

**SUZUKI**

**RM80**

OWNER'S MANUAL

*B*

## FOREWORD

*Welcome to the world of Suzuki motorcycles.*

*The confidence you have shown by the purchase of our products is very much appreciated. Each Suzuki motorcycle backs this confidence by a long record of manufacturing and engineering excellence. The same excellence that has produced a long history of world-championship racing successes at the famous Isle of Man as well as the motocross tracks of Europe.*

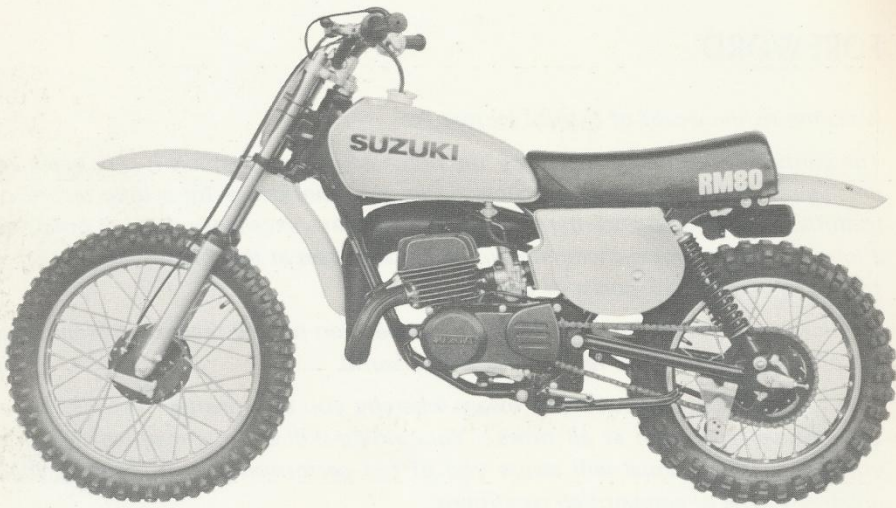
*Suzuki now presents the new RM80, a competition proved racing machine, capable of competing on any race course in the world.*

*This handbook is presented as a means whereby you can maintain your RM80 in top working condition at all times. Your riding skill and the maintenance steps outlined in this manual will assure you of top performance from your machine under any type of competition conditions.*

*We sincerely wish you and your Suzuki motorcycle a successful partnership for many years of happy riding.*

**SUZUKI MOTOR CO., LTD.**





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# OPERATING INSTRUCTION

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## GASOLINE

The RM80 engine is of the two-stroke design, which requires a premixture of gas and oil.

Gasoline should be graded 95 Research Octane or higher.

## ENGINE OIL

The following brands of oil are highly recommended for use in the premixture.

- \* Castrol R30
- \* Golden Spectro Synthetic Blend
- \* Shell Super M
- \* B.P. Racing
- \* Bel-Ray MC-1 Two-cycle Racing Lubricant

## MIXING RATIO

20 parts gasoline to 1 part oil is the correct gas to oil mixture ratio for your engine. For proper engine performance, it is essential that the above gas/oil mixture be maintained.

*Caution:*

*A mixture containing too little oil will cause overheating of the engine. Too much oil will cause excessive carbon formation resulting in preignition, fouled spark plug and loss of power.*

### FUEL MIXTURE RATIO OF 20 : 1

GASOLINE (qt)	OIL (oz)	GASOLINE (qt)	OIL (oz)
0.5	0.8	5.5	8.8
1.0	1.6	6.0	9.6
1.5	2.4	6.5	10.4
2.0	3.2	7.0	11.2
2.5	4.0	7.5	12.0
3.0	4.8	8.0	12.8
3.5	5.6	8.5	13.6
4.0	6.4	9.0	14.4
4.5	7.2	9.5	15.2
5.0	8.0	10.0	16.0



