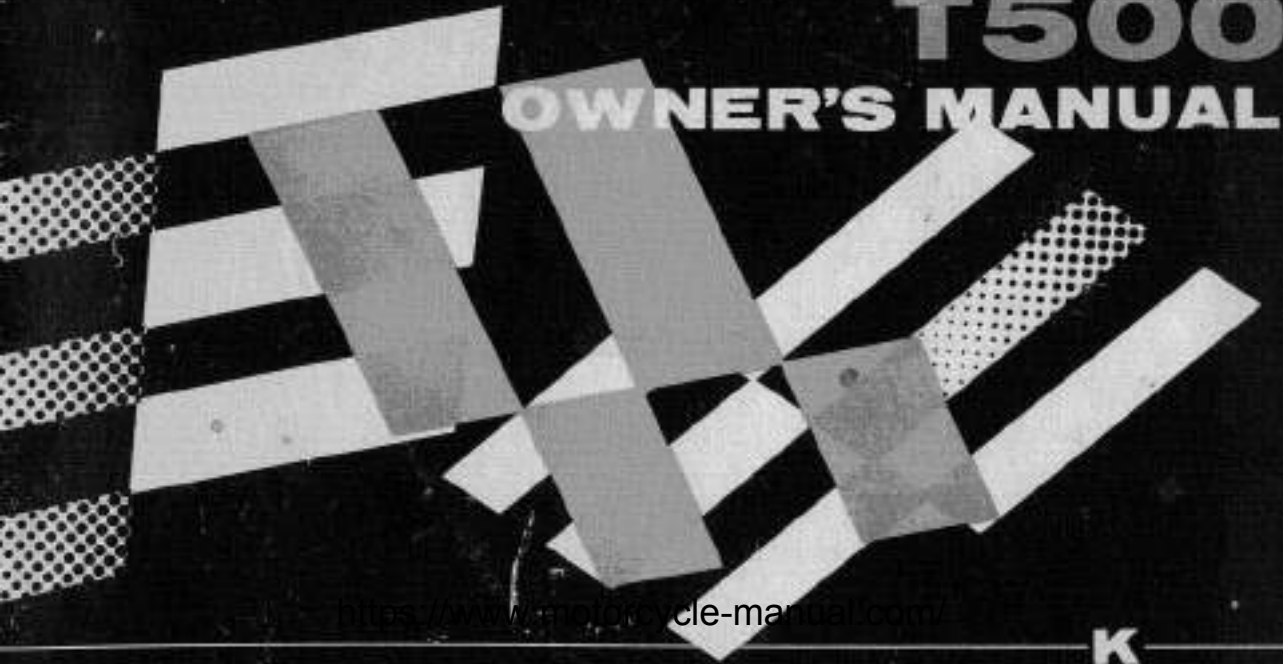
SUZUKI

T500

OWNER'S MANUAL



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Home of World-Champion Motorcycles

SUZUKI MOTOR CO.,LTD.

FOREWORD

We sincerely thank you for choosing this Suzuki motorcycle from the many fine models available. With Suzuki motorcycles you are assured of the latest innovations in high performance and styling which have been the hallmark of Suzuki Motor Co., Ltd. since 1936. Critical engineering techniques and the latest in modern factory equipment and manufacturing know-how have resulted in a product world renowned for excellence. Having won the famous Isle of Man T.T., as well as many world motocross championships, we assure you that the same high standards are attained on each production unit.

However, even the best motorcycle cannot maintain peak performance unless it is serviced properly. So we advise that this Owner's Manual be read carefully and its instructions followed religiously. Treat your motorcycle properly and ride it correctly and you will enjoy the comfort and exhilaration associated with riding a world champion machine.

We thank you for placing your confidence in Suzuki and wish you many miles of happy riding.

SUZUKI MOTOR CO.,LTD.

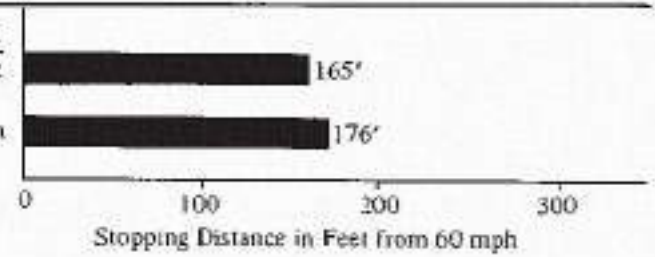
(1) Vehicle Stopping Distance

This figure indicates braking performance that can be met or exceeded by the vehicle to which it applies, without locking the wheels, under different conditions of loading and with partial failures of the braking system.

Notice: The information presented represents results obtainable by skilled driver under controlled road and vehicle conditions, and the information may not be correct under other conditions.

Description of vehicle to which this table applies:
Suzuki motorcycle model T500K

Fully Operational Service Brake



(2) Acceleration and Passing Ability

This figure indicates passing times and distances that can be met or exceeded by the vehicle to which it applies, in the situations diagrammed below.

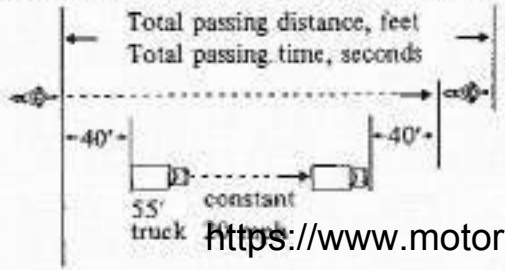
The low-speed pass assumes an initial speed of 20 mph and a limiting speed of 35 mph. The high-speed pass assumes an initial speed of 50 mph and a limiting speed of 80 mph.

Notice: The information presented represents results obtainable by skilled driver under controlled road and vehicle conditions, and the information may not be correct under other conditions.

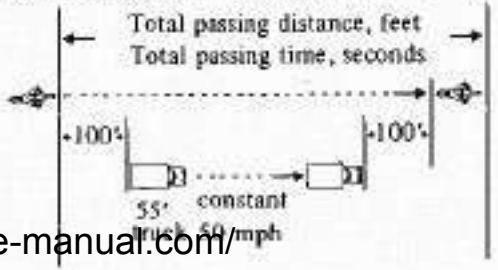
Description of vehicle to which this table applies:
Suzuki motorcycle model T500K

Low-speed pass . . . . . 349 feet, 7.1 seconds
High-speed pass . . . . . 988 feet, 9.9 seconds

Low-speed
Initial speed: 20 mph Limiting speed: 35 mph



High-speed
Initial speed: 50 mph Limiting speed: 80 mph



" IMPORTANT "

BREAKING-IN

The life of the motorcycle depends on how it is broken in. During this period the engine must be given the best care possible. For careful break-in observe the following instructions:

- DO NOT RACE THE ENGINE.
- KEEP TO THE SPECIFIED BREAKING-IN ENGINE RPM LIMIT.

FIRST 100 MILES (160 KM) . . . . . BELOW 3,500 RPM
UP TO 500 MILES (800 KM) . . . . . BELOW 4,000 RPM
UP TO 1,000 MILES (1,600 KM) . . . . . BELOW 5,000 RPM

First 100 miles (160 km)

Up to 500 miles (800 km)

Up to 1,000 miles (1,600 km)

CONTENTS

1. SPECIFICATIONS

- **Dimensions, Weight**

Overall length	86.4 in (2,195 mm)
Overall width	34.6 in (880 mm)
Overall height	43.5 in (1,105 mm)
Wheelbase	57.3 in (1,455 mm)
Road clearance	6.3 in (160 mm)
Tires, front	3.25–19, 4PR
rear	4.00–18, 4PR
Dry weight	412 lb (187 kg)

- **Performance**

Maximum speed	105–110 mph (168–176 kph)

- **Engine**

Type	2 stroke, air-cooled aluminum
Piston displacement	492 cc (30.0 cu in)
Bore x stroke	2.76 x 2.52 in (70 x 64 mm)
Number of cylinder	2
Corrected compression ratio	6.6
Maximum horsepower	45 hp at 6,000 rpm
Maximum torque	39.0 ft-lb (5.40 kg-m) at 5,500 rpm
Starter	Kick

- **Fuel System**

Carburetors	Two, VM32SC
Air cleaner	Wet polyurethane filter
Fuel tank capacity	3.7/3.1 US/Imp gal (14 ltr)

- **Lubrication System**

Engine	Suzuki CCI
Transmission	Oil bath, 1,200 cc (2.5/2.1 US/Imp pt)
Oil tank capacity	3.8/3.2 US/Imp pt (1.8 ltr)

- **Ignition System**

Type	Battery ignition
Ignition timing	24° B.T.D.C.
Spark plugs	NGK B-77HC or Nippon Denso W-24FS

