

TIRES

Inspect Initial 1 000 km (2 months) and Every
5 000 km (15 months)

TIRE TREAD CONDITION

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

Tire tread depth

Service Limit (Front): 1.6 mm (0.06 in)
(Rear) : 2.0 mm (0.08 in)

09900-20805: Tire depth gauge

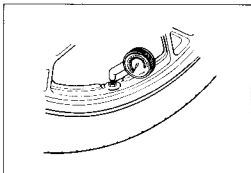
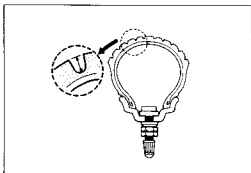
TIRE PRESSURE

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.

	Solo riding			Dual riding		
	kPa	kg/cm ²	psi	kPa	kg/cm ²	psi
FRONT	200	2.00	29	200	2.00	29
REAR	225	2.25	33	250	2.50	36

CAUTION:

The standard tire fitted on this motorcycle is 110/70-17 54H for front and 140/70-17 66H for rear. The use of a tire other than the standard may cause instability. It is highly recommended to use a SUZUKI Genuine Tire.



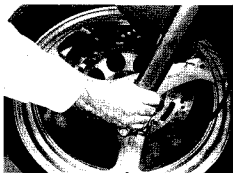
STEERING

**Inspect Initial 1 000 km (2 months) and Every
5 000 km (15 months)**

Taper roller type bearings are applied on the steering system for better handling.

Steering should be adjusted properly for smooth turning of handlebar and safe running. Too stiff steering prevents smooth turning of handlebar 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 fork tubes near the axle and pull forward. If play is found, perform steering bearing adjustment. (Refer to pages 7-25 and 7-26.)



FRONT FORK

**Inspect Initial 1 000 km (2 months) and Every
5 000 km (15 months)**

Inspect the front fork for oil leakage, scoring and scratches on the outer surface of the inner tubes.

Replace any defective parts, if necessary.

REAR SUSPENSION

**Inspect Initial 1 000 km (2 months) and Every
5 000 km (15 months)**

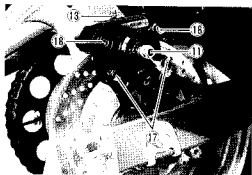
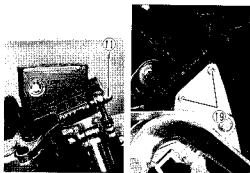
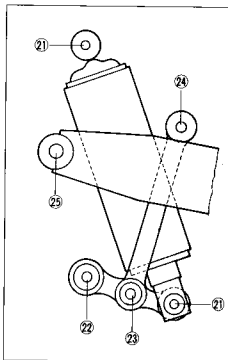
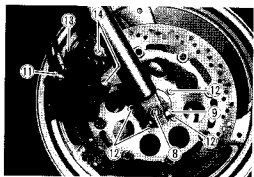
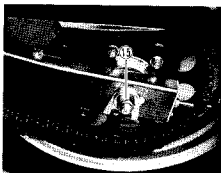
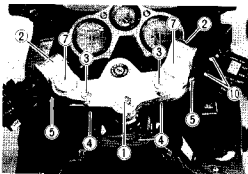
Inspect the rear shock absorber for oil leakage and check that there is no play in the swingarm assembly.

CHASSIS BOLTS AND NUTS

Tighten Initial 1 000 km (2 months) and Every
5 000 km (15 months)

The bolts and nuts listed below are important safety parts. They must be retightened when necessary to the specified torque.

