



**OWNER'S MANUAL**

**RAIDER**  
**150**



**FU150SC**

<http://motoh.com>

## FOREWARD

Thank you for choosing Suzuki. We at Suzuki have designed, tested and produced this motorcycle using the most modern technology available to provide you with a happy, enjoyable, safe riding. Motorcycling is one of Man's most exhilarating sports and to insure your riding enjoyment, you should become thoroughly familiar with the information presented in this owner's manual before riding the motorcycle.

The proper care and maintenance that your motorcycle requires is outlined in this manual. By following these instructions explicitly you will insure a long trouble free operating life for your motorcycle. Your Suzuki dealer has experienced technicians that are trained to provide your machine with the best possible service with the right tools and equipment.

SUZUKI PHILS., INC.

## SERIAL NUMBER LOCATION

The frame and engine serial numbers are used to register the motorcycle. They are also used to assist your dealer when ordering parts or referring to special service information.



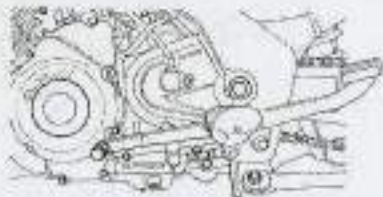
### 1). FRAME NUMBER

The frame number is stamped on the right steering head tube.



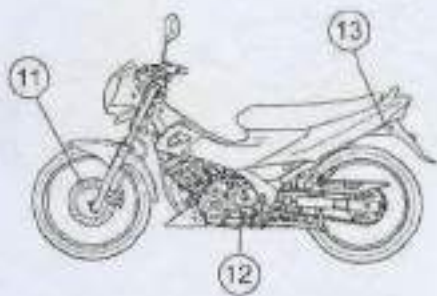
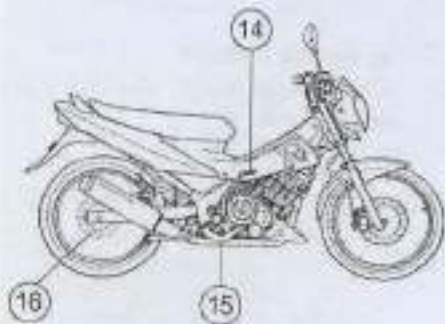
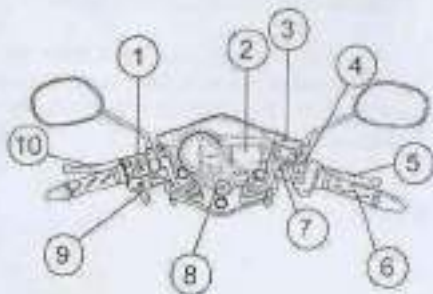
### 2). ENGINE NUMBER

The engine number is stamped on the left crankcase.



## LOCATION OF PARTS

- |                               |                      |
|-------------------------------|----------------------|
| ① Left handlebar switch       | ⑨ Choke lever        |
| ② Speedometer                 | ⑩ Clutch lever       |
| ③ Front brake fluid reservoir | ⑪ Front brake disk   |
| ④ Right handlebar switch      | ⑫ Gearshift lever    |
| ⑤ Front brake lever           | ⑬ Seat lock          |
| ⑥ Throttle grip               | ⑭ Kick starter lever |
| ⑦ Brake fluid level check     | ⑮ Rear brake pedal   |
| ⑧ Ignition switch             | ⑯ Rear brake disk    |



## CONTROLS AND DISPLAYS

### IGNITION SWITCH



The ignition switch has three positions.

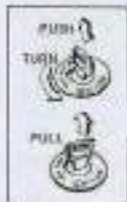
- ① "OFF" position - All electrical circuits are cut off.
- ② "ON" position - All electrical circuits are available.
- ③ "Lock" position - To lock the steering.

