PERIODIC MAINTENANCE AND TUNE-UP PROCEDURES

CONTENTS

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. Mileages are expressed in terms of miles, kilometers and months.

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

PERIODIC MAINTENANCE CHART

INTERVAL: This intervals judged by odometer reading or month whichever comes first				
	miles	Initial 600	Every 2400	Every 4800
	km	Initial 1000	Every 4000	Every 8000
	months	2	6	12
Battery		I	I	–
Cylinder head nuts and exhaust pipe nuts		T	T	–
Cylinder head and cylinder		–	–	C
Spark plug		–	C	R
Fuel line		I	I	–
		Replace every 4 years		
Air cleaner		–	C	–
Throttle cable play		I	I	–
Engine idle rpm		I	I	–
Oil pump		I	I	–
Final gear oil		I	–	I
Brakes		I	I	–
Brake hose		I	I	–
		Replace every 4 years		
Brake fluid		I	I	–
		Replace every 2 years		
Tire		I	I	–
Steering		I	I	–
Front suspension		I	–	I
Rear suspension		I	–	I
Chassis bolts and nuts		T	T	–

NOTE: I = Inspect and clean, adjust, lubricate or replace, if necessary.
A = Adjust, C = Clean, R = Replace, T = Tighten

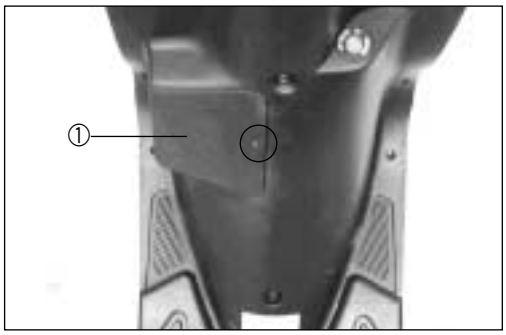
MAINTENANCE AND TUNE-UP PROCEDURE

This section describes the servicing procedures for each item of the Periodic Maintenance requirements.

BATTERY

Inspect at Initially 1000km (600miles, 2momths), and Every 4000km (2400miles, 6months) thereafter

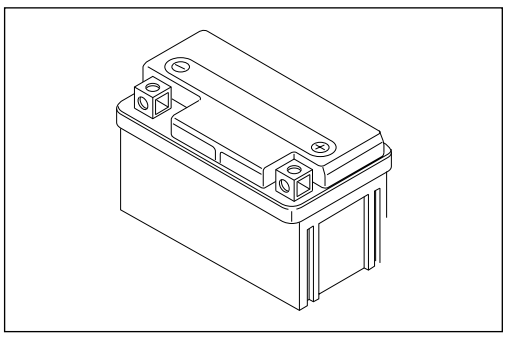
- Remove the battery cover ① from the leg shield mounting screws.



- Remove the battery ⊖ lead and then ⊕ lead at the battery terminals and remove the battery.

- Check the battery voltage with the pocket tester.
  If the voltage reading is below 12.0V, this battery needs recharging. (Refer to page 5-10)

Battery voltage	Minimum 12.0V
09900-25002	Pocket tester

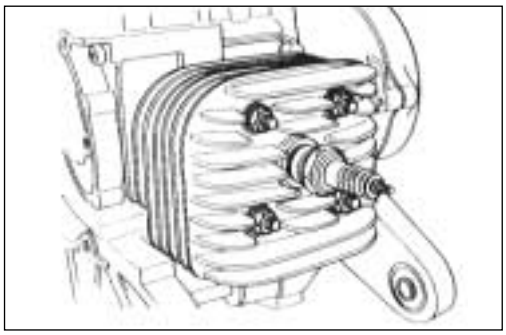


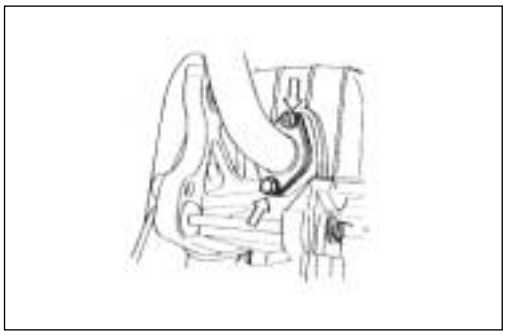
CYLINER HEAD NUT AND EXHAUST PIPE BOLTS

Tighten at Initially 1000km (600miles, 2months), and Every 4000km (2400miles, 6months) thereafter

Cylinder head nuts, when they are not tightened to the specified torque, may result in leakage of the compressed mixture and reduce output. Tighten the cylinder head nuts in the following procedure.

