FOREWORD

The SUZUKI GSX250F has been developed as a new generation motorcycle to the GS-models. It is packed with highly advanced design concepts including a new highly efficient combustion system, a fully transistorized ignition system and a improved link type rear suspension. Combined with precise control and easy handling the GSX250F provides excellent performance and outstanding riding comfort.

This service manual has been produced primarily for experienced mechanics whose job is to inspect, adjust, repair and service SUZUKI motor cycles.
Apprentice mechanics and do-it-yourself mechanics, will also find this manual as an extremely useful repair guide. This manual contains the most up-to-date information at the time of publication. The rights are reserved to update or make corrections to this manual at any time.

SUZUKI MOTOR CORPORATION
Overseas Service Department

GROUP INDEX

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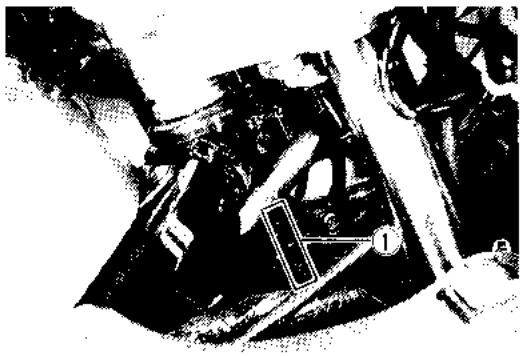
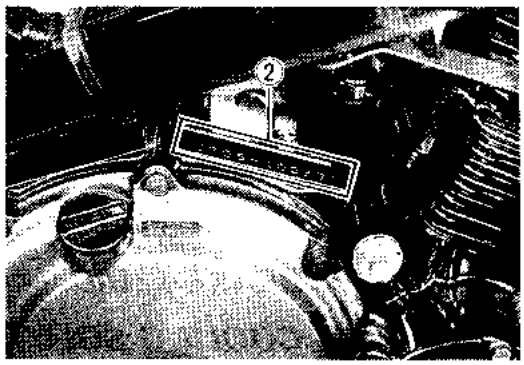
VIN AND SERIAL NUMBER LOCATIONS

The frame serial number or V.I.N. (Vehicle Identification Number) ① is stamped on the steering head pipe. The engine serial number ② is located on the right side of the upper crankcase. These numbers are required especially for registering the machine and ordering spare parts.





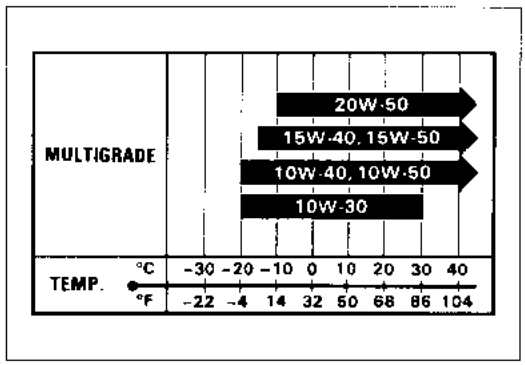
FUEL, OIL AND COOLING SOLUTION RECOMMENDATIONS

FUEL

Gasoline used should be graded 85—95 octane or higher. An unleaded gasoline is recommended.

ENGINE OIL

Be sure that the engine oil you use comes under API classification of SE or SF and that its viscosity rating is SAE 10W/40. If an SAE 10W/40 motor oil is not available, select the oil viscosity according to the right chart.



FRONT FORK OIL

Use fork oil #10.

99000-99044-10G: SUZUKI FORK OIL #10

BRAKE FLUID

specification and classification: DOT 4

99000-23110: SUZUKI BRAKE FLUID

COOLING SOLUTION

Use an anti-freeze & Summer coolant compatible with aluminum radiator, mixed with distilled water only, at ratio of 50 : 50.

WATER FOR MIXING

Use distilled water only. Water other than distilled water can corrode and clog the aluminum radiator.

ANTI-FREEZE & SUMMER COOLANT

The coolant performs as corrosion and rust inhibitor as well as anti-freeze. Therefore, the coolant should be used at all times even though the atmospheric temperature in your area does not go down to freezing point.

SUZUKI recommends the use of SUZUKI GOLDEN CRUISER 1200NA anti-freeze & summer coolant. If this is not available, use an equivalent which is compatible with aluminum radiator.

99000-99032-10X : SUZUKI GOLDEN CRUISER 1200NA (Non-Amine type)

REQUIRED AMOUNT OF WATER/COOLANT

Solution capacity (total) : 2 000 ml (2.1/1.8 US/Imp qt)

CAUTION:

Mixing of anti-freeze & summer coolant should be limited to 60%. Mixing beyond it would reduce its efficiency. If the anti-freeze & summer coolant mixing ratio is below 30%, rust inhibiting performance is greatly reduced. Be sure to mix it above 30% even though the atmospheric temperature does not go down to freezing point.

BREAKING-IN PROCEDURES

During manufacture only the best possible materials are used and all machined parts are finished to a very high standard, but it is still necessary to allow the moving parts to "BREAK-IN" before subjecting the engine to maximum stresses. The future performance and reliability of the engine depends on the care and restraint exercised during its early life. The general rules are as follows.

• Keep to these breaking-in engine speed limits.