#### How to lock

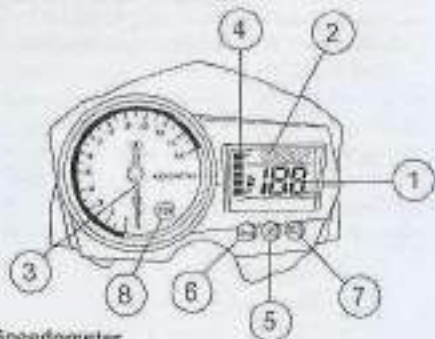
- Turn the handlebar all the way to the left.
- Push down and turn the key to the "LOCK" position and remove the key.

#### How to unlock

- Hold the handle
- Turn the key to the "OFF"



## INSTRUMENT PANEL



### 1) Speedometer

The speedometer indicates the road speed in kilometers per hour.

### 2) Odometer

The odometer register the total distance that the motorcycle has been ridden.

### 3) Tachometer

The tachometer indicates the engine speed in revolutions (per minute) RPM and do not speed

up. Warning zone on red tap while riding : maximum permissible engine speed exceeded, danger to engine.

### 4) Fuel Meter

The fuel meter indicates the amount of gasoline remaining in the fuel tank. The 'E' mark indicates the tank is empty or nearly so. The 'F' mark indicates the fuel tank is full.

### 5) Neutral gear position indicator light

The light will be on neutral gear

### 6) Turn signal indicator light

When the turn signals are being operated either to the right or left side respectively right or left side indicator light will flash at same time.

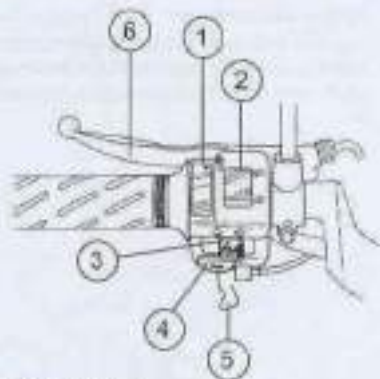
### 7) High beam indicator light

The blue indicator light will be lit when the headlight high beam is turned on position

### 8) Top gear position indication light

This indicator light show the gear position '6'

## LEFT HANDLEBAR SWITCH



### 1) Lighting switch



- OFF - Headlight and taillight are cut off.
- ON - Headlight and taillight will turn on while the engine is operating.

### 2) Dimmer switch

When the dimmer switch is moved to the **ED** position, the high beam will be lit. At the

same time that the high beam is lit, the high beam indicator light will also light in the instrument panel. When the dimmer switch is moved to the low position, the high beam will not be lit.

### 3) Turn signal switch (Push cancel)

Moving the switch to the  position will flash the left turn signal. Moving the switch to the  position will flash the right turn signal. The indicator light will also flash intermittently.

### 4) Horn button

Press the button to operate the horn.

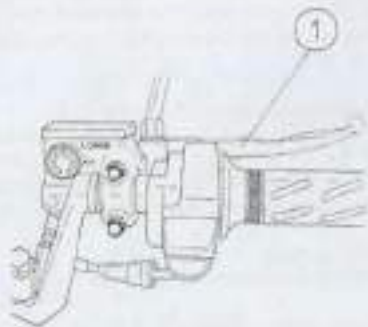
### 5) Carburetor choke lever

The carburetor of this motorcycle is equipped with a "choke" system to provide easy starting. When the engine is cold.

### 6) Clutch lever

The clutch lever is used for disengaging the drive to the rear when starting the engine or shifting the engine or shifting the transmission. Squeezing the lever disengages the clutch.

## RIGHT HANDLEBAR SWITCH



### 1) Front brake lever

The front brake is applied by squeezing the handlebar brake lever and the brake light will be lit when the lever is squeezed inward.



## SEAT

### Seat opening

- Insert the ignition key into the lock and turn it clockwise until the lock is released.
- Raise the seat by hand.



### Seat Lock.

- Push down firmly until the seat latch snaps into the locked position.
- Push down the seat until "Click"



## HELMET HOLDER

This motorcycle has helmet holders under the seat.