- Remove the frame side cover.(Refer to page 6-3)
- Remove the spark plug cap.
- Remove the cylinder head cover bolts. (Refer to page 3-5)
- Tighten the nuts evenly one by one in stages until each one is tightened to the specified torque. Tighten the nuts in the order indicated.





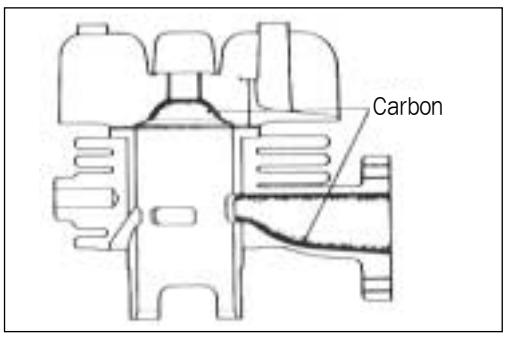
Tightening torque

Cylinder head nut	8-12 N · m (0.8-1.2 kg-m, 6.0-8.5 lb-ft)
Exhaust pipe nut	8-12 N · m (0.8-1.2 kg-m, 6.0-8.5 lb-ft)

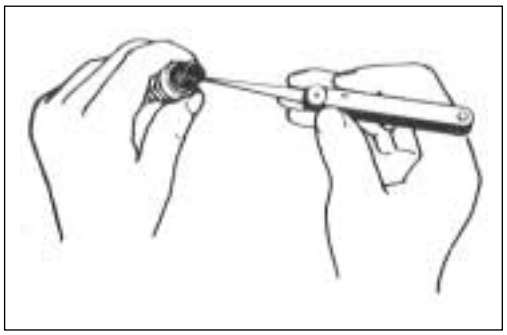
CYLINER HEAD AND CYLINDER

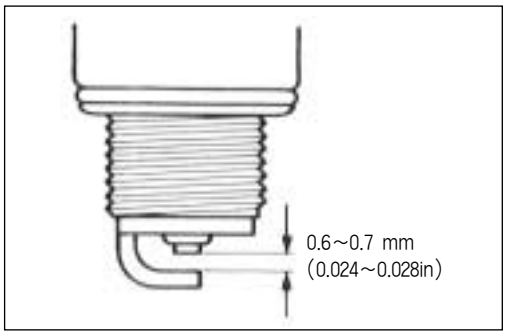
Remove carbon Every 8000km (4800miles, 12months)

Carbon deposits in the combustion chamber and the cylinder head will raise the compression ratio and may cause preignition or over-heating. Carbon deposited at the exhaust port of the cylinder will prevent the flow of exhaust gases, reducing the output. Remove carbon deposits periodically.



SPARK PLUG





Clean Every 4000km (2400miles, 6months) and Replace Every 8000km (4800miles, 12months)

Neglecting the spark pulg maintenance eventually leads to difficult starting and poor performance. If the spark plug is used for a long period, the electrode gradually burns away and carbon builds up along the inside part. In accordance with the Periodic Inspection Chart, the plug should be removed for inspection, cleaning and to reset the gap.

- Carbon deposits on the spark plug will prevent good sparking and cause misfiring. Clean the deposits off periodically.
- If the center electrode is fairly worn down, the plug should be replaced and the plug gap set to the specified gap using a thickness gauge.

09900-20804	Thickness gauge
Spark plug gap	0.6-0.7 mm(0.024-0.028 in)

- Check the spark plug for burnt condition. If abnormal, replace the plug as indicated in the chart.

GOLDEN	REMARKS
BP5HS	If the standard plug is apt to get wet, replace with this plug.
BP6HS	Standard
BP7HS	If the standard plug is apt to get overheat, replace with this plug.

- Tighten the spark plug to the specification.

Spark plug

Tightening torque	25 – 30 N · m (2.5 – 3.0 kg-m, 18.0 – 21.0 lb-ft)

NOTE:

- **To check the spark plug, first make sure that the fuel used is unleaded gasoline, and if plug is either sooty with carbon or burnt white, replace it.**
- **Confirm the thread size and reach when replacing the plug.**

FUEL LINE

Inspect at Initially 1000km (600miles, 2momths), and Every 4000km (2400miles, 6months) thereafter
Replace Every 4 years.

