SUZUKI

PV50

SERVICE MANUAL

99500-10291-01E
(英)

FOREWORD

This service manual has been specially prepared to provide all the necessary information for the proper maintenance and repair of the PV50.

The PV50 fits the needs of a wide variety of motorcycle users. Those who will be servicing this motorcycle should carefully review this manual before performing any repairs or services.

This manual contains up-to-date information at the time of its issue. Latermade modification and changes will be explained to each SUZUKI distributor in respective markets, to whom you are kindly requested to make query about up dated information, if any.

The motorcycles distributed in your country might differ in minor respects from the standard – specification and, if they do, it is because some minor modifications (which are of no consequence in most cases as far as servicing is concerned) had to be made to comply with the statutory requirements of your country.

SUZUKI MOTOR CO.,LTD.
Service Publications Department
Overseas Service Division

VIEW OF SUZUKI PV50

RIGHT SIDE

LEFT SIDE

GROUP INDEX

GROUP INDEX

LEFT SIDE

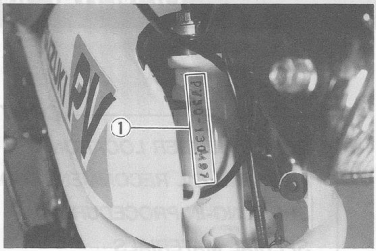
GENERAL INFORMATION

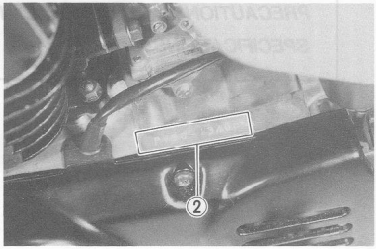
1

CONTENTS

SERIAL NUMBER LOCATIONS

The frame serial number or VIN (Vehicle Identification Number) ① is stamped on the steering head pipe. The engine serial number ② is located on the left crankcase. These numbers are required especially for registering the machine and ordering spare parts.





FUEL AND OIL RECOMENDATIONS

FUEL

Unleaded or low-lead type gasoline is recommended. Use gasoline which is at least 85 – 95 octane by the Research Method.

ENGINE OIL

Use SUZUKI "CCI" oil or SUZUKI CCI super oil.

MIXING RATIO

25 parts gasoline to 1 part oil is the correct gasoline to oil mixture ratio.

TRANSMISSION OIL

Use a good quality SAE 20W/40 multi grade motor oil.

FRONT FORK OIL

Use fork oil #10

BREAKING-IN PROCEDURES

During the manufacture only the best possible materials are used and all machine 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 these breaking-in throttle position.

Initial 800 km	Below 1/4 throttle
Up to 1 600 km	Below 1/2 throttle

- Do not maintain constant engine speed for an extended time period during any portion of the break-in. Try to vary the throttle position.
- Upon reaching an odometer reading of 1 600 km, you can subject the motorcycle to full throttle operation.

SPECIAL MATERIALS

MATERIALS REQUIRED FOR MAINTENANCE

The materials shown are required for maintenance works on the Model PV50, and should be kept on hand for ready use. These items supplement such standard materials as cleaning fluids, lubricants, emery cloth and the like. Methods of use are discussed on later pages.

Material	Part	Page	Material	Part	Page
 SUZUKI SUPER GREASE "A" 99000-25010	Bearing and oil seals	3-22	 SUZUKI FORK OIL #10 99000-99044-15G	Front fork	6-14
		3-23			
	Wheel bearing	6-7			
		6-27			
	Brake cam shaft	6-8			
		6-9			
	Dust seal	6-9			
	Steering outer race	6-18			
	Sprocket mounting drum bearing	6-27			
 SUZUKI BOND NO. 4 99000-31030	Crankcase mating surface.	3-28	 THREAD LOCK SUPER "1303" 99000-32030	Countershaft spacer	3-26
 THREAD LOCK "1342" 99000-32050	Reed valve screws	3-18	 THREAD LOCK SUPER "1333B" 99000-32020	Gearshift cam pin retainer screw	3-32
	Bearing retainer screws	3-22			
	Stator screws	3-29			
	Gearshift cam guide screw	3-32			
	Damper rod bolt	6-13			
 THREAD LOCK SUPER "1322" 99000-32110	Magneto rotor nut	3-29			

PRECAUTIONS AND GENERAL INSTRUCTIONS

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

- Do not run engine indoors with little or no ventilation.
- Be sure to replace packings, gaskets, circlips, O-rings, self-lock nuts 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 it 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 out-side diagonally, with specified tightening torque.
- Use special tools where specified.
- Use genuine parts and recommended oils.
- When 2 or more persons work together, pay attention to the safety of each other.
- After a 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 .....Personal safety of the rider is involved, and disregard of the information could result in injury.
CAUTION.....For the protection of the motorcycle, the instruction or rule must be strictly adhered to.
NOTE .....Advice calculated to facilitate the repair of the motorcycle is given under this heading.