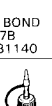
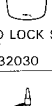
Initial 800 km (500 miles) : Below 7 000 r/min
Up to 1 600 km (1 000 miles) : Below 10 000 r/min
Over 1 600 km (1 000 miles) : Below 16 500 r/min

CYLINDER IDENTIFICATION

The four cylinders of this engine are identified as No.1, No.2, No.3 and No.4 cylinder, as counted from the left hand. (as viewed by rider on the seat)

SPECIAL MATERIALS

The materials listed below are needed for maintenance work on the GSX250F, and should be kep on hand for ready use. They supplement such standard materials as cleaning fluids, lubricants, emer cloth and the like. How to use them and where to use them are described in the text of this manua

MATERIAL	PART	PAGE	PART	PAGE
 SUZUKI SUPER GREASE "A" 99000-25010	• Starter motor oil seal and O-ring • Wheel bearing • Steering stem bearings • Sprocket mounting drum bearing • Water pump oil seal	6-10 7-3 7-28 7-30 7-23 7-28 7-30 5-11	• Swingarm bearing, spacer and dust seal cover • Cushion lever bearing, spacer and dust seal • Speedometer gear box	7-36 7-40 7-36 7-40 7-3
 SUZUKI MOLY PASTE 99000-25140	• Valve stem • Conrod big end bearing • Countershaft and drive-shaft • Crankshaft journal bearing • Camshaft journal • Starter motor armature end	3-21 3-31 3-37 3-40 3-50 6-10		
 SUZUKI BOND NO.1207B 99000-31140	• Crankcase mating surface • Mating surface between crankcases and starter clutch cover, clutch cover • Oil pressure switch • Cylinder head cover • Water thermo-gauge • Water pump mechanical seal	3-40 3-43 3-46 3-47 3-52 5-7 5-11		
 THREAD LOCK SUPER "1303" 99000-32030	• Cam sprocket bolt	3-25		
 THREAD LOCK "1342" 99000-32050	• Gearshift cam stopper bolt • Countershaft bearing retainer screw • Gearshift cam guide/pawl lifter screw • Starter motor mounting bolt	3-41 3-43	• Front fork damper rod bolt	7-2

MATERIAL	PART	PAGE	PART	PAGE
 THREAD LOCK SUPER "1305" 99000-32100	• Generator rotor bolt	3-42		
 THREAD LOCK "1360" 99000-32130	• Disc plate mounting bolt	7-3 7-5		
 SUZUKI SILICONE GREASE 99000-25100	• Front brake caliper	7-12		
 SUZUKI BRAKE FLUID DOT3 & DOT4 99000-23110	• Brakes	1-1 2-14 7-17		
 SUZUKI FORK OIL #10 99000-99044-10G	• Front fork	7-22		
 SUZUKI GOLDEN CRUISER 1200NA (Non-Amine type) 99000-99032-10X		1-2		

PRECAUTIONS AND GENERAL INSTRUCTIONS

Observe the following items without fail when disassembling and reassembling motorcycles.

- Do not run engine indoors with little or no ventilation.
- Be sure to replace packings, gaskets, circlips, O-rings and cotter pins with new ones.

CAUTION:
Never reuse a circlip after a circlip has been removed from a shaft, it should be discarded and a new circlip must be installed.
When installing a new circlip, care must be taken not to expand the end gap larger than required to slip the circlip over the shaft.
After installing a circlip, always insure that is completely seated in its groove and securely fitted.

- Tighten cylinder head and case bolts and nuts beginning with larger diameter and ending with smaller diameter, and from inside to outside diagonally, to the specified tightening torque.
- Use special tools where specified.
- Use genuine parts and recommended oils.
- When more than 2 persons perform work together, pay attention to the safety of each other.
- After the reassembly, check parts for tightness and operation.
- Treat gasoline, which is extremely flammable and highly explosive, with greatest care. Never use gasoline as cleaning solvent.

Warning, Caution and Note are included in this manual occasionally, describing the following contents.

WARNING ..... **The personal safety of the rider or bystanders may be involved. Disregarding this information could result in personal injury.**

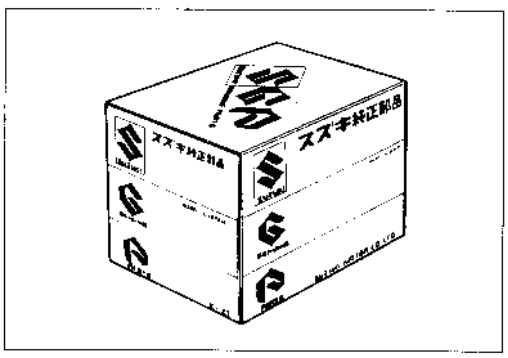
CAUTION ..... **These instructions point out special service procedures or precautions that must be followed to avoid damaging the machine.**

NOTE ..... *This provides special information to make maintenance easier or important instructions clearer.*

REPLACEMENT PARTS

When you replace any parts, use only genuine SUZUKI replacement parts, or their equivalent. Genuine SUZUKI parts are high quality parts which are designed and built specifically for SUZUKI vehicles.

CAUTION:
Use of replacement parts which are not equivalent in quality to genuine SUZUKI parts can lead to performance problems and damage.