AIR CLEANER

Clean Every 4000km (2400miles, 6months)

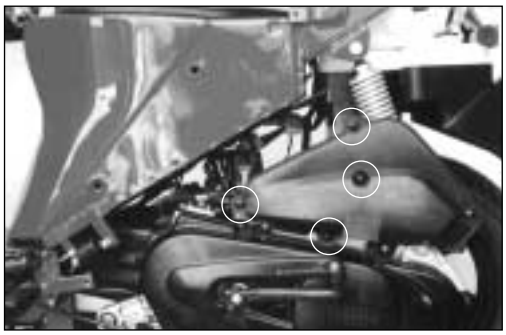
If the air cleaner is clogged with dust, intake resistance will be increased with a resultant decrease in power output and an increase in fuel consumption. Check and clean the element in the following manner.

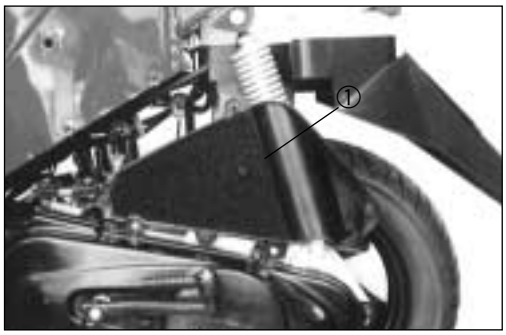
- Remove the frame side cover.(Refer to page 6-3)
- Remove the cleaner cover by removing the screw.
- Remove the element ①.
- Fill a washing pan of a proper size with non-flammable cleaning solvent. Immerse the element in the cleaning solvent and wash them clean.
- Squeeze the cleaning solvent out of the washed element by pressing it between the palms of both hands: do not twist or wiring the element or if will develop tears.
- Immerse the element in SAE 10/W40 oil, and squeeze the oil out of the element leaving it slightly wet with oil.
- Fit the elements to the cleaner case properly.

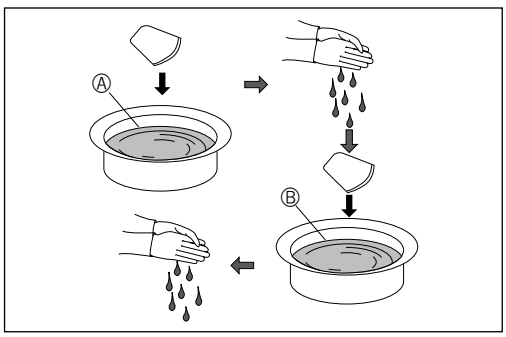
CAUTION:

- **Before and during the cleaning operation, inspect the element for tears. A torn element must be replaced.**
- **Be sure to position the element snugly and correctly, so that no incoming air will bypass it. Remember, rapid wear of piston rings and cylinder bore is often caused by a defective or poorly fitted element.**

Ⓐ Non-flammable cleaning solvent
Ⓑ SAE 10W40





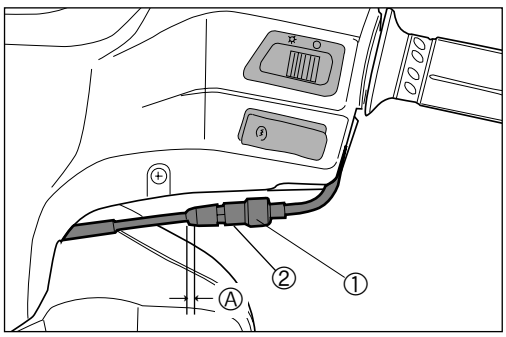


THROTTLE CABLE

Adjust at Initially 1000km (600miles, 2momths), and Every 4000km (2400miles, 6months) thereafter

- Loosen the lock nut ① and adjust the cable play Ⓐ by turning adjuster ② in or out to obtain the following cable play. After adjusting play, tighten the lock nut.