- **Transmission System**

Clutch		Multi-plate, wet disc
Gearbox		5-speed, constant mesh
Gear shifting		Left foot, lever operated
Primary reduction ratio		2.500 (65/26)
Final reduction ratio		2.200 (33/15)
Gear ratios	low	2.500 (30/12)
	second	1.562 (25/16)
	third	1.157 (22/19)
	fourth	0.954 (21/22)
	fifth	0.869 (20/23)

Overall reduction ratios	
low	13.75
second	8.59
third	6.36
fourth	5.25
fifth	4.78
Drive chain, size	50HDS
number of links	110

♦ Suspension

Front suspension	Telescopic, oil dampened
Rear suspension	Swinging arm, oil dampened, 5-way adjustable

♦ Steering

Steering angle	40° (right and left)
Castor	61°
Trail	5.1 in (130 mm)
Turning radius	7.5 ft (2.3 m)

♦ Brakes

Front brake	Right hand, internal expanding, double cam
Rear brake	Right foot, internal expanding

- **Electrical Equipment**

Generator	Internal rotating alternator
Battery	12V 7AH
Fuse	15A
Head lamp	12V 35/25W
Tail/Brake lamp	12V 8/23W (3/32 cp)
Neutral indicator lamp	12V 3.4W
Speedometer lamp	12V 3.4W
Tachometer lamp	12V 3.4W
High beam indicator lamp	12V 3.4W
Turn signal indicator lamp	12V 1.7W
Turn signal lamp	12V 23W (32 cp) × 4

*** SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.**

* You may find some slight differences between your motorcycle and this owner's manual. This is because of differences required by traffic regulations in different countries.

2. SUZUKI CCI LUBRICATION SYSTEM

The Suzuki CCI lubrication system is the most advanced system available for two-stroke engines.

In this system oil is stored in an oil tank and a fresh charge of oil is fed by the oil pump to both side of crankshaft bearings, connecting rods and the surface of the piston and cylinder. The middle crankshaft bearing alone is lubricated by transmission oil.

The amount of oil fed to these areas is regulated by the oil pump control lever which is controlled by engine speed and the amount of throttle opening.

Since the engine is constantly lubricated by a fresh charge of oil which is properly regulated to meet all operating conditions, the CCI system assures that proper lubrication is always maintained.

This results in less carbon build-up and less exhaust smoking than was previously possible when troublesome pre-mixing of gasoline and oil was necessary.

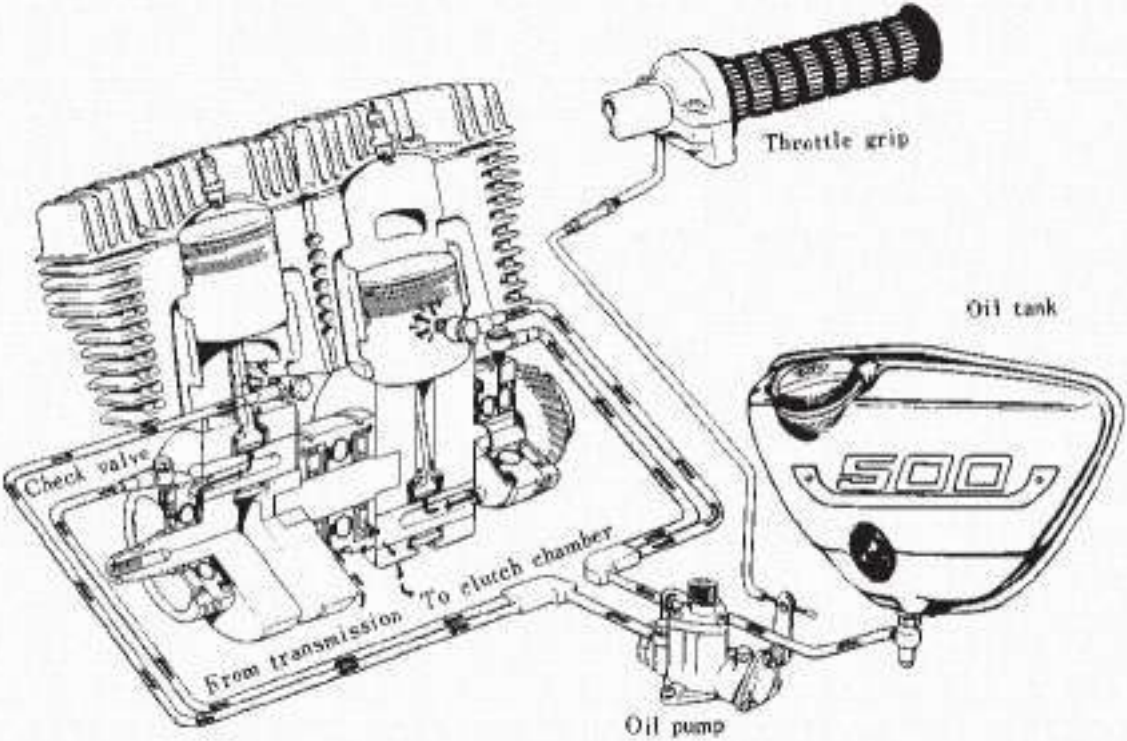


Fig. 1 Suzuki CCI

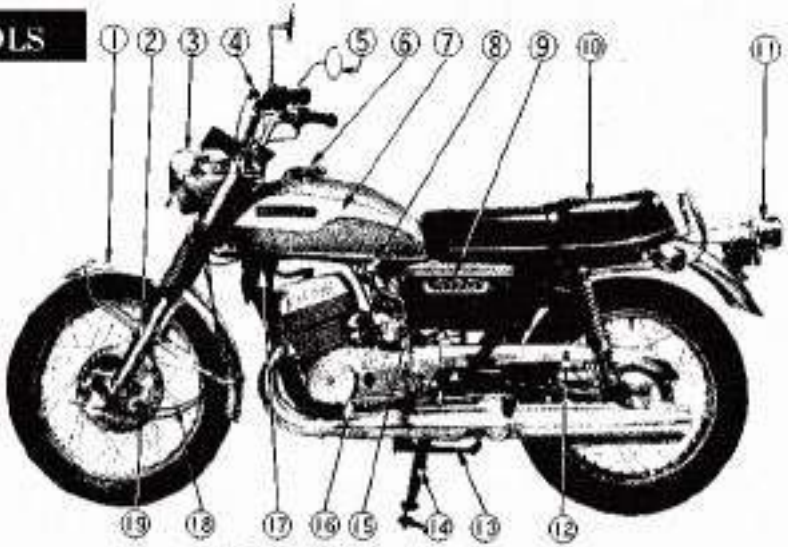


Fig. 2 Left side view

1.	Front Fender	8.	Fuel Cock	15.	Kick Starter Lever
2.	Front Fork	9.	Battery & Tool Cover	16.	Gear Shifting Lever
3.	Headlamp	10.	Dual Seat	17.	Ignition Switch
4.	Clutch Lever	11.	Tail/Brake Lamp	18.	Speedometer Cable
5.	Rear View Mirror	12.	Chain Guard	19.	Front Brake Cable
6.	Fuel Tank Cap	13.	Side Stand		
7.	Fuel Tank	14.	Center Stand		

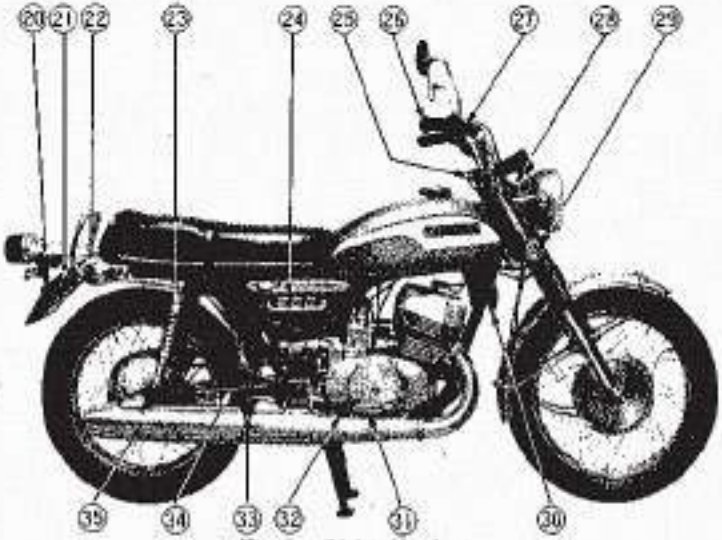


Fig. 3 Right side view

20.	Rear Side Reflector	26.	Throttle Grip	32.	Front Footrest
21.	Rear Fender	27.	Front Brake Lever	33.	Rear Footrest
22.	Rear Turn Signal Lamp	28.	Front Turn Signal Lamp	34.	Swinging Arm
23.	Rear Shock Absorber	29.	Front Side Reflector	35.	Muffler
24.	Oil Tank	30.	Horn		
25.	Steering Damper Knob	31.	Brake Pedal		