ITEM	N·m	kg·m	lb·ft
① Steering stem head bolt	35–55	3.5–5.5	25.5–40.0
② Handlebar clamp bolt	18–28	1.8–2.8	13.0–20.0
③ Handlebar holder bolt	40–60	4.0–6.0	29.0–43.5
④ Handlebar holder nut	27–42	2.7–4.2	19.5–30.5
⑤ Front fork upper clamp bolt	18–28	1.8–2.8	13.0–20.0
⑥ Front fork lower clamp bolt	25–40	2.5–4.0	18.0–29.0
⑦ Front fork cap	15–30	1.5–3.0	11.0–21.5
⑧ Front axle nut	43–62	4.3–6.2	31.0–45.0
⑨ Front axle pinch bolt	20–30	2.0–3.0	14.5–21.5
⑩ Front brake master cylinder bolt	5–8	0.5–0.8	3.5–6.0
⑪ Brake hose union bolt (Front & Rear)	15–20	1.5–2.0	11.0–14.5
⑫ Brake disc bolt (Front & Rear)	18–28	1.8–2.8	13.0–20.0
⑬ Air bleeder valve (Front & Rear)	6–9	0.6–0.9	4.5–6.5
⑭ Front brake caliper mounting bolt	30–47	3.0–4.7	21.5–34.0
⑮ Rear axle nut	55–88	5.5–8.8	40.0–63.5
⑯ Rear torque link nut	25–38	2.5–3.8	18.0–27.5
⑰ Rear brake caliper mounting bolt	20–30	2.0–3.0	14.5–21.5
⑱ Rear brake caliper housing bolt	30–36	3.0–3.6	21.5–26.0
⑲ Rear brake master cylinder bolt	8–12	0.8–1.2	6.0–8.5
⑳ Rear brake rod lock nut	15–20	1.5–2.0	11.0–14.5
㉑ Rear shock absorber mounting nut (Upper & Lower)	48–72	4.8–7.2	34.5–52.0
㉒ Rear cushion lever nut (Front)	84–120	8.4–12.0	60.5–87.0
㉓ Rear cushion lever nut (Center)	84–120	8.4–12.0	60.5–87.0
㉔ Rear cushion rod nut	84–120	8.4–12.0	60.5–87.0
㉕ Rear swingarm pivot nut	55–88	5.5–8.8	40.0–63.5



ENGINE

CONTENTS

COMPRESSION PRESSURE CHECK	3- 1
COMPRESSION TEST PROCEDURE	3- 1
OIL PRESSURE CHECK	3- 2
OIL PRESSURE TEST PROCEDURE	3- 2
ENGINE COMPONENTS REMOVABLE WITH ENGINE IN PLACE	3- 3
ENGINE REMOVAL AND REMOUNTING	3- 4
ENGINE REMOVAL	3- 4
ENGINE REMOUNTING	3- 8
ENGINE DISASSEMBLY	3- 9
ENGINE COMPONENTS INSPECTION AND SERVICING	3-18
CYLINDER HEAD	3-18
VALVE	3-19
CAMSHAFT	3-23
CAM CHAIN TENSIONER	3-25
CYLINDER	3-25
PISTON	3-26
PISTON RING	3-27
PISTON PIN	3-28
CONROD	3-28
CRANKSHAFT	3-31
CLUTCH	3-35
OIL PUMP	3-36
TRANSMISSION GEARS	3-36
ENGINE REASSEMBLY	3-39

COMPRESSION PRESSURE CHECK

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. Performance maintenance records kept at your dealership should include compression readings for each maintenance service.

COMPRESSION PRESSURE SPECIFICATION

Standard	Limit	Difference
1 200–1 700 kPa (12–17 kg/cm ²) (171–241 psi)	1 000 kPa (10 kg/cm ²) (142 psi)	200 kPa (2 kg/cm ²) (28 psi)

Low compression pressure can indicate any of the following conditions:

- * Excessively worn cylinder wall
- * Worn-down piston or piston rings
- * Piston rings stuck in the 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 cylinders is less than 1 000 kPa (10 kg/cm², 142 psi)
- * Difference in compression pressure between any two cylinders is more than 200 kPa (2 kg/cm², 28 psi).
- * All compression pressure are below 1 200 kPa (12 kg/cm², 171 psi) even when they measure more than 1 000 kPa (10 kg/cm², 142 psi).

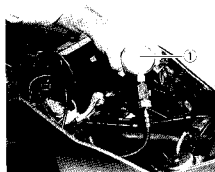
COMPRESSION TEST PROCEDURE

NOTE:

- * Before testing the engine for compression pressure, make sure that the cylinder head nuts and bolts are tightened to the specified torque values and tappet clearance are properly adjusted.
- * Have the engine warmed up by idling before testing.

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

- Remove the seat.
- Pull up the trunk.
- Remove all the spark plugs.
- Fit the compression gauge ① one of the plug holes, taking care to make the connection tight.
- Keep the throttle grip in full-open position.
- While cranking the engine a few seconds with the starter, record the maximum gauge reading as the compression of that cylinder.
- Repeat this procedure with the other cylinders.



09915-64510: Compression gauge

09915-63310: Adaptor

OIL PRESSURE CHECK

To check periodically oil pressure of the oil passage way in the engine needs to judge roughly the conditions of the moving parts.

