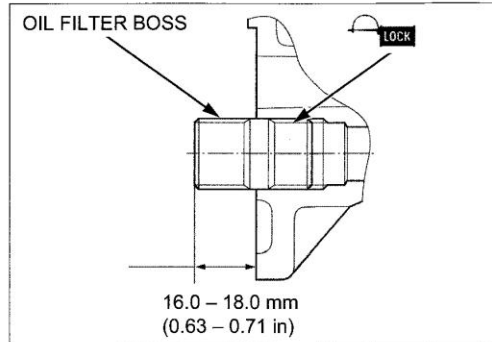


Check that the oil filter boss protrusion from the crankcase is specified length as shown.

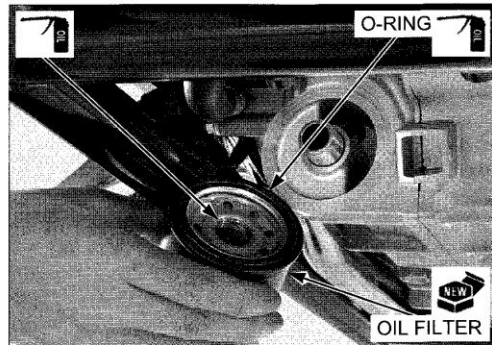
SPECIFIED LENGTH: 16.0 – 18.0 mm (0.63 – 0.71 in)

NOTE:

- Apply locking agent to the oil filter boss threads (crankcase side), then install it, if the oil filter boss is removed from the crankcase.



Apply engine oil to new oil filter cartridge threads and O-ring.



Install and tighten the oil filter cartridge with the special tool to the specified torque.

TOOL:

Oil filter wrench 07HAA-PJ70101 or
07AAA-PLCA100
(U.S.A. only)

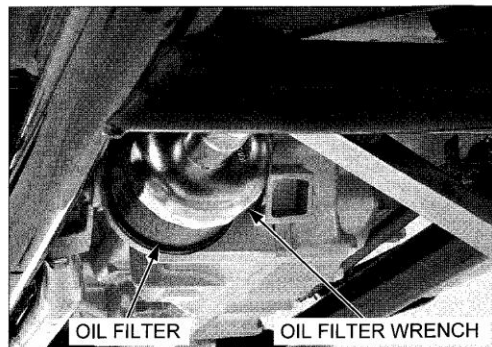
TORQUE: 26 N·m (2.7 kgf·m, 19 lbf·ft)

Fill the recommended engine oil (page 4-13).

Make sure there are no engine oil leaks.

CALIFORNIA Install the EVAP canister (page 6-66).

TYPE:



ENGINE IDLE SPEED

NOTE:

- Inspect the idle speed after all other engine maintenance items have been performed and are within specifications.
- Before checking the idle speed, inspect following items.
 - No DTC and MIL blinking
 - Spark plug condition (page 4-8)
 - Air cleaner condition (page 4-6)
- The engine must be warm for accurate idle speed inspection.
- This system eliminates the need for manual idle speed adjustment from the previous designs.
- Use a tachometer with graduations of 50 rpm smaller that will accurately indicate 50 rpm change.

Start the engine and warm it up to coolant temperature is 80°C (176°F).

Stop the engine and connect a tachometer according to its manufacturer's instructions.

Start the engine and let it idle. Check the idle speed.

ENGINE IDLE SPEED: 930 ± 100 rpm

If the idle speed is out of the specification, check the following:

- Throttle operation and throttle grip freeplay (page 4-5)
- Intake air leak or engine top-end problem (page 9-5)
- IACV operation (page 6-52)

RADIATOR COOLANT

Check the coolant level of the reserve tank with the engine running at normal operating temperature. The level should be between the "UPPER" and "LOWER" level lines with the motorcycle upright on a level surface.

If necessary, fill the recommended coolant.

RECOMMENDED ANTIFREEZE:

Pro Honda HP Coolant or an equivalent high quality ethylene glycol antifreeze containing silicate-free corrosion inhibitors.

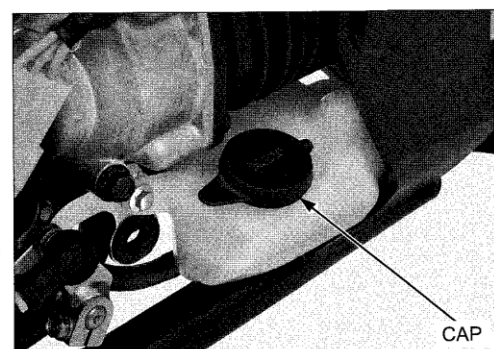
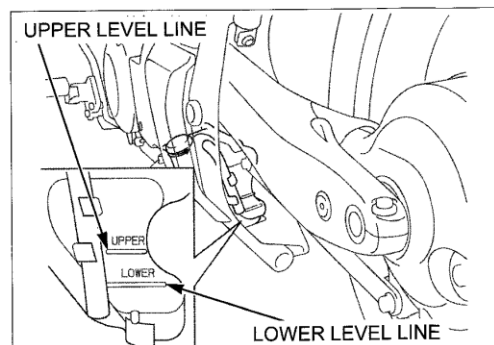
Remove the left crankcase rear cover (page 3-7).

Remove the reserve tank cap, and fill the reserve tank to the "UPPER" level line with a 1:1 mixture of distilled water and antifreeze (coolant preparation: page 7-6).

Check to see if there are any coolant leaks when the coolant level decreases very rapidly.

If the reserve tank becomes completely empty, there is a possibility of air getting into the cooling system.

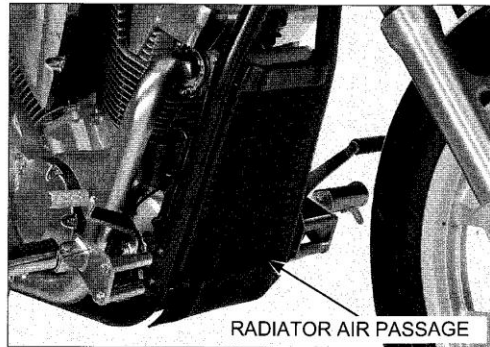
Be sure to remove any air from the cooling system (page 7-7).