USE OF GENUINE SUZUKI PARTS

When replacing any part of the machine, the use of genuine SUZUKI replacement parts is highly recommended. The use of parts that are not genuine SUZUKI will lower the inherent capability of the machine and could induce costly mechanical trouble.

SPECIFICATIONS

DIMENSIONS AND DRYMASS

Overall length	1 415 mm
Overall width	690 mm
Overall height	915 mm
Wheelbase	960 mm
Ground clearance	125 mm
Dry mass	67 kg

ENGINE

Type	Two-stroke, air-cooled
Intake system	Piston and reed valve
Number of cylinder	1
Bore	41.0 mm
Stroke	37.8 mm
Piston displacement	49 cm^3
Compression ratio	7.3 : 1
Carburetor	MIKUNI VM12SH, single
Air cleaner	Polyurethane form element
Starter system	Primary kick
Lubrication system	SUZUKI "CCI"
Fuel/oil mixing ratio	25 : 1 by volume

TRANSMISSION

Clutch	Wet multi-plate type
Transmission	4-speed constant mesh
Gearshift pattern	1 down, 3-up
Primary reduction	3.842 (73/19)
Final reduction	2.692 (35/13)
Gear ratios, Low	3.166 (38/12)
2nd	1.941 (33/17)
3rd	1.380 (29/21)
Top	1.083 (26/24)
Drive chain	DAIDO D.I.D. 420 or TAKASAGO RK420M 88 links

CHASSIS

Front suspension	Telescopic, coil spring, oil damped
Rear suspension	Swinging arm, oil damped
Steering angle	42° (right & left)
Caster	26° 00′
Trail	46 mm
Turning radius	1.7 m
Front brake	Internal expanding
Rear brake	Internal expanding
Front tire size	3.50-8-4PR
Rear tire size	3.50-8-4PR
Front tire pressure	125 kPa (1.25 kg/cm^2)
Rear tire pressure	175 kPa (1.75 kg/cm^2)

ELECTRICAL

Ignition type	SUZUKI "PEI"
Ignition timing	17° ± 3° B.T.D.C. at 6 000 r/min.
Spark plug	NGK BP6ES or NIPPON DENSO W20EP
Headlight (HI/LO)	6V 15/15W
Tail/Brake light	6V 3/10W
Speedometer light	6V 3W

CAPACITIES

Fuel tank including reserve	3.5 L	
reserve	0.5 L	
Transmission oil	Change	650 ml
	Overhaul	700 ml
Front fork oil	55 ml	

*These specifications are subject to change without notice.

PERIODIC MAINTENANCE AND TUNE-UP PROCEDURES

CONTENTS

PERIODIC MAINTENANCE SCHEDULE

The chart below lists the recommended interval for all the required periodic service work necessary to keep the motorcycle operating at peak performance and economy. Traveled distance is expressed in terms of kilometers and months for your convenience.

NOTE:
Vehicles operated under severe conditions may require more frequent servicing.

PERIODIC MAINTENANCE SCHEDULE CHART

Interval / Item	km / months	1 000 / 2	3 000 / 6	6 000 / 12
Cylinder head nuts and exhaust pipe bolts		T	T	T
Cylinder head, cylinder and muffler		–	C	C
Spark plug		C	C	R
Air cleaner		–	C	C
Carburetor		I	I	I
Fuel line		I	I	I
		Replace every 4 years		
Fuel strainer cup		C	–	C
Clutch		I	I	I
Transmission oil		R	–	R
Drive chain		I	I	I
		Clean and lubricate every 1 000 km		
Brake		I	I	I
Steering		I	I	I
Front fork		I	I	I
Rear suspension		I	I	I
Tire		I	I	I
Chassis bolts and nuts		T	T	T

NOTE: T = Tighten, I = Inspect, R = Replace, C = Clean

MAINTENANCE PROCEDURES

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

GENERAL LUBLICATIONS

Proper lubrication is important for smooth operation and long life of each working part of the motorcycle and also for safe riding. It is a good practice to lubricate the machine after a long rough ride and after getting it wet in the rain or after washing it. Major lubrication points are indicated below.

