

PERIODIC MAINTENANCE

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2-1 PERIODIC MAINTENANCE

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.

CAUTION

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

PERIODIC MAINTENANCE CHART

⊙ ENGINE

Interval Item	Initial 1,000 km	Every 6,000 km	Every 12,000 km	page
Air cleaner element	Clean every 3,000 km · Replace every 12,000 km			2- 7
Exhaust pipe nuts and muffler mounting bolts	Tighten	Tighten	—	2-6
Valve clearance adjust	Inspect	Inspect	—	2- 3
Cylinder head bolt	Tighten	Tighten		3-50
Cylinder head & Cylinder	—	—	Remove carbon	3-21
Spark plug	Clean	Clean	Replace	2- 5
Fuel hose	Inspect	Inspect	—	2- 8
	Replace every 4 years			
Engine oil filter	Replace	Replace	—	2-11
Engine oil	Replace	Replace	—	2- 9
Throttle cable	Inspect	Inspect	—	2- 8
Idle speed	Inspect	Inspect	—	2- 7
Clutch	Inspect	Inspect	—	2- 9
Engine coolant	Replace every 2 years			2-20
Radiator hoses	—	Inspect	—	2-22
	Replace every 4 years			

⊙ CHASSIS

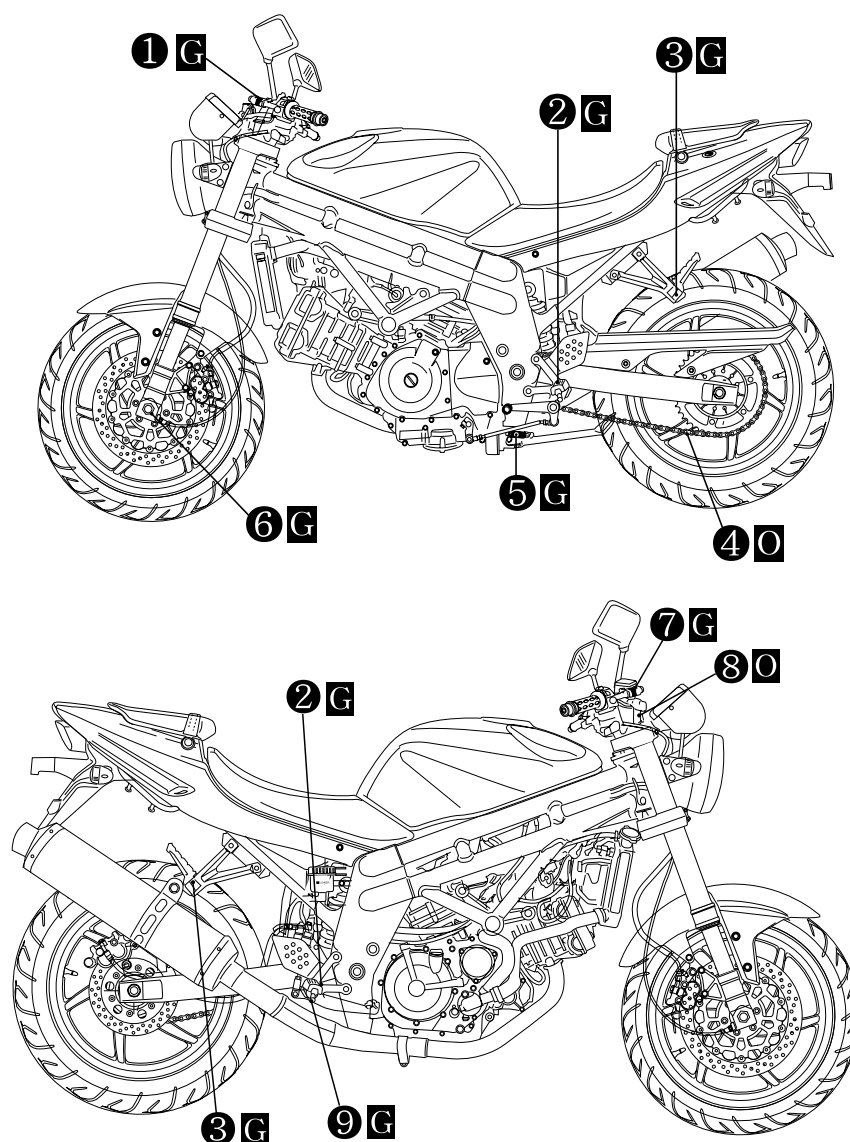
Item \ Interval	Initial 1,000 km	Every 6,000 km	Every 12,000 km	page
Drive chain	Clean and lubricate every 1,000km			2-12
Brake	Inspect	Inspect	—	2-14
Brake hose	Inspect	Inspect	—	2-14
	Replace every 4 years			
Brake fluid	Inspect	Inspect	—	2-14
	Replace every 2 years			
Tires	Inspect	Inspect	—	2-19
Steering	Inspect	Inspect	—	2-18
Front forks	—	Inspect	—	2-18
Rear suspension	—	Inspect	—	2-18
Chassis bolts and nuts	Tighten	Tighten	—	2-19

CAUTION

Using poor quality replacement parts can cause your motorcycle to wear more quickly and shorten its useful life.
Use only genuine Hyoung replacement parts or their equivalent.

LUBRICATION POINT

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



- ① Clutch lever holder and clutch cable
- ② Footrests pivot
- ③ Passenger footrests pivot
- ④ Drive chain
- ⑤ Side stand pivot and spring hook

- ⑥ Speedometer gear box
- ⑦ Front brake lever holder
- ⑧ Throttle cable
- ⑨ Rear brake pedal pivot

⓪ - Motor oil, ① - Grease

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 either motor oil or grease whenever the motorcycle has been operated under wet or rainy condition.

MAINTENANCE PROCEDURES

This section describes the service procedure for each section of the periodic maintenance.

VALVE CLEARANCE

Inspect Interval

Inspect Initial 1,000 km and Every 6,000 km.

CAUTION

The clearance specification is for COLD state.

The valve clearance specification is different for intake and exhaust valves.

Valve clearance adjustment must be checked and adjusted,

- 1) at the time of periodic inspection,
- 2) when the valve mechanism is serviced, and
- 3) when the camshaft is disturbed by removing it for servicing.

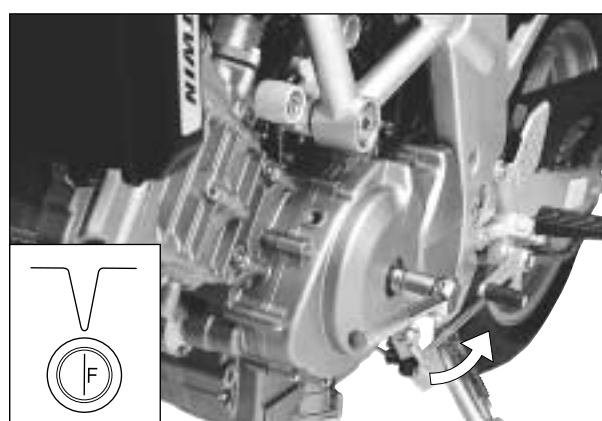
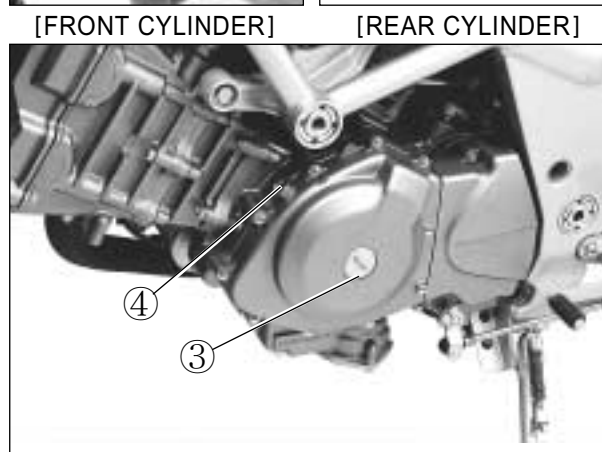
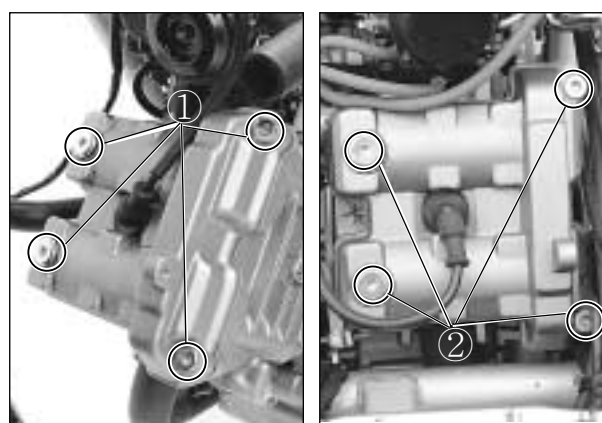
- Remove the spark plug. (Refer to page 2-5)
- Remove the fuel tank. (Refer to page 4-1)
- Remove the radiator. (Refer to page 5-2)
- Remove the cylinder head cover bolt ① and ②.
- Remove the magneto cover plug ③ and the timing inspection plug ④.