Cable play	0.5 – 1.0 mm(0.020 – 0.040 in)

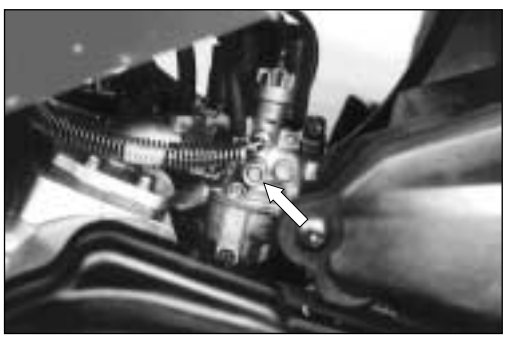


ENGINE IDLE SPEED

Adjust at Initially 1000km (600miles, 2momths), and Every 4000km (2400miles, 6months) thereafter

- Adjust the throttle cable play.
- Remove the frame side cover.(Refer to page 6-3)
- Warm up the engine.

NOTE:
A warm engine means an engine that has been run for 10 minutes.



- Connect an electric tachometer to the connecting portion of the high tension lead. Use the selector key "C" position.

09900-26006	Tachometer

- Asjust the throttle stop screw to obtain the idle r/min as follows.

Idle r/min	1800±50 r/min

- Finally adjust the throttle cable play.

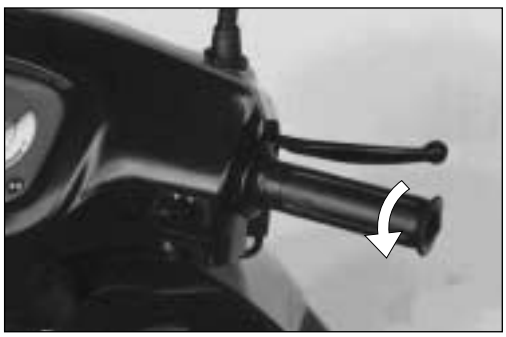
OIL PUMP

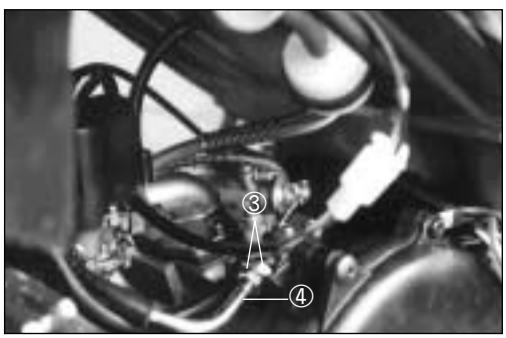
Inspect at Initially 1000km (600miles, 2momths), and Every 4000km (2400miles, 6months) thereafter

The engine oil is fed by the oil pump to the engine. The amount of oil fed to it is regulated by engine speed and oil pump control lever which is controlled by amount of throttle opening.
Check the oil pump in the following manner to confirm correct operation for throttle valve full opening position.

- Turn the throttle grip full open.
- Check whether the mark ① on the oil pump control lever is aligned with the index mark ② when the throttle valve is positioned as above.
- If the marks are not aligned, loosen lock nuts ③ and turn the adjuster ④ in or out to align the marks.
- After aligning the marks, tighten the lock nuts.

CAUTION:
Oil pump cable adjustment must be done after throttle cable adjustment.



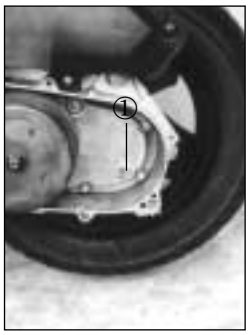


FINAL GEAR OIL

Inspect at Initially 1000km (600miles, 2momths), and Every 8000km (4800miles, 12months) thereafter

Inspect final gear oil periodically following procedure below.

- Remove the side cover.(Refer to page 6-3)
- Remove the clutch cover.(Refer to page 3-5)



- Remove the oil level bolt ① and inspect oil level.
  If the level is below the level hole, add oil until oil flows from the level hole.
- Tighten the oil level bolt to the specified torque.

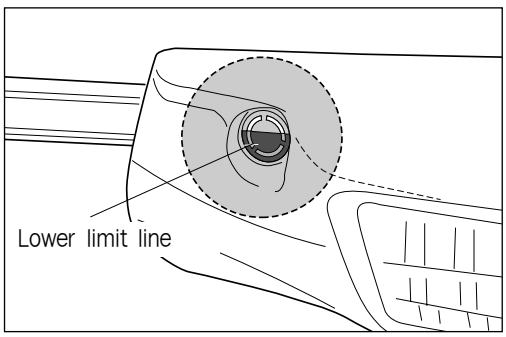
Tightening torque	9 – 15 N · m (0.9 – 1.5 kg-m, 6.5 – 11.0 lb-ft)

BRAKES

Inspect at Initially 1000km (600miles, 2momths), and Every 4000km (2400miles, 6months) thereafter
Replace(change) brake fluid Every 2 years
Replace brake hose Every 4 years

FRONT BRAKE FLUID LEVEL

- Keep the motorcycle upright and place the handlebar straight.
- Check brake fluid level by observing the lower limit line on the brake fluid reservoir.
- When the level is bolow the lower limit line, replenish with brake fluid that meets the following specification.