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

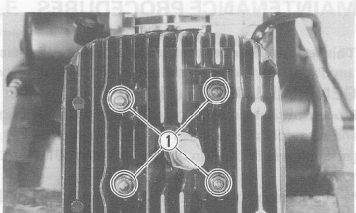
WARNING:
Be careful not to apply too much grease to the brake cam shafts. If grease gets on the linings, brake slippage will results.

O . . . . . Motor oil
G . . . . . Grease

CYLINDER HEAD NUTS AND EXHAUST PIPE BOLTS

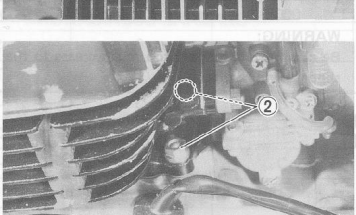
Tighten 1 000 km (2 months), 3 000 km (6 months) and 6 000 km (12 months).

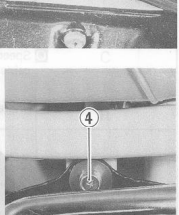
The nuts and bolts listed are important parts, and they must be kept to the specified torque for safety. Loosen and retighten to the specified torque.



Tightening torque

ITEM	N·m	kg-m
Cylinder head nut ①	8 – 12	0.8 – 1.2
Cylinder base nut ②	8 – 12	0.8 – 1.2
Exhaust pipe mounting bolt ③	5.5 – 6.0	0.5 – 0.6
Muffler mounting bolt ④	13 – 16	1.3 – 1.6

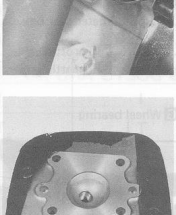


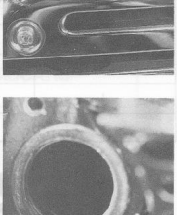


CYLINDER HEAD, CYLINDER AND MUFFLER

Clean 3 000 km (6 months) and 6 000 km (12 months).

Carbon deposits in the combustion chamber of the cylinder head and at the piston crown will raise the compression ratio and may cause preignition or overheating. Carbon deposited at the exhaust port of the cylinder will prevent the flow of the exhaust, reducing the output. Remove the carbon deposits periodically. Be careful not to damage the surface of the combustion chamber and exhaust port when removing carbon.





SPARK PLUG

Clean 1 000 km (2 months) and 3 000 km (6 months).
Replace 6 000 km (12 months).

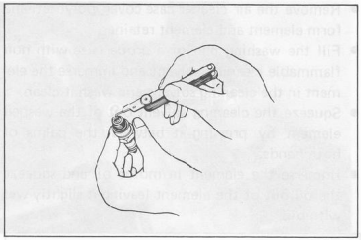
Remove the carbon deposits with a wire or pin and adjust the spark plug gap to 0.6 – 0.7 mm, measuring with the thickness gauge.

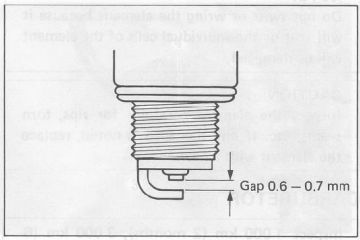
Spark plug gap	0.6 – 0.7 mm

09900-20804	Thickness gauge

When removing the carbon deposits, be sure to inspect the insulator of the plug. Proper heat range is indicated if the insulator is light brown in color.
If the standard plug is apt to get wet (blackened by carbon), replace it with hot type.
If apt to overheat (porcelain is whitish), replace it with cold type.

	NGK	NIPPON DENSO
Hot type	BP5ES	W16EP
Standard	BP6ES	W20EP
Cold type	BP7ES	W22EP



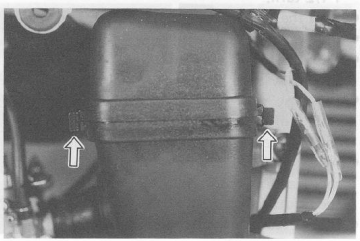


AIR CLEANER

Clean 3 000 km (6 months) and 6 000 km (12 months).

If the air cleaner element 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:

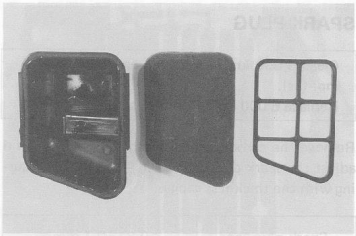
- Remove the screw ① and remove the left frame cover.
- Remove the two fitting slippers.