- Rotate the magneto rotor counter-clockwise to set the front cylinder's piston at TDC (Top Dead Center) of the compression stroke.
(Rotate the rotor until "F" line on the rotor is aligned with the center of hole on the crankcase.)

- To inspect the front cylinder's valve clearance, insert the thickness gauge to the clearance between the camshaft and the tappet.

Valve clearance	Standard (When cold)
IN.	0.1 ~ 0.2 mm (0.004 ~ 0.008 in)
EX.	0.2 ~ 0.3 mm (0.008 ~ 0.012 in)

 Thickness gauge : 09900-20806



- If the clearance is out of specification, first remove the cam chain tensioner, camshaft housing, camshaft.
To install the tappet shim at original position, record the shim NO. and clearance to present by “A”, “B”, “C”, “D” mark on the cylinder head.

Select the tappet that agree with tappet clearance (vertical line) and shim NO.(horizontal line) as refer to the tappet shim selection chart. (Refer to page 8-29 · 30)

Adjust valve timing, install the camshaft housing and the tensioner.

After the crankshaft rotate about 10 times, measure the valve clearance.

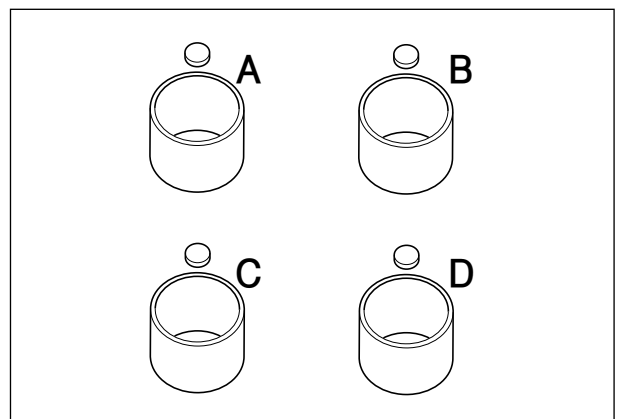
If the clearance be not agree, adjust the standard clearance as the same manner above.

- In case that valve adjustment which there is no the tappet shim selection chart, please follow instructions of example in the below.

For example, the intake clearance is 0.4 and the shim is 170 (1.70 mm), select 195 (1.95 mm) of the shim which 170 (1.70 mm) of the shim add up the excess clearance 0.25 mm when adjust with the standard 0.15 as the intake standard clearance 0.1 ~ 0.2 mm.

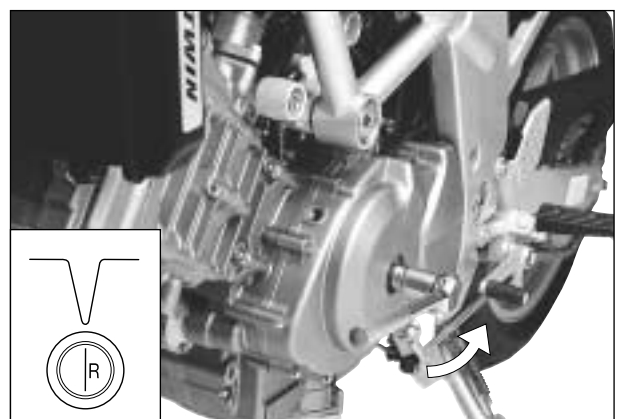
CAUTION

- ❖ Valve clearance should be checked when the engine is cold.
- ❖ If you don't rotate the crankshaft about 10 times before measuring the valve clearance, there is no meaning of valve clearance.



- Rotate the magneto rotor to set the rear cylinder's piston at TDC(Top Dead Center) of the compression stroke.
(Rotate the rotor 285° counter-clockwise from the “F” line, and until the “R” line on the rotor is aligned with the center of hole on the crankcase.)

- Inspect the rear cylinder's valve clearance with the same manner of the front cylinder.



SPARK PLUG

Inspect Interval

*Clean Initial 1,000 km and Every 6,000 km,
Replace Every 12,000 km.*

- Remove the three radiator mounting bolts.

WARNING

The hot radiator and the hot engine can burn you. Wait until the radiator and the engine are cool enough to touch.

CAUTION

- Be careful not to damage the radiator fins.
- Do not extract the radiator hose.

- Remove the fuel tank.

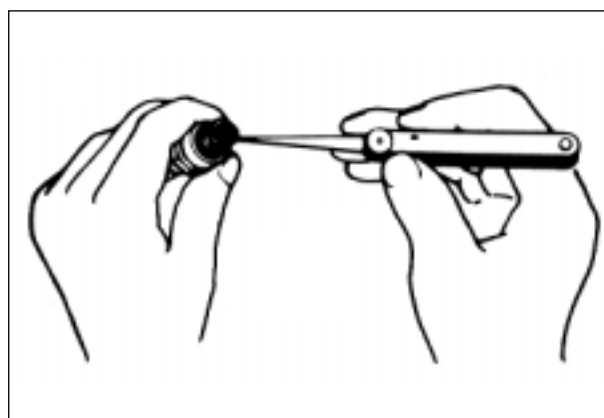
- Disconnect the spark plug caps.
- Remove the spark plugs.

TYPE	SPARK PLUG SPECIFICATION
Hot type	CR7E
Standard type	CR8E
Cold type	CR9E

Remove the carbon deposit with wire or pin and adjust the spark plug gap to 0.7~0.8 mm(0.028~0.032 in), measuring with a thickness gauge.

Spark plug gap 0.7~0.8 mm (0.028~0.032 in)

 Thickness gauge : 09900-20806




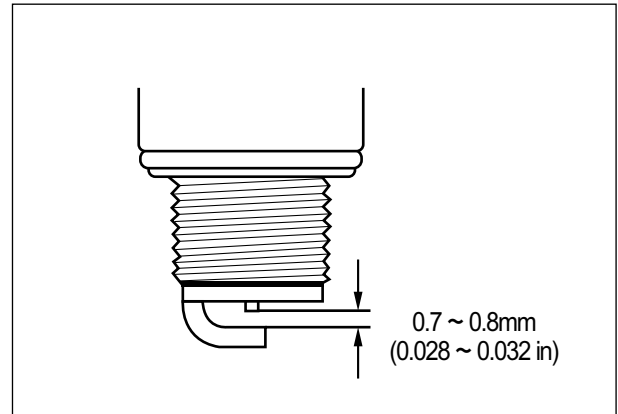
Check to see the worn or burnt condition of the electrodes.

If it is extremely worn or burnt, replace the plug.

And also replace the plug if it has a broken insulator, damaged thread, etc.

- Install the spark plug, and then tighten it to specified torque.

 **Spark plug** : 11 N · m (1.1 kg · m)




EXHAUST PIPE NUTS AND MUFFLER MOUNTING BOLTS

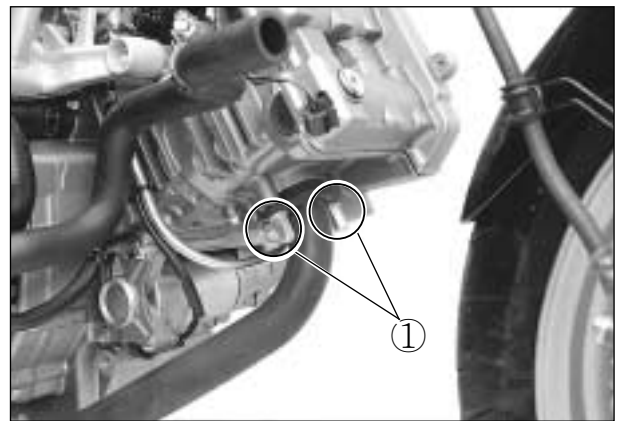
Inspect Interval

Tighten Initial 1,000 km and Every 6,000 km.