SPECIFICATIONS

DIMENSIONS AND DRY MASS

Overall length	2 020 mm (79.5 in)
Overall width	695 mm (27.4 in)
Overall height	1 120 mm (44.1 in)
Wheelbase	1 380 mm (54.3 in)
Seat height	770 mm (30.3 in)
Ground clearance	140 mm (5.5 in)
Dry mass	163 kg (359 lbs)

ENGINE

Type	Four-stroke, water-cooled, DOHC
Number of cylinders	4
Bore	49.0 mm (1.929 in)
Stroke	33.0 mm (1.299 in)
Piston displacement	248 cm^3 (15.1 cu.in)
Compression ratio	12.5 : 1
Carburetor	MIKUNI BSW27, two
Air cleaner	Non-woven fabric element
Starter system	Electric starter motor
Lubrication system	Wet sump

TRANSMISSION

Clutch	Wet multi-plate type
Transmission	6-speed constant mesh
Gearshift pattern	1-down, 5-up
Primary reduction	2.285 (80/35)
Final reduction	3.769 (49/13)
Gear ratios, Low	3.083 (37/12)
2nd	2.200 (33/15)
3rd	1.722 (31/18)
4th	1.450 (29/20)
5th	1.315 (25/19)
Top	1.227 (27/22)
Drive chain	DAIDO: DID520V7, TAKASAGO: RK520SMO, 110 links

CHASSIS

Front suspension	Telescopic, coil spring, oil damped
Rear suspension	Link type, coil spring, oil damped, spring pre-load 7-way adjustable
Steering angle	33° (right & left)
Caster	64° 10′
Trail	102 mm (4.0 in)
Turning radius	2.9 m (9.5 ft)
Front brake	Disc
Rear brake	Disc
Front tire size	110/70-17 54H
Rear tire size	140/70-17 66H
Front fork stroke	130 mm (5.1 in)
Rear wheel travel	122 mm (4.8 in)

ELECTRICAL

Ignition type	Transistorized
Ignition timing	22° B.T.D.C. below 1800 r/min
Spark plug	NGK CR7HSA or ND U22FSR-U
Battery	12V 21.6 kC (6Ah)/ 10HR
Generator	Three-phase A.C. generator
Fuse	25/10/10/10A

CAPACITIES

Fuel tank	
including reserve	12L (3.2/2.6 US/Imp gal)
reserve	2.0L (0.5/0.4 US/Imp gal)
Engine oil change	2.6L (2.7/2.3 US/Imp qt)
with filter change	2.9L (3.1/2.6 US/Imp qt)
Front fork oil	401 ml (13.6/14.1 US/Imp oz)
Coolant	
including reserve	2.0L (2.1/1.8 US/Imp qt)

*These specifications are subject to change without notice.

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 kilometer, miles and time for your convenience.