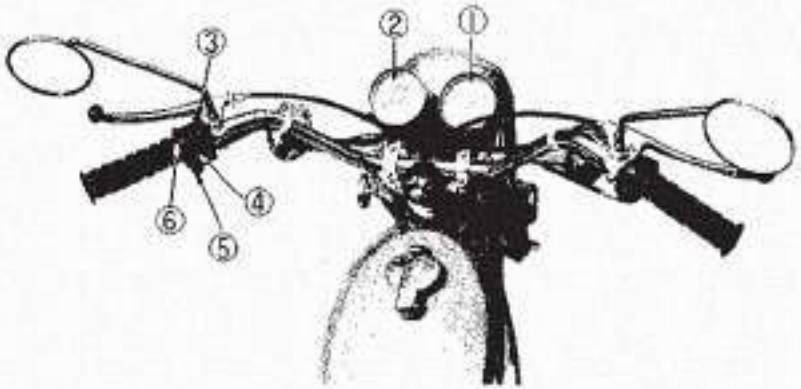


Fig. 4 Combination meter & Switches

1. Tachometer
2. Speedometer
3. Lighting Switch
4. Turn Signal Switch
5. Horn Button
6. Dimmer Switch

♦ Identification & Certification Plate

The engine and frame numbers of your machine are given on the identification plate. These numbers are required especially for registering the machine and ordering spare parts. When writing to your dealer, never fail to mention them as well as the milage reading.

Due to a difference in regulations in other countries some machines may be fitted with a certification plate instead of an identification plate.

Fig. 5 Identification plate/ certification plate

♦ Fuel Tank Cap

The fuel tank cap of this model is of a flip-up type. To open the fuel tank cap, push the knobs on both sides and it can be unlocked. The fuel tank cap can also be locked by using ignition switch key.

Fig. 6 Fuel tank cap

♦ Fuel Cock

The fuel cock on this motorcycle is of diaphragm type and has three positions such as ON, RESERVE and PRIMING.

Before starting the engine, turn the fuel cock lever to the ON position where the fuel flows from the fuel tank into the carburetor as the engine is rotating.

If the fuel in the tank is too low to be fed to the carburetor at the ON position, turn the lever to the RESERVE position, which opens a tap to approximately 4.2/3.5 US/Imp gal (2 ltr) of reserve supply. Only when no fuel is in the carburetor, turn the lever to the PRIMING position, which allows the fuel to flow directly to the carburetor even with the engine at a stop. When the engine has started, be sure to return the lever to the ON position.

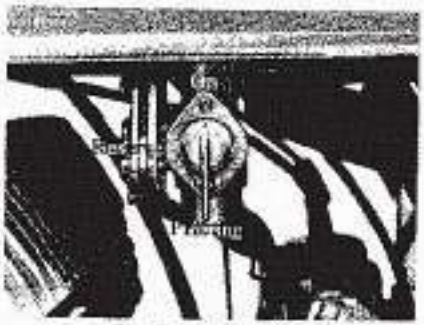


Fig. 7 Fuel cock

♦ Kick Starter Lever

The engine can be started easily by depressing the kick starter lever. Always shift the gears into neutral before depressing the kick starter lever.


Fig. 8 Kick starter lever

♦ Ignition Switch

The ignition switch has three positions such as OFF, ON and PARKING, it switches the engine ignition system and the electrical equipments on and off.

When the key is in the ON position, the engine can be started and the electrical equipment works as shown in the following table. When parking the motorcycle, turn the key to the PARKING position and the tail lamp lights and the key can be taken from your motorcycle.

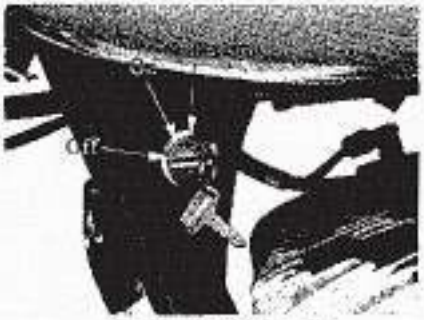


Fig. 9 Ignition switch

Electrical Equipment	OFF	ON	PARKING	
Brake lamp		○		When the brake is applied.
Tail lamp		○		When the lighting switch knob is slid to ON position.
Head lamp		○		When the lighting switch knob is slid to ON position.
Horn		○		When the horn button is pushed.
Neutral indicator lamp		○		When the transmission is in Neutral position.
High beam indicator lamp		○		When the lighting switch knob is in ON position and the dimmer switch knob is slid to H position.
Turn signal indicator lamp		○		When the turn signal lamps are operated.
Tachometer lamp		○		When the lighting switch knob is slid to ON position.
Speedometer lamp		○		When the lighting switch knob is slid to ON position.
Turn signal lamp		○		When the turn signal switch knob is slid to "L" or "R" position.
Tail lamp (for parking)			○	

◆ **Brake Lever**

Front braking is controlled by pressure applied on the brake lever. When the brake lever is squeezed, braking force is applied to the front wheel.

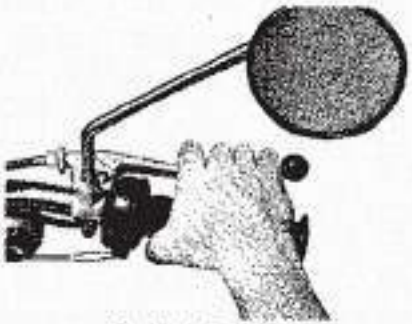


Fig. 10 Brake lever

◆ **Brake Pedal**

Rear braking is controlled by pressure applied on the brake pedal. When the brake pedal is depressed, braking force is applied to the rear wheel and the brake lamp lights.

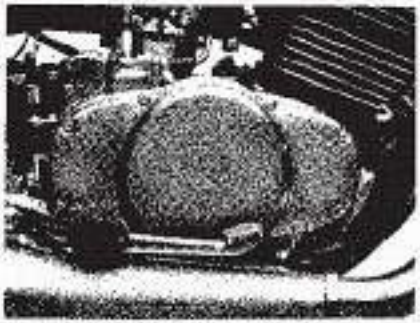


Fig. 11 Brake pedal

♦ Gear Shifting Lever

The T500 is equipped with a 5 speed transmission which operated as shown in figure 13.

Neutral is located between low and 2nd gear. Low gear is engaged by fully depressing the pedal from the neutral position. Shifting into succeedingly higher gears is accomplished by pulling up on the shift lever once for each gear. When shifting from low to 2nd gear, neutral is automatically missed. When neutral is wanted for stopping, depress or raise the lever a half of a stroke between low and 2nd gear.

Fig. 12 Gear shifting lever

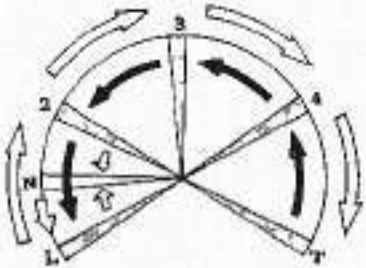


Fig. 13 Gear shifting operation

♦ Carburetor Choke Lever

The carburetor starter system gives easy starts even in cold weather by supplying a rich fuel/air mixture to the engine. When starting a cold engine, push the choke lever.

Be sure to return it to its original position when the engine warms up and the motorcycle is run. Do not open the throttle when this lever is pushed. If the throttle grip is turned even a small amount, the engine becomes hard to start.

When the engine is already warm, operation of carburetor choke lever is not necessary.

Fig. 14 Carburetor choke lever

♦ Clutch Lever

The clutch lever is used to disengage the engine with the rear wheel when starting or shifting the transmission gears. Squeezing the lever disengages the clutch and releasing it connects the engine with the rear wheel.

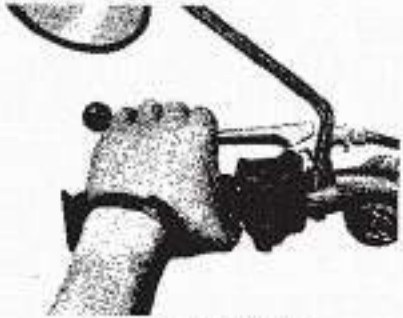


Fig. 15 Clutch lever

♦ Throttle Grip

Engine speed is controlled by the throttle grip. If the throttle grip is twisted inward toward you, engine speed rises.

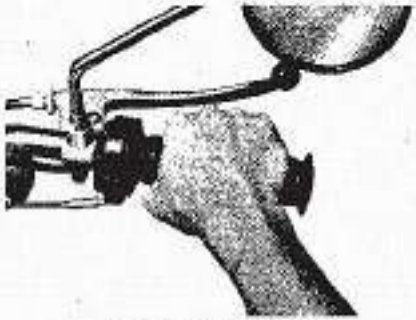


Fig. 16 Throttle grip

♦ Steering Lock

To lock the steering, turn the steering handlebar all the way to the left, insert the ignition switch key in the steering lock and turn clockwise. Don't forget to lock the steering when parking the motorcycle.