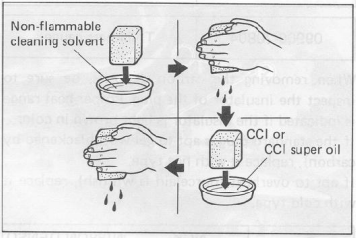


- Remove the air cleaner case cover, polyurethane form element and element retainer.
- Fill the washing pan of a proper size with non flammable cleaning solvent and immerse the element in the cleaning solvent and wash it clean.
- Squeeze the cleaning solvent out of the washed element by pressing it between the palms of both hands.
- Immerse the element in motor oil and squeeze the oil out of the element leaving it slightly wet with oil.

NOTE:
Do not twist or wring the element because it will tear or the individual cells of the element will be damaged.

CAUTION:
Inspect the element carefully for rips, torn seams, etc. If any damaged is noted, replace the element with a new one.





CARBURETOR

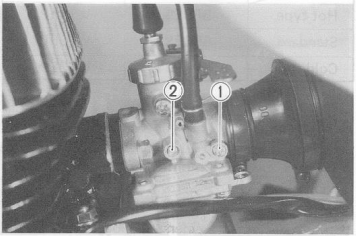
Inspect 1 000 km (2 months), 3 000 km (6 months) and 6 000 km (12 months).

ENGINE IDLE SPEED

Adjust the engine idle speed in the following manner:

- Adjust the throttle cable play. (Page 2-6)
- Carefully turn in the pilot screw ① until it bottoms.

NOTE:
Be careful not overtighten the screw.



- From the position, turn out the pilot screw 1 1/2 turn.
- Start the engine and allow it to warms up.
- Connect a tachometer.
- Turn the throttle stop screw ② so that engine idles between 1 400 – 1 700 r/min.
- Turn the pilot screw ① in or out within 1/2 turn from the standard setting, so that the engine speed is at the highest possible level.
- After this adjustment, recheck the engine idle speed and adjust at 1 200 – 1 500 r/min with the throttle stop screw ②.
- Finally recheck the throttle cable play.

Idle r/min	1 200 – 1 500 r/min

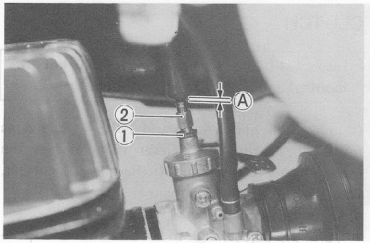
THROTTLE CABLE

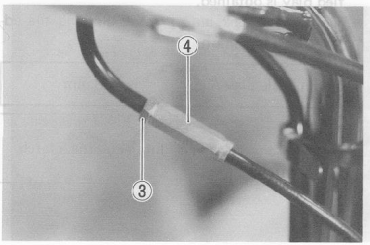
Adjust the throttle cable play Ⓐ in the following manner:

- Loosen the lock nut ①.
- Adjust the cable play Ⓐ to 0.5 – 1.0 mm by turning the adjuster ②.
- After adjusting the play, tighten the lock nut ①.

Throttle cable play Ⓐ	0.5 – 1.0 mm

NOTE:
Minor adjustment can be made by the adjuster ④ after loosening the lock nut ③. At the same intervals, lubricate the throttle cable with motor oil.





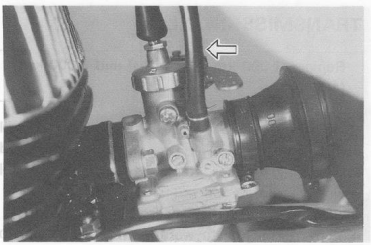
FUEL LINE

Inspect 1 000 km (2 months), 3 000 km (6 months) and 6 000 km (12 months).
Replace every 4 years.

Inspect the fuel line and connections for damage and fuel leakage.
If any defects are found, replace the fuel line with a new one.

NOTE:
Turn the fuel cock to "OFF" position when replacing.

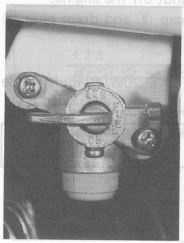
WARNING:
Gasoline is very explosive. Extreme care must be taken.

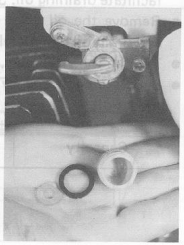


FUEL STRAINER CUP

Clean 1 000 km (2 months) and 6 000 km (12 months).

If the fuel strainer cup is dirty with sediment or water, gasoline will not flow smoothly and a loss in engine power may result. Clean the strainer and the cup, leaving the cock lever in "OFF" position.