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

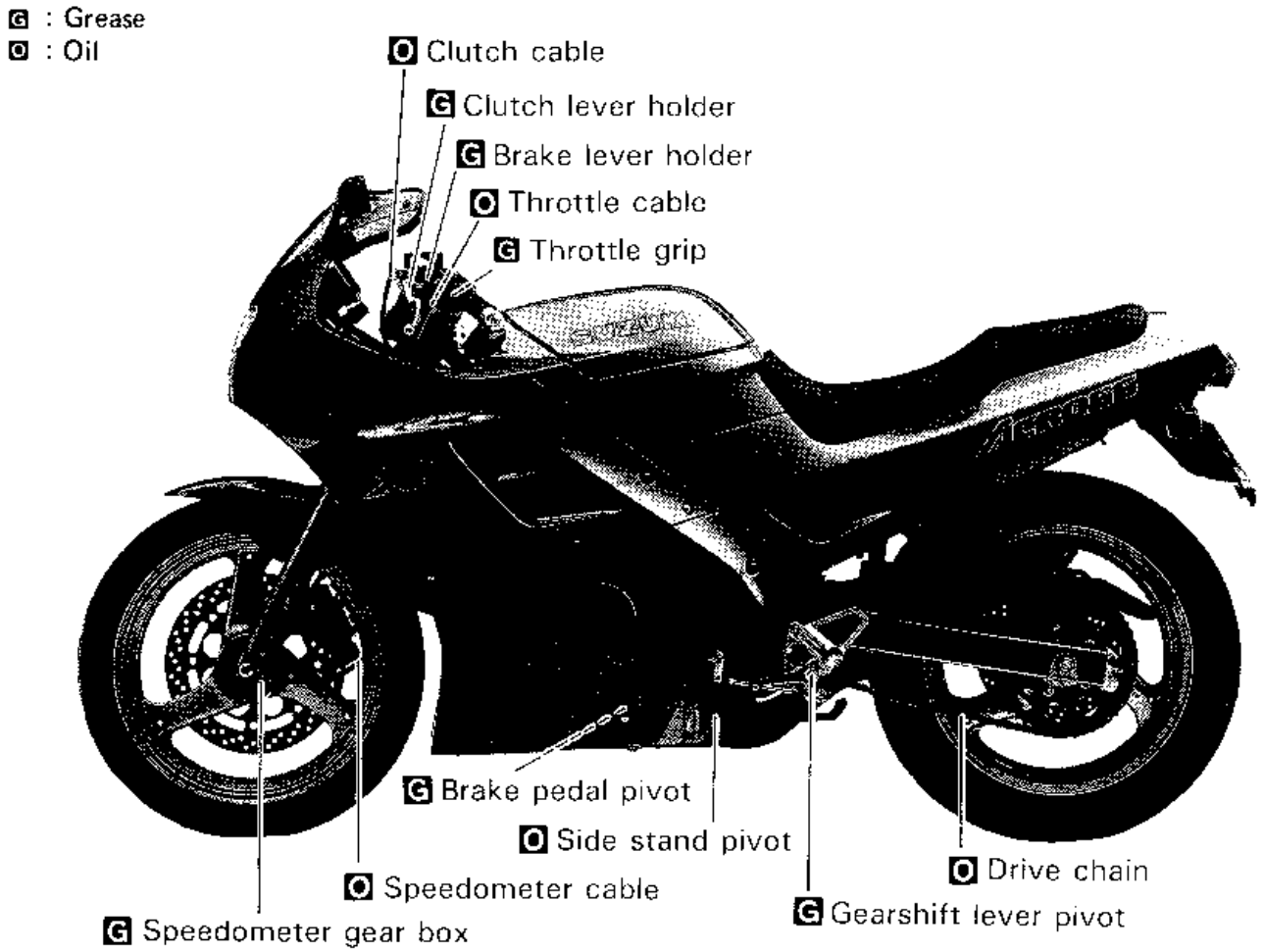
PERIODIC MAINTENANCE CHART

Item \ Interval					
	km	1 000	5 000	10 000	15 000
	miles	600	3 000	6 000	9 500
	months	2	15	30	45
Battery		—	I	I	I
Air cleaner		Clean every 3 000 km (2 000 miles) and replace every 12 000 km (7 500 miles)			
Exhaust pipe bolts		T	T	T	T
Tappet clearance		I	I	I	I
Spark plugs		—	I	R	I
Engine oil and oil filter		R	R	R	R
Fuel lines		I	I	I	I
		Replace every four years			
Carburetors		I	I	I	I
Radiator hoses		I	—	I	—
		Replace every four years			
Coolant		Replace every two years			
Clutch		I	I	I	I
Drive chain		I	I	I	I
		Clean and lubricate every 1 000 km (600 miles)			
Brakes		I	I	I	I
Brake hoses		I	I	I	I
		Replace every four years			
Brake fluid		I	I	I	I
		Replace every two years			
Tires		I	I	I	I
Steering		I	I	I	I
Front fork		I	I	—	I
Rear suspension		I	I	—	I
Chassis bolts and nuts		T	T	T	T

NOTE:
I = Inspect and clean, adjust, replace or lubricate as necessary
R = Replace T = Tighten

LUBRICATION POINTS

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



NOTE:

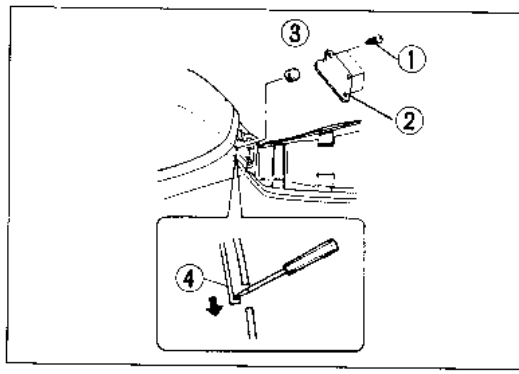
* *Before lubricating each part, clean off any rusty spots and wipe off any grease, oil, dirt or grime.*
* *Lubricate exposed parts, other than the points mentioned on above, which are subject to rust.*

MAINTENANCE AND TUNE-UP PROCEDURES

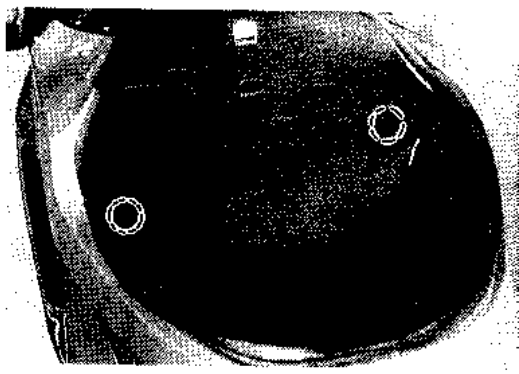
This section describes the servicing procedures for each item of the Periodic Maintenance requirements.

BATTERY

Inspect Every 5 000 km (15 months)

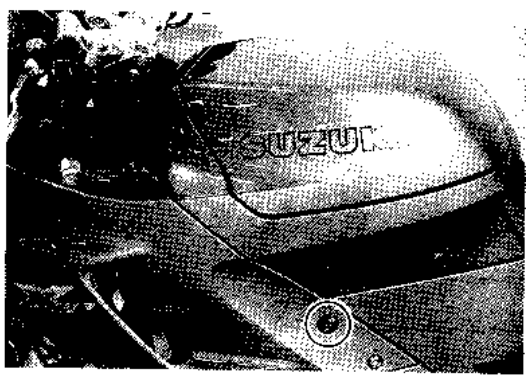


- Remove the seat.
- To open the trunk lid, insert the key into the ignition switch and turn the key to the "OPEN" position.



NOTE:
To open the trunk lid when the battery is discharged, remove the screws ①, plate ② and rubber cap ③ then insert the negative screwdriver etc. into the hole and push the nail ④ down until the latch is released.

- Remove the trunk mounting bolts (⑤ and ⑥) and screws ⑦.
- Pull up the front end of the trunk and lean it rearward.

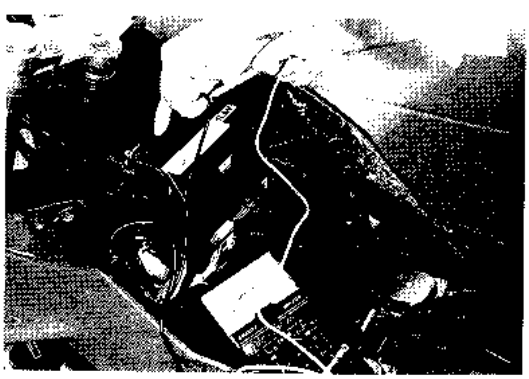


- Check the battery voltage with the pocket tester.