- 1) Insert the ignition key into lock and turn it clockwise until the lock is released.
- 2) Raise the seat by hand.



- 3) Hook your helmet fastener



- 4) Push down the seat until "click"

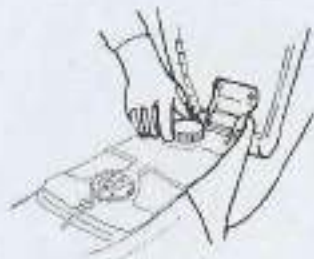


### CAUTION

Do not operate the motorcycle with a helmet fastened to the helmet holder. The helmet may interfere with the safe operation of the motorcycle.

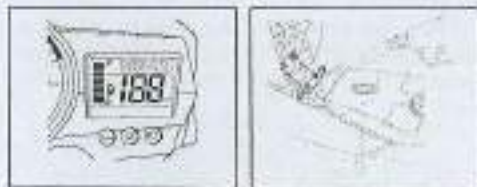
## FUEL TANK CAP

- Insert key and turn it clockwise to raise the seal.
- Open the fuel tank cap.
  - Open : Turn the cap counter clockwise.
  - Close : Turn the cap clockwise and tighten it securely.



- The capacity of fuel tank is 4.9 liters.
- Use unleaded gasoline with an octane rating of 91 or higher.

## FUEL LEVEL



Fuel level can be seen from the fuel meter on the panel. The fuel meter indicates the amount of gasoline remaining the fuel tank.

F = The fuel tank is full

E = The tank is empty or nearly so fill the tank up to full level

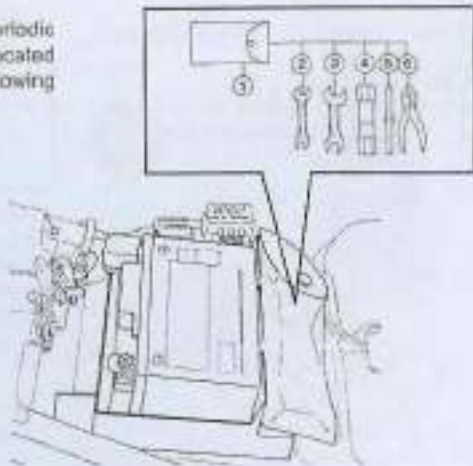
### CAUTION

- Do not overfill the fuel tank. Avoid spilling fuel on the hot engine.
- Turn off the engine while filling the fuel.
- Do not smoke or lit the fire in the fuel filling area.

## TOOL

To assist you in the performance of periodic maintenance, a tool kit is supplied and is located under the seat. The tool kit consists of the following items:

- 1) tool bag
- 2) 10 x12 mm. Open end wrench
- 3) 14 x17 mm. Open end wrench
- 4) Spark plug wrench
- 5) Combination screw driver
- 6) Pliers



## ENGINE OIL

Long engine life depends much on the selection of a quality oil and the periodic changing of the oil. Daily oil level checks and periodic changes are two of the most important maintenance to be performed.



## ENGINE OIL LEVEL CHECK

Follow the procedure below to inspect the engine oil level.

- Start the engine and run it for a few minutes.
- Stop the engine and wait one minute.
- Hold the motorcycle vertically and inspect the engine oil level through the engine oil level inspection window.

### CAUTION

The engine oil level must be middle line.

## ENGINE OIL (SUZUKI SUPER 4T)

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

SAE GRADE				20W-50					
				15W-40, 15W-50					
			10W-40, 10W-50						
			10W-30						
TEMP	C	-30	-20	-10	0	10	20	30	40
	F	-22	-4	14	32	50	68	86	104

### CAUTION

The oil should be changed when the engine is hot.

## FUSE

Fuse will cut off the system when there are short circuits in electrical system. Fuse box is installed under the seat.