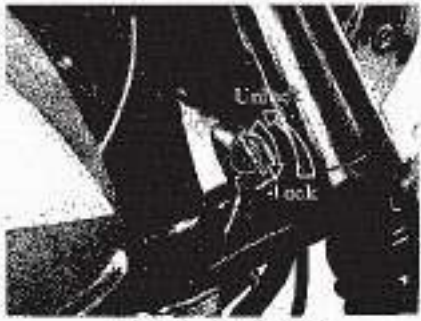


Fig. 17 Steering lock

♦ Lighting/Dimmer Switch

The lighting switch has an ON and OFF position. When the ignition switch key is in the ON position and the lighting switch knob is slid to the ON position, the headlamp and tail lamp light are on and the headlamp beam can be changed both downward and upward by sliding the dimmer switch knob to the "L" or "H" position.

The headlamp cannot be lighted regardless of the ignition switch key position when the lighting switch is in the OFF position.

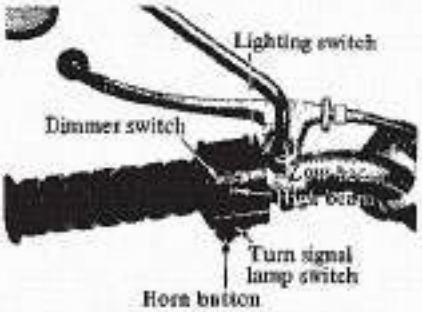


Fig. 18 Lighting/Dimmer switch

♦ Trip Meter

A trip meter is provided in the speedometer. To return the mileage to "0", turn the counter-clockwise.

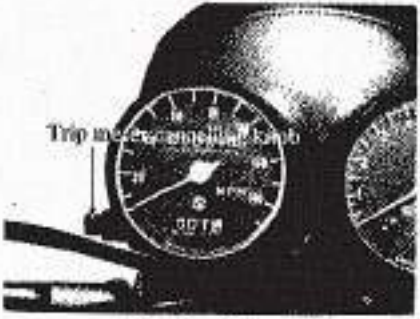


Fig. 19 Trip meter

♦ Indicator Lamps

* Neutral indicator lamp

The green neutral indicator lamp lights when the gears are in Neutral and goes out when another gear is engaged.

* High beam indicator lamp

The red high beam indicator lamp lights when the ignition switch key and lighting switch knob are in the ON position and the dimmer switch knob is slid to the "II" position indicating the headlamp is on high beam.

* Turn signal indicator lamp

The orange turn signal indicator lamp lights when the turn signal switch knob is slid to the right or left activating the turn signal lamps.

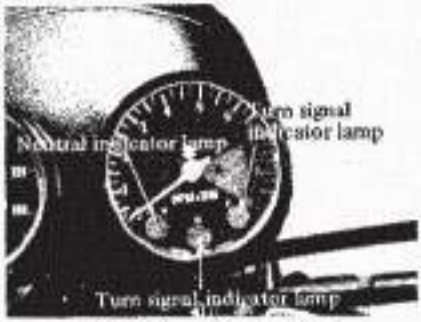


Fig. 20 Indicator lamps

Be sure to check the following items before operating the motorcycle.

♦ Fuel

Check to see that fuel is in the fuel tank. The fuel tank capacity is 3.7/3.1 US/Imp gal (14 ltr) including 4.2/3.5 US/Imp pt (2 ltr) of reserve supply.

♦ Engine Oil

Be sure to check the oil level in the oil tank before starting the engine. If the oil level is found below the oil level inspection eye, replenish the oil tank with the recommended oil.

For the Suzuki CCI system, use of Suzuki CCI Oil is highly recommended, but if it is not available, a good quality two-stroke motorcycle injection oil of around SAE 30 should be used.

Fig. 21 Oil level inspection eye

◆ Brakes

Brakes are the most important for safe riding. Always check the brakes before riding the motorcycle.

To adjust the brakes properly:–

* Front Brake

Adjust the brake cable with the front brake adjusting nut so there is 0.8–1.2 in (20–30 mm) of distance between the front brake lever and throttle grip when the brake is operated.

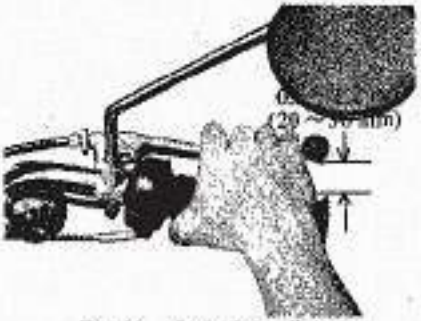


Fig. 22 Brake lever distance

Fig. 23 Adjusting front brake

* Rear Brake

Before adjusting the brake pedal travel, adjust the brake pedal position with the brake pedal adjuster until the most suitable position is obtained for quick operation.

Turning adjuster in . . . . . raises pedal
Turning adjuster out . . . . . lowers pedal

After the adjustment of the brake pedal position is completed, adjust the brake pedal travel with the rear brake adjusting nut to 0.8 ~ 1.2 in (20 ~ 30 mm).

Turning adjusting nut in . . . . . decreases travel
Turning adjusting nut out . . . . . increases travel

Fig. 24 Brake pedal adjuster

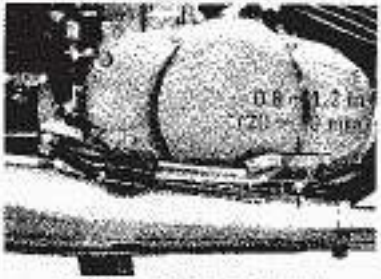


Fig. 25 Brake pedal travel


Fig. 26 Adjusting brake pedal travel

♦ Tire Pressure

Insufficient air pressure in the tires hastens tire wear and increases road resistance which increases fuel consumption and adversely affects the performance and the running stability of the motorcycle.

Soft tires also make smooth cornering difficult. Over inflated tires decrease the amount of tire in contact with the ground and cause skids when the brakes are applied, as well as subjecting the tire to stress, which is bad for it.

Hard tires also tend to throw the motorcycle into slides on corners. Be sure that tire pressure is correct at all times.

Fig. 27 Checking tire pressure

	FRONT				REAR			
	SOLO RIDING		DUAL RIDING		SOLO RIDING		DUAL RIDING	
	PSI	KG/CM²	PSI	KG/CM²	PSI	KG/CM²	PSI	KG/CM²
NORMAL RIDING	23	1.6	23	1.6	26	1.8	28	2.0
CONTINUOUS HIGH SPEED RIDING	26	1.8	26	1.8	28	2.0	28	2.0

♦ Head Lamp

Check to see if the head lamp lights when the ignition switch key and the lighting switch knob are in the ON position and the head lamp beam can be changed both downward and upward by operating the dimmer switch knob.

♦ Turn Signal Lamp

Check to see if the turn signal lamps flash when the ignition switch is turned to the ON position and the turn signal switch knob is operated.

♦ Tail/Brake Lamp

Under the condition that the ignition switch key is in the ON position, check to see if the tail lamp lights when the lighting switch is slid to the ON position and if the brake lamp lights at about 0.4 in (10 mm) after the brake pedal begins to be depressed.

In case the brake lamp lights at any position other than abovementioned one, adjust the brake lamp switch as follows.

Loosen the switch lock nuts and move the switch up or down to adjust it so that the switch operates and the brake lamp lights at proper position.

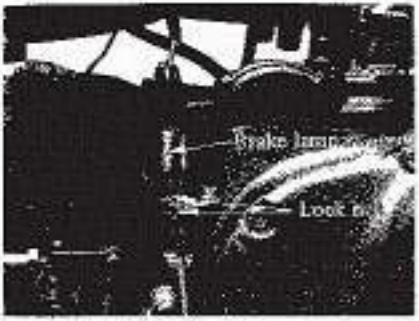


Fig. 28 Brake lamp switch

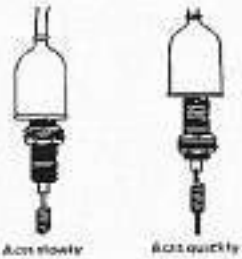


Fig. 29 Switch adjustment

♦ Clutch Lever

Check if the play of clutch lever is about 0.16 in (4 mm) at the clutch lever holder before the clutch begings to disengage. If you find a abnormal play, adjust it by turning the clutch cable adjuster until the proper play is obtained.

Note : The adjustment of the clutch should be made on the release screw and the clutch cable according to the inspection chart on page 36. For the adjustments, refer to page 41.