OIL PRESSURE SPECIFICATION

<p>Above 200 kPa (2.0 kg/cm², 28 psi) Below 400 kPa (4.0 kg/cm², 57 psi)</p>	at 3 000 r/min., Oil temp. at 60°C (140°F)
---	--

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

LOW OIL PRESSURE

- * Clogged oil filter
- * Oil leakage from oil passage way
- * Damaged oil seal
- * Defective oil pump
- * Combination of above items

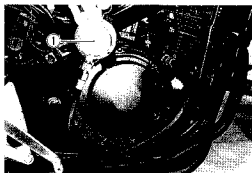
HIGH OIL PRESSURE

- * Used a engine oil which is too heavy a weight
- * Clogged oil passage way
- * Combination of above items

OIL PRESSURE TEST PROCEDURE

Start the engine and check if the oil pressure indicator light is turned on. If it keeps on lighting, check the oil pressure indicator light circuit. If it is in good condition, check the oil pressure in the following manner.

- Remove the lower cowling.
- Install the oil pressure gauge ① with the adaptor in the position shown in the figure.
- Warm up the engine as follows:
 Summer 10 min. or so at 2 000 r/min.
 Winter 20 min. or so at 2 000 r/min.
- After warming up, increase the engine speed to 3 000 r/min. with the engine tachometer reading, and read the oil pressure gauge.



09915-74520: Oil pressure gauge

09915-77330: Compression gauge

ENGINE COMPONENTS REMOVABLE WITH ENGINE IN PLACE

The parts listed below can be removed and reinstalled without removing the engine from the frame. Refer to the page listed in each section for removal and reinstallation instructions.

ENGINE CENTER

	See page
Exhaust pipe/muffler	3-6
Radiator	5-3
Water hose	3-5
Oil filter	2-9
Oil strainer	3-15
Oil regulator	3-15
Carburetor	3-6
Cam chain tensioner	3-9
Cylinder head cover	3-9
Camshafts	3-9
Cylinder head	3-10
Cylinder	3-10
Pistons	3-11
Starter motor	3-11

ENGINE LEFT SIDE

	See page
Engine sprocket cover	3-7
Engine sprocket and drive chain	3-7
Generator cover	3-14
Starter clutch	3-14
Starter idle gear	3-14

ENGINE RIGHT SIDE

	See page
Signal generator cover	3
Signal generator	3
Oil pressure switch	3
Clutch cover	3
Clutch pressure, drive and driven plate	3
Oil pump driven gear	3
Primary driven gear	3
Gearshift shaft	3
Gear shifting pawl and cam driven gear	3
Neutral indicator switch body	3
Oil pump	3
Water pump	5

ENGINE REMOVAL AND REMOUNTING

ENGINE REMOVAL

Before taking the engine out of the frame, thoroughly clean the engine with a suitable cleaner. The procedure of engine removal is sequentially explained in the following steps.

- Drain engine oil. (Refer to page 2-8.)
- Drain coolant. (Refer to page 2-11.)
- Remove the seat.
- Remove the trunk mounting bolts and screws. (Refer to page 2-3.)
- Remove the trunk by removing the clip ① and pin ②.
- Open the fuel tank cap lid by turning the ignition switch key to the "FUEL" position and then push the fuel opener ③.

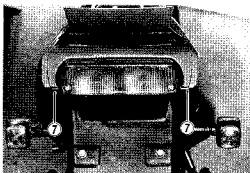
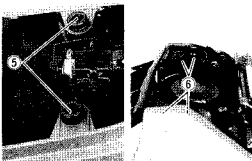
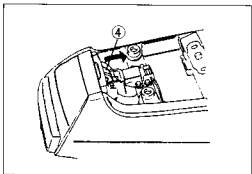
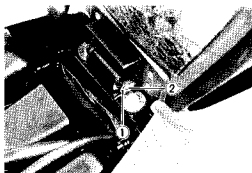
NOTE:

To open the fuel tank cap lid when the battery is discharged, unhook the lid latch ④ by hand as shown in the illustration.

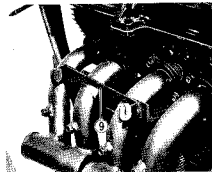
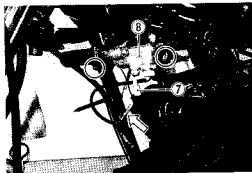
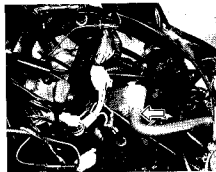
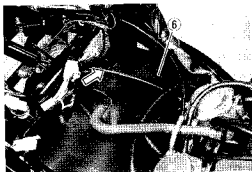
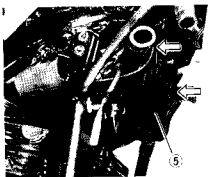
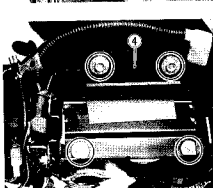
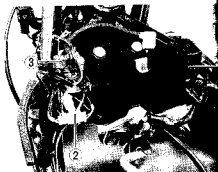
- Remove the frame covers by removing the mounting screws (⑤, ⑥ and ⑦).
- Remove the fairing. (Refer to page 7-1.)
- Remove the radiator. (Refer to page 5-3.)
- Remove the battery by disconnecting the \ominus and \oplus battery lead wires.