#### FUEL MIXTURE RATIO OF 20 : 1

GASOLINE (lit)	OIL (cc)	GASOLINE (lit)	OIL (cc)
0.5	25	5.5	275
1.0	50	6.0	300
1.5	75	6.5	325
2.0	100	7.0	350
2.5	125	7.5	375
3.0	150	8.0	400
3.5	175	8.5	425
4.0	200	9.0	450
4.5	225	9.5	475
5.0	250	10.0	500

#### FUEL MIXING PROCEDURE

To mix the gasoline and oil, always use a separate, clean container. Pour the full amount of oil required for the total mixture into the container, add approximately half the amount of gasoline to be mixed and shake thoroughly. Add the remainder of the gasoline and again thoroughly agitate the container.

#### TRANSMISSION OIL

Use of Suzuki Transmission oil is highly recommended, but if it is not available, a good quality **SAE 20W/40 multi-grade motor oil** should be used.

## BREAKING-IN

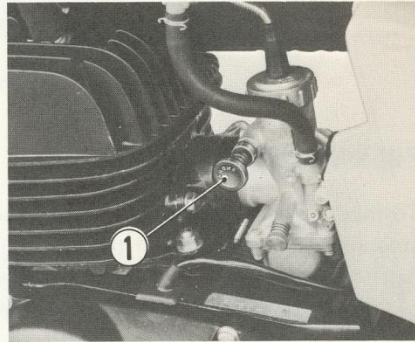
The RM80 is manufactured using the latest technology relating to the two-stroke engine and thus requires a relatively short breaking-in period. No programmed breaking-in operation is necessary: the only thing is that the machine should not be continuously operated in full-load condition for the first one hour or 30 km (20 miles). This practice will help all moving parts to break in and will assist in acquainting you with machine. Once the machine is fully broken in, you can be assured of high performance in competition.

## CARBURETOR CHOKE KNOB

When starting a cold engine pull the choke knob ①. Kick the engine over without opening the throttle grip. Even opening the throttle slightly may make the engine hard to start. Always return the choke knob to the original position when the engine warms up.

### When the engine is warm

Using the choke knob is not necessary. To start a warm engine, open the throttle 1/8 to 1/4 and kick start the engine.

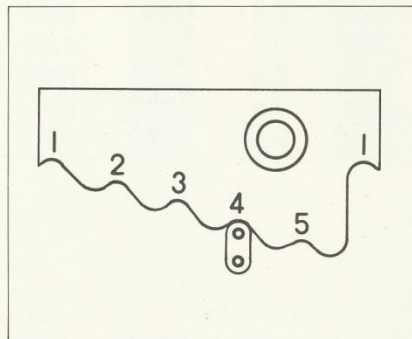


## REAR SHOCK ABSORBER

The rear shock absorber spring tension can be adjusted to meet road or riding conditions. As shown in the figure the larger the number, the stronger the spring tension.

### Caution:

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

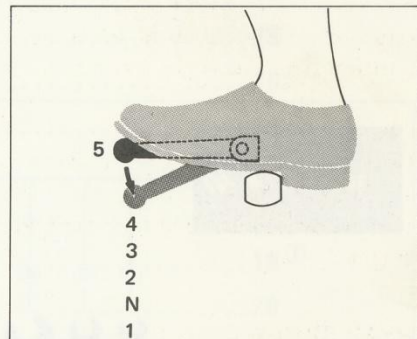
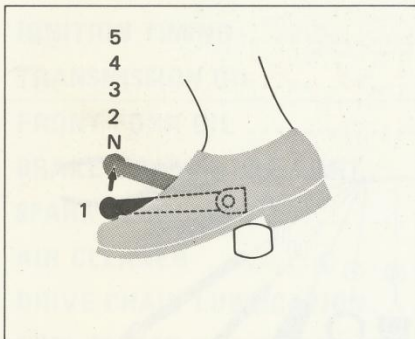
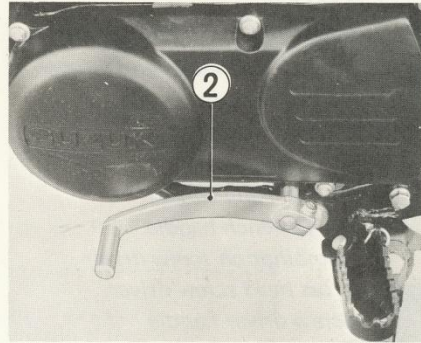