CLUTCH

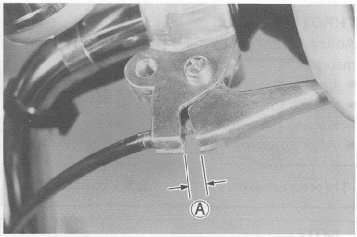
Inspect 1 000 km (2 months), 3 000 km (6 months) and 6 000 km (12 months).

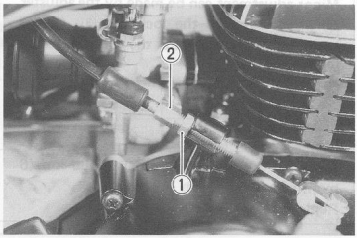
Clutch cable play Ⓐ should be 2 – 3 mm as measured at the clutch lever holder when the clutch begins to disengage. If the play is incorrect, adjust it in the following manner:

- Loosen the lock nut ①.
- Turn the adjuster ② in or out until the specified play is obtained.
- Tighten the lock nut ① while holding the adjuster ② in position.

Clutch cable play Ⓐ	2 – 3 mm

NOTE:
At the same intervals, lubricate the clutch cable with motor oil.





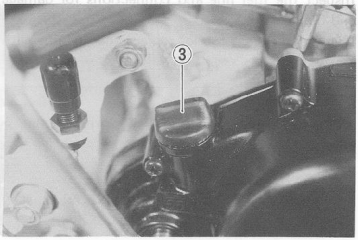
TRANSMISSION OIL

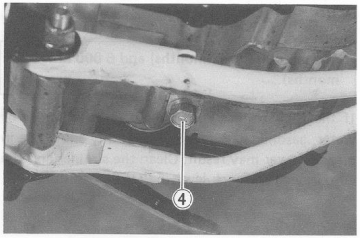
Replace 1 000 km (2 months) and 6 000 km (12 months).

After a long period of use, the transmission oil will deteriorate and quicken the wear of sliding and interlocking surfaces. Replace the transmission oil periodically in the following manner:

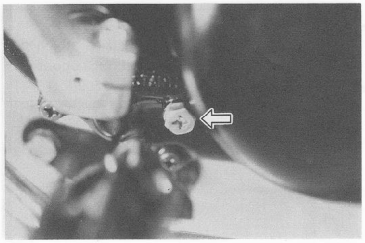
- Place the vehicle on level ground.
- Start the engine to warm up the engine oil to facilitate draining oil. Shut off the engine.
- Remove the oil filler cap ③ and drain plug ④ and drain oil completely.
- Tighten the drain plug.
- Supply a good quality SAE 20W/40 multi-grade motor oil.

Capacity	650 ml





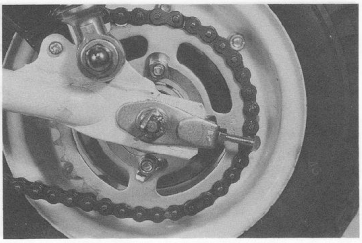
- Check the oil level with the oil level screw. If the level is below the hole add oil until it reaches the hole.



DRIVE CHAIN

Inspect 1 000 km (2 months), 3 000 km (6 months) and 6 000 km (12 months).
Clean and lubricate every 1 000 km.

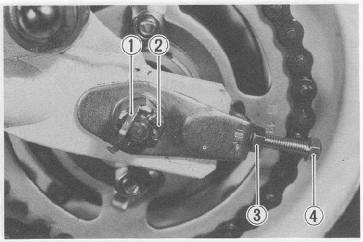
Visually inspect the drive chain for the below listed possible malconditions.
(Lift the rear wheel and place a jack or wooden block under the engine, and turn the rear wheel slowly by hand, with the transmission in NEUTRAL.)



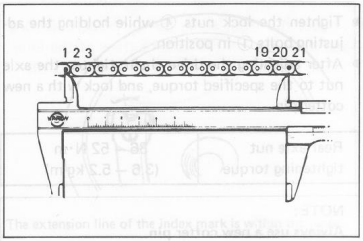
INSPECT FOR:
* Loose pins
* Damaged rollers
* Dry or rusted links
* Twisted or seized links
* Excessive wear

If any defects are found, the drive chain must be replaced. (Page 3-3)

Check the drive chain for wear and adjust the chain tension in the following manner:



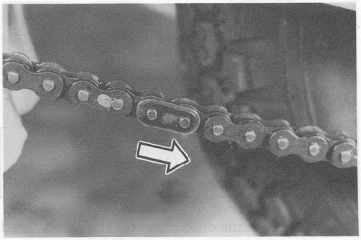
CHECKING
- Remove the cotter pin ① and loosen the axle nut ②.
- Loosen the chain adjusting lock nuts ③ and stretch the drive chain fully by tightening the both chain adjusting bolts ④.
- Count out 21 pins (20 pitch) on the chain and measure the distance between the two.
  If the distance exceeds the service limit, replace the chain.