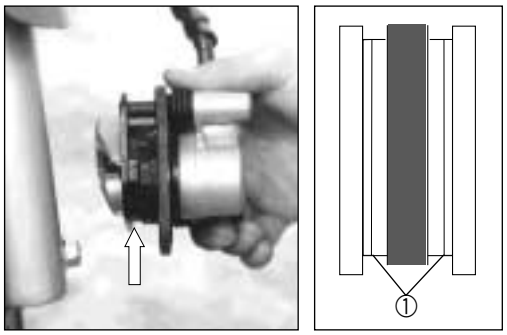
Specification and classification	DOT4

WARNING:
The brake system of this motorcycle is filled with a glycolbased brake fluid. Do not use or mix different type of fluid such as silicone-based and petroleum-based. Do not use any brake fluid taken from old, used or unsealed containners. Never re-use the brake fluid left over from the last servicing and stored for long periods.

WARNING:
Brake fluid, if it leaks, will interfere with safe running and immediatery discolor painted surfaces.
Check the brake hoses for cracks and hose joints for leakage before riding.

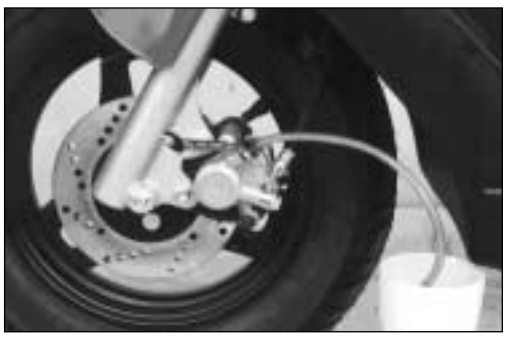
BRAKE PADS

Wearing condition of brake pads can be checked by observing the limit line ① marked on the pad. When the wear exceeds the limit mark, replace the pads with new ones.(Refer to page 6-13.)

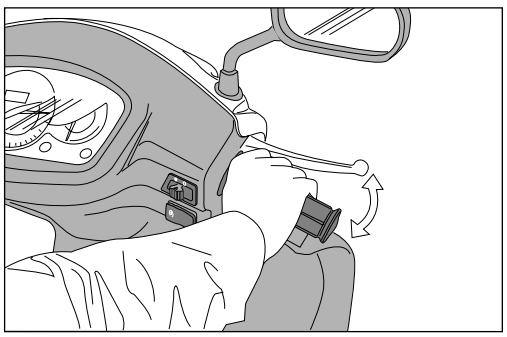


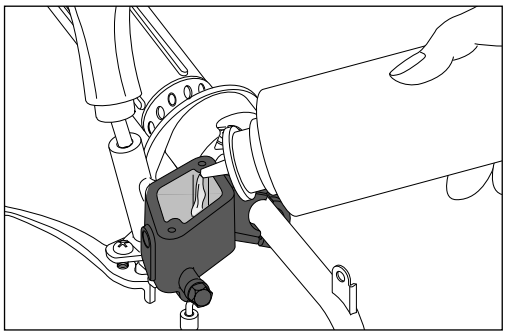
BLEEDING AIR FROM THE BRAKE FLUID CIRCUIT

Air trapped in the 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 essectial 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 up the master cylinder reservoir to the upper end of the inspection window. Replace the reservoir cap to prevent entry of dirt.
- Attach a pipe to the caliper bleeder valve, and insert the free end of the pipe into a receptacle.
- Bleed air from the bleeder valve.
- 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 valve, pump and squeeze the lever, and open the valve. Repeat this process until the fluid flowing into the receptacle no longer contains air bubbles.





NOTE:
Replenish the brake fluid reservoir as necessary while bleeding the brake system.
Make sure that there is always some fluid visible in the reservoir.