MAINTENANCE

COOLING SYSTEM

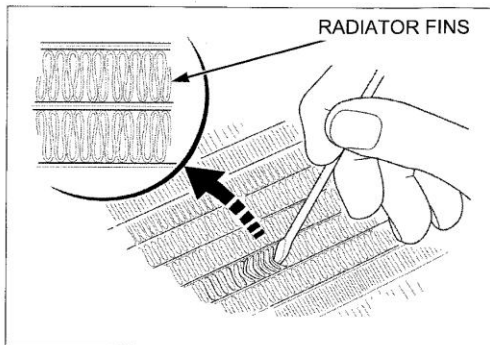
Check the radiator air passage for clogs or damage.



Straighten bent fins with a small, flat blade screwdriver and remove insects, mud or other obstructions with compressed air or low pressure water.

Replace the radiator if the air flow is restricted over more than 20% of the radiating surface.

For radiator replacement (page 7-10).



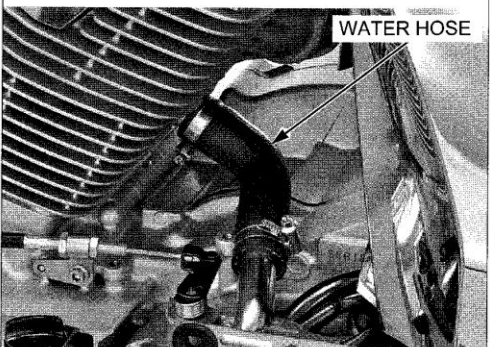
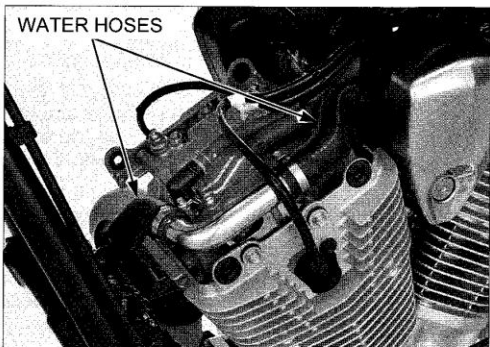
Remove the following:

- Front over head cover (page 3-5)
- Left crankcase rear cover (page 3-7)

Check for any coolant leakage from the water pump, water hoses and hose joints.

Check the water hoses for cracks or deterioration, replace if necessary.

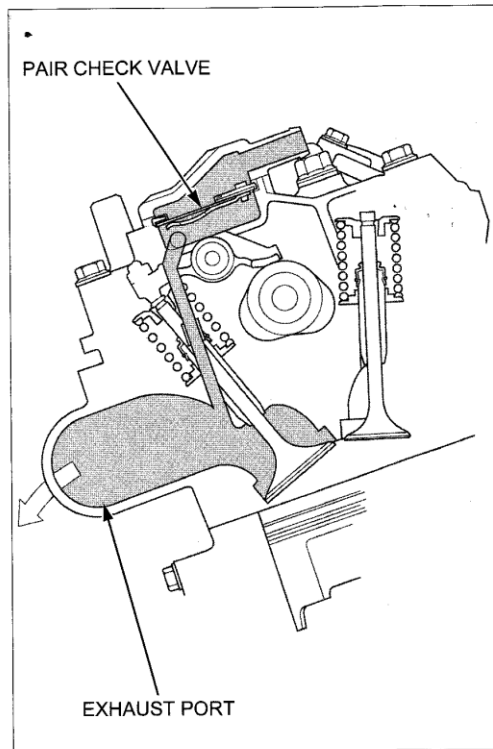
Check that all water hose band screws are tight.



SECONDARY AIR SUPPLY SYSTEM

NOTE:

- This model is equipped with a built-in secondary air supply system. The pulse secondary air supply system is located on the cylinder head cover.
- The secondary air supply system introduces filtered air into exhaust gases in the exhaust port. The secondary air is drawn into the exhaust port whenever there is negative pressure pulse in the exhaust system. This charged secondary air promotes burning of the unburned exhaust gases and changes a considerable amount of hydrocarbons and carbon monoxide into relatively harmless carbon dioxide and water.

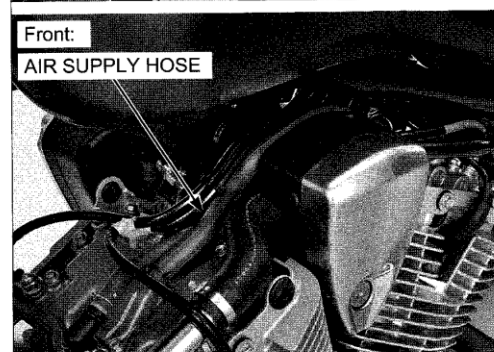
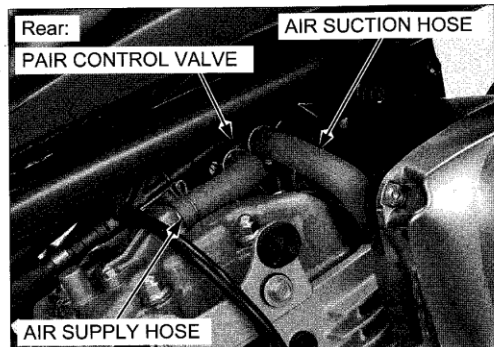


Remove the over head cover (page 3-5).

Check the air suction hose between the air cleaner housing and PAIR control solenoid valve for deterioration, damage or loose connections. Check that the hoses are not kinked, pinched or cracked.

If the hoses show any signs of heat damage, inspect the PAIR check valves for damage.

Check the secondary air supply hoses between the PAIR control solenoid valve and cylinder head cover for deterioration, damage or loose connections. Make sure that the hoses are not cracked.