## FUSE CHANGE

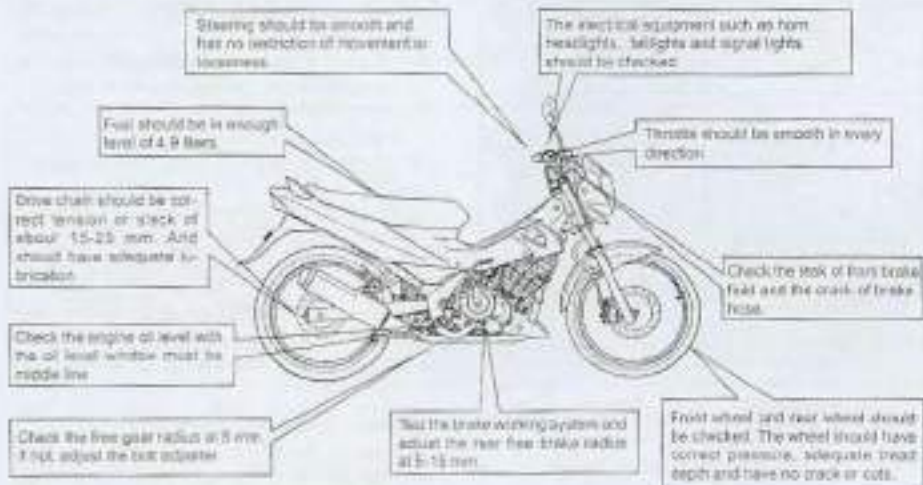
- Turn the ignition switch to the "OFF" position.
- Remove the fuse out of the box.
- Replace the fuse with a new one and reinstall to the place.

### CAUTION

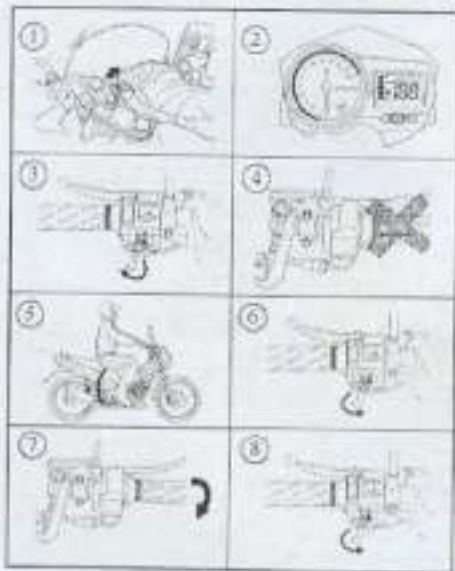
- Do not use the fuse over 10 A.
- Do not use other objects in place of fuse such as copper wire or road paper fuse when there are short circuits, these cannot cut off the electric and will damage the equipments.

## INSPECTION BEFORE RIDING

Before riding the motorcycle, be sure to check the following items. Along the easy steps. This is not complicated and takes only a few time.



## STARTING THE ENGINE



- 1) Turn the ignition key to the "ON" position.
- 2) Be sure the transmission is in neutral position.
- 3) Turn the carburetor choke lever all the way to the left.
- 4) No need to open the throttle grip.
- 5) Depress the kick starter lever carefully.
- 6) Immediately after the engine starts, turn the choke lever half-way back.
- 7) Let the engine run until the engine warm up.
- 8) When the engine is ready turn the choke lever back to its disengaged position.

### NOTE :

- Do not open the throttle while starting with choke for it will open the throttle valve at the carburetor and the choke system will not work.
- When open the throttle 1/8 to 1/4. Depress the kick starter lever for sharply.
- Operation of the choke system is usually not necessary when the engine is warm.



## RIDING

When the engine is warm and ready.

- Check all the equipment.
- Be sure the side stand for is returned to its full up position and is not hanging down while making a left turn.
- Move around the handlebar to check that it isn't locked



- It is possible to up shift or down shift more than one gear at a time due to ratchet mechanic being use.
- Do not shift low gears at once while the engine on high speed may damage the engine to accident.