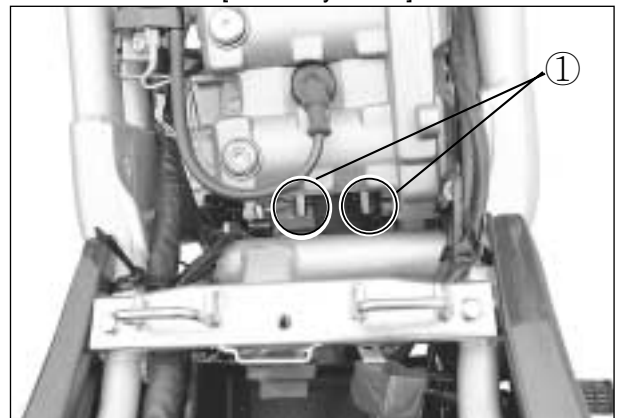
- Tighten the exhaust pipe nuts ①, and muffler mounting bolts ② to the specified torque.

 **Exhaust pipe nut**
: 18~28 N · m (1.8~2.8 kg · m)

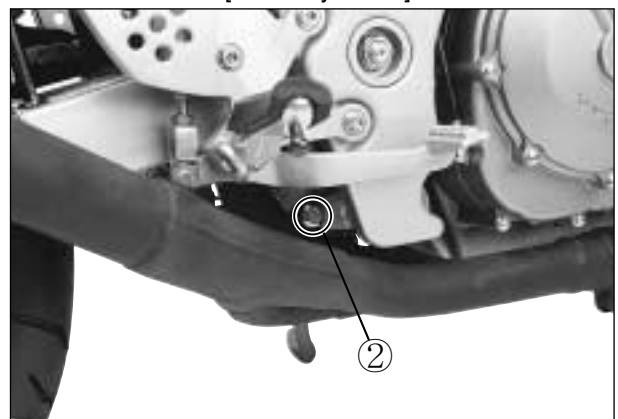
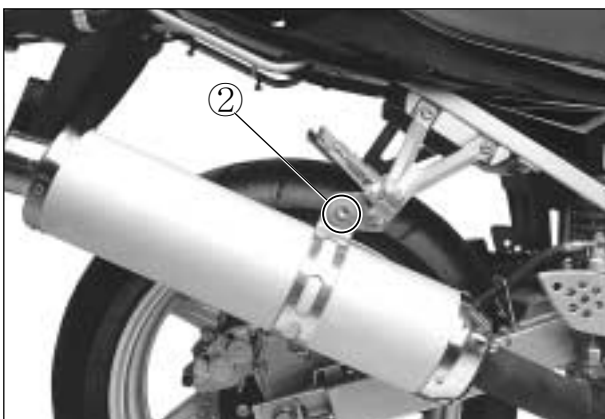
Muffler mounting bolt
: 18~28 N · m (1.8~2.8 kg · m)



[Front Cylinder]



[Rear Cylinder]



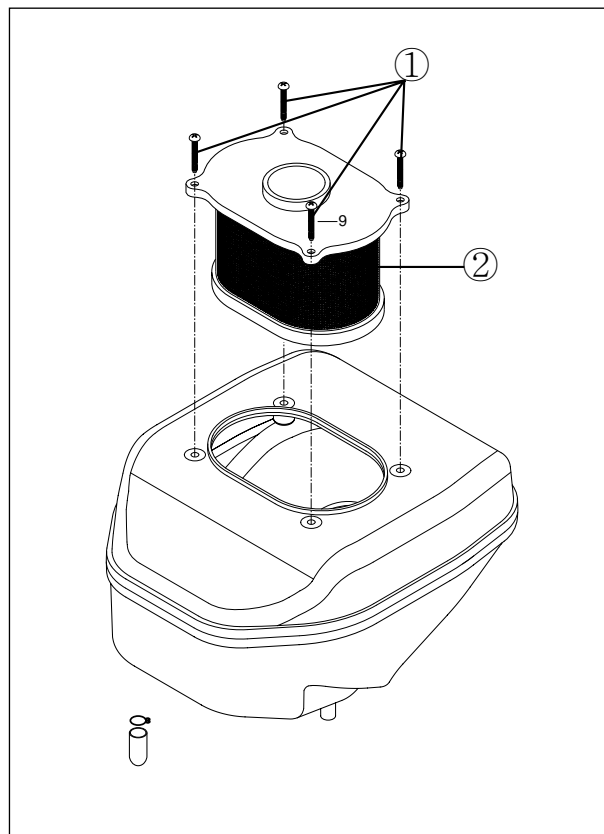
AIR CLEANER

Inspect Interval

Clean Every 3,000 km,

Replace Every 12,000 km.

- Remove the front and rear seat.
- The air cleaner is located under the fuel tank.
Remove the fuel tank.
- Remove the four screw ①.
- Pull up the air cleaner cover and the air cleaner element ②.



Clean the air cleaner element for the following:

- When the air cleaner element clean with the air gun, necessarily blow at the inside by compressed air.
- Carefully examine the air cleaner element for tears during cleaning. Replace it with a new one if it is torn.
- Assemble the element completely or damage severely the engine.
- Be careful not to allow water to go inside the air cleaner element.



CAUTION

More frequent servicing may be performed on motorcycles that are used under severe conditions, also clean the air cleaner element when replacing the oil to prevent damage of the engine.

CARBURETOR

Inspect Interval

Inspect Initial 1,000 km and Every 6,000 km.

⊙ IDLE SPEED

NOTE

Make this inspection when the engine is hot.



- Connect an engine tachometer to the high tension cord.

Start up the engine and set its speed at anywhere 1,300 and 1,500 rpm by turning throttle stop screw ①.

Engine idle speed	1,300 ~ 1,500 rpm
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 **Engine tachometer : 09900-26006**

⊙ THROTTLE CABLE PLAY

This motorcycle has a twin throttle cable system. Cable ① is for throttle cable and cable ② is for returning cable. There should be 0.5~1.0mm play on the throttle cable.

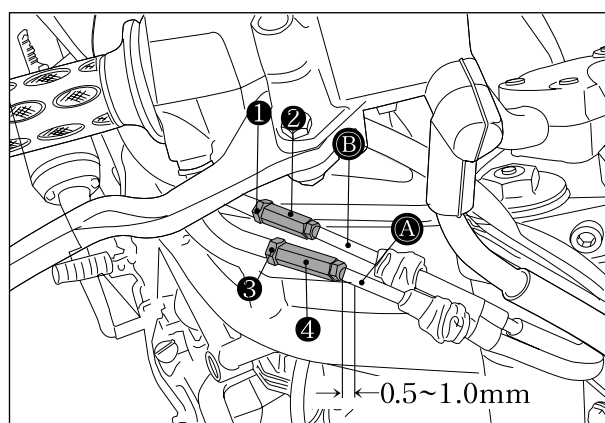
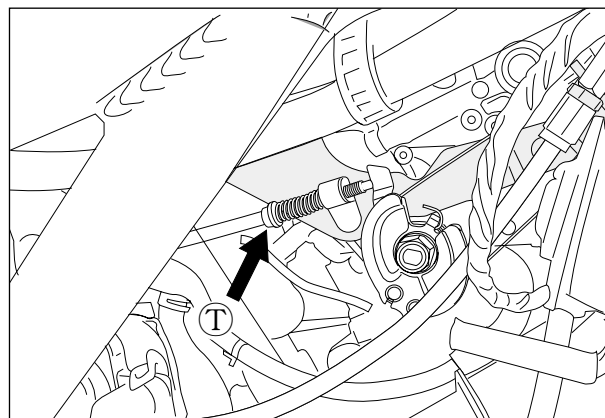
To adjust the throttle cable play.

- Loosen the lock nut ① of the returning cable ② and fully turn in the adjuster ③.
- Loosen the lock nut ④ of the throttle cable ①.
- Turn the adjuster ⑤ in or out until the throttle cable play is between 0.5 ~ 1.0mm(0.02 ~ 0.04 in).
- Tighten the lock nut ④ while holding the adjuster ⑤.
- While holding the throttle grip at the fully closed position, slowly turn out the adjuster ③ of the returning cable ② until resistance is felt.
- Tighten the lock nut ① while holding the adjuster ③.

Throttle cable play	0.5 ~ 1.0 mm (0.02 ~ 0.04 in)
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CAUTION

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



CAUTION

Inadequate throttle cable play can cause engine speed to rise suddenly when you turn the throttle grip. This can lead to loss of rider control.

FUEL HOSE

Inspect Interval

*Inspect Initial 1,000 km and Every 6,000 km,
Replace every 4 years.*

- Remove the front and rear seat. (Refer to page 7-1)
- Remove the fuel tank.

Inspect the fuel hoses for damage and fuel leakage. If any defects are found, the fuel hoses must be replaced.