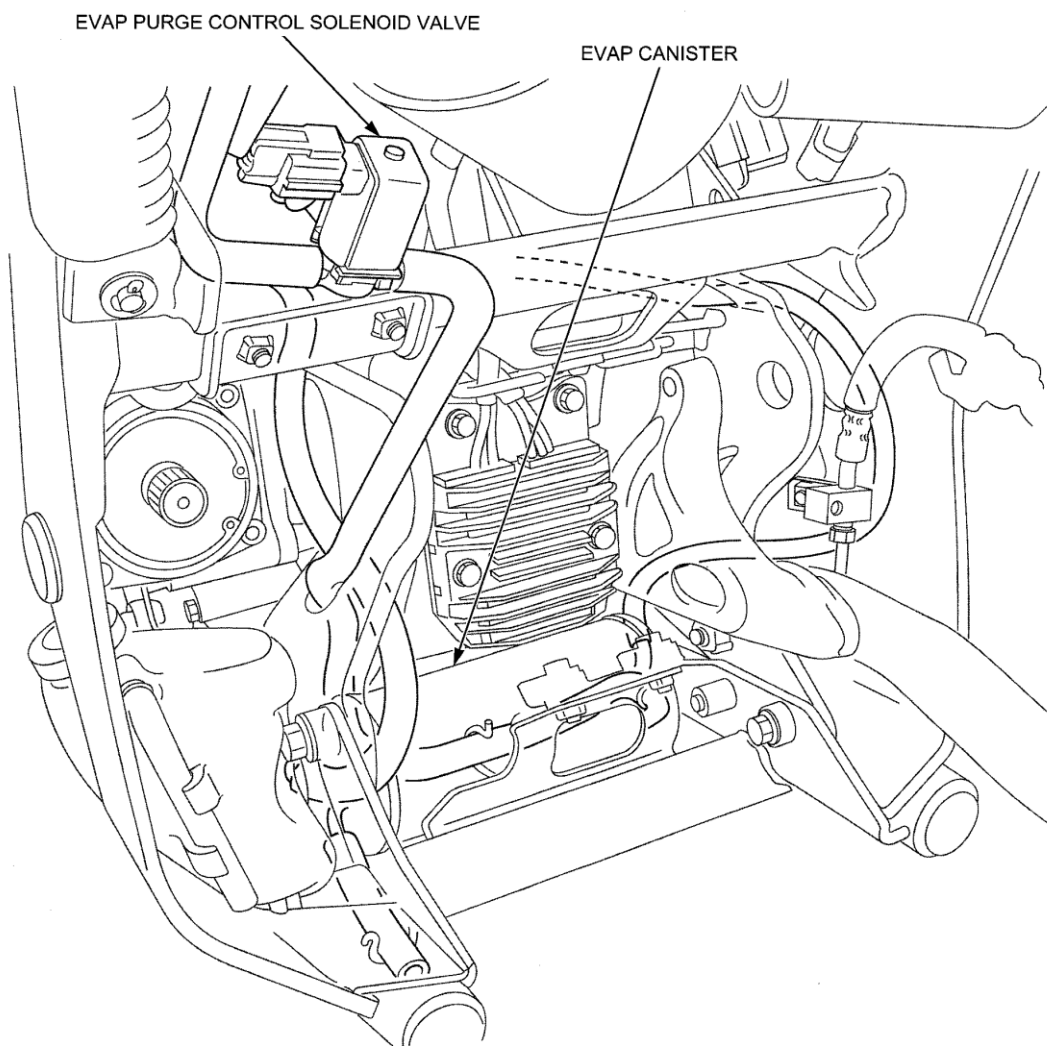
MAINTENANCE

EVAPORATIVE EMISSION CONTROL SYSTEM (CALIFORNIA TYPE)

Check the hoses between the fuel tank, intake manifold, EVAP canister, EVAP purge control solenoid valve for deterioration, damage or loose connection.

Check the EVAP canister for clacks or other damage.

Refer to the CABLE & HARNESS ROUTING for hose connections (page 1-22).

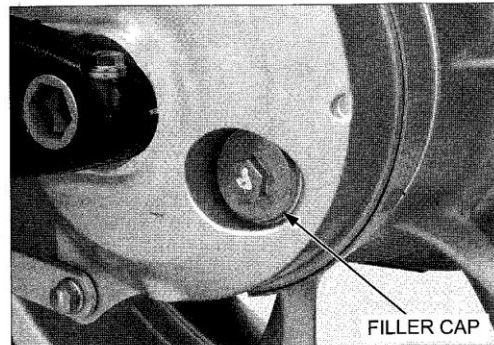


FINAL DRIVE OIL

OIL LEVEL INSPECTION

Support the motorcycle on its sidestand on a level surface.

Remove the oil filler cap from the final gear case.



Check that the oil level is up to the lower edge of the oil filler hole.

If the oil level is low, fill the recommended final drive oil.

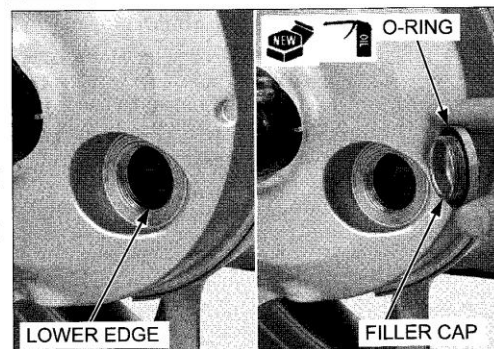
RECOMMENDED FINAL DRIVE OIL:

Hypoid gear oil, SAE #80

Apply engine oil to a new O-ring and install it into the oil filler cap groove.

Install and tighten the oil filler cap to the specified torque.