## PROPER WAY OF RIDING

In order to ride a motorcycle properly, one should sit right so that he or she can control the motorcycle easily, this helps the rider feel comfortable and keep him or her away from the accident.

### EYES

Look straight do not focus on one thing.

### HANDS

Hold the handles perfectly

### KNEES

Keep together. Do not spread out when riding on a rough surface or when riding rough the curve far in will affect on the control and balance of the motorcycle.



### SHOULDERS

Relax your shoulders naturally.

### ELBOWS

Try to place your elbows right to the body, do not spread them out, it helps balancing the body with a sudden brake.

### HIPS

Sit in a position that does not cause the sore on your shoulders and arms.

### FEET

Place your feet in the middle of pillion bar horizontally.

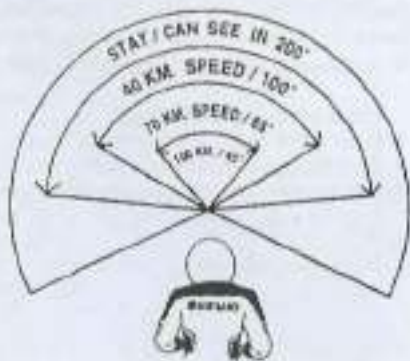
## SPEED AND SIGHT

The ability of human sight is around  $200^{\circ}$  when being still but when we move with a high speed, the eye sight will be narrowed. So the rider should pay a particular attention on a road, road signs, and traffic lights. The increasing speed will make the sight around unclear where as the distant sight can be seen clearly. So, the rider should look for away when riding in a high speed in order to see in a wider radius.

### CLARITY AND SPEED

Speed Km./hour	20	40	60	80	100
Clarity (meters)	60	120	180	400	500

## THE ABILITY OF SIGHT AND SPEED



## SAFE BRAKE

Avoid a sudden brake. Persistent brake is better than one definite brake because the following cars will be able to see the brake light easily. The motorcycle should be in a straight position while braking.

There are 3 ways to brake

1. Front brake lever for front brake.
2. Rear brake pedal for rear brake.
3. Use the engine brake by changing lower gear.



## GOOD BRAKING

1. For the use of front brake, the rider should lightly depress first. Do not depress too tight for you may lose balance.

2. It requires less concentration for the use of rear brake. It follows the same instruction as front brake but it is best to use engine brake first and then rear brake while riding on slippery road.

3. The engine brake by changing gear lower should be used while riding on slippery road. Do not change the gear right from the highest to the lowest for it may damage the engine and make and the motorcycle lose its balance.

## FIRST PERIOD OF A NEW MOTORCYCLE USE

Do not heavily use the motorcycle in the first period for all the parts and engine are brand-new. Do not ride in a high speed for it may damage the parts. In order to preserve the motorcycle for the long use, the rider should follow this table below.

0-500 km.	Less than 1/2 throttle
500-1,500 km.	Less than 3/4 throttle
more than 1,500 km.	Upon reaching an odometer reading of 1,500 km. You can subject the motorcycle to full throttle operation for short periods of times.



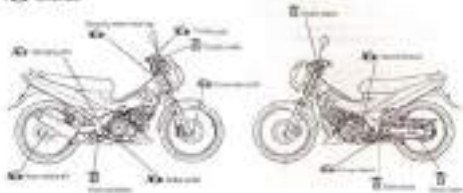


## LUBRICATION POINT

Lubricating parts that are as important as for motorcycle, which is causing parts to long time and using

101 oil

102 grease



<http://mototh.com>

## PART ADJUSTMENT AND MAINTANANCE

### AIR CLEANER

The air cleaner element used in this motorcycle is a paper element type. If the element has become clogged with dust, intake resistance will increase in fuel consumption due to the richer mixture. Clean the air cleaner element every 4,000 km. According to the following procedure.



- 1) Remove the cover frame.
- 2) Remove the 3 screws air cleaner cover.
- 3) Take off the air cleaner cover.
- 4) Take the air cleaner element.