# INSPECTION AND MAINTENANCE

## GEARSHIFT LEVER

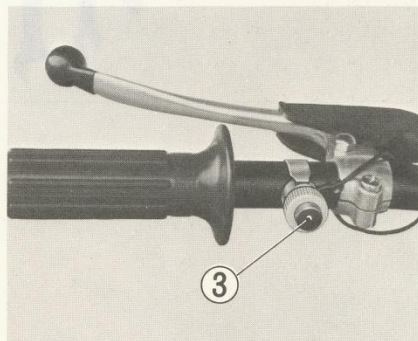
The RM80 is equipped with a 5-speed transmission which operates as shown in figure.

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



## IGNITION KILL BUTTON

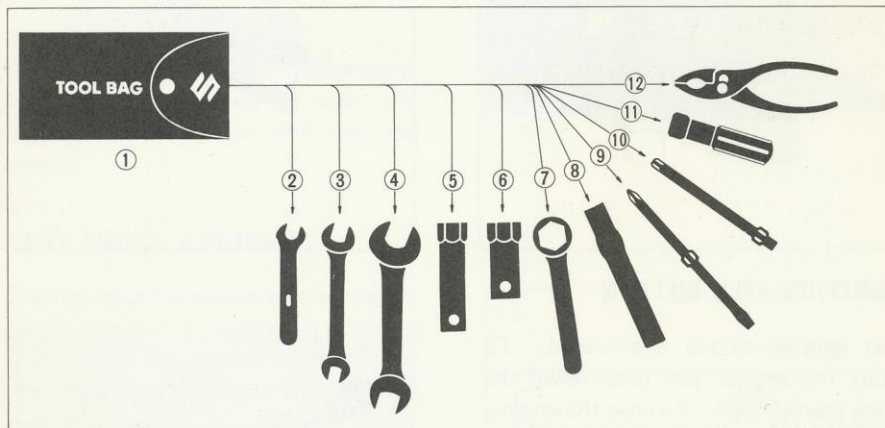
No ignition switch is provided. To start the engine, just push down the kick starter lever. To stop the engine, push the ignition kill button ③ as shown in photo.





## TOOL KIT

1. Tool bag
2. 8 mm Open end wrench
3. 10 x 12 mm Open end wrench
4. 14 x 17 mm Open end wrench
5. 10 mm Box Wrench
6. 21 mm Box wrench
7. 22 mm Ring wrench
8. Ring wrench handle
9. Combination screw driver
10. Cross head screw driver
11. Screw driver handle
12. Pliers



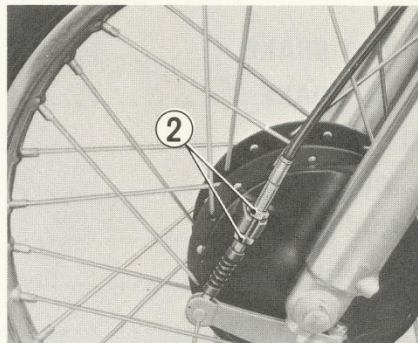
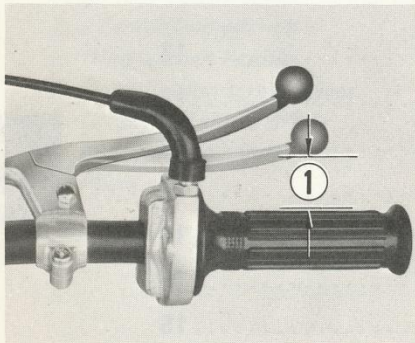
# INSPECTION AND MAINTENANCE