TORQUE: 12 N·m (1.2 kgf·m, 9 lbf·ft)



OIL CHANGE

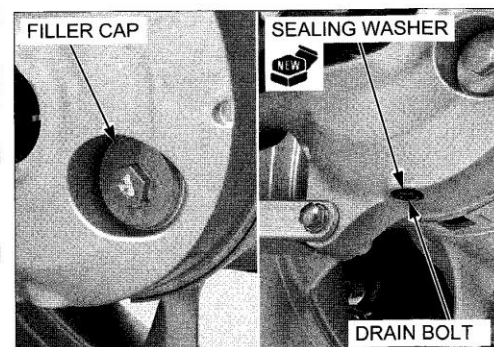
Support the motorcycle using a hoist or equivalent and raise the rear wheel off the ground.

Remove the oil filler cap and drain bolt from the final gear case, slowly turn the rear wheel and drain the final drive oil.

Install the drain bolt with a new sealing washer and tighten it to the specified torque.

TORQUE: 12 N·m (1.2 kgf·m, 9 lbf·ft)

Support the motorcycle on its sidestand on a level surface.



Fill the recommended final drive oil through the oil filler hole until it reaches the lower edge of the filler hole.

RECOMMENDED FINAL DRIVE OIL:

Hypoid gear oil, SAE #80

OIL CAPACITY:

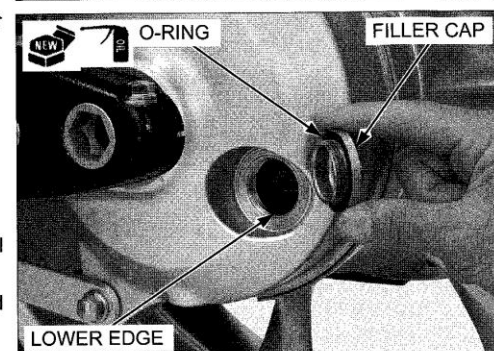
130 cm³ (4.4 US oz, 4.6 Imp oz) at draining

170 cm³ (5.7 US oz, 6.0 Imp oz) at disassembly

Apply engine oil to a new O-ring and install it into the oil filler cap groove.

Install and tighten the oil filler cap to the specified torque.

TORQUE: 12 N·m (1.2 kgf·m, 9 lbf·ft)



MAINTENANCE

BRAKE FLUID

NOTICE

Spilled fluid can damage painted, plastic or rubber parts. Place a rag over these parts whenever the system is serviced.

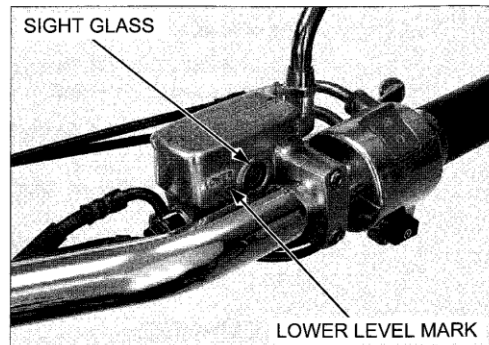
NOTE:

- Do not mix different types of fluid, as they are not compatible with each other.
- Do not allow foreign material to enter the system when filling the reserve tank.
- When the fluid level is low, check the brake pads for wear (page 4-22).
- If the brake pads are worn, the caliper piston is pushed out, and this accounts for a low fluid level. If the brake pads are not worn and the fluid level is low, check entire system for leaks (page 4-22).

FRONT BRAKE

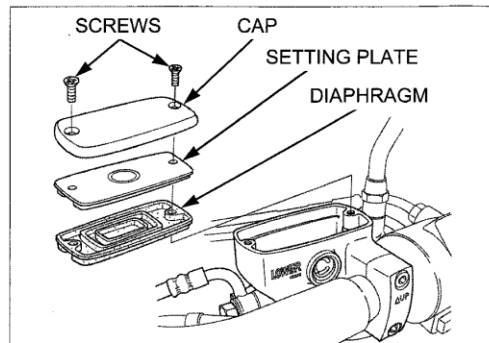
Turn the handlebar to the left side so the reservoir is level and check the front brake reservoir fluid level through the sight glass.

If the fluid level is near the "LOWER" level mark, fill the recommended brake fluid.



Remove the following:

- Screws
- Reservoir cap
- Setting plate
- Diaphragm



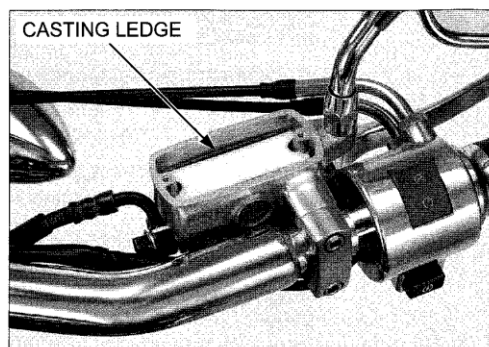
Fill the reservoir with DOT 4 brake fluid from a sealed container to the casting ledge.

Install the following:

- Diaphragm
- Set plate
- Reservoir cap

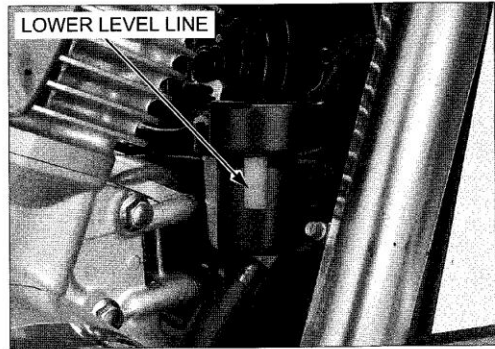
Install and tighten the screws to the specified torque.

TORQUE: 1.5 N·m (0.2 kgf·m, 1.1 lbf·ft)

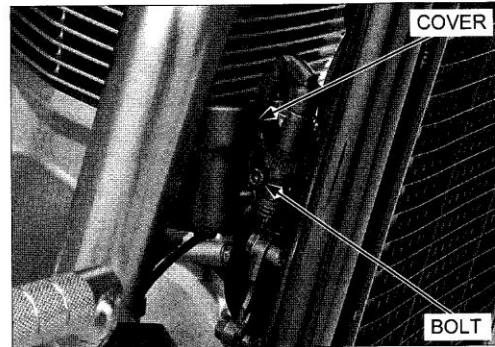


REAR BRAKE

Support the motorcycle upright on a level surface.
 Check the fluid level in the rear brake reservoir.
 If the level is near the "LOWER" level line, fill the recommended brake fluid.