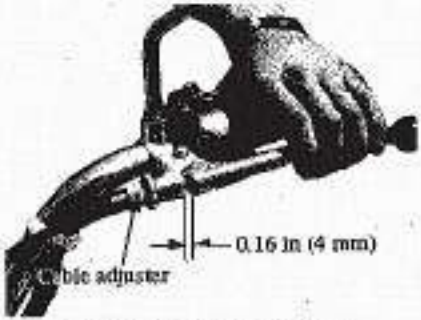


Fig. 30 Checking clutch lever

♦ Horn

Check if the horn sounds properly by pushing the horn button.

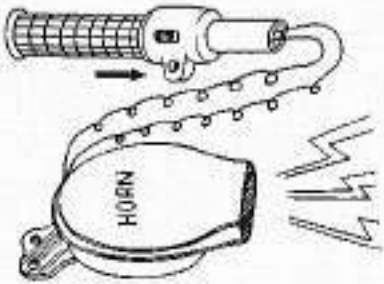


Fig. 31 Checking horn sound

- **Throttle Operation**

  Check that the throttle operates smoothly without binding.

- **Steering Operation**

  Check that the handlebar turns to both left and right smoothly without any play in the steering stem.

♦ Tool Kit

A tool kit which includes all tools needed for daily maintenance is provided inside the battery & tool cover.

Fig. 32 Tool kit

1. Tool bag
2. Universal box wrench
3. Box wrench handle
4. Box wrench handle bar
5. 32 mm offset wrench
6. 22 mm offset wrench
7. Offset wrench handle
8. 14 x 17 mm open end wrench
9. 10 x 12 mm open end wrench
10. 8 mm open end wrench
11. 21 mm box wrench
12. 14 mm box wrench
13. Cross head screw driver
14. Combination screw driver
15. Screw driver handle
16. Pliers

♦ How To Start Engine

1. Assure that the fuel cock lever is in the ON position.
2. Insert the key into the ignition switch and turn it clockwise one notch to the ON position, and the Neutral indicator lamp will light if the gears are in Neutral.
   (It is good practice to shift the gears into Neutral before starting engine.)

* When engine is already warm:

3. Open the throttle 1/8 to 1/4 and depress the kick starter lever.
   Operation of carburetor choke lever is not necessary.

* When engine is cold:

3. Pull the carburetor choke lever. Close the throttle completely.
4. Depress the kick starter lever, and the engine will start.
5. After the engine starts, be sure to return it to its original position when engine warms up and the motorcycle is run.

♦ How To Shift Gear

1. Pull the clutch lever to disengage the clutch and depress the gear shifting lever to shift into Low gear.
2. Twist the throttle grip inward toward you and at the same time let out the clutch lever slowly; the motorcycle will start forward.
   (If the engine is run at too high speed or the clutch lever is released rapidly, the motorcycle will start with jerky spurts or the engine will stall.)
3. When the speed of the motorcycle reaches about 12 mph (20 km/h), twist the throttle grip away from you. At the same time, pull in the clutch lever and then shift up into 2nd gear. Let out the clutch lever and open the throttle again. Follow the same procedure to shift into higher gears.
4. The speed range at which gears should be used is shown below.

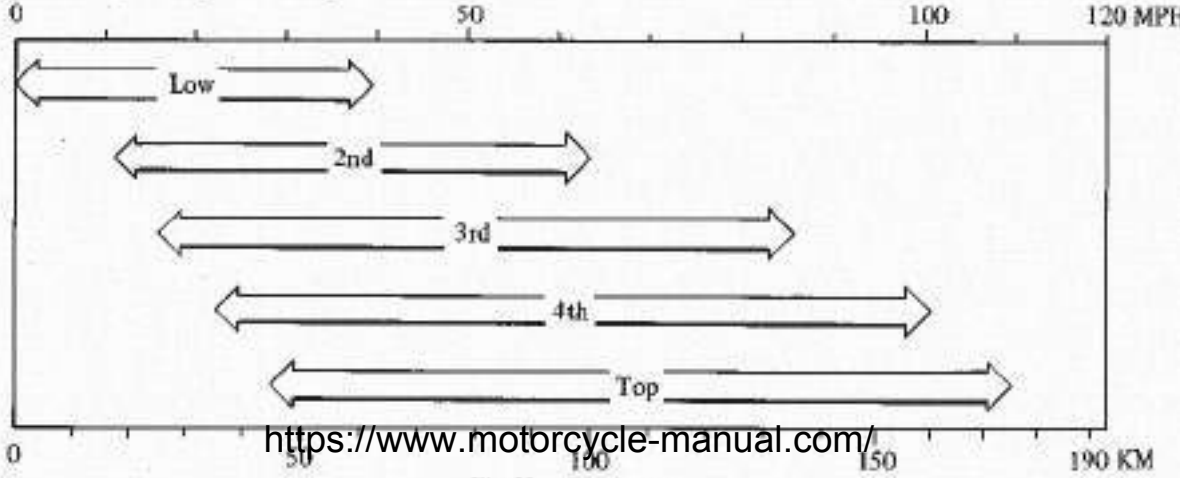


Fig. 33 Speed range

♦ How To Drive

• High speed riding

1. Tire pressure should be increased as described on page 27 before riding the motorcycle.
2. A spark plug with a colder heat range than the standard NGK B-7HC or Nippon Denso W-24FS is recommended for continual high speeds . . . . . NGK B-8HS.
3. The rear shock absorbers spring tension should be adjusted to meet road condition and motorcycle speed.

For example;

Position (1) is for normal riding

Position (2)
Position (3)
Position (4)
Position (5)
} Change the position from (2) to (5) in accordance with increase of running speed and load.

Caution : Be sure to set the adjusting positions on both left and right side identically.

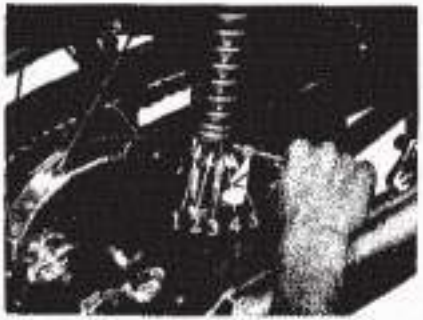


Fig. 34 Adjusting spring tension

* Riding on hills

1. If the speed of the motorcycle decreases when riding up a hill, shift down into a lower gear so that the engine may always operate in its power range. Shift the gears rapidly to prevent the motorcycle from losing momentum.
2. When riding down a hill, the engine can be used for braking, for short intervals, by shifting to a lower gear. Caution should be used, however, in avoiding over-revving with the throttle closed for long periods of time.

* Stopping and parking

1. Turn the throttle grip outward away from you to close the throttle completely.
2. Apply the front and rear brake evenly at the same time and the motorcycle will stop smoothly and safely. Using only the front or rear brake is dangerous and can cause skidding and loss of control. Make it a rule to always apply both brakes simultaneously.
3. Apply the brakes lightly and with great care on wet highway pavement or other slippery surfaces and on corners. Abrupt braking on slippery roads or corner is particularly dangerous.
4. Just before the motorcycle stops, be sure to shift the gears into Neutral. Confirm this by observing the neutral indicator lamp in the tachometer.
5. Turn the ignition switch key to the OFF or PARKING position to stop the engine. When turning the key to the PARKING position, the tail lamp can be lighted, that assures safety on night time parking.
6. Remove the ignition key from the switch.
7. Lock the steering to prevent theft.

6. INSPECTION AND MAINTENANCE

Periodic inspection is the most important thing to prolong the life of the motorcycle and to ensure your safety driving. Take your motorcycle to your Suzuki dealer for these inspections without fail.

Item \ Distance	First 750 Mile / First 1,000 Km	Every 2,000 Mile / Every 3,000 Km	Every 4,000 Mile / Every 6,000 Km	Every 8,000 Mile / Every 12,000 Km	Page
Air Cleaner Element		Wash		Replace	38
Carburetor	Adjust with throttle valve stop screw and pilot air screw	Adjust with throttle valve stop screw and pilot air screw		Overhaul and clean	39
Clutch	Adjust	Adjust			41
Contact Breaker Point	Check contact point gap and ignition timing	Check contact point gap and ignition timing		Replace contact point	42
Cylinder Head and Cylinder	Retighten cylinder head nuts	Retighten cylinder head nuts	Remove carbon		
Drive Chain	Adjust	Adjust	Wash		44
Exhaust Pipe and Muffler	Retighten exhaust pipe fitting nuts	Retighten exhaust pipe fitting nuts	Remove carbon		45
Oil Pump	Check operation, adjust control lever aligning marks	Check operation, adjust control lever aligning marks			46
Spark Plug	Clean	Clean and adjust gap	Replace		47
Transmission Oil	Change	Change			48
Battery	Check and service electrolyte solution	Check and service electrolyte solution			46
Bolts, Nuts and Spokes	Retighten		Retighten		52
Front Brake	Adjust play	Adjust play			25
Fuel Cock	Clean fuel strainer		Clean fuel strainer		49
Rear Brake	Adjust play	Adjust play			26
Tire		Check tire tread condition			49

♦ Lubrication

Moving parts must be lubricated periodically. Insufficient lubrication will cause rapid wear and severe damage.