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## FRONT BRAKE

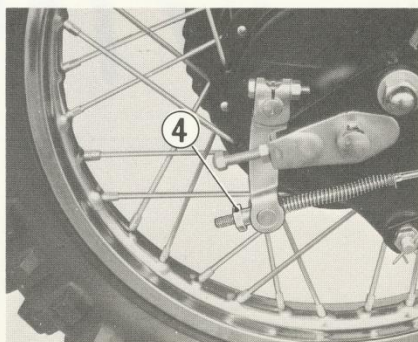
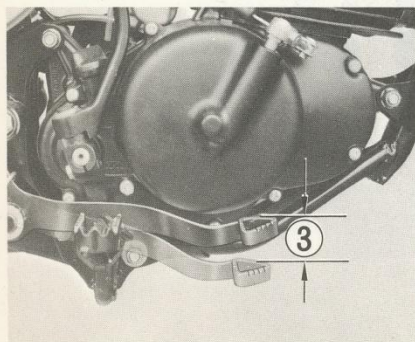
Measure the amount of the front brake lever distance ① between the brake lever end and throttle grip. The distance should be **20 ~ 30 mm (0.8 ~ 1.2 in.)**. If adjustment is necessary, turning the front brake adjusting nuts ② in the clockwise direction will increase the distance.



## REAR BRAKE

Check the free travel ③ of the rear brake pedal. Normal free travel is **0.8 ~ 1.2 in (20 ~ 30 mm)**.

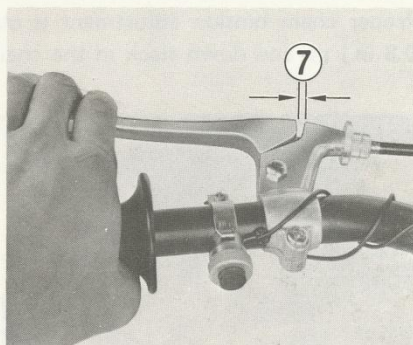
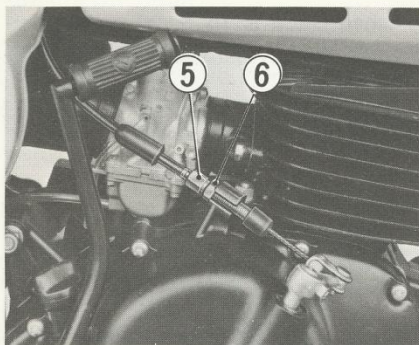
If adjustment is necessary, make the adjustment with the rear brake cable adjusting nut ④. Turn the adjusting nut clockwise to decrease the free travel of the brake pedal, and turn the nut counter-clockwise to increase the free travel.





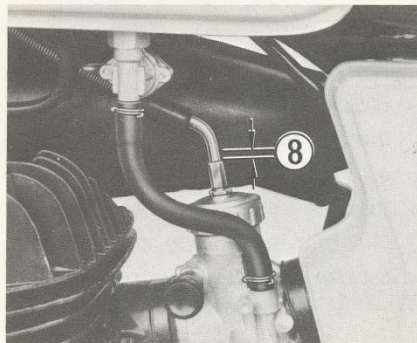
## CLUTCH

Adjust the clutch with the clutch cable adjuster ⑤ by loosening lock nut ⑥. The play ⑦ of the clutch cable should be 4 mm (0.16 in.) measured at the clutch lever holder before pressure can be felt indicating disengagement of the clutch.



## CARBURETOR

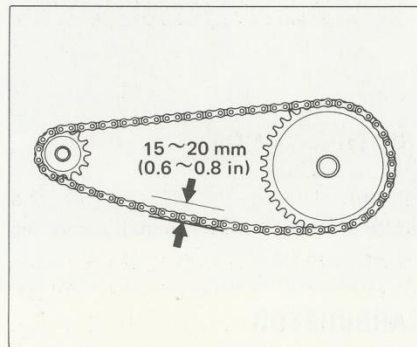
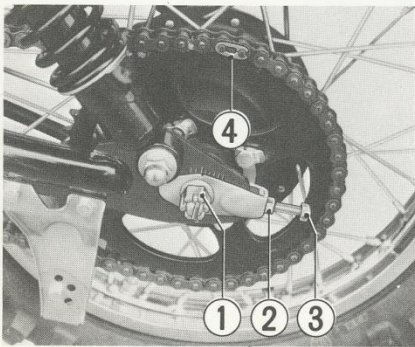
For correct safe throttle operation the throttle cable should be adjusted to have 0.5 mm (0.02 in.) play ⑧ at the carburetor. This adjustment can be made at the cable adjuster on the carburetor cap.