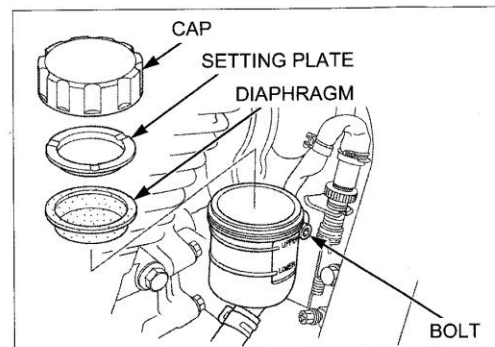
Remove the bolt and reservoir cover.



Temporarily install the rear brake reservoir with the bolt.

Remove the following:

- Reservoir cap
- Setting plate
- Diaphragm



Fill the reservoir with DOT 4 brake fluid from a sealed container to the "UPPER" level line.

Install the following:

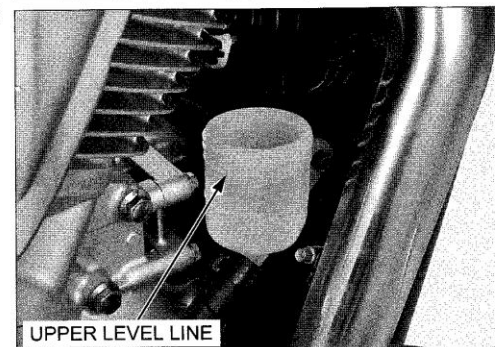
- Diaphragm
- Setting plate
- Reservoir cap

Remove the bolt.

Install the reservoir cover and bolt.

Tighten the bolt to the specified torque.

TORQUE: 10 N·m (1.0 kgf·m, 7 lbf·ft)



MAINTENANCE

BRAKE PADS WEAR

FRONT BRAKE PADS

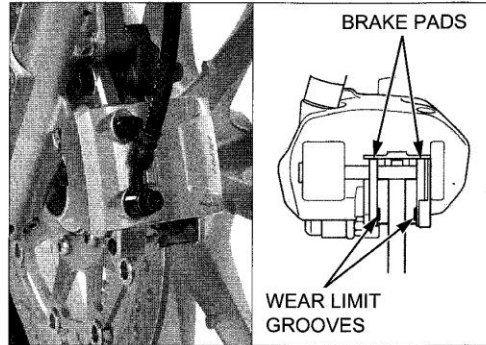
Check the brake pads for wear.

Always replace the brake pads as a set to assure even disc pressure.

Replace the brake pads if either pad is worn to the bottom of the wear limit groove.

For brake pad replacement:

- VT1300CX (page 17-16)
- VT1300CXA (page 17-17)



REAR BRAKE PADS

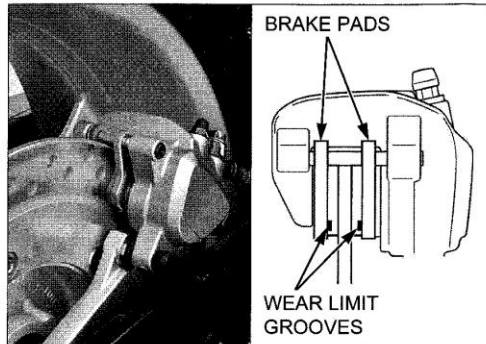
Check the brake pads for wear.

Always replace the brake pads as a set to assure even disc pressure.

Replace the brake pads if either pad is worn to the bottom of the wear limit groove.

For brake pad replacement:

- VT1300CX (page 17-18)
- VT1300CXA (page 17-19)



BRAKE SYSTEM

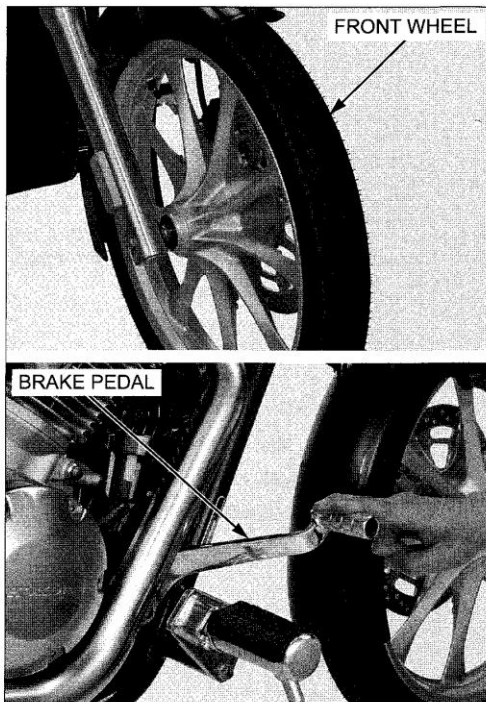
VT1300CXA: This model is equipped with a Combined Brake System.

Check the front and rear brake operation as follows:

Support the motorcycle securely and raise the front wheel off the ground.

Apply the brake pedal.

Make sure the front wheel does not turn while the brake pedal is applied.