09900-25002: Pocket tester

If voltage reading is below 12.0 V, this battery needs recharging.

Battery voltage: Above 12V



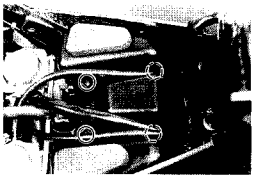
- Disconnect the battery ⊖ and ⊕ lead wires and remove the battery.

WARNING:
When disconnecting the battery lead wire, ⊖ lead wire first.

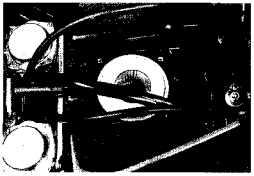
CAUTION:
Read the "ELECTRICAL SECTION", for the servicing battery.

AIR CLEANER

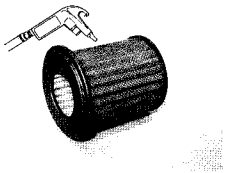
Clean Every 3 000 km and Replace Every 12 000 km



- Open the trunk. (Refer to page 2-3.)
- Remove the air cleaner case cover.



- Remove the air cleaner element.



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

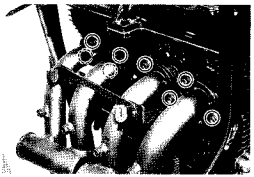
CAUTION:
Always use air pressure on the outside of the cleaner element. If air pressure is used on the inside, dirt will be forced into the pores of the cleaner element thus restricting air flow through the cleaner element.

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

CAUTION:
If driving under dusty conditions, clean the air cleaner element more frequently. The surest way to accelerate engine wear is to use the engine without the element or to use a reptured element. Make sure that the air cleaner is in good condition at all times. Life of the engine depends largely on this component!

EXHAUST PIPE BOLTS

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



- Tighten the exhaust pipe bolts to the specified torque.

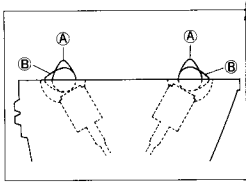
Tightening torque: 8—12 N·m
(0.8—1.2 kg-m, 6.0—8.5 lb-ft)

TAPPET CLEARANCE

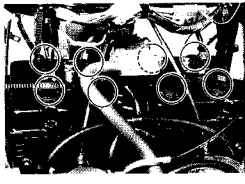
Inspect Initial 1 000 km (2 months) and Every 5 000 km (15 months)

The tappet clearance specifications in the different for both intake and exhaust.
Tappet clearance adjustment must be checked and adjusted, 1) at the time of periodic inspection, 2) when the tappet mechanism is serviced, and 3) when the camshafts are disturbed by removing them for servicing.

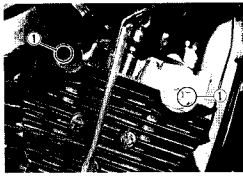
Tappet clearance (when cold) **IN: 0.17—0.27 mm (0.007—0.011 in)**
EX: 0.20—0.30 mm (0.008—0.012 in)



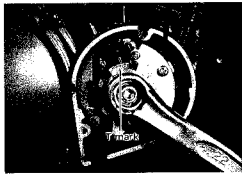
- Remove the fairing. (Refer to page 7-1.)
- Remove the battery and battery holder. (Refer to pages 3-4 and 3-5.)
- Drain coolant. (Refer to page 2-11.)
- Remove the radiator. (Refer to page 5-2.)
- Remove the thermostat case.
- Disconnect the spark plug caps and breather hose.
- Remove the cylinder head cover.



NOTE:
* *The cam must be at positions, Ⓐ or Ⓑ, in order to check the tappet clearance. Clearance readings should not be taken with the cam in any other position than these two positions.*
* *The clearance specification is for COLD state.*
* *To turn the crankshaft for clearance checking, be sure to use a 22 mm wrench and rotate in the normal running direction. All spark plugs should be removed.*



- Turn crankshaft to bring the "T" mark on the rotor to the center of pick-up coil and also to bring the notches ① in the right ends of both camshafts (IN. and EX.) to the positions shown. In this condition, read the tappet clearance at the tappets Ⓒ (IN. and EX. of No.1 cylinder, EX. of No.2 and IN. of No.3).

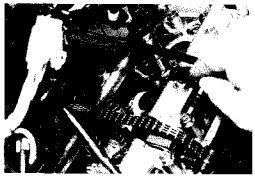


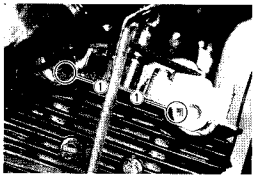
- Use the thickness gauge between tappet and cam to check the clearance.

09900-20803: Thickness gauge

- Turn the crankshaft 360° (one rotation) to bring the "T" mark on the rotor to the center of pick-up coil and also to bring the notches ① to the positions as shown.
- Read the clearance at the remaining tappets Ⓓ and adjust the clearance if necessary.