CLUTCH

Inspect Interval

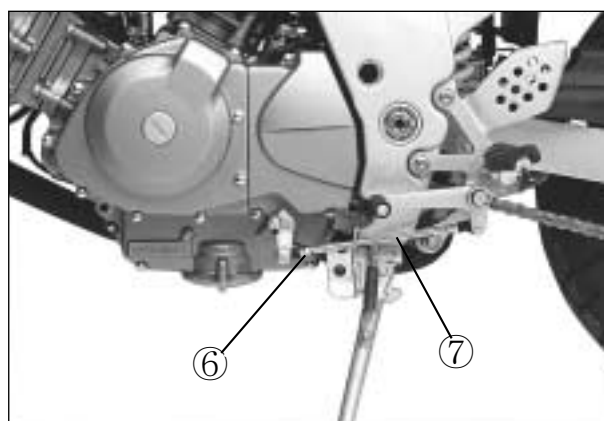
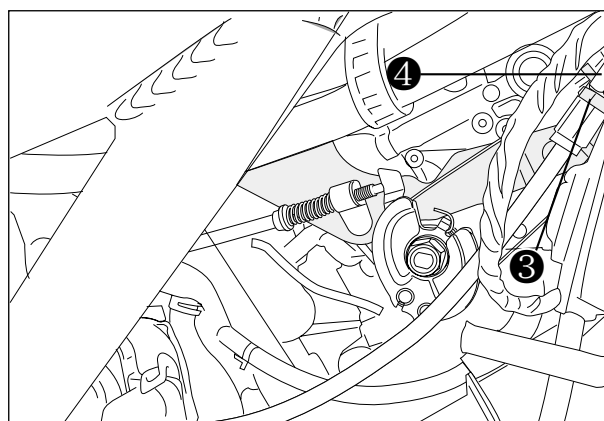
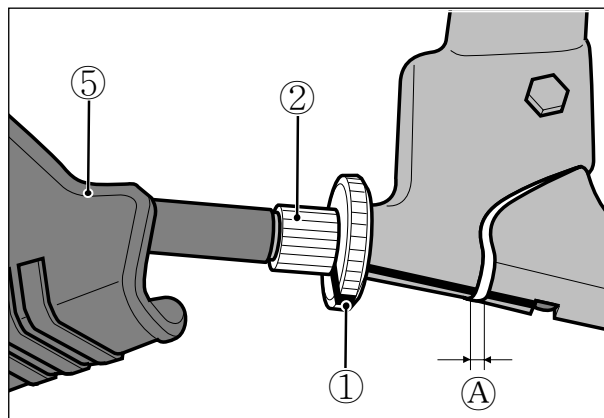
Inspect Initial 1,000 km and Every 6,000 km.

Clutch play should be 2 mm(0.08 in) as measured at the clutch lever holder before the clutch begins to disengage. If the play in the clutch is incorrect, adjust it in the following way :

- A basis adjustment be allowed by the clutch lever adjuster ②.
- Loosen the clutch lever adjuster ②.
- Screw the lock nut ① clockwise fully, after finishing adjustment.
- After end of adjustment, tighten the lock nut ① and cover the rubber boot ⑤.
- If not adjust by the adjuster ②, loosen the clutch cable adjuster lock nut ③.
- Turn the clutch cable adjuster ④ in or out to acquire the specified play.
- After end of adjustment, tighten the lock nut ③.
- The clutch cable should be lubricated with a light weight oil whenever it is adjusted.

Clutch cable play ①

2 mm (0.08 in)



⊙ GEARSHIFT LEVER HEIGHT ADJUSTMENT

- Loosen the lock nut ⑥.
- With the link rod ⑦ turned, adjust the gearshift lever height.
- Tighten the lock nut ⑥.

ENGINE OIL


Inspect Interval

Replace Initial 1,000 km and Every 6,000 km.

Necessary amount of engine oil	
Oil change	3,000 ml
Filter change	3,200 ml
Overhaul engine	3,400 ml
Engine oil type	SAE 10W/40 API Over SG

Oil should be changed while the engine is warm. Oil filter replacement at the above intervals, should be together with the engine oil change.

- Keep the motorcycle upright.
- Place an oil pan below the engine, and drain the oil by removing the filler cap ① and drain plug ②.
- Tighten the drain plug ② to the specified torque, and pour fresh oil through the oil filler. Use an API classification of Over SG oil with SAE 10W/40 viscosity.

 **Oil drain plug : 21 N · m (2.1 kg · m)**

- 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.


CAUTION

Never operate the motorcycle if the engine oil level is below the “Lower line mark(L)” in the inspection window. Never fill the engine oil above the “Upper line mark(F)”.

Engine oil level being most suitable about 1mm under the “Upper line mark(F)” of the engine oil lens. In case of the engine oil pouring in excessively, the engine output being made insufficient.

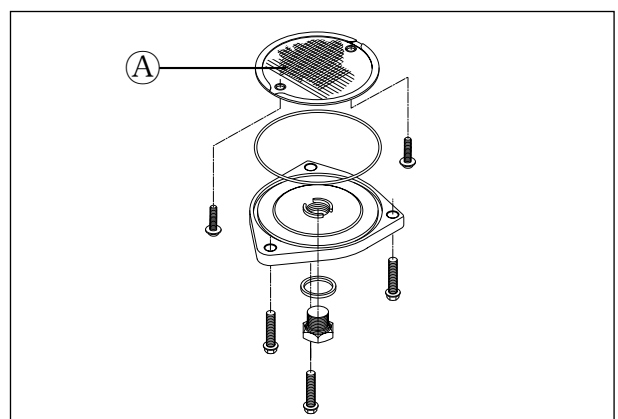
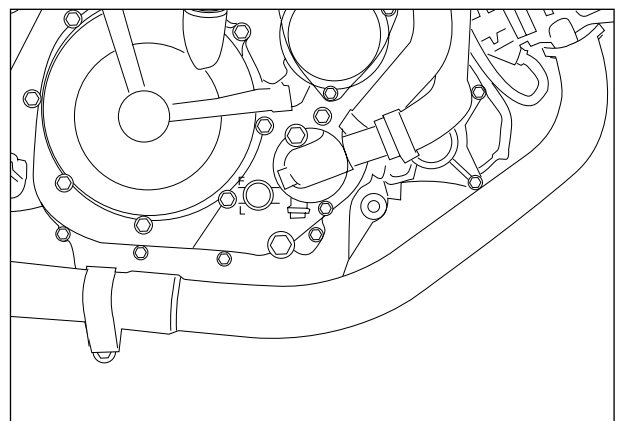
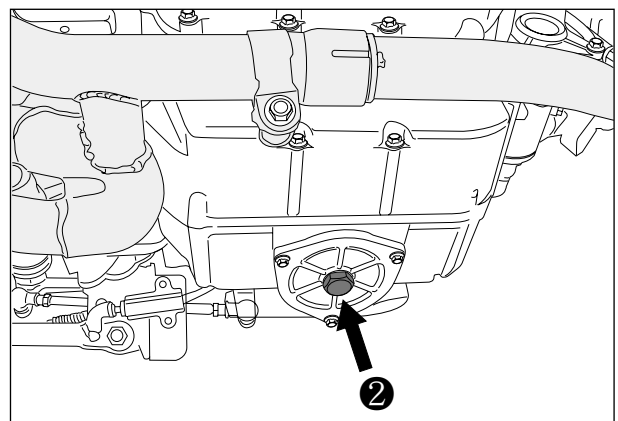
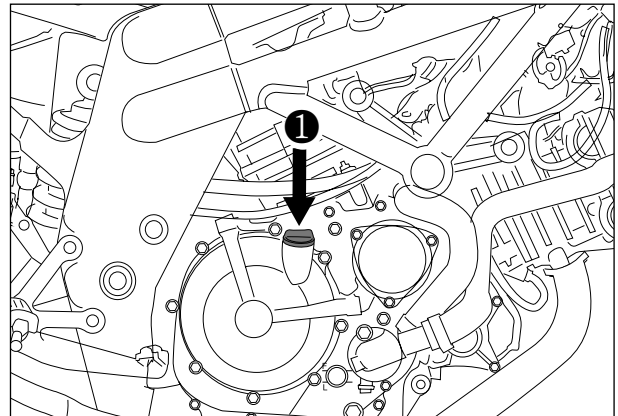
Be careful not to pour the oil excessively into engine.

CAUTION

Necessarily, confirm and clean the oil strainer  when replace the engine oil (specially, when first replacement).