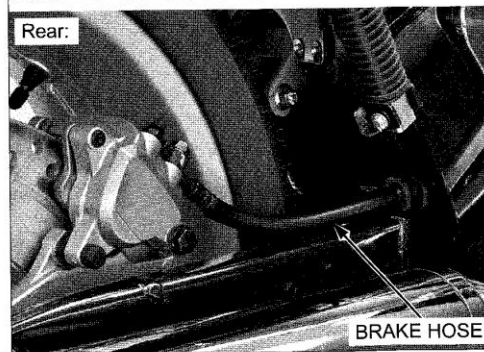
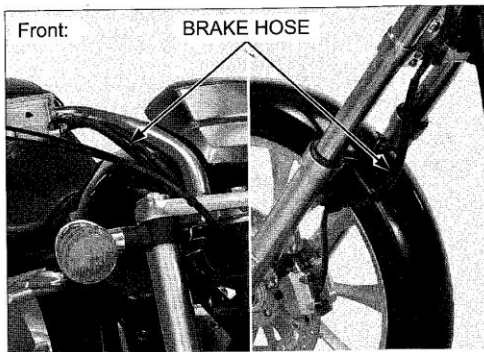
Firmly apply the brake lever or pedal and check that no air has entered the system. If the lever or pedal feels soft or spongy when operated, bleed the air from the system.

For air bleeding procedures:

- VT1300CX (page 17-7)
- VT1300CXA (page 17-10)

Inspect the brake hoses, pipes and fittings for deterioration, cracks, damage or signs of leakage. Tighten any loose fittings.

Replace hoses, pipes and fittings as required.

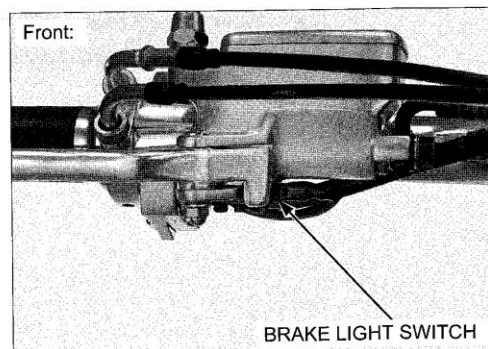


BRAKE LIGHT SWITCH

NOTE:

- The front brake light switch cannot be adjusted. If the front brake light switch actuation and brake engagement are not synchronized, either replace the switch unit or the malfunctioning parts of the system.

For front brake light switch replacement (page 17-21).



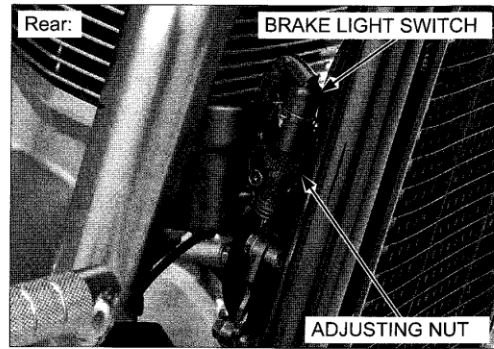
MAINTENANCE

Adjust the rear brake light switch so that the brake light comes on just prior to the brake actually being engaged.
If the light fails to come on, adjust the switch so that the light comes on at the proper time.

Do not turn the switch body while turning the adjusting nut.

Hold the switch body and turn the adjusting nut.

Recheck the rear brake light switch operation.



HEADLIGHT AIM

NOTE:

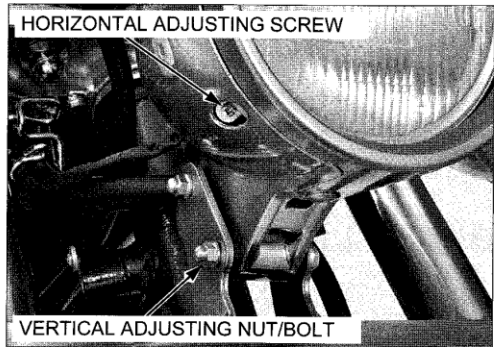
- Adjust the headlight beam as specified by local laws and regulations.

Support the motorcycle on a level surface.

Adjust vertically by loosening the vertical adjusting nut/bolt.

Tighten the vertical adjusting nut while holding the bolt.

Adjust horizontally by turning the horizontal adjusting screw.

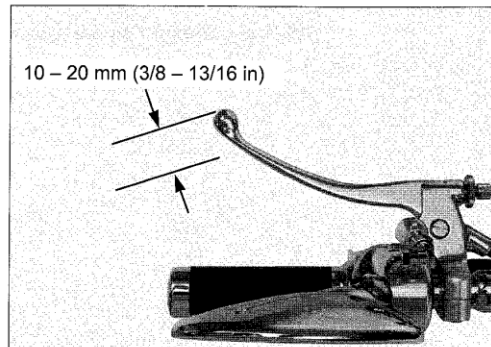


CLUTCH SYSTEM

Inspect the clutch cable for kinks or damage, and lubricate the cable if necessary.

Measure the clutch lever freeplay at the end of the lever.

FREEPLAY: 10 – 20 mm (3/8 – 13/16 in)

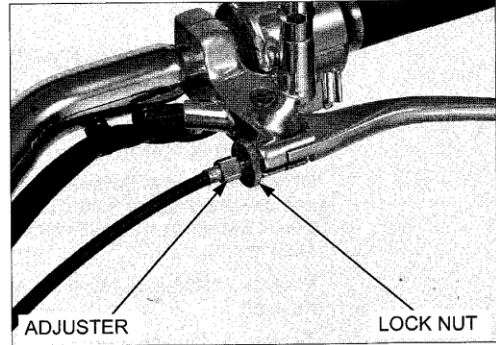


Minor adjustments are made with the upper adjuster at the clutch lever.

Loosen the lock nut and turn the adjuster.
Tighten the lock nut securely.

The adjuster may be damaged if it is positioned too far out, leaving minimal thread engagement.

If the adjuster is threaded out near its limit and the correct freeplay cannot be obtained, turn the adjuster all the way in and back out one turn.
Tighten the lock nut and make major adjustments as described below.

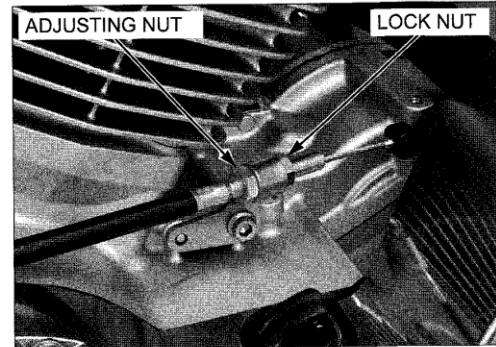


Major adjustments are made with the lower adjusting nut at the engine.