### AIR CLEANER ELEMENT

Cleaning the element as follow :

- 1) Carefully use air hose to blow the dust from the air cleaner element from steel side.
- 2) Reinstal the air cleaner element to the place.



### CAUTION

When installing the air cleaner element in the case, make sure that the element is correctly positioned.



## BATTERY



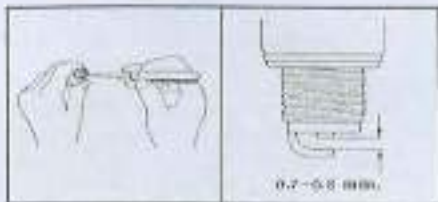
The battery voltage must be checked. Measure the voltage between  $\oplus$  terminal and  $\ominus$  terminal of battery. If the voltage check is below 12.4 v the battery need recharging.

### NOTE :

When the battery is almost empty noticed by the horn, making no sound, turning lights do not flash. take your motorcycle to the service center for battery check and recharge.

## SPARK PLUG

At initial 1,000 km. and every 4,000 km. There after remove the carbon deposits from the spark plug with a small wire brush or a spark plug cleaning machine. Readjust the spark plug gap to 0.7-0.8 mm by using a spark plug gap thickness gauge. The spark plug should be replaced every 8,000 km.



STANDARD OF SPARK PLUG	ND	U 24ESR-N
	NGK	CR 8 E

### QUESTION: CAL AND FILTER CHANGE

The oil pressure gauge is showing 0. What is the most likely cause of this problem?

- A. The oil filter is clogged
- B. The oil pump is not working
- C. The oil level is low
- D. The oil pressure sensor is bad



What is the most likely cause of the problem?



What is the most likely cause of the problem?



1. Remove the front wheel cover and  
 2. Remove the front wheel cover



**CAUTION**

Do not touch the front wheel cover with  
 your hands. The front wheel cover is  
 made of plastic and may become  
 damaged if touched.



3. Push the front wheel cover back  
 into the front wheel cover. (1) and (2)  
 (1) (2) (3) (4) (5) (6) (7) (8) (9) (10)

**CAUTION**

- 1. Do not touch the front wheel cover  
 with your hands.
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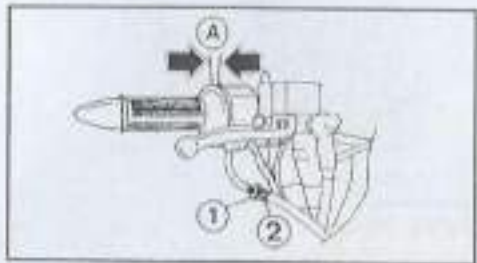
## CARBURETOR ENGINE IDLE SPEED ADJUSTMENT

Inspection at initially 1,000 km.  
Every 4,000 km.



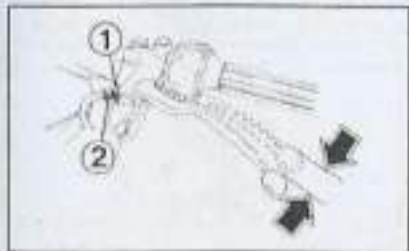
- Start the engine and allow it to warm up.
- Turn the throttle stop screws (1) in or out so that engine may run at  $1,400 \pm 100$  rpm.

## THROTTLE CABLE ADJUSTMENT



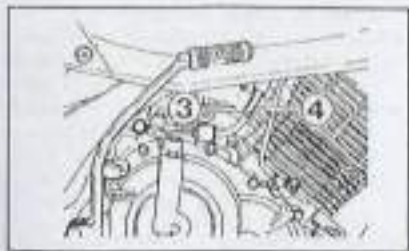
- 1) Loosen the lock nut (1)
- 2) Adjust the cable slack by turning adjuster (2) in or out to obtain the correct slack of 2-4 mm as shown in the fig (A)
- 3) After adjusting the slack, tighten the lock nut (1)

## CLUTCH LEVER ADJUSTMENT



The play of the clutch lever should be 10-15 mm, as measured at the clutch lever end. If you find the play of the clutch incorrect, adjust it in the following way.