CAUTION

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

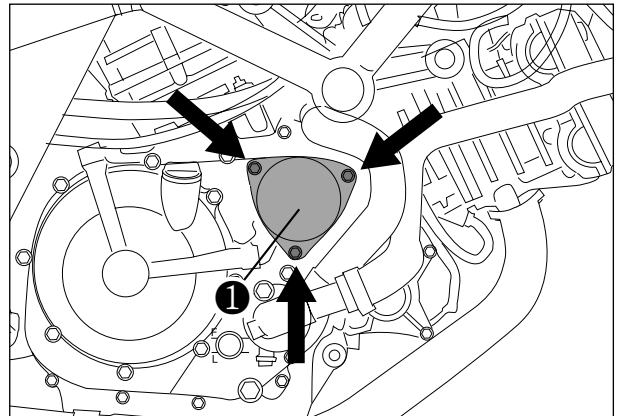


ENGINE OIL FILTER

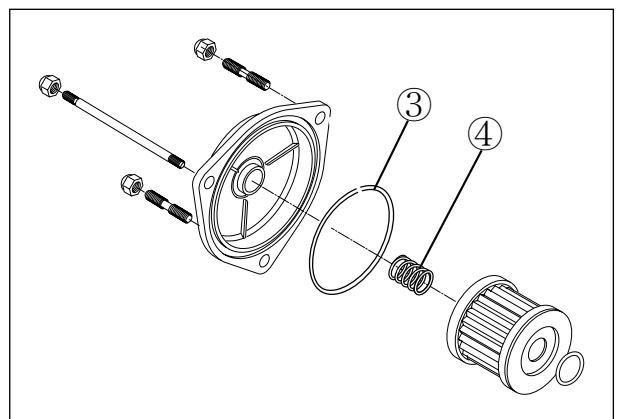
Inspect Interval

Replace Initial 1,000 km and Every 6,000 km.

- Drain the engine oil as described in the engine oil replacement procedure.
- Remove the oil filter cap ①.
- Remove the oil filter.
- Install the new O-ring ②.



- Install the new oil filter.
- Install the new O-ring ③ and spring ④ to the oil filter cap.
- Install the oil filter cap.



⚠ CAUTION

Before installing the oil filter cap, apply engine oil lightly to the new O-ring ③.

⊙ OIL FILTER INSTALLATION

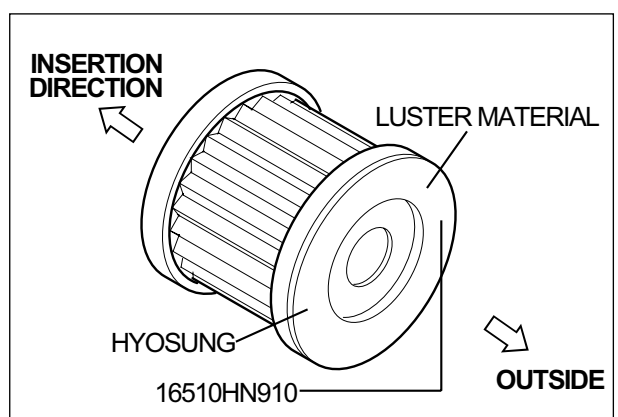
⚠ CAUTION

When install the oil filter, necessarily, “HYOSUNG” character and “16510HN910” part's NO. install toward the outside, otherwise can damage the engine.

⚠ WARNING

Engine oil and exhaust pipes can be hot enough to burn you.

Wait until the oil drain plug and exhaust pipes are cool enough to touch with bare hands before draining oil.



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

⚠ CAUTION

Use **HYOSUNG MOTORS GENUINE OIL FILTER** only, since the other make's genuine filters and after-market parts may differ filtering performance and durability, which could cause engine damage or oil leaks. Hyosung motors genuine oil filter is also not usable for the motorcycles.

DRIVE CHAIN

Inspect Interval

Clean and Lubricate Every 1,000 km.

Visually check the drive chain for the possible defects listed below. (Support the motorcycle by the jack or block, turn the rear wheel slowly by hand with the transmission shifted to Neutral.)

- Loose pins
- Excessive wear
- Damaged rollers
- Improper chain adjustment
- Missing X-Oring seals
- Dry or rusted links
- Kinked or binding links

If any defects are found, the drive chain must be replaced.

Damage to the drive chain means that the sprocket may also be damaged.

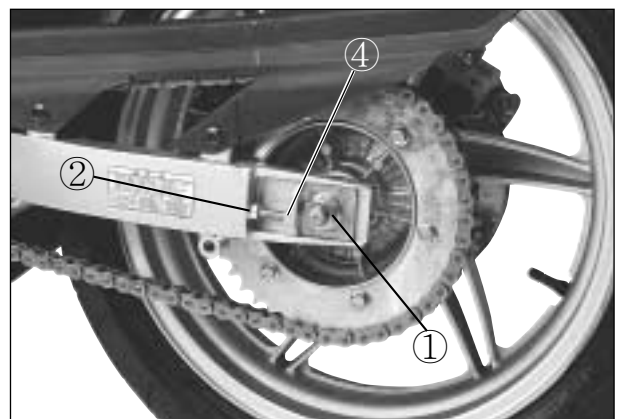
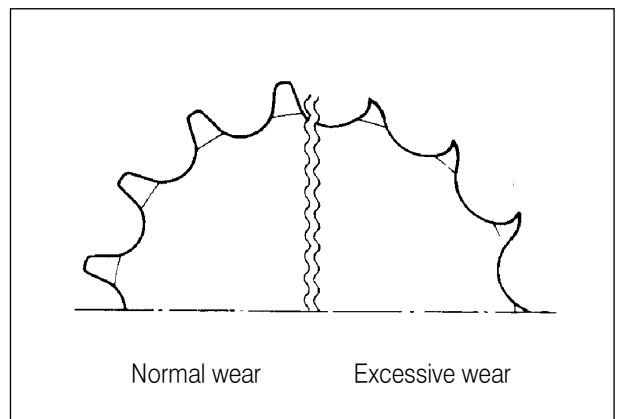
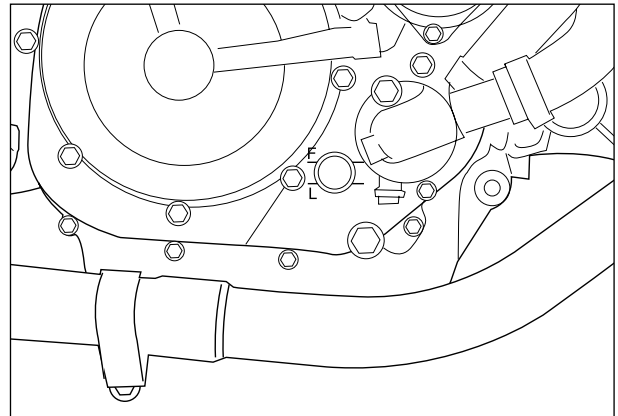
If any defects are found, the sprocket must be replaced.

NOTE

When replacing the drive chain, replace the drive chain and sprocket as a set.

⊙ INSPECTION OF DRIVE CHAIN LENGTH

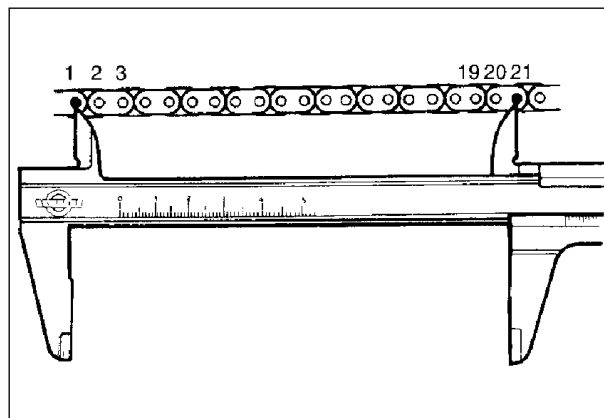
- Loosen the axle nut ①.
- Loosen the lock nuts ②, ③.
- Tense the drive chain fully by turning both chain adjusters ④, ⑤.



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- Count out 21 pins (20 pitches) on the chain and measure the distance between the two points. If the distance exceeds the service limit, the chain must be replaced.

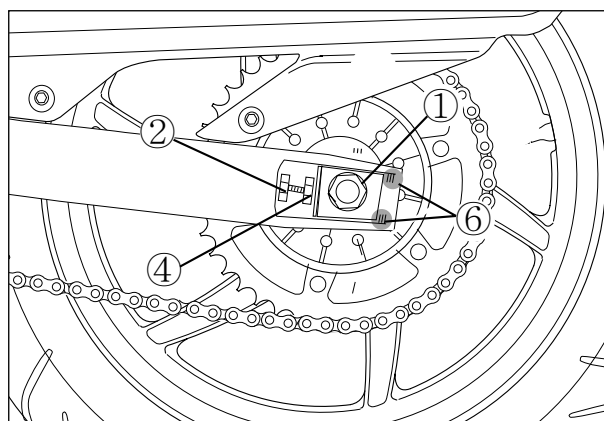
Drive chain 20pitch length	Service limit
	319.4 mm (12.58 in)




⊙ ADJUSTMENT OF DRIVE CHAIN SLACK

- Loosen the axle nut ①.
- Loosen the lock nuts ②, ③.
- Loosen or tighten both chain adjusters ④, ⑤ until the chain has 20 ~ 30 mm of slack in the middle between the engine and rear sprockets. The marks ⑥, ⑦ on both chain adjusters must be at the same position on the scale to ensure that the front and rear wheels are correctly aligned.