Service Limit	442.6 mm

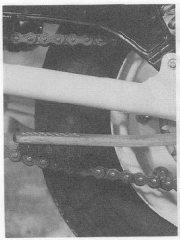
CAUTION:
The standard drive chain is DAIDO D.I.D. 420 or TAKASAGO RK420M. For the replacement of the chain SUZUKI recommends above-mentioned standard drive chain.

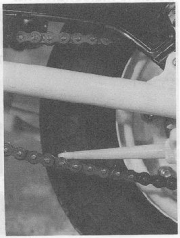
WARNING:
The drive chain joint clip should be attached in the way that the slit end will face opposite the direction of rotation.



CLEANING AND LUBRICATING

- Wash the chain with kerosene. If the chain tends to rust faster, the interval must be shortened.
- After washing and drying the chain, lubricate it with chain lube or heavy-weight motor oil (hypoid gear oil).



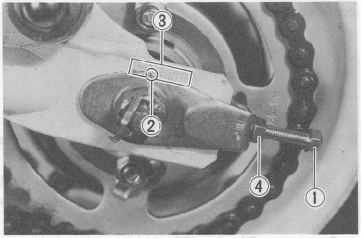


ADJUSTING

- Loosen the adjusting bolts ① until the chain has 20 – 30 mm of slack at the middle between the engine and rear sprockets.

NOTE:
The marks ② must point at the same scales ③ to ensure that the front and rear wheels are correctly aligned.

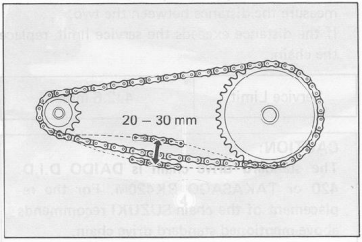
Drive chain slack	20 – 30 mm



- Tighten the lock nuts ④ while holding the adjusting bolts ① in position.
- After adjusting the drive chain, tighten the axle nut to the specified torque, and lock with a new cotter pin.

Rear axle nut tightening torque	36 – 52 N·m (3.6 – 5.2 kg-m)

NOTE:
Always use a new cotter pin.



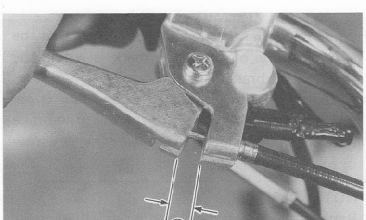
BRAKE

Inspect 1 000 km (2 months), 3 000 km (6 months) and 6 000 km (12 months).

FRONT BRAKE CABLE PLAY

- Loosen the lock nuts ① and turn the adjuster ② to obtain the specified brake cable play Ⓐ.
- Tighten the lock nuts ①.

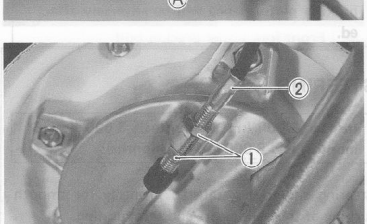
Front brake cable play Ⓐ	2 – 3 mm

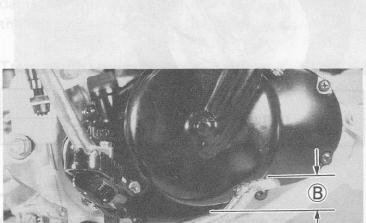


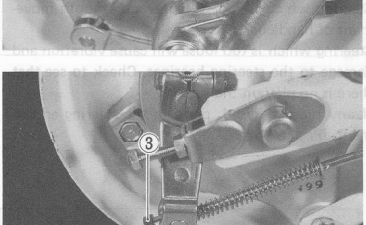
REAR BRAKE FREE TRAVEL

- Turn the adjuster ③ and adjust the free travel Ⓑ.

Brake pedal free travel Ⓑ	20 – 30 mm





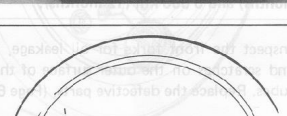


BRAKE SHOE WEAR

This motorcycle has brake lining wear limit indicator on the front and rear. As shown in Fig., at the condition of normal lining wear, the extension line of index mark on the brake cam shaft should be within the range embossed on the brake panel with brake on.

Check the wear of each brake lining in the following manner:

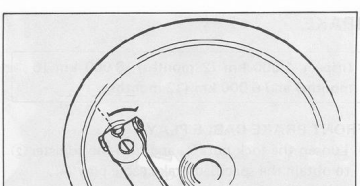
- Adjust the front brake cable play and rear brake pedal free travel.