1. Loosen the lock nut (1) and turn in the adjuster (2) as far as it will go.
2. Loosen the lock nut (3) and turn the adjuster (4) to obtain the correct play.
3. Minor adjustment can be made with the clutch lever side adjuster (2).
4. Tighten the lock nuts (1) and (3).



## FRONT BRAKE DISC

- Place the motorcycle on the center stand.
- Measure the amount of the brake fluid. If the brake fluid level is lower than LOWER, fill the brake fluid until full.



### CAUTION

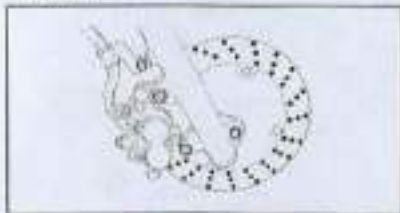
Brake fluid is very dangerous. One may vomit if eats or swallows it. Wash with a great amount of water if the brake fluid touches the body skin.

- Do not mix the used brake fluid with the new one.
- Do not let the brake fluids splash on any plastic or colored parts for they may be damaged.

BRAKE FLUID TYPE SHELLDORAX B OR DOT4

## FRONT BRAKE LINING WEAR

- Check if brake lining wear is worn down replace the new brake lining wear when required



Check the brake system everyday as follow:

- 1) Check the leak of the brake fluid.
- 2) Check the crack of the brake fluid hose.
- 3) Check the work of front and rear brake.  
Must be work effectively all times.
- 4) Check the front disc brake is worn down ①



## REAR BRAKE DISC

- Place the motorcycle on the center stand.
- Measure the amount of the brake fluid. If the brake fluid level is lower than LOWER, fill the brake fluid until full.



### CAUTION

Brake fluid is very dangerous. One may vomit if eats or swallows it. Wash with a great amount of water if the brake fluid touches the body skin.

- Do not mix the used brake fluid with the new one.
- Do not let the brake fluids splash on any plastic or colored parts for they may be damaged.

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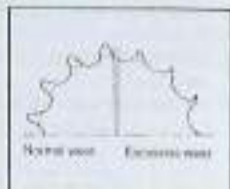
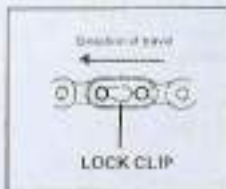
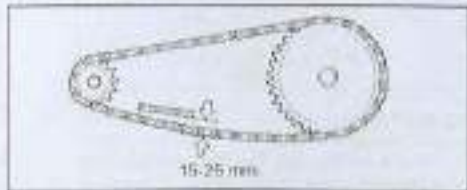
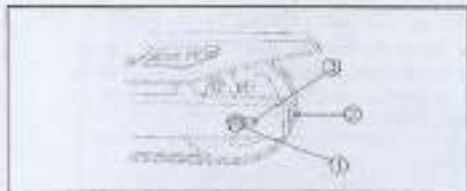
## DRIVE CHAIN CLEANING AND LUBRICATING

Dirt on the drive chain hastens wear of the drive chain itself and also the sprockets, so wash the drive chain in cleaning solvent and then lubricate with the chain lube of motor oil every 1,000 km.

## DRIVE CHAIN ADJUSTMENT

To adjust the drive chain, follow these directions:

- 1) Place the motorcycle on the center stand.
- 2) Loosen the axle nut ①
- 3) Turn the right and left adjuster ② to obtain the correct slack 15-25 mm. At the same time, align both right and left adjuster by referring to the reference mark ③
- 4) Tighten the axle nut ①



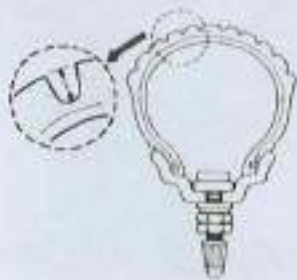


## TIRES

Check the tire inflation pressure and tire thread condition at the initial 1,000 km, and every 4,000 km. There after. For maximum safety and good tire life, the tire pressure is too high, the machine will tend to bounce up and down. Conversely affected. Therefore, maintain the correct tire pressure for good road ability or shorter tire life will result.