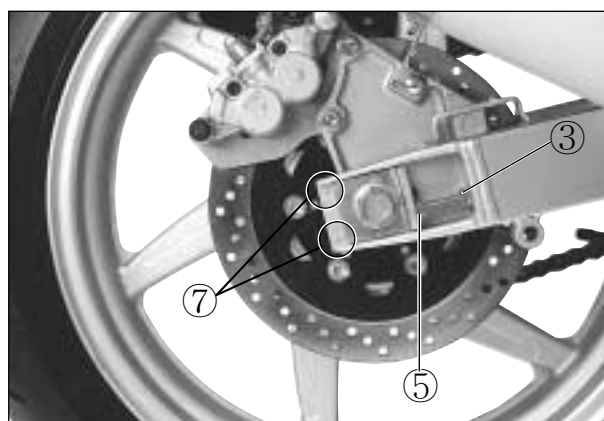
Drive chain slack	20 ~ 30 mm (0.79 ~ 1.18 in)
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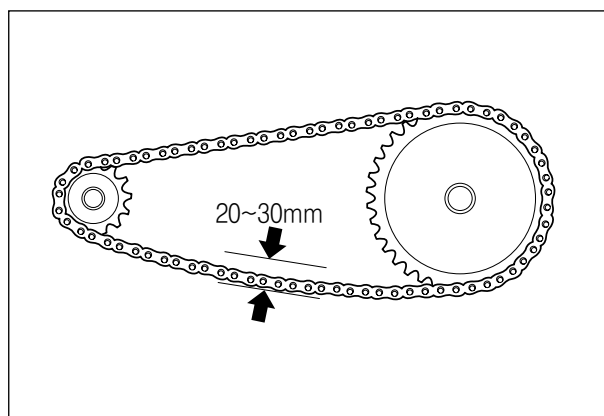
- Place the motorcycle on jack or block for accurate adjustment.
- After adjusting the drive chain, tighten the axle nut to the specified torque.

 **Rear axle nut : 90~140 N · m (9.0~14.0 kg · m)**

- Tighten both chain adjuster lock nuts ②, ③ securely.



- Recheck the drive chain slack after tightening the rear axle nut.



⦿ CLEANING AND LUBRICATING

- Wash the drive chain with kerosene. If the drive chain tends to rust quickly, the intervals must be shortened. Kerosene is a petroleum product and will provide some lubrication as well as cleaning action.
- After washing and drying the chain, oil it with a engine oil or chain lubricating oil.

⚠ CAUTION

The drive chain for this motorcycle is made of the special material.

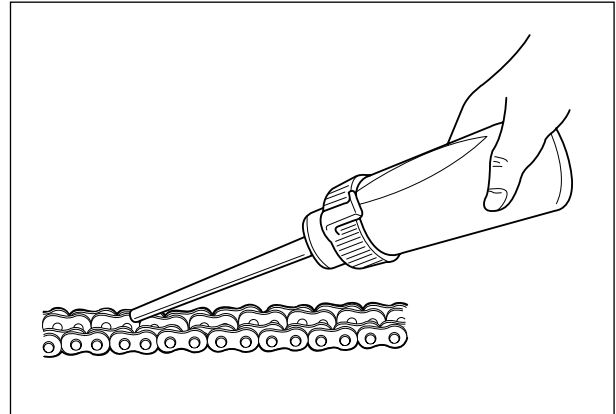
The chain should be replaced with a RK525XSO for 『Comet650』.

Use of another chain may lead to premature chain failure.

⚠ CAUTION

Some drive chain lubricants contain solvents and additives which could damage the X-Orings in your chain.

Use Hyosung chain lube or an equivalent that is specifically intended for use with X-Oring chains.



⚠ CAUTION

Cleaning the chain with gasoline or commercial cleaning solvents can damage X-Orings and ruin the chain.

Clean the drive chain with kerosene only.

BRAKE SYSTEM

Inspect Interval

[BRAKE]

Inspect Initial 1,000 km and Every 6,000 km.

[BRAKE HOSE & BRAKE FLUID]

Inspect Initial 1,000 km and Every 6,000 km.

Replace the brake hoses Every 4 years,

Replace the brake fluid Every 2 years.

⦿ BRAKE FLUID LEVEL CHECK

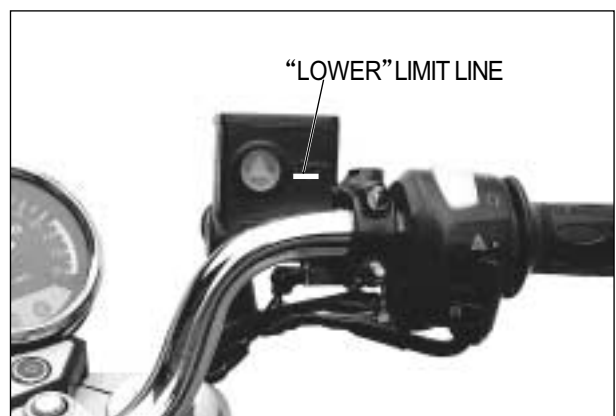
- Keep the motorcycle upright and place the handle-bars straight.
- Check the brake fluid level by observing the lower limit line (LOWER) on the front brake fluid reservoir.
- When the level is below the lower limit line (LOWER), replenish with brake fluid that meets the following specification.



Specification and Classification
(Front brake) : DOT 4
(Rear brake) : DOT 4

⚠ CAUTION

Do not spill any brake fluid on the brake pad of disk.



[Front Brake]

⚠ 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 or petroleum-based. 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.

⚠ WARNING

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 oil leakage before riding.

⦿ BRAKE PAD WEAR

The extend of brake pad wear can be checked by observing the grooved limit **A** on the pad. When the wear exceeds the grooved limit, replace the pads with new ones.

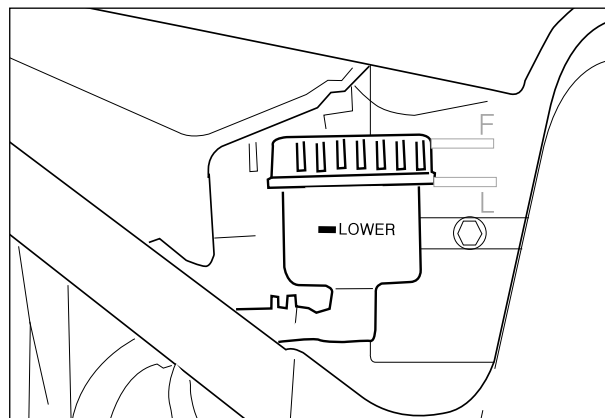
⚠ CAUTION

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

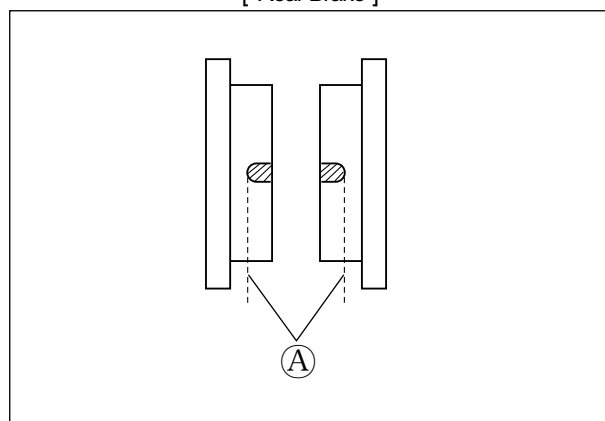
⦿ FRONT AND REAR BRAKE PAD REPLACEMENT

- Remove the brake caliper.
- Remove the brake pads.
- To reassemble, reverse the above sequence.