WARNING:

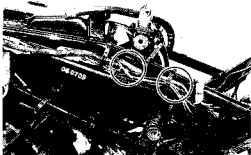
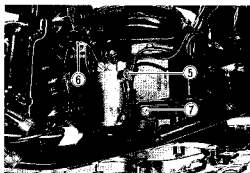
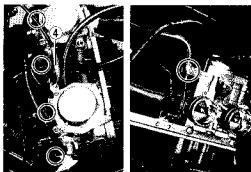
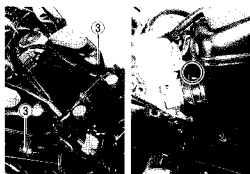
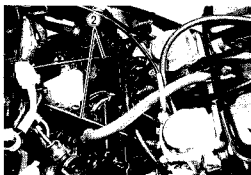
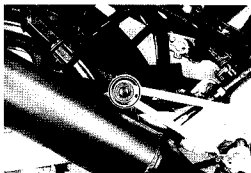
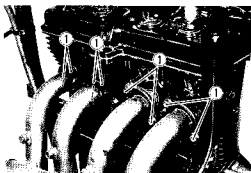
When disconnecting the battery lead wires, \ominus lead wire first.



- Disconnect the fuse coupler (1), starter relay coupler (2) and starter motor wire (3).
- Remove the battery holder (4), by removing the mounting bolts.
- Remove the rubber covers (5 and 6), by removing the clamps.
- Disconnect the spark plug caps, breather hose and radiator fan switch lead wire.
- Disconnect the water thermo switch lead wire (7).
- Remove the water thermo case (8) by removing the mounting bolts.
- Remove the radiator lower bracket (9).

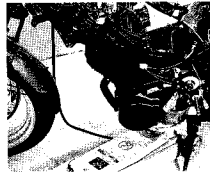
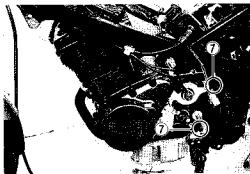
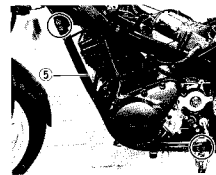
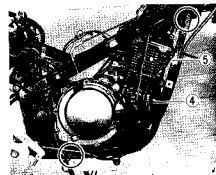
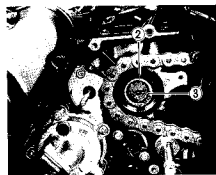
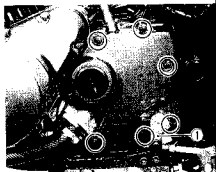


- Remove the exhaust pipe bolts ①.
- Remove the muffler by removing the mounting nut and bolt.
- Remove the starter cables ②.
- Remove the air cleaner mounting bolts ③.
- Remove the air cleaner by loosening the clamp screws.
- Remove the carburetors by loosening the clamp screws.
- Disconnect the throttle cable ④ by loosening the lock nuts.
- Disconnect the starter motor lead wire ⑤, oil pressure switch lead wire ⑥ and ground wire ⑦.
- Disconnect the signal generator lead wires, generator lead wires and neutral indicator switch lead wire.



3-7 ENGINE

- Remove the gearshift arm ①.
- Remove the engine sprocket cover.
- Loosen the rear axle nut and chain adjuster nuts.
- Push the rear wheel forward.
- Remove the engine sprocket ② with drive chain by removing the circlip ③.
- Remove the engine mounting nut and bolt ④.
- Remove the frame down tube ⑤ by removing the mounting bolts ⑥.
- Remove the other engine mounting nuts and bolts ⑦.
- Remove the engine by using jack etc.



ENGINE REMOUNTING

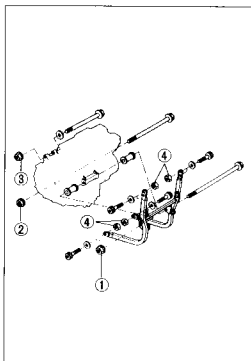
The engine can be mounted in the reverse order of removal.

NOTE:

The engine mounting nuts are self-lock type. Once the nut has been removed, it is no longer of any use. Be sure to use new nuts and tighten them to the specified torque.