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

- While operating the brake, check to see that the extension line of the index mark is within the range on the brake panel.
- If the extension line of the index mark is beyond the range as shown in the Fig., the brake shoe assembly should be replaced with a new one as a set.

NOTE:
Replace the brake shoe with a set, otherwise braking performance will be adversely affected.

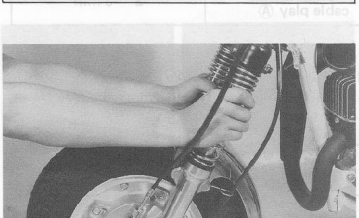


The extension line of the index mark is beyond the range.

STEERING

Inspect 1 000 km (2 months), 3 000 km (6 months) and 6 000 km (12 months).

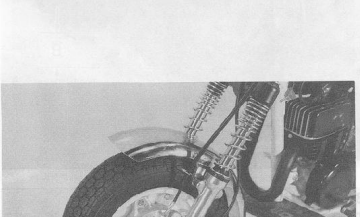
Steering should be adjusted properly for smooth turning of the handlebars and safe running.
Steering which is too stiff prevents smooth movement of handlebars.
Steering which is too loose will cause vibration and damage to the steering bearings. Check to see that there is no play on the steering.
If any play is found, perform the steering adjustment. (Page 6-18)



FRONT FORK

Inspect 1 000 km (2 months), 3 000 km (6 months) and 6 000 km (12 months).

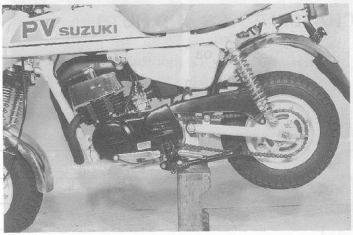
- Inspect the front forks for oil leakage, scoring and scratches on the outer surface of the inner tubes. Replace the defective parts. (Page 6-10)



REAR SUSPENSION

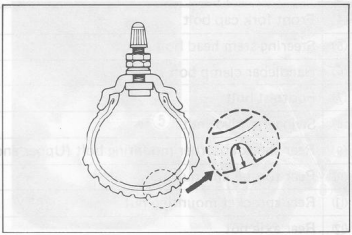
Inspect 1 000 km (2 months) and 6 000 km (12 months).

- Inspect the rear shock absorber for oil leakage and check that there is no play in the swingarm assembly. Replace the defective parts. (Page 6-30)



TIRE

Inspect 1 000 km (2 months), 3 000 km (6 months) and 6 000 km (12 months).



TREAD DEPTH

Inspect the tires for wear and damage. Check the tire tread depth as shown. Replace a badly worn or damaged tire. A tire with its tread worn down to the limit (in terms of tread depth) must be replaced.

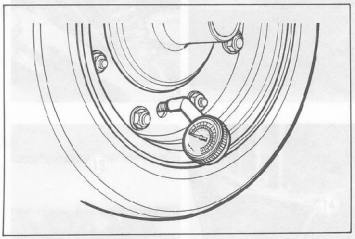
Tread depth service limit

FRONT	1.6 mm
REAR	

TIRE PRESSURE

Check the tire pressure, and examine the valve for evidence of air leakage.

	FRONT	REAR
COLD INFLATION TIRE PRESSURE	125 kPa (1.25 kg/cm^2)	175 kPa (1.75 kg/cm^2)



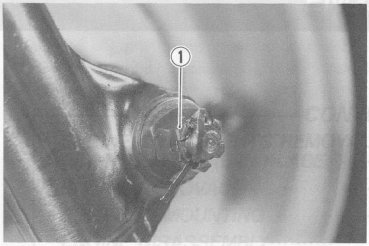
WARNING:
The standard tire fitted on this motorcycle is 3-50-8 4PR for front and rear. The use of a tire other than the standard may cause instability. It is highly recommended to use a SUZUKI Genuine Tire.

CHASSIS BOLTS AND NUTS

Tighten 1 000 km (2 months), 3 000 km (6 months) and 6 000 km (12 months).

The bolts and nuts listed are important parts, and they must be retightened, as necessary, to the specified torque with a torque wrench.