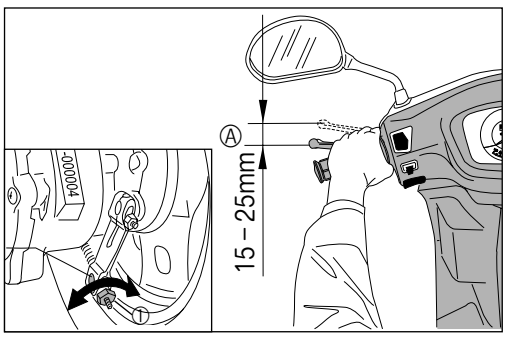
- Close the bleeder valve, and disconnect the pipe. Fill the reservoir to the upper end of the inspection window.

Bleeder valve

Tightening torque	6 – 9 N · m (0.6 – 0.9 kg-m, 4.5 – 6.5 lb-ft)

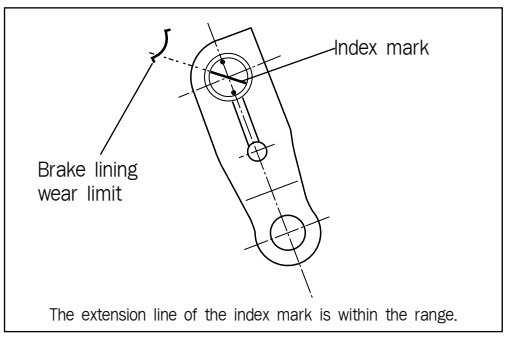
CAUTION:
Handle the brake fluid with care: the fluid reacts chemically with paint, plastics, rubber materials, etc.

REAR BRAKE
Adjust by turning the adjusting nut ① so that the play Ⓐ is 15 – 25 mm (0.6 – 1.0 in) as shown in the illustration.

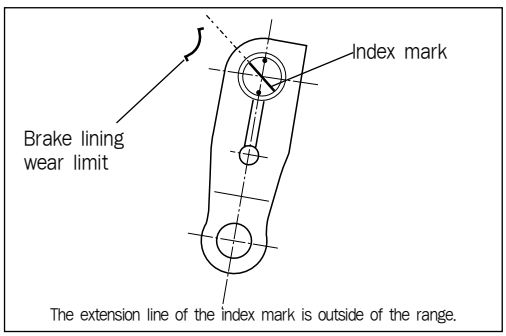


Brake lining wear limit
This motorcycle is equipped with the brake lining wear limit indicator on the rear brake. As shown in the illustration at right, at the condition of normal lining wear, an extended line from the index mark on the brake camshaft should be within the range embossed on the crankcase. To check wear of the brake lining, follow the steps below.

- First check if the brake system is properly adjusted.
- While operating the brake, check to see that the extension line from the index mark is within the range on the crankcase.
- If the index mark is outside the range as shown in the illustration at right, the brake shoe assembly should be replaced to ensure safe operation.



The extension line of the index mark is within the range.



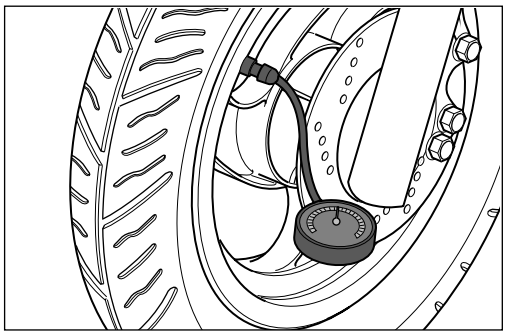
The extension line of the index mark is outside of the range.

TIRES

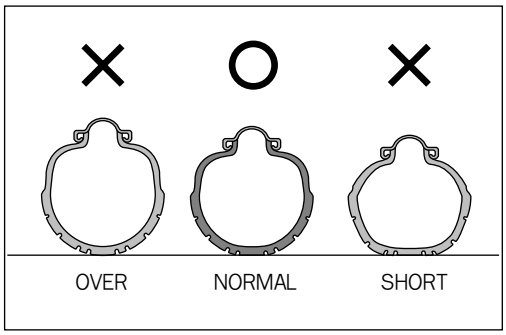
Inspect at Initially 1000km (600miles, 2momths), and Every 4000km (2400miles, 6months) thereafter

TIRE PRESSURE

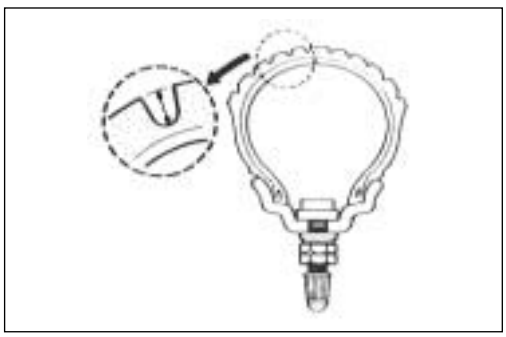
If the tire pressure is too high, the motorcycle will tend to ride stiffly and have poor traction. Conversely, if the tire pressure is too low, stability will be adversely affected. Therefore, maintain the correct tire pressure for good roadability and to prolong tire life.