## DRIVE CHAIN

Adjust the drive chain at the rear axle by loosening nut ①. Then loosen lock nut ② and adjust the chain tension by turning bolt ③ in or out. Be sure the marks stamped on the adjuster yoke aligns with the same mark on the swing arm on both sides of the motorcycle.

Proper chain tension adjustment is obtained when there is 15 ~ 20 mm (0.6 ~ 0.8 in.) up and down slack in the chain, at a point midway between the sprockets.



Drive chain slack

*Warning:*  
When refitting the drive chain, be sure the drive chain joint clip ④ is attached in the way that the slit end will face opposite to the turning direction.

## TIRE PRESSURE

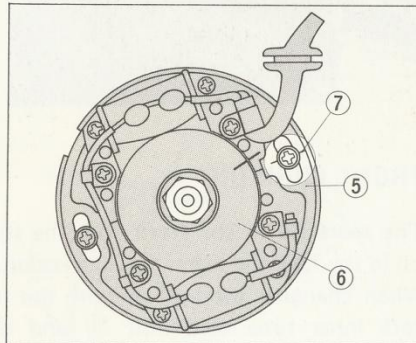
If the tire pressure is too high, the machine will tend to bounce up and down. Conversely, if the tire pressure is too low, steering will be adversely affected. Therefore, maintain the correct tire pressure for good roadability or shorter tire life will result.

Front	0.7 ~ 1.0 kg/cm <sup>2</sup>
Rear	(10 ~ 14 psi)

## IGNITION TIMING

Ignition timing is adjusted at the factory and should normally require no adjustment. However, if the stator is removed or tampered with, adjustment may be necessary. In this case the top mounting screw should be aligned with the mark stamped on the stator plate.

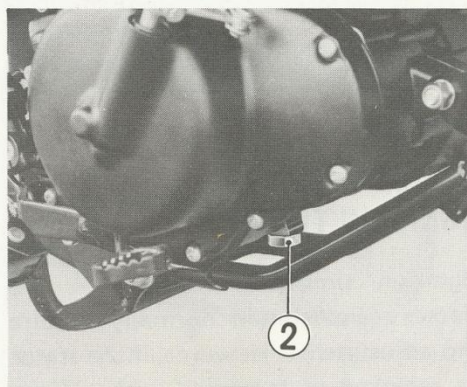
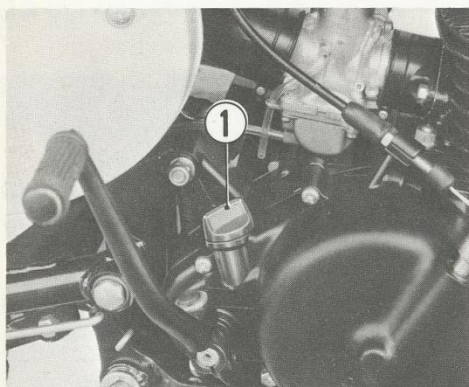
- ⑤. Stator
- ⑥. Rotor
- ⑦. Aligning mark





## TRANSMISSION OIL

To change the transmission oil, remove the filler ① and drain ② plug and drain the oil. Install the drain plug and measure **650 cc (1.4/1.1 US/Imp pt)** of **Suzuki Transmission Oil** or a good quality **SAE 20W/40** multigrade motor oil, then pour it into the transmission slowly.