Loosen the lock nut and turn the adjusting nut.
After adjustment is complete, tighten the lock nut securely while holding the adjusting nut.

Check the clutch operation.

If the freeplay cannot be obtained, or the clutch slips during the test ride, disassemble and inspect the clutch (page 11-6).



SIDESTAND

Support the motorcycle using a safety stand or hoist and raise rear wheel off the ground.

Check the sidestand spring for damage or loss of tension.

Check the sidestand assembly for freedom of movement and lubricate the sidestand pivot if necessary.

If necessary, tighten the pivot lock nut while holding the pivot bolt to the specified torque.

TORQUE:

Sidestand pivot bolt:

10 N·m (1.0 kgf·m, 7 lbf·ft)

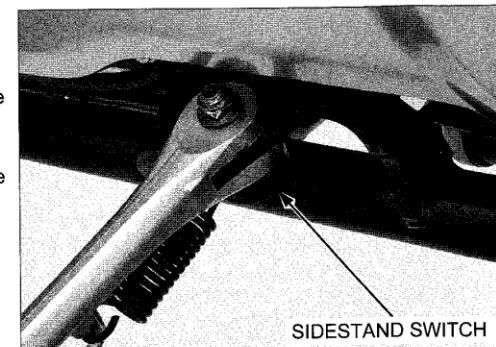
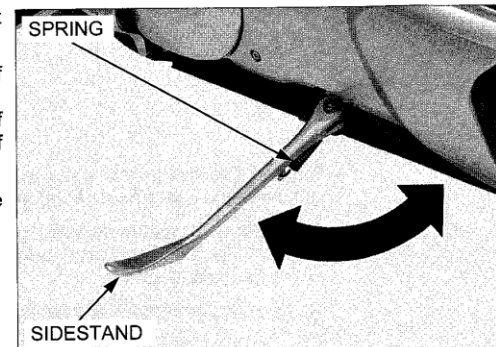
Sidestand pivot lock nut:

30 N·m (3.1 kgf·m, 22 lbf·ft)

Check the sidestand ignition cut-off system:

- Fully lower the sidestand.
- Start the engine with the transmission in neutral.
- Shift the transmission into gear, while squeezing the clutch lever.
- The sidestand switch is normal if the engine stop.

If there is a problem with the system, check the sidestand switch (page 22-25).



SUSPENSION

FRONT SUSPENSION INSPECTION

NOTE:

- Loose, worn or damaged suspension parts impair motorcycle stability and control.

Check the action of the forks by applying the front brake and compressing the front suspension several times. Check the entire assembly for leaks, damage or loose fasteners.

Replace damaged components which cannot be repaired.

Tighten all nuts and bolts.

For fork service:

- Left front fork (page 15-19)
- Right front fork (page 15-29)



REAR SUSPENSION INSPECTION

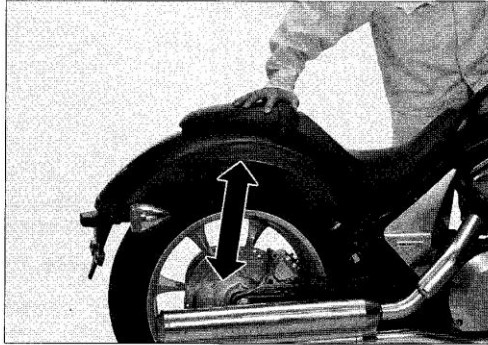
Check the action of the shock absorber by compressing it several times.

Check the entire shock absorber assembly for leaks, damage or loose fasteners.

Replace damaged components which cannot be repaired.

Tighten all nuts and bolts.

For shock absorber service (page 16-15).

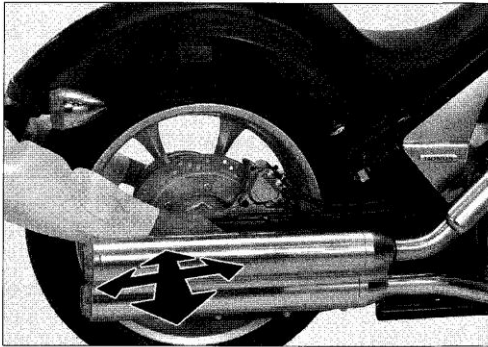


Support the motorcycle using a safety stand or hoist and raise the rear wheel off the ground.

Check for worn swingarm bearings by grabbing the rear end of the swingarm and attempting to move the swingarm side to side.

Replace the bearings if any looseness is noted.

For swingarm service (page 16-17).



REAR SUSPENSION ADJUSTMENT

SPRING PRE-LOAD ADJUSTER

Spring pre-load can be adjusted by turning the adjuster.
Remove the right side cover (page 3-6).

TURN CLOCKWISE:

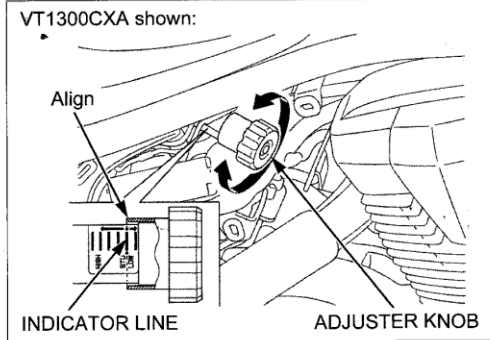
Increase the spring pre-load

TURN COUNTERCLOCKWISE:

Decrease the spring pre-load

To adjust to the standard position:

1. Turn the spring preload adjuster knob counterclockwise until it will no longer turn (lightly seats).
2. Turn the adjuster clockwise by 6 clicks.
At that position, the end of the adjuster knob should be aligned with the indicator line.



REBOUND DAMPING ADJUSTER

NOTICE

Do not turn the adjusters more than the given positions or the adjusters may be damaged.