	ITEM	N·m	kg-m
①	Front axle nut	27 – 43	2.7 – 4.3
②	Brake cam lever nut (Front and Rear)	4 – 7	0.4 – 0.7
③	Front fork upper bracket bolt	25 – 40	2.5 – 4.0
④	Front fork cap bolt	35 – 55	3.5 – 5.5
⑤	Steering stem head bolt	57 – 73	5.7 – 7.3
⑥	Handlebar clamp bolt	12 – 20	1.2 – 2.0
⑦	Footrest bolt	15 – 25	1.5 – 2.5
⑧	Swingarm pivot nut	25 – 40	2.5 – 4.0
⑨	Rear shock absorber mounting bolt (Upper and Lower)	20 – 30	2.0 – 3.0
⑩	Rear torque link nut	10 – 15	1.0 – 1.5
⑪	Rear sprocket mounting nut	45 – 60	4.5 – 6.0
⑫	Rear axle nut	36 – 52	3.6 – 5.2
⑬	Muffler mounting bolt	13 – 16	1.3 – 1.6
⑭	Exhaust pipe mounting bolt	5.5 – 6.0	0.5 – 0.6
⑮	Damper rod bolt	35 – 55	3.5 – 5.5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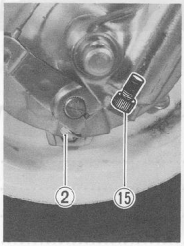
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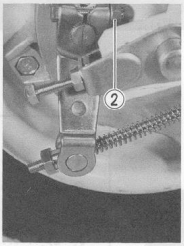
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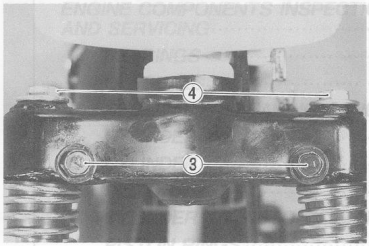
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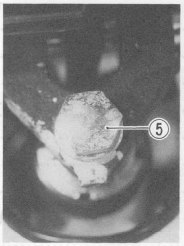
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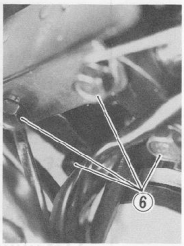
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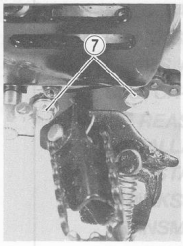
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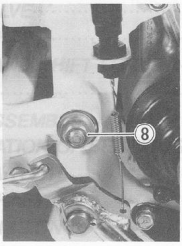
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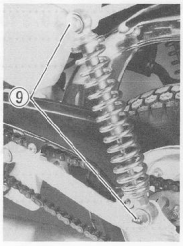
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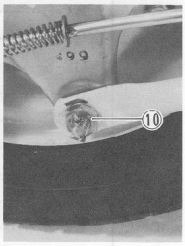
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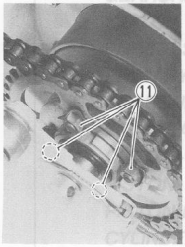
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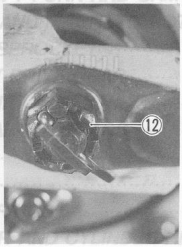
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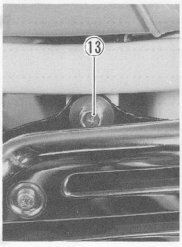
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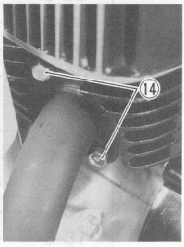
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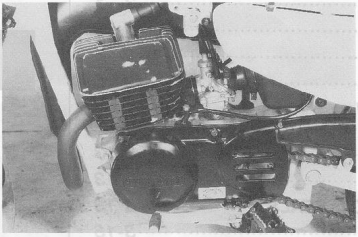
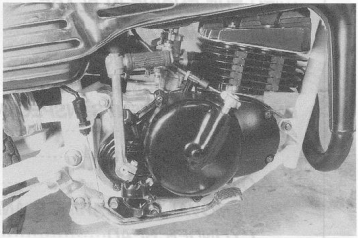
CONTENTS

ENGINE COMPONENTS REMOVAL WITH THE ENGINE IN PLACE

The parts listed below can be removed with the engine in the frame. Refer to the page listed in this section for the removal instruction.





ENGINE LEFT SIDE

	Refer to page
Gearshift lever	3-5
Engine sprocket	3-9
Magneto cover and rotor	3-9, 3-10
Stator coil	3-11
Cylinder head	3-5
Cylinder	3-5
Piston	3-6

ENGINE RIGHT SIDE

	Refer to page
Clutch release mechanism	3-6
Clutch cover	3-6
Primary drive gear	3-9
Primary driven gear	3-7
Clutch assembly	3-7
Gearshift shaft	3-8
Kick starter assembly	3-7