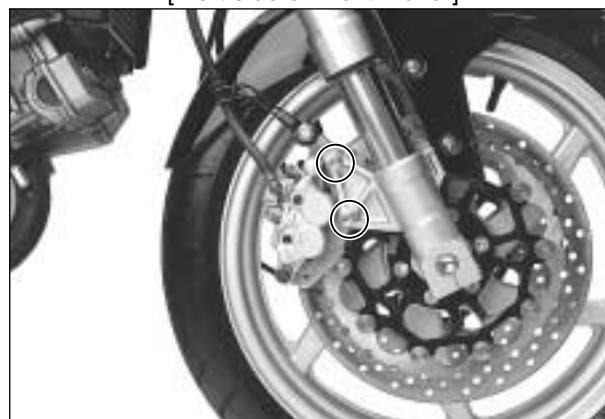
- 🔧 Front brake caliper mounting bolt**
: 18~28 N · m (1.8~2.8 kg · m)
- Rear brake caliper mounting bolt**
: 18~28 N · m (1.8~2.8 kg · m)



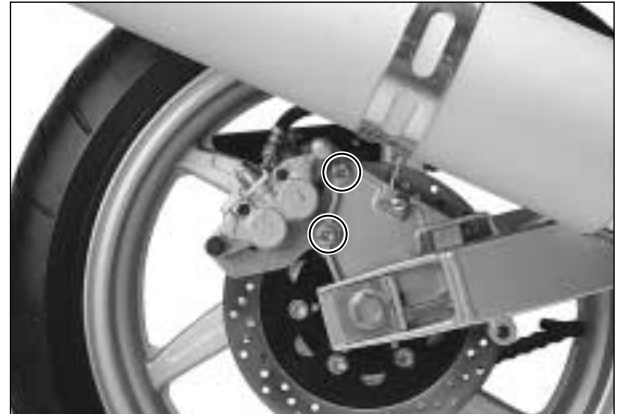
[Rear Brake]



[Left side of Front Brake]



[Right side of Front Brake]



[Rear Brake]

⦿ FRONT AND REAR BRAKE FLUID REPLACEMENT

- Place the motorcycle on a level surface and keep the handlebars straight.
- Remove the master cylinder reservoir cap and diaphragm.
- Suck up the old brake fluid as much as possible.
- Fill the reservoir with new brake fluid.

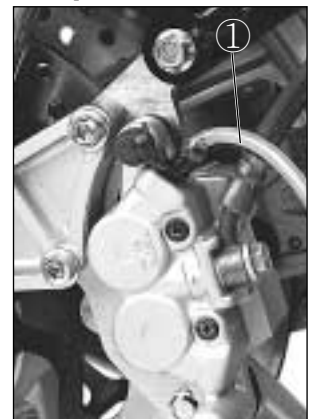


Specification and Classification

(Front brake) : DOT 4

(Rear brake) : DOT 4

- Connect a clear hose ① to the air bleeder valve and insert the other end of the hose into a receptacle.
- Loosen the air bleeder valve and pump the brake lever until the old brake fluid is completely out of the brake system.



- Close the air bleeder valve and disconnect the clear hose. Fill the reservoir with new brake fluid to the upper line.
- Replace the rear brake's fluid with the same manner of the front brake.



Front brake caliper air bleeder valve

: 6~8 N · m (0.6~0.8 kg · m)

Rear brake caliper air bleeder valve

: 6~8 N · m (0.6~0.8 kg · m)



⦿ AIR BLEEDING OF 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 :

- Fill the master cylinder reservoir to top of the inspection window. Replace the reservoir cap to prevent dirt from entering it.
- Attach a hose to the air bleeder valve, and insert the free end of the hose into a receptacle.
- Bleed air from the brake system.
- Squeeze and release the brake lever several times in rapid succession and squeeze the lever fully without releasing it. Loosen the 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 brake lever, and open the valve. Repeat this process until the 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 upper line.
- Bleed the rear brake's air with the same manner of front brake.

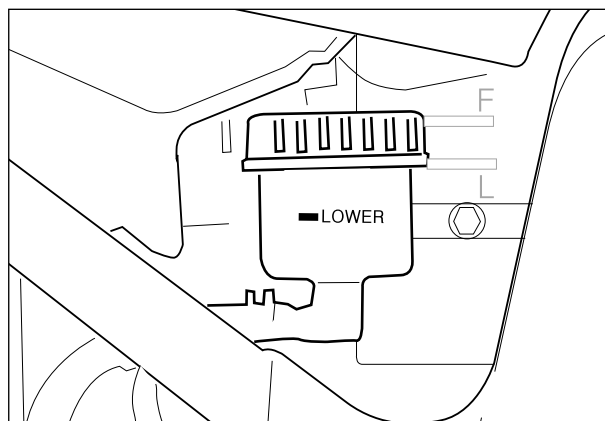


Front brake caliper air bleeder valve

: 6~8 N · m (0.6~0.8 kg · m)

Rear brake caliper air bleeder valve

: 6~8 N · m (0.6~0.8 kg · m)



CAUTION

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

⦿ FRONT BRAKE LAMP SWITCH

The front brake lamp switch is located beneath the front brake lever. Loosen the switch fitting screws and adjust the timing by moving the switch body forward or backward. (Refer to page 6-1)

⦿ REAR BRAKE LAMP SWITCH

Adjust the rear brake lamp switch ① so that the brake lamp will come on just before pressure is felt when the brake pedal is depressed.



STEERING

Inspect Interval

Inspect Initial 1,000 km and Every 6,000 km.

Steering should be adjusted properly for smooth turning of handlebars and safe running. Overtight steering prevents smooth turning of the handlebars and too loose steering will cause poor stability. Check that there is no play in the steering stem while grasping the lower fork tubes by supporting the machine so that the front wheel is off the ground, with the wheel straight ahead, and pull forward. If play is found, perform steering stem nut adjustment as described in page 7-25 of this manual.



FRONT FORK

Inspect Interval

Inspect Every 6,000 km.

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

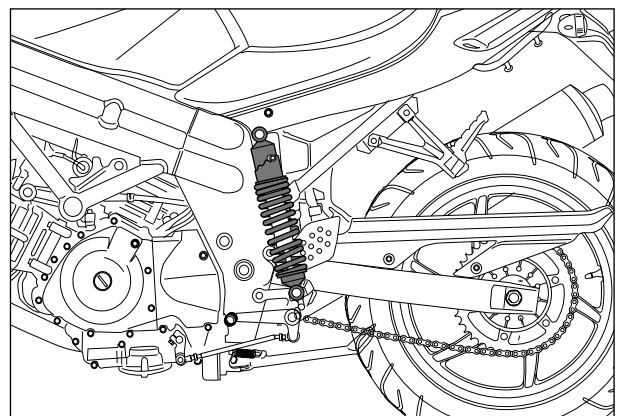


REAR SUSPENSION

Inspect Interval

Inspect Every 6,000 km.

Inspect the rear shock absorber for oil leakage and mounting rubbers including engine mounting for wear and damage. Replace any defective parts, if necessary. (Refer to page 7-32)



TIRE

Inspect Interval

Inspect Initial 1,000 km and Every 6,000 km.

⊙ TIRE TREAD CONDITION

Operating the motorcycle with excessively worn tires will decrease riding stability and can lead to loss of control.

- Inspect shortage of tire thread's depth by the 『tire wear indicator』.
- Replace the front and rear tires at once when appear the 『tire wear indicator』.

⊙ TIRE PRESSURE

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

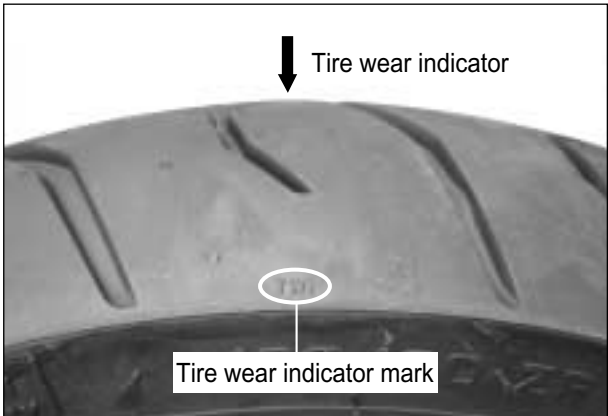
COLD INFLATION TIRE PRESSURE	SOLO RIDING			DUAL RIDING		
	KPa	kgf/cm ²	psi	KPa	kgf/cm ²	psi
Front	221	2.25	33.0	221	2.25	33.0
Rear	245	2.50	36.0	245	2.50	36.0

CHASSIS BOLTS AND NUTS

Inspect Interval

Tighten Initial 1,000 km and Every 6,000 km.

Check that all chassis bolts and nuts are tightened to their specified torque.(Refer to page 8-13)



CAUTION

The standard tire on 『Comet650』 is
**120/60-ZR 17 55W for front and
160/60-ZR 17 69W for rear.**

**The use of tires other than those specified
may cause instability. It is highly recommended to
use a HYOSUNG Genuine Tire.**

ENGINE COOLANT

Inspect Interval

Replace the engine coolant Every 2 years.