NOTE:

- Rebound damping adjustment is referenced from the full hard position.

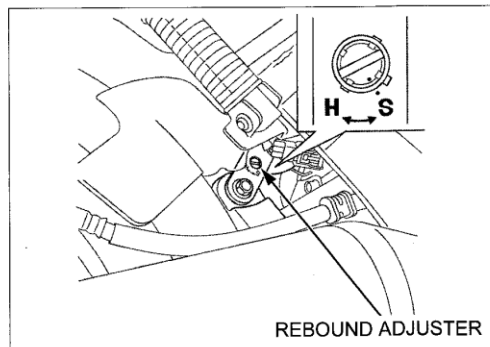
The rebound damping can be adjusted by turning the adjuster.

DIRECTION H: Increase the damping force (harder)
DIRECTION S: Decrease the damping force (softer)

Turn the rebound adjuster clockwise until it stops (full hard position), then turn the adjuster counterclockwise.

REBOUND DAMPING ADJUSTER STANDARD POSITION:

3/4 turns out from full hard



NUTS, BOLTS, FASTENERS

Check that all chassis nuts and bolts are tightened to their correct torque values (page 1-14).

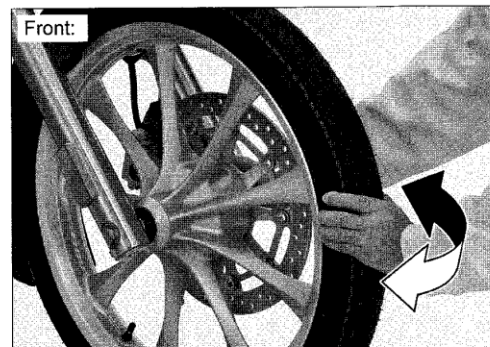
Check that all cotter pins, safety clips, hose clamps and cable stays are in place and properly secured.

WHEELS/TIRES

Support the motorcycle using a safety stand or hoist and raise the front wheel off the ground.

Hold the fork leg and move the front wheel sideways with force to see if the wheel bearings are worn.

For front wheel service (page 15-12).

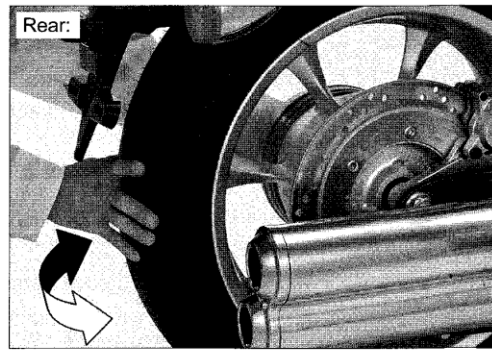


MAINTENANCE

Support the motorcycle using a safety stand or hoist and raise the rear wheel off the ground.

Hold the swingarm and move the rear wheel sideways with force to see if the wheel and driven flange bearings are worn.

For rear wheel service (page 16-6).

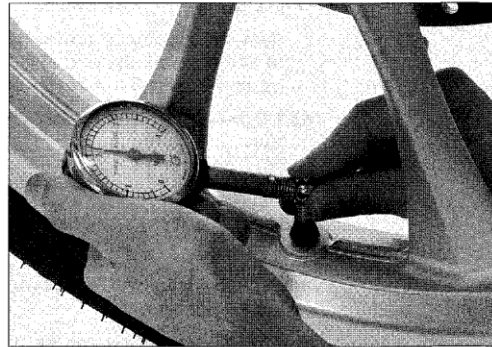


Tire pressure should be checked when the tires are cold.

Check the cold tire pressure.

RECOMMENDED TIRE PRESSURE AND TIRE SIZE:

| | | FRONT | REAR |
|--|--------|--------------------|---------------------|
| Tire pressure kPa (kgf/cm ² , psi) | | 225 (2.25, 33) | 280 (2.80, 41) |
| Tire size | | 90/90-21M/C 54H | 200/50R18M/C 76H |
| Tire brand | DUNLOP | ELITE3 | ELITE3 |



Check the tires for cuts, embedded nails, or other damage.

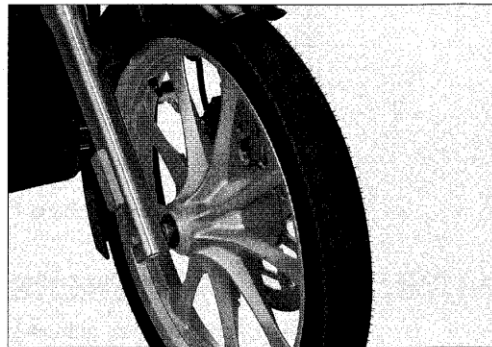
Check the front and rear wheels for trueness.

Measure the tread depth at the center of the tires. Replace the tires when the tread depth reaches the following limits.

MINIMUM TIRE TREAD DEPTH:

FRONT: 1.5 mm (0.06 in)

REAR: 2.0 mm (0.08 in)



STEERING HEAD BEARINGS

Support the motorcycle using a safety stand or hoist and raise the front wheel off the ground.

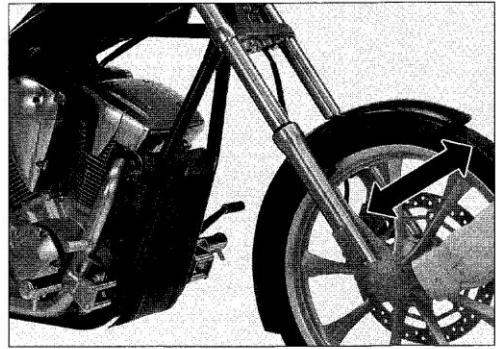
Check that the handlebar moves freely from side to side.

Make sure the control cables do not interfere with the handlebar rotation.



Check for steering head bearings by grabbing the fork legs and attempting to move the fork back and front.

If the handlebar moves unevenly, binds, or has vertical movement, inspect the steering head bearings (page 15-37).



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