	SOLO RIDING	DUAL RIDING
FRONT	32 lb/in <sup>2</sup>	32 lb/in <sup>2</sup>
	2.25 kg/cm <sup>2</sup>	2.25 kg/cm <sup>2</sup>
REAR	36 lb/in <sup>2</sup>	36 lb/in <sup>2</sup>
	2.50 kg/cm <sup>2</sup>	2.50 kg/cm <sup>2</sup>

## TIRE THREAD CONDITION



Operating the motorcycle with excessively worn tires will decrease riding stability and can lead to loss of control. It is recommended that a tire be replaced when the remaining depth of tire thread becomes 1.6 mm or less.

## SPECIFICATIONS

### DIMENSIONS AND DRY MASS

Overall length .....	1,940 mm
Overall width .....	652 mm
Overall height .....	941 mm
Seat height .....	764 mm
Wheel base .....	1,280 mm
Ground clearance .....	140 mm
Dry mass .....	95 kg ..... FU 150 SG

### ENGINE

Type .....	Four-stroke, DOHC
Cooling system .....	Air cooling
Number of cylinder .....	1
Bore .....	62.0 mm
Stroke .....	49.8 mm
Piston displacement .....	147.3 c.c.
Corrected compression ratio .....	10.2 : 1
Carburetor .....	MIKUNI BS 26-187
Air cleaner .....	Paper element
Starter system .....	Kick starter
Valve clearance IN : .....	0.10-0.20 mm
EX : .....	0.20-0.30 mm
Lubrication system .....	Wet sump

## TRANSMISSION

Clutch .....	Wet Multigrade type
Transmission .....	6 speed constant mesh
Gearshift pattern .....	1 down & 5 up
Primary reduction .....	3.500 (70/20)
Final reduction .....	3.071 (43/14)
Gear ratios, 1st .....	2.750 (33/12)
2nd .....	1.785 (25/14)
3rd .....	1.368 (26/19)
4th .....	1.095 (23/21)
5th .....	0.913 (21/23)
6th .....	0.800 (20/25)
Drive chain .....	DIDO D.I.D. 428 HO QTY 122 Links

## CHASSIS

Front suspension .....	Telescopic, oil damped
Rear suspension .....	Swing arm, coil spring, oil damped
Steering angle .....	45° (right & left)
Caster .....	25°
Trail .....	69 mm
Front brake .....	Disc brake
Rear brake .....	Disc brake
Front tire size .....	70/90-17 38S
Rear tire size .....	80/90-17 44S

## ELECTRICAL SYSTEM

Ignition system .....	Suzuki DC-CDI (Digital)
Spark plug .....	NGK : CR8E , NO : U24 ESR-N
Battery .....	12 V 2.5 Ah / 10 HR
Generator .....	AC magneto
Fuse .....	10 A
Headlight .....	12 V 35/25 W + 10/18 W
Tail/Brake light .....	12 V 5 / 18 W
Turn signal light .....	12 V 10 W
Neutral indicator light .....	LED (GREEN)
Speedometer light .....	LED (AMBER)
High beam indicator light .....	LED (BLUE)
Turn signal indicator light .....	LED (AMBER)
Top gear position indicator light .....	LED (AMBER)

## CAPACITY

Fuel tank including reserve .....	4.9 L
Front fork oil .....	103.5 cc
Engine oil (change) .....	1,000 ml
(with filter) .....	1,100 ml
(overhaul) .....	1,200 ml

## NOTE :

These specifications are subject to change without notice.