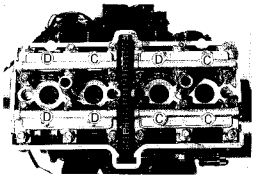
	Notch ① position	
Cam Position	Intake Camshaft	Exhaust Camshaft
Ⓒ	⊖	⊖
Ⓓ	⊖	⊖





TAPPET CLEARANCE ADJUSTMENT

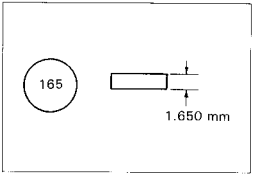
- Remove the camchain tensioner. (Refer to page 3-9.)
- Remove the camshafts. (Refer to page 3-9.)
- Remove the tappets. (Refer to page 3-18.)
- Replace the shim with a magnetic bar etc.
- Check the figures printed on the shim. These figures indicate the thickness of the shim, as illustrated.
- Select a replacement shim that will provide a clearance within the specified range (IN.: 0.17—0.27 mm, EX.: 0.20—0.30 mm). For the purpose of this adjustment, a total of 41 sizes of tappet shim are available ranging from 1.200 mm to 2.200 mm in steps of 0.025 mm. Fit the selected shim to the spring retainer, with numbers toward tappet. Be sure to check shim sized with micrometer to insure its size.



NOTE:

** Before fitting the tappet shim to the spring retainer, be sure to apply engine oil to its top and bottom faces.*

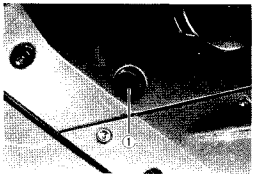
** When seating tappet shim, be sure to face figure printed surface to the tappet.*



- To check the tappet clearance, reassemble each tappet, camshafts, camchain and camchain tensioner. (Refer to page 3-51.)
- Turn the crankshaft two turns and bring the position to T.D.C. and check the tappet clearance. If the correct clearance not has been obtained, readjust the clearance until correct range.

CARBURETORS

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

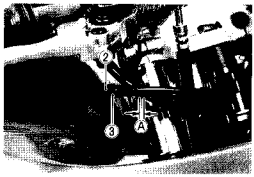


IDLE R/MIN (Idling adjustment)

NOTE:
Make this adjustment when the engine is hot.

- Start up the engine and set its speed at anywhere between 1 500 and 1 700 r/min to turn throttle stop screw ①.

Engine idle speed: 1 600 ± 100 r/min



THROTTLE CABLE PLAY

There should be 0.5—1.0 mm (0.02—0.04 in) play Ⓐ on the throttle cable.
Adjust the throttle cable play by the following procedures.

- Loosen the lock nut ② and turn the adjuster ③ until the specified play can be obtained.
- Tighten the lock nut ② while holding the adjuster.

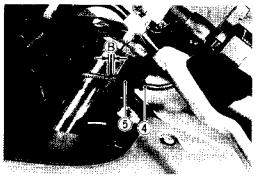
Throttle cable play Ⓐ: 0.5—1.0 mm (0.02—0.04 in)

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

CHOKE CABLE PLAY

- Loosen the lock nut ④ and turn the adjuster ⑤ until the specified play can be obtained.
- Tighten the lock nut.

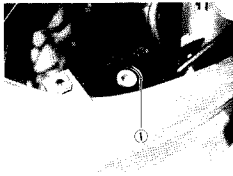
Choke cable play Ⓑ: 0.5—1.0 mm (0.02—0.04 in)



COOLING SYSTEM

Inspect Initial 1 000 km (2 months) and Every 5 000 km (15 months)
Replace (change) coolant Every 2 years
Replace hoses Every 4 years

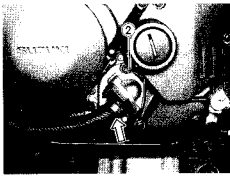
- Loosen the screw and remove the radiator cap ①.
- Remove the drain plug ② and disconnect the hose, and drain coolant thoroughly while holding the motorcycle upright.



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

WARNING:
Cooling solution may be harmful if swallowed or if it comes in contact with skin or eyes. If cooling solution gets into the eyes or in contact with the skin, it should be flushed thoroughly with plenty of water. If swallowed, induce vomitting and call physician immediately.

- Flush the radiator with fresh water.
- Tighten the drain plug securely.
- Fill the specified coolant up to the radiator inlet hole.



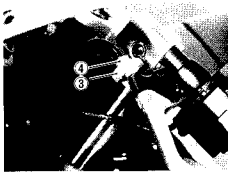
NOTE:
For coolant information, refer to "COOLING SYSTEM" section (page 5-2.)

- Fill the reservoir tank to the "F" level with coolant.
- Close the radiator cap securely.
- After warming up and cooling down the engine, check the coolant level of the reservoir tank and add the coolant to the "F" level if the level is below "L".

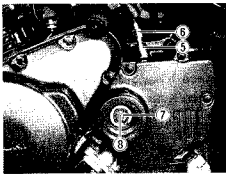
Including reservoir tank capacity: 2 000 ml (2.1/1.8 US/Imp qt)
Reservoir tank capacity: 150 ml (0.16/0.13 US/Imp qt)

CLUTCH

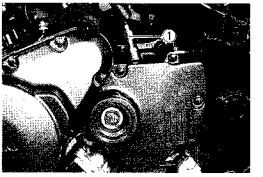
Inspect Initial 1 000 km (2 months) and Every 5 000 km (15 months)

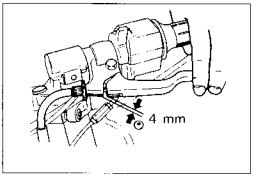


- Loosen the lock nut ③ and turn the adjuster ④ fully in.
- Loosen the lock nut ⑤ and turn in the adjuster ⑥.
- Remove the clutch release adjuster cap.
- Loosen the lock nut ⑦, and loosen the adjusting screw ⑧.
- Tighten the adjusting screw ⑧ until resistance is felt, then loosen it 1/4 turn.
- Tighten the lock nut ⑦.



- Adjust the clutch cable adjuster ① until approx. 4 mm of play remains at the bottom of the clutch lever.
- Tighten the lock nuts.