⊙ ENGINE COOLANT LEVEL CHECK

- Keep the motorcycle upright.
- Check the engine coolant level by observing the full line(F) and lower line(L) on the engine coolant reserve tank.
- If the level is below the lower line(L), add engine coolant to the full line from the engine coolant reserve tank filler ①.

Engine coolant capacity	
Reserve tank side	230ml
Radiator side	430ml
Engine side	940ml

⚠ WARNING

- Engine coolant is harmful if swallowed or if it comes in contact with skin or eyes.
- Keep out of the reach of children and animals.

⚠ CAUTION

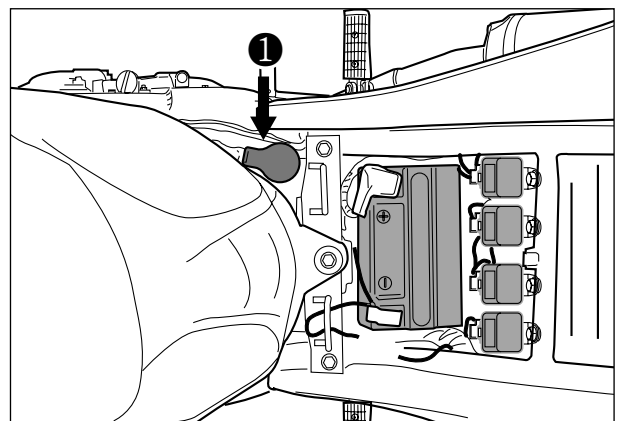
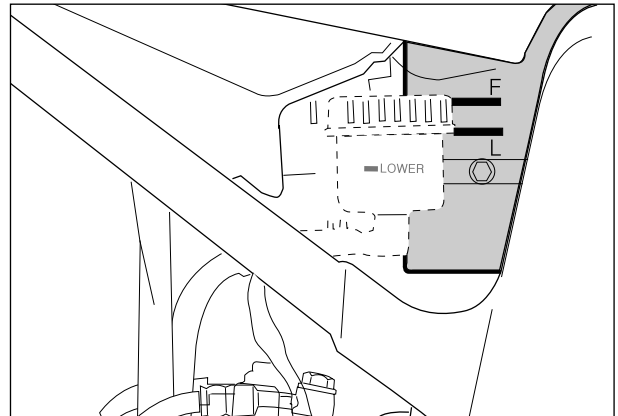
- Use distilled water only. Water other than distilled water can corrode and clog the aluminum radiator.
- The 50 : 50 mixture of distilled water and ethylene glycol anti-freeze will provide the optimum corrosion protection and excellent heat protection, and will protect the cooling system from freezing at temperatures above $-31^{\circ}\text{C}(-24^{\circ}\text{F})$.

⊙ ENGINE COOLANT CHANGE

⚠ WARNING

Do not open the radiator cap when the engine is hot, as you may be injured by escaping hot liquid or vapor.

- Remove the radiator cap ②.
- Drain engine coolant by removing the drain bolt.



NOTE

Bleed air from the cooling circuit when the engine overheats.



2-21 PERIODIC MAINTENANCE

- Flush the radiator with fresh water if necessary.
- Install the water hose.
- Tighten the coolant drain bolt ① to the specified torque.



Coolant drain bolt

: 11~14 N · m (1.1~1.4 kg · m)

- Pour the engine coolant through the radiator cap inlet.

Engine coolant capacity	
Reserve tank side	230ml
Radiator side	430ml
Engine side	940ml

- Bleed the air from the engine coolant circuit as following procedure.

NOTE

For engine coolant information, refer to page 5-1

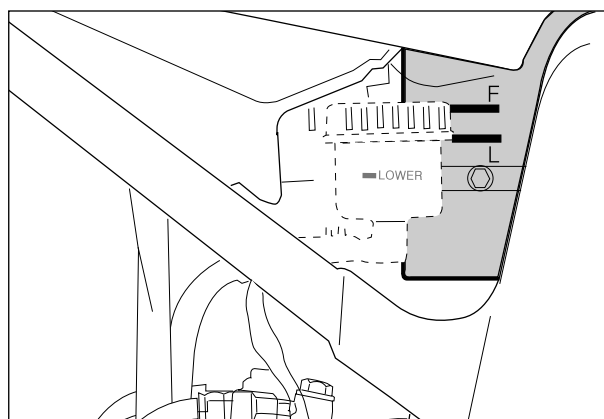
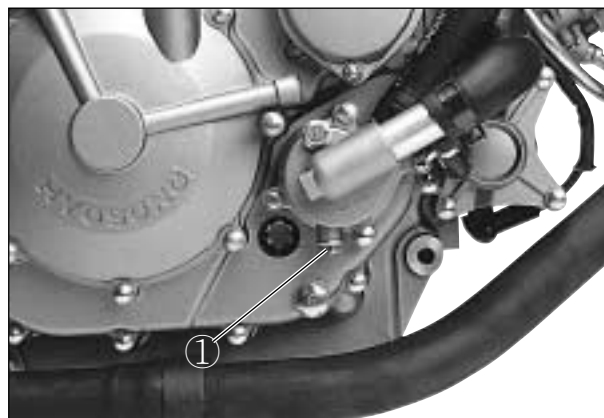
⊙ AIR BLEEDING THE COOLING CIRCUIT

- Add engine coolant up to the radiator cap 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 cap inlet.
- Start up the engine and bleed air from the radiator cap inlet completely.
- Add engine coolant up to the radiator cap inlet.
- Repeat the above procedure until no air bleed from the radiator cap inlet.
- Close the radiator cap securely.
- After warming up and cooling down the engine several times, add the engine coolant up to the full line(F) of the reserve tank.



CAUTION

Repeat the above procedure several times and make sure that the radiator is filled with engine coolant up to the reserve tank full line(F).



RADIATOR HOSE

Inspect Interval

Inspect Every 6,000km,

Replace the radiator hose Every 4 years.

Check to see the radiator hose for crack, damage or engine coolant leakage.

If any defects are found, replace the radiator hoses with new ones.



COMPRESSION PRESSURE

The compression 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 reading for each maintenance service.

Compression pressure	
Standard	14 kg/cm ² (at 500 rpm)
Service limit	12 kg/cm ² (at 500 rpm)
Difference	2 kg/cm ² (at 500 rpm)

⦿ COMPRESSION TEST PROCEDURE

NOTE

- ❖ *Before testing the engine for compression pressure, make sure that the cylinder head bolts are tightened to the specified torque values and valves are properly adjusted.*
- ❖ *Have the engine warmed up by idling before testing.*
- ❖ *Be sure that the battery used is in fully-charged condition.*

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

- Loosen the radiator mounting bolts from the frame.

⚠ WARNING

The hot radiator and the hot engine can burn you. Wait until the radiator and the engine are cool enough to touch.

⚠ CAUTION

- Be careful not to damage the radiator fins.
- Do not extract the radiator hose.

- Remove the fuel tank.
- Remove all the spark plug.
- Fit the compression gauge in one of the plug holes, while taking care that the connection is tighten.
- Keep the throttle grip in full-open position.
- Crank the engine a few seconds with the starter, and record the maximum gauge reading as the compression of that cylinder.

 **Compression gauge : 09915-64510**

Low compression pressure can indicate any of the following conditions :

- Excessively worn cylinder wall
- Worn-down piston or piston rings
- Piston rings stuck in grooves
- Poor seating of valves
- Ruptured or otherwise defective cylinder head gasket



Overhaul the engine in the following cases :

- Compression pressure in one of the cylinder is less than 12kg/cm².
- The difference in compression pressure between any two cylinder is more than 2kg/cm².
- All compression pressure readings are nearly 12kg/cm² even when they measure more than 12kg/cm².

OIL PRESSURE

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

Oil pressure	Standard
	2.0 ~ 6.0 kg/cm ² (at 60 °C · 3,000 rpm)

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

⦿ LOW OIL PRESSURE

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

⦿ HIGH OIL PRESSURE

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

⦿ OIL PRESSURE TEST PROCEDURE

Check the oil pressure in the following manner.

- Remove the oil check plug and install the adapter of oil pressure gauge at the removed position.
- Connect an engine tachometer.
- Warm up the engine as follows :
Summer : 10 min. at 2,000 rpm.
Winter : 20 min. at 2,000 rpm.
- After warming up, increase the engine speed to 3,000 rpm. (with the engine tachometer), and read the oil pressure gauge.



Oil pressure gauge : 09915-74510
Engine tachometer : 09900-26006