Tightening torque

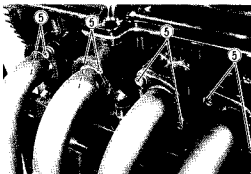
ITEM	N·m	kg·m	lb·ft
①, ②, ③	60–72	6.0–7.2	43.5–52.0
④	18–28	1.8–2.8	13.0–20.0



- Tighten the exhaust pipe bolts ⑤ and muffler mounting nut ⑥ to the specified torque.

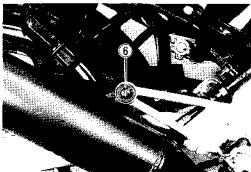
Tightening torque

- ⑤: 8–12 N·m (0.8–1.2 kg·m, 6.0–8.5 lb·ft)
- ⑥: 18–28 N·m (1.8–2.8 kg·m, 13.0–20.0 lb·ft)



ENGINE OIL

Pour 3.2 L (3.4/2.8 US/Imp qt) of engine oil SAE10W/40 under API classification.



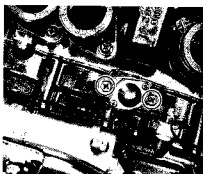
ADJUSTMENT

After remounting the engine, following adjustments are necessary.

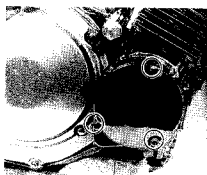
- * Throttle cable play
- * Clutch cable play
- * Drive chain slack
- * Engine idle r/min
- * Filling cooling solution

ENGINE DISASSEMBLY

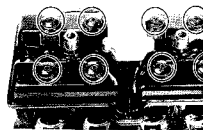
- Remove the cam chain tensioner.



- Remove the signal generator cover.



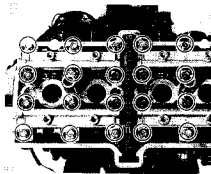
- Remove the cylinder head cover.



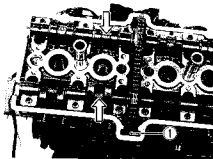
- Remove the camshaft journal holders.

NOTE:

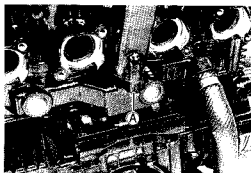
Be sure to loosen the camshaft journal holder bolts evenly by shifting the wrench diagonally.



- Remove the camshafts and cam chain guide ①.



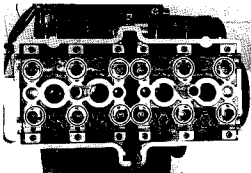
- The cylinder head becomes free for removal when its one 6-mm bolt (A) and twelve 10-mm nuts are removed.



NOTE:

When loosening the cylinder head nuts, loosen each nut little by little in a descending order according to the numbers cast on a cylinder head.

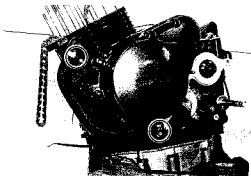
- Lift the cylinder head up to grip its both ends. If it does not come off, lightly tap on the finless portions of it with a plastic mallet.



CAUTION:

Be careful not to damage the fins when removing or handling the cylinder head.

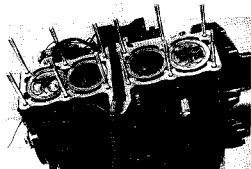
- Remove the hose.



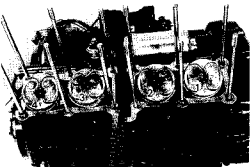
- Firmly grip both ends of the cylinder block and lift it straight up. If the block does not come off, lightly tap on the finless portions of the block with a plastic mallet to shake the gasketed joint loose.

CAUTION:

Be careful not to damage the fins when removing or handling the cylinder block.



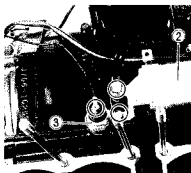
- Scribe the cylinder number on the head of the respective pistons.



- Place a cloth beneath the piston so as not to drop any parts in the crankcase, and remove the circlip ① with long-nose pliers.
- Draw out the piston pin. Place each piston pin in the same piston as that it was removed from.



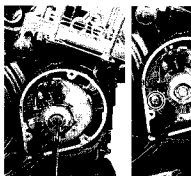
- Remove the starter motor ② and oil pressure switch ③.



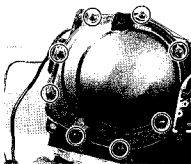
- Remove the signal generator rotor with the special tool.

09910-20115: Conrod holder

- Remove the signal generator stator.



- Remove the clutch cover.



- Remove the clutch spring set bolts in a criss-cross manner with the special tool.

09910-20115: Conrod holder

- Remove the drive and driven plates.