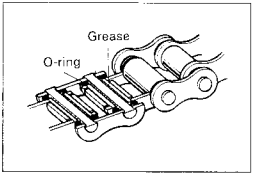
DRIVE CHAIN

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

Visually inspect the drive chain for the below listed possible malconditions. (Lift the rear wheel and place a jack or block under the engine, and turn the rear wheel slowly by hand, with the transmission in NEUTRAL).

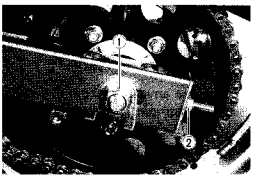
* Loose pins
* Damaged rollers
* Dry or rusted links
* Kinked or binding links
* Excessive wear
* Improper chain adjustment
* Missing O-ring or seals

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



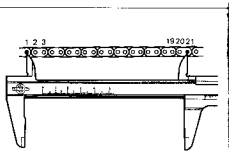
CHECKING

- Loosen axle nut ①.
- Tense the drive chain fully to screw in the chain adjuster lock nuts ②.



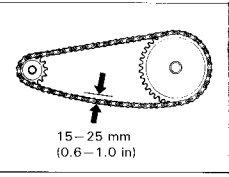
• Count out 21 pins (20 pitches) on the chain and measure the distance between the two points. If the distance exceeds the service limit, the chain must be replaced.

Service Limit: 319.4 mm (12.57 in)



ADJUSTING

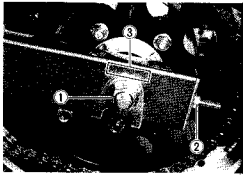
• Loosen both chain adjuster lock nuts ② until the chain has 15—25 mm (0.6—1.0 in) of slack at the middle between engine and rear sprockets. The mark ③ on both chain adjusters must be at the same position on the scale to ensure that the front and rear wheels are correctly aligned.
Place the motorcycle on the side stand for accurate adjustment.



Drive chain slack: 15—25 mm (0.6—1.0 in)

• After adjusting the drive chain, tighten the axle nut ① securely.

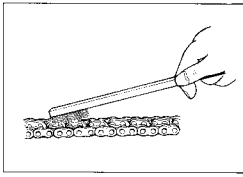
Tightening torque: 55—88 N·m
(5.5—8.8 kg-m, 40.0—63.5 lb-ft)



CLEANING AND LUBRICATING

• Wash the chain with kerosene. If the chain tends to rust faster, the intervals must be shortened.

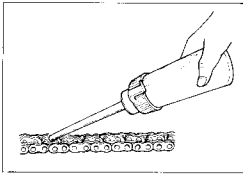
CAUTION:
Do not use trichlene, gasoline or any similar fluids: These fluids have too great a dissolving power for this chain and, what is more important, can spoil the "O" rings (or seals) confining the grease in the bush to pin clearance. Remember, high durability comes from the presence of grease in that clearance.



• After washing and drying the chain, oil it with a heavy-weight motor oil.

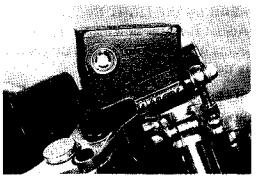
CAUTION:
Do not use any oil sold commercially as "drive chain oil". Such oil too can spoil the "O" rings (or seals).

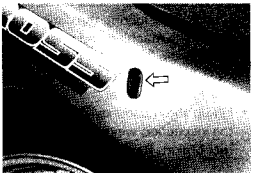
CAUTION:
The standard drive chain is DID520V7 or RK520SMO. SUZUKI recommends that the abovementioned standard drive chain be used for the replacement.



BRAKES

Inspect Initial 1 000 km (2 months) and Every 5 000 km (15 months)
Replace hoses Every 4 years
Replace (change) fluid Every 2 years





BRAKE FLUID LEVEL

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

Specification and classification: DOT 4

99000-23110: SUZUKI BRAKE FLUID

WARNING:
The brake system of this motorcycle is filled with a glycol-based brake fluid. Do not use or mix different types of fluid such as silicone-based and petroleum-based. Do not use any brake fluid taken from old, used or unsealed containers. 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 immediately discolor painted surfaces.
Check the brake hoses for cracks and hose joints for leakage before riding.

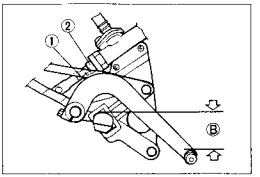
BRAKE PADS

Wearing condition of brake pads can be checked by observing the limit line (front and rear calipers) marked on the pad. When the wear exceeds the limit mark, replace the pads with new ones. (Refer to page 7-13 and 7-31.)

BRAKE PEDAL HEIGHT

- Loosen the lock nut ①, and rotate push rod ② to locate brake pedal 50 mm Ⓑ below the top face of the footrest.
- Retighten the lock nut ① to secure the push rod ② in the proper position.

Brake pedal height Ⓑ: 50 mm (2.0 in)



REAR BRAKE LIGHT SWITCH

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

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 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:

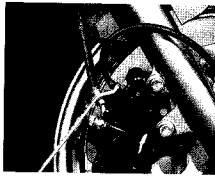
- Fill up the master cylinder reservoir to the upper end of the inspection window (for front brake) and upper line (for rear brake). Replace the reservoir cap to prevent entry of dirt.
- Attach a pipe to the caliper bleeder valve, and insert the free end of the pipe into a receptacle.
- Front brake: Bleed the 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.