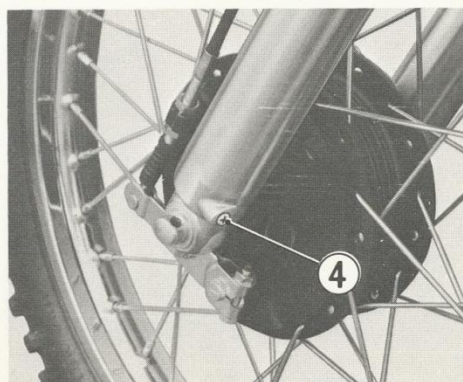
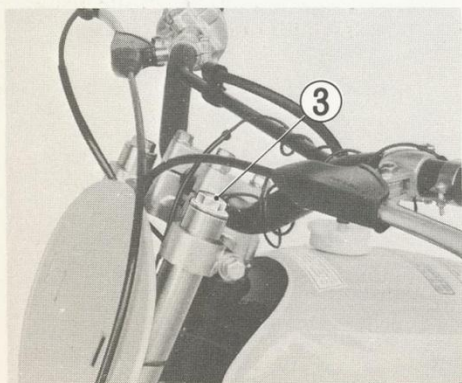


## FRONT FORK OIL

The more oil in the front fork the stiffer the suspension becomes, while the less oil in the fork the softer the suspension becomes.

When changing the fork oil with the fork fitted on the steering stem, remove the fork inner tube head bolt ③ and the fork oil drain plug ④ and completely drain the oil from the fork leg.

Pour **126 cc (4.26/4.44 US/Imp oz)** of **SAE 5W/20 motor oil** or **A.T.F. (Automatic Transmission Fluid)** into each inner tube after refitting the drain plug.

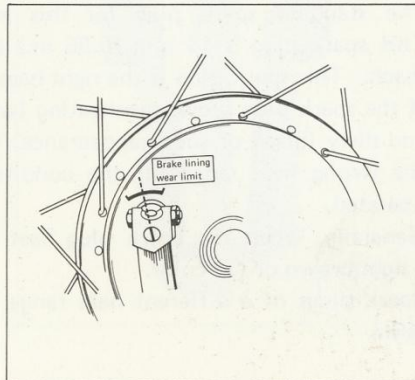


## BRAKE LINING WEAR LIMIT

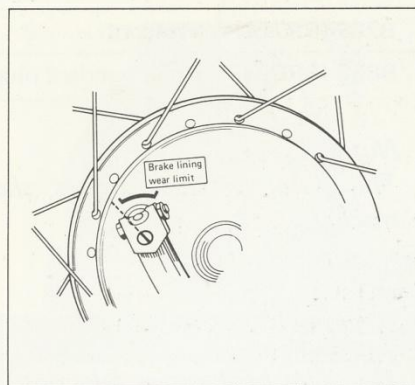
This motorcycle is equipped with brake lining wear limit indicators on both front and rear brakes. As shown in the figure A, at the condition of normal lining wear, the extension line of the index mark on the brake cam shaft should be within the range embossed on the brake panel with brake on.

To check wear of the brake lining, perform the following steps:

1. First check if the brake system is properly adjusted.
2. While operating the brake, check to see that the extension line of the index mark is within the range on the brake panel.
3. If the index mark is beyond the range as shown in the figure B, have the brake shoe assembly replaced by your Suzuki dealer to insure safe operation.



**Fig. A** The extension line of the index mark is within the range.



**Fig. B** The extension line of the index mark is out of the range.

## SPARK PLUG

The standard spark plug for this motorcycle is the **NGK B-7ES (BR-7ES)**. This spark plug is 14 mm (0.55 in.) thread diameter with a 19.0 mm (3/4 in.) reach. This spark plug is the right heat range for normal operation in most locales. If the spark plug shows overheating (whitish appearance at the electrode) or is wet and dirty (black or sooty appearance) this could indicate that the spark plug is of the wrong heat range for the conditions under which the motorcycle is being operated.

Generally, when the spark