CAUTION:
The standard tire fitted on this motorcycle is 100/90-10 56J for front and rear. The use of a tire other than the standard may cause handling instability. It is highly recommended to use a HYOSUNG Genuine Tire.



COLD INFLATION TIRE PRESSURE	SOLO RIDING			DUAL RIDING		
	kPa	kg/㎠	psi	kPa	kg/㎠	psi
FRONT	125	1.25	18	–	–	–
REAR	200	2.00	29	–	–	–



TIRE TREAD CONDITION

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

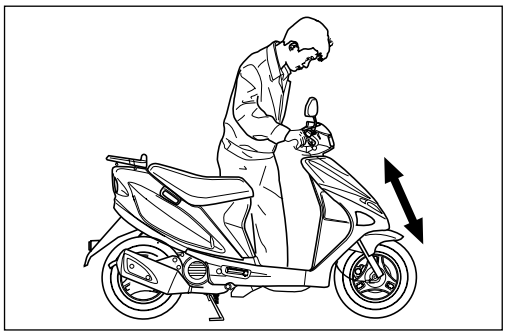
Front and Rear	1.6 mm (0.064 in)
09900-20805	Tire depth gauge

STEERING

Inspect at Initially 1000km (600miles, 2momths), and Every 4000km (2400miles, 6months) thereafter

Steering should be adjusted properly for smooth turning of handlebars and safe running. Too stiff steering prevents smooth turning of handlebars and too loose steering will cause poor stability.
Check that there is no play in the front fork assembly by supporting the machine so that the front wheel is off the ground, with wheel straight ahead, grasp lower shock absorber near the axle and pull forward. If play is found, perform steering bearing adjustment.(Refer to page 6-24)

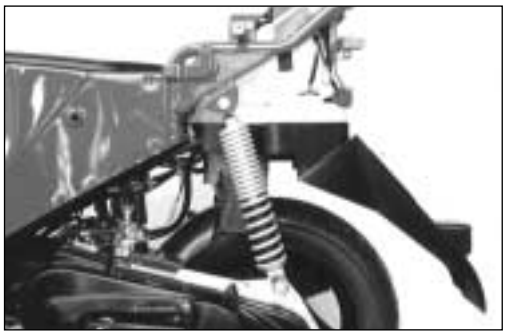
FRONT SUSPENSION



Inspect at Initially 1000km (600miles, 2momths), and Every 8000km (4800miles, 12months) thereafter

Inspect the front shock absorber for oil leakage or other damage, and replace the defective parts, if necessary.

REAR SUSPENSION



Inspect at Initially 1000km (600miles, 2momths), and Every 8000km (4800miles, 12months) thereafter

Inspect the rear shock absorber for oil leak and the mounting rubbers including engine mountings for wear and damage. Replace the defective part if necessary.

CHASSIS BOLTS AND NUTS

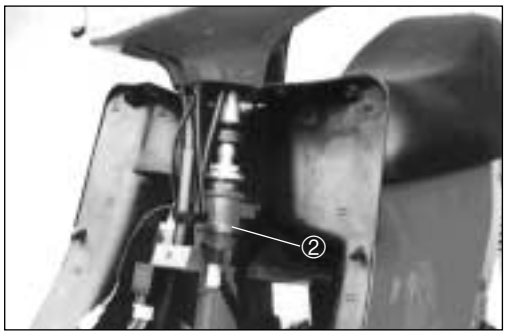
Tighten at Initially 1000km (600miles, 2momths), and Every 4000km (2400miles, 6months) thereafter

These bolts and nuts listed below are important safety parts. They must be loosened first and retightened, to the specified torque with a torque wrench.