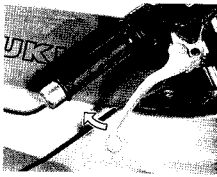
NOTE:
Replenish the brake fluid reservoir as necessary while bleeding the brake system.
Make sure that there is always some fluid visible in the reservoir.

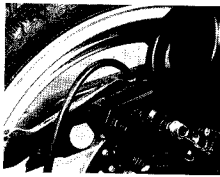
- Close the bleeder valve, and disconnect the pipe. Fill the reservoir to the upper end of the inspection window (for front brake) and upper line (for rear brake).
- Rear brake: Differences between front and rear are that the master cylinder is actuated by a pedal.

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.

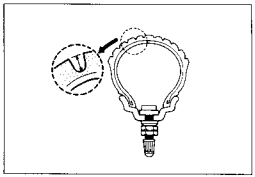


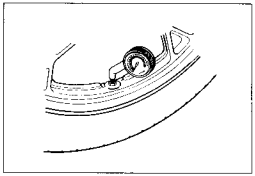




TIRES

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

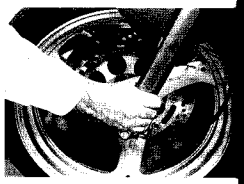
TIRE PRESSURE

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/cm²	psi	kPa	kg/cm²	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)

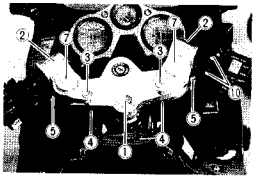
Inspect the rear shock absorber for oil leakage and check that there is no play in the swingarm assembly.

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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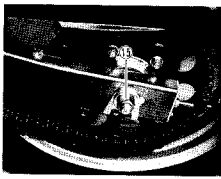
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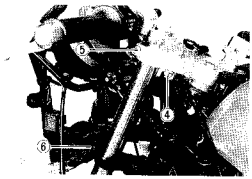
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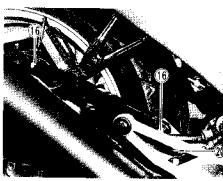
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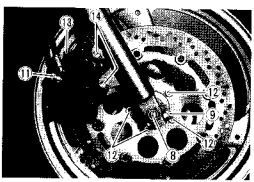
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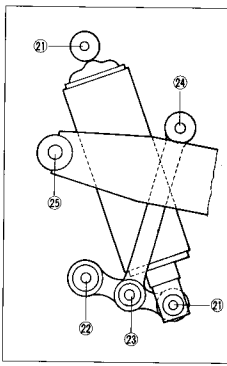
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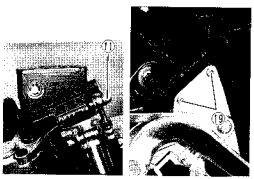
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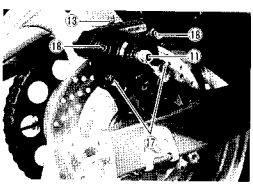
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ENGINE

CONTENTS

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. Per
maintenance records kept at your dealership should include compression readings for each m
tenance service.

COMPRESSION PRESSURE SPECIFICATION

Standard	Limit	Difference
1 200—1 700 kPa (12—17 kg/cm²) (171—241 psi)	1 000 kPa (10 kg/cm²) (142 psi)	200 kPa (2 kg/cm²) (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/
  28 psi).
* All compression pressure are below 1 200 kPa (12 kg/cm², 171 psi) even when they mea
  more than 1 000 kPa (10 kg/cm², 142 psi).

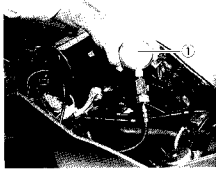
COMPRESSION TEST PROCEDURE

NOTE:

* *Before testing the engine for compression pressure, make sure that the cylinder head nuts*
  bolts are tightened to the specified torque values and tappet clearance are properly adjus
* *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

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

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

LOW OIL PRESSURE

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

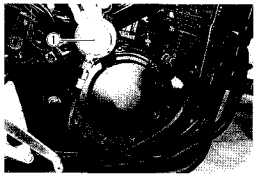
HIGH OIL PRESSURE

* 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 PLA

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

ENGINE CENTER

ENGINE LEFT SIDE

ENGINE RIGHT SIDE

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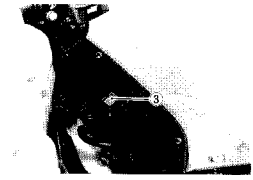
ENGINE REMOVAL AND MOUNTING

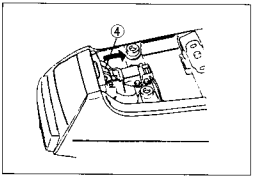
ENGINE REMOVAL

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.

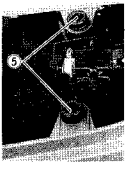


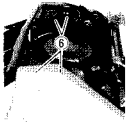
NOTE:
To open the fuel tank cap lid when the battery is discharged, unhook the lid latch ④ by hand as shown in the illustration.

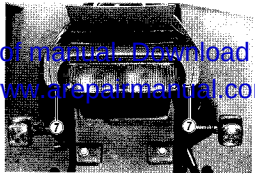


- Remove the frame covers by removing the mounting screws (⑤, ⑥ and ⑦).
- Remove the fairing. (Refer to page 7-1.)
- Remove the radiator. (Refer to page 5-3.)
- Remove the battery by disconnecting the ⊖ and ⊕ battery lead wires.

WARNING:
When disconnecting the battery lead wires, ⊖ lead wire first.







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