Lubricate the following parts periodically as follows:–

Item \ Distance	Every 2,000 Mile Every 3,000 Km	Every 4,000 Mile Every 6,000 Km
Brake cam shaft	Grease	
Brake cable	Motor oil	
Clutch cable	Motor oil	
Drive chain	Chain lube or motor oil	
Oil pump cable	Motor oil	
Throttle cable	Motor oil	
Clutch release		Grease
Kick starter lever		Grease
Swinging arm pivot shaft		Grease
Throttle grip		Grease

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

◆ Cleaning Air Cleaner

If the air cleaner is clogged with dust, intake resistance will be increased with a resultant decrease in output and an increase in fuel consumption. Check and clean every 2,000 mi (3,000 km) according to the following procedure.

1) Remove the battery & tool cover by unscrewing the knob.
2) Remove the air cleaner cover by unscrewing the wing nut and take out the air cleaner element.
3) Take the polyurethane filter out of the element.
4) Wash the filter with gasoline.
5) After wringing gasoline out of the filter, sock it into the Suzuki CCI Oil or engine oil with around SAE No. 30.
6) Wring oil out of the filter and then fit it to the element.

Fig. 35 Air cleaner cover wing nut

Fig. 36 Removing polyurethane filter

♦ Adjusting Carburetor

Carburetion may change during the long time use of the motorcycle and it often becomes necessary to readjust the carburetor.

However as the carburetor adjustment is extremely critical, the adjustment should be performed by an authorized Suzuki dealer only. In an emergency, you may adjust the idle speed and synchronizing the throttle valves by the following procedure.

* Adjusting idle speed

1) Adjust the throttle cable adjuster on each carburetor to obtain 0.08 - 0.12 in (2 - 3 mm) cable play.
2) Screw in the pilot air screw of each carburetor until it bottoms, then screw each one out 1½ turns.
3) Start the engine and allow it to warm up.
4) Adjust the throttle valve screw of each carburetor so that the engine runs at the lowest steady speed.
5) Synchronize the throttle valve and adjust the throttle cable play as following step.

Fig. 37 Carburetor

* Synchronizing the throttle valve

In order to obtain maximum efficiency and throttle response, it is necessary that the throttle valve of each carburetor opens at the same time.

Check to see whether exhaust fumes from the mufflers on both sides are identical in shade and volume when turning the throttle grip very slowly.

If difference is found, adjust with the throttle cable adjusters on each carburetor so that the exhausting gases come out of the mufflers on both sides identically (both the throttle valves begin to lift simultaneously) when turning the throttle grip slowly.

Finally adjust the throttle cable play on the handlebar side to allow 0.04 - 0.08 in (1 - 2 mm) with the throttle cable adjuster of the handlebar side.

This adjustment could affect the oil pump lever adjustment. Therefore, readjust the oil pump lever cable as necessary.

Fig. 38 Throttle cable adjuster

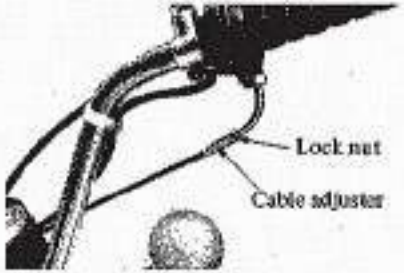


Fig. 39 Throttle cable adjuster

Note : In the event that carburetor adjustment is required due to different altitude or climate conditions, take your motorcycle in to your authorized Suzuki dealer.
Mechanical malfunctions resulting from the owner tampering with carburetion adjustment will normally be invalid from warranty coverage.

♦ Adjusting Clutch

Adjust the clutch with both the clutch cable adjuster and the release adjusting screw. The play of the clutch should be 0.16 in (4 mm) measured at the clutch lever holder before the clutch begins to disengage. If you find the play of the clutch incorrect, adjust it in the following procedure.

1) After loosening the cable adjuster lock nut, screw in the clutch cable adjuster and give sufficient play to the clutch cable.
2) Loosen the lock nut temporarily by using open end wrench to turn the release adjusting screw.
3) Turn in the release adjusting screw until it stops slightly and then back it out ¼ - ½ turn and secure the lock nut.
4) Finally adjust the clutch cable adjuster on the engine left cover and by the clutch lever holder until about 0.16 in (4 mm) of play is left at the clutch lever holder.

Fig. 40 Clutch lever play

Fig. 41 Adjusting clutch

♦ Adjusting Ignition Timing

Incorrect ignition timing decreases engine performance and shortens the life of the engine. Therefore, it is necessary to check the ignition timing periodically. When adjusting the ignition timing, be sure to adjust the contact breaker point gap first and then adjust the ignition timing.

However as the ignition timing is extremely critical, the adjustment should be performed by an authorized Suzuki dealer only. In emergency, you may adjust the ignition timing by the following procedure.

1) Remove the crankcase left cover by loosening three fitting screws.
2) Check the point gap with the feeler gauge (0.014 in . . . 0.35 mm).
   Standard point gap . . . 0.012 - 0.016 in (0.3 - 0.4 mm)
3) When the gap is too large or too small, loosen screw "A" and adjust the gap to the standard by moving the stationary contact point with a screw driver.
   Retighten screw "A" securely after the adjustment is made.
4) And so to the adjustment of ignition timing. Tune the timing cam shaft counter-clockwise and stop the rotation when the contact points just begin to open.

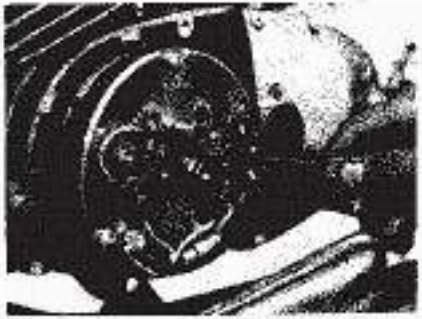


Fig. 42 Checking point gap

5) Check to see if the line "B" on the rotor aligns with the line "C" on the stator. If "B" is on the left side of "C" the ignition timing is retarded. If "B" is on the right side of "C", the igniting timing is advanced.
6) If the ignition timing is found to be retarded, loosen two screws "D" and turn the contact point base with the screw driver put into the notch of the contact point base to clockwise until the points begin to open just when "B" aligns with "C".
7) If the ignition timing is found to be advanced, turn the contact point base to counter-clockwise until the points begin to open just when "B" aligns with "C". After the adjustment is made, tighten screws "D".

Fig. 43 Timing marks

Note : 1. The above-mentioned procedure should be followed for both the right and left set of contact points.
2. The aforementioned procedure for adjusting engine ignition timing is adequate only as an emergency measure. Correct tuning procedures call for adjustment by your Suzuki dealer using special tools. Any timing adjustments should therefore be made by your dealer, except under emergency conditions.

Caution : Point surfaces which are burnt, pitted or coated with oil cause defective engine operation. Check the points periodically and clean them if they are dirty. Polish the points with sand paper when they are burned. Keep the points clean at all times. Be careful not to let oil get on the points.

◆ **Adjusting Drive Chain**

Adjust the drive chain by the following procedure until it has 0.6 - 0.8 in (15 - 20 mm) of play at the middle of two sprockets.

1) Loosen the axle nuts after pulling out the cotter pin.
2) Adjust the drive chain by turning the right and left chain adjuster nuts.
   Turning adjuster bolt in ..... tightens chain
   Turning adjuster bolt out ..... loosens chain
3) Marks on both chain adjusters must indicate the same position to align the front and rear wheels correctly.
4) After the drive chain adjustment is correct, tighten the axle nut securely and never fail to fix with a cotter pin.

Note : When refitting the drive chain, be sure the drive chain joint clip is seated in the right direction.

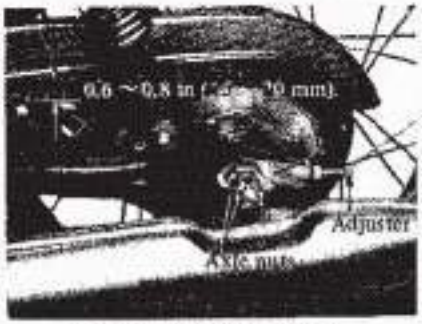


Fig. 44 Drive chain play

Fig. 45 Chain joint clip

♦ Lubricating Drive Chain

Dirt on the drive chain hastens wear of the drive chain itself and also the sprockets, so wash the drive chain in cleaning solvent or gasoline and then lubricate with chain lube oil every 2,000 mi (3,000 km).

If you operate the motorcycle under dusty condition, frequent rapid acceleration or at sustained high speeds, the drive chain should be cleaned and lubricated more often.

♦ Cleaning Muffler

1) Remove the fitting screw at the end of the muffler and pull out the baffle pipe.
2) Remove carbon deposits by gently striking the baffle pipe.
3) Wash the baffle pipe with gasoline or cleaning solvent.

Caution : Do not run your motorcycle with the baffle pipe removed from the muffler as this causes blowby of the fuel mixture, thereby hindering the engine output and possibly damaging your engine. Running the motorcycle engine with the baffle pipe removed voids your warranty.

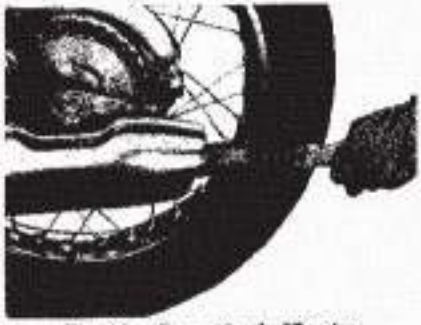


Fig. 46 Removing baffle pipe

♦ Adjusting Oil Pump

Adjust the oil pump control cable with the cable adjuster so that the marks A & B as shown in figure align when the throttle is twisted inward all the way.

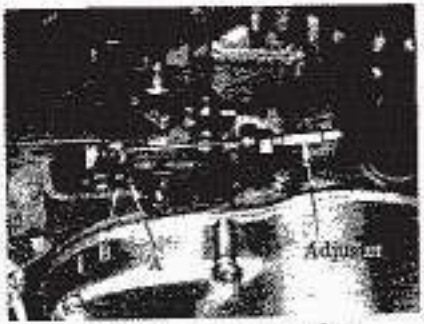


Fig. 47 Adjusting marks

♦ Battery Solution

The solution must be kept above the lower limit line at all times. If the solution level is found below the lower limit line, add pure distilled water up to the upper limit line. Do not add diluted sulphuric acid.

Caution: Check the battery every two weeks. Be careful not to bend the plastic battery vent tubing causing kinks or the battery may explode.

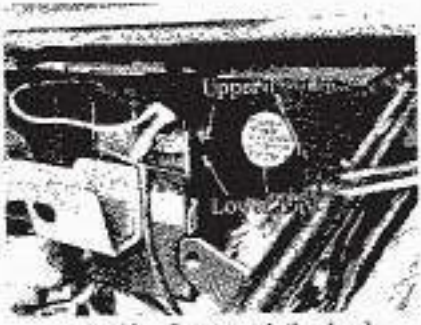


Fig. 48 Battery solution level

◆ Spark Plug

The NGK B-77HC and Nippon Denso W-24FS spark plugs are standard for this motorcycle. If the standard spark plug is unsuitable for your usage, that is, apt to overheat (porcelain shows whitish appearance) or get wet (black appearance), change it as follows.

	NGK	Nippon Denso	Remarks
Hotter type	B-7HS	W-22FS	Apt to get wet
Standard	B-77HC	W-24FS	
Colder type	B-8HS		Apt to overheat

If another brand of spark plug is to be used other than NGK or Nippon Denso, consult your authorized Suzuki dealer.

Note : Indiscriminate experimentation with different brands and heat ranges of spark plugs by the owner can, in some cases, cause engine problems.
Problems resulting from such tampering would not be subject to warranty coverage.

When carbon accumulates on the spark plug, a hot, strong spark will not be produced. Remove carbon deposits with a wire or pin and adjust the spark plug gap to 0.016 - 0.020 in (0.4 - 0.5 mm) for NGK; 0.024 - 0.028 in (0.6 - 0.7 mm) for Nippon Denso by measuring with a thickness gauge.

Caution : When installing the spark plug, screw it in with your fingers, to prevent stripping the threads, then tighten with a torque wrench to 18.0 - 21.6 ft-lb (2.5 - 3.0 kg-m).

Fig. 49 Spark plug gap

♦ Changing Transmission Oil

Oil in the transmission deteriorates and its lubricating performance decreases if it is used too long. Change oil first at 750 mi (1,000 km) and every 2,000 mi (3,000 km) after the first oil change.

1) Remove the oil filler cap and the oil drain plug located on the bottom of the engine and drain all the used oil.

Caution : To accomplish this completely and quickly, drain the used oil while the engine is warm and the viscosity is low.

2) Reinstall the oil drain plug.

3) Measure 1,200 cc (2.5/2.1 US/Imp pt) of SAE 20W/40 multi-grade motor oil into a beaker and pour it into the transmission slowly. Choose a good brand of oil.

4) Refit the oil filler cap.

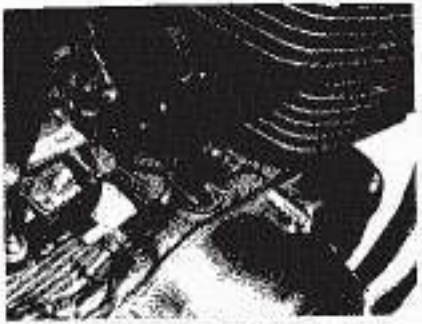


Fig. 50 Oil filler cap

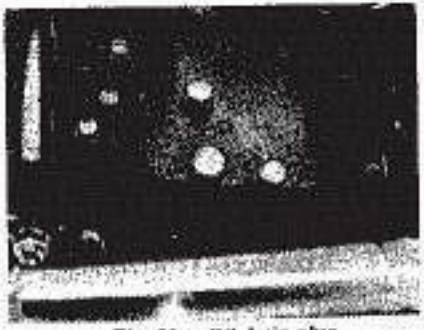


Fig. 51 Oil drain plug

♦ Cleaning Fuel Strainer

If the fuel strainer or strainer cup is dirty with sediment and gasoline will not flow smoothly a loss in engine power may result. Clean both the strainer cup and strainer with gasoline from time to time.

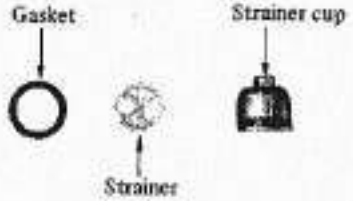


Fig. 52 Fuel strainer

♦ Tire Tread Condition

Operating the motorcycle with the excessively worn tires will decrease riding stability and consequently invite a dangerous situation.

It is highly recommended replace the tire when the remaining depth of tire tread becomes 0.06 in (1.6 mm) in front tire and 0.08 in (2.0 mm) in rear tire.

Note : The standard tire of your motorcycle is 3.25 - 19 for front 4.00 - 18 for rear. The use of tire other than the standard may cause trouble. It is highly recommended to use a Suzuki Genuine Tire or a well-known brand of the specified size.

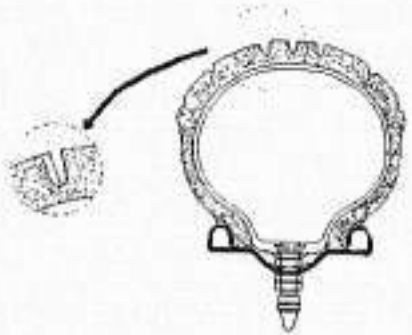


Fig. 53 Tire tread condition

♦ **Headlamp Beam**

The headlamp beam can be adjusted in the following manner:

* U.S.A. and Canada markets

1. Adjust the beam horizontally by turning the cross head screw located on the left side of the headlamp unit clockwise or counter-clockwise. (Fig. 54)
2. Adjust the beam vertically by loosening the headlamp housing fitting bolts and moving the lamp up and down as required. (Fig. 55)

* Other market than U.S.A. and Canada

Adjust the beam vertically by loosening the headlamp housing fitting bolts and moving the lamp up and down as required. (Fig. 55)

Fig. 54 Adjusting beam horizontally

Fig. 55 Adjusting beam vertically

♦ Changing Front Fork Oil

The front fork is a telescopic type with oil dampers.
When changing the oil in the front fork;–

1) Remove the drain screw at the end of one leg. Press down the front end to force all of the oil out. Refit the drain screw when the oil inside has been completely drained out.
2) Repeat the same procedure on the other leg.
3) Loosen the two fork fitting bolts and pour in SAE 30 motor oil, about 220 cc (7.4/7.7 US/Imp oz) for each leg.

The more oil in the fork the stiffer the suspension becomes, while the less oil in the fork the softer the suspension becomes.
Too little oil, however, causes abnormal noise and wear when running on bad roads.

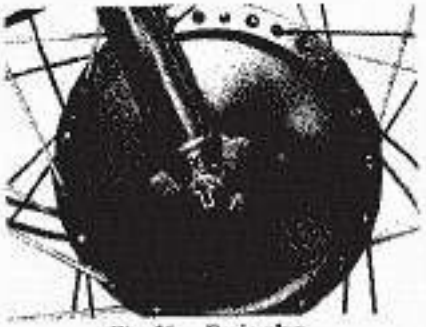


Fig. 56 Drain plug

Fig. 57 Pouring front fork oil

♦ Tightening Bolts & Nuts

Bolts and nuts on the engine and frame may become loose from vibration during riding. Tightening bolts and nuts is essential to keep your machine in good condition. Items with * mark must be tightened to ensure your safe driving according to the inspection chart of page 36 by your authorized Suzuki dealer using proper torque values.

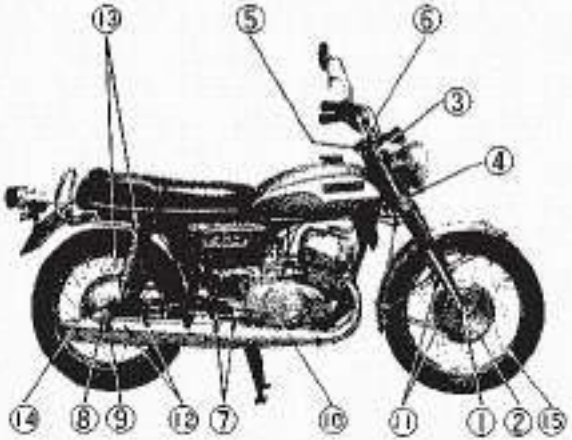


Fig. 58 Points to be tightened

* 1. Front axle
2. Front axle holder bolt
* 3. Front fork upper bracket bolt (R & L)
* 4. Front fork lower bracket bolt (R & L)
* 5. Steering stem nut
* 6. Handlebar clamp bolt
7. Front footrest bolt
* 8. Rear axle nut
9. Rear sprocket mounting shaft nut
*10. Rear swinging arm pivot nut
11. Front torque link nut
12. Rear torque link nut
*13. Rear shock absorber nut
*14. Brake cam lever fitting nut
15. Spoke

7. TROUBLE SHOOTING

Regardless of how excellent the design and manufacture may be, all machinery is subject to wear and occasional breakdowns. The following trouble shooting list will help you find the cause of most troubles.

♦ If Engine Does Not Start

1) Check to see if there is fuel in the tank and that the fuel cock is not clogged.
2) Check to see if the spark plug porcelain and electrodes are wet or dirty with carbon.
   If so, clean the inside of the spark plug.
3) Place the spark plug, with the ignition wire attached on the cylinder head after removing from the spark plug hole. Turn on the ignition switch and check to see that a strong blue spark jumps between the electrodes by turning the engine with the kick starter lever. In case no spark is produced, take your motorcycle to your Suzuki dealer to remedy the trouble.

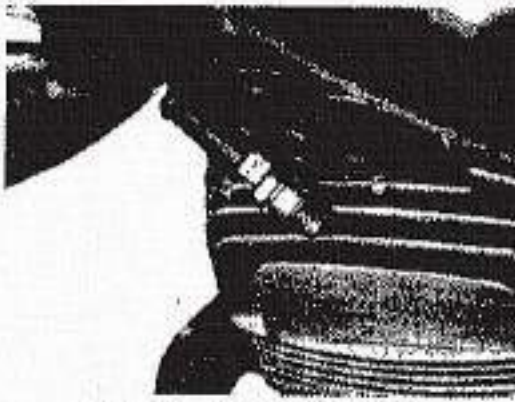


Fig. 59 Checking ignition

♦ If Engine Fails To Develop Power

1) When the engine fails to develop power and the engine gets excessively dirty, there may be areas which allow compression to leak in the engine.
   Check the areas below.
   * A loose spark plug causes the portion (1) to get dirty.
   * Loose cylinder head nuts cause the portions (2) and (3) to get dirty.

   The cylinder head gasket and/or base gasket must be replaced if compression still leaks after the above-mentioned parts are properly tightened.
2) Holding your palm at about 6 in (15 cm) from the muffler end, check to see if the fumes are exhausted vigorously. If not, carbon may be collected in the muffler baffle pipe. Remove carbon from it.

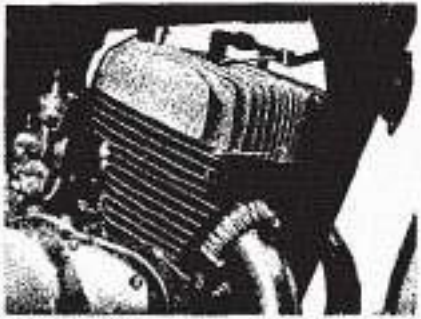


Fig. 60 Deagnosing loose points

Fig. 61 Checking exhaust pressure

♦ If Engine Stops Suddenly

1) Check to see if there is fuel in the tank and fuel cock and fuel tank cap air vent are not clogged.
2) Check to see if the spark plug electrodes are not bridged with carbon.

♦ Bad Stability And Steering

1) Check to see if the front and rear tire pressures are proper.
2) Make sure that there is no play in the front fork fitting.
3) Check to see if the rear axle is fitted squarely in the swinging arm and the front and the rear wheels are perfectly aligned. If not, adjust by using drive chain adjusters.
4) Check the swinging arm pivot nut for looseness.
5) Check the tire tread condition.

Note : Correct wheel alignment is very important on the T500 not only to secure safety driving but to prevent one-side wear of tires while running at a high speed. It is recommended for you to take your motorcycle to your dealer for correct alignment.

Fig. 62 Checking front fork fitting

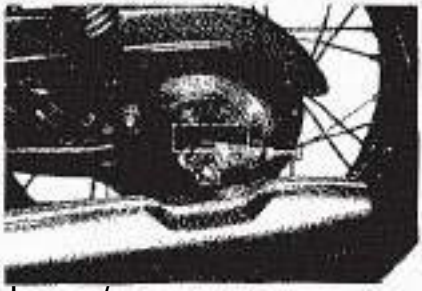
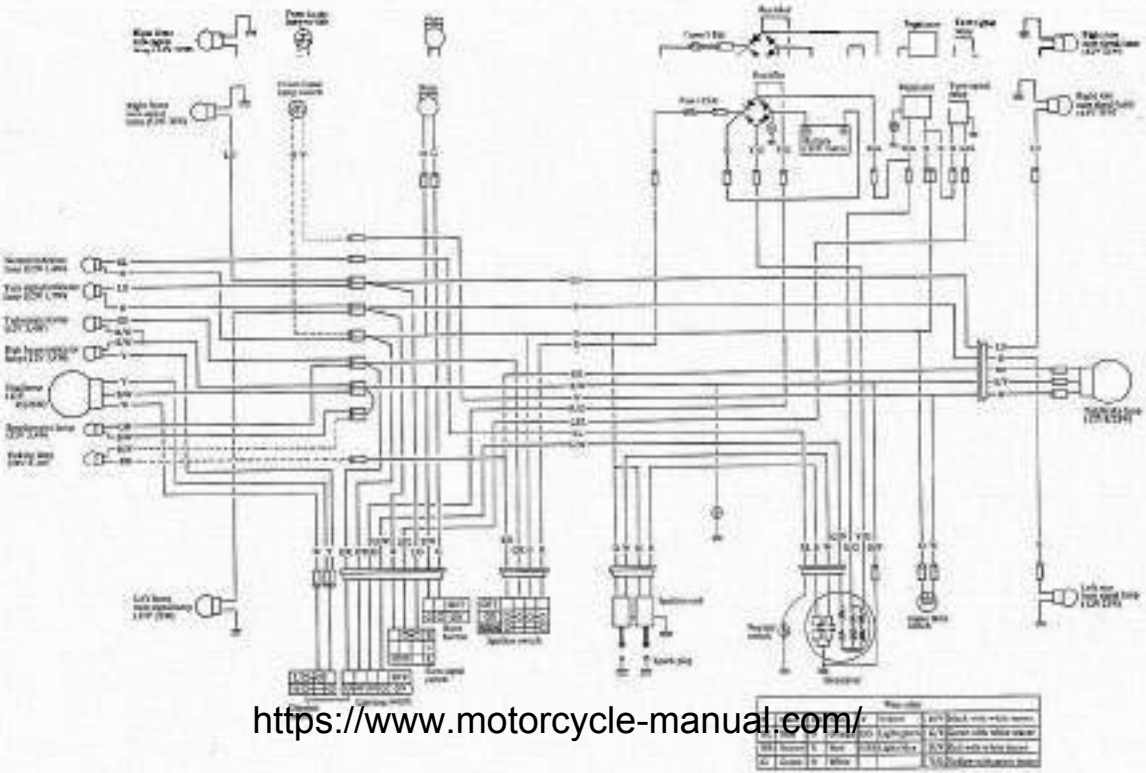


Fig. 63 Rear wheel alignment marks

8. WIRING DIAGRAM



9. INDEX

PARTS & ACCESSORIES

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