No.	ITEM	N · m	kg · m	lb · ft
①	Front axle nut	33 – 52	3.3 – 5.2	24.0 – 37.5
②	Steering stem lock nut	60 – 100	6.0 – 10.0	43.5 – 72.5
③	Handlebar clamp nut	48 – 52	4.8 – 5.2	34.5 – 37.5
④	Handlebar set bolt	22 – 28	2.2 – 2.8	16.0 – 20.0
⑤	Front brake master cylinder bolt	8 – 12	0.8 – 1.2	6.0 – 8.5
⑥	Front brake hose union bolt	20 – 25	2.0 – 2.5	14.5 – 18.0
⑦	Front brake caliper mounting bolt	18 – 28	1.8 – 2.8	13.0 – 20.0
⑧	Front brake air bleeder valve	6 – 9	0.6 – 0.9	4.5 – 6.5
⑨	Rear axle nut	60 – 90	6.0 – 9.0	43.5 – 65.0
⑩	Rear shock absorber bolt (upper and lower)	22 – 35	2.2 – 3.5	16.0 – 25.5
⑪	Rear brake cam lever nut	6 – 9	0.6 – 0.9	4.5 – 6.5
⑫	Engine mounting bracket nut	48 – 72	4.0 – 6.0	34.5 – 52.0
⑬	Engine mounting nut	40 – 60	7.0 – 10.0	29.0 – 43.5


①


⑨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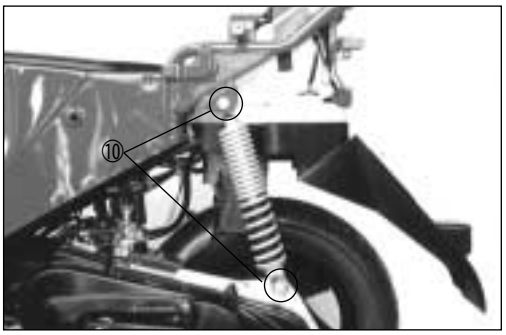
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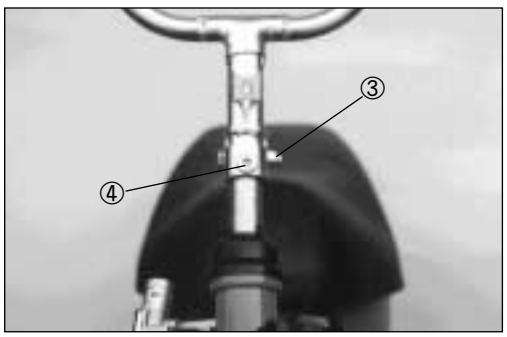
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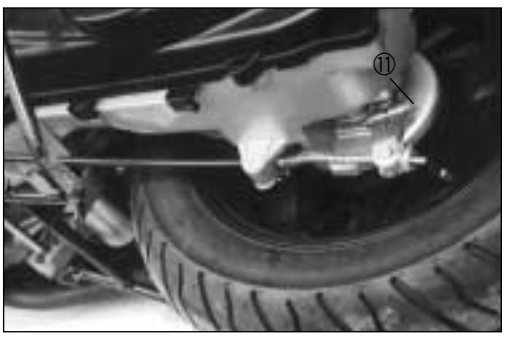
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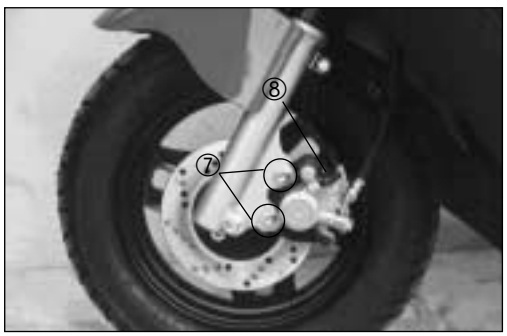
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⑦

GENERAL LUBRICATIONS

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

NOTE:
** Lubricate expodes parts which are subject to rust with motor oil grease.*
** Before lubricating each part, clean off any rusty spots and wipe off any grease, oil dirt of grime.*

WARNING:
Be careful not to apply too much grease to the rear break camshaft. If grease gets on the linings, brake slippage will result.

① Steering stem bearing
② Speedometer cable and drive gear box
③ Throttle grip
④ Throttle cable
⑤ Wheel bearing
⑥ Center stand
⑦ Engine mounting bracket pivoting portion
⑧ Rear brake lever and cable
⑨ Rear brake camshaft

G : Grease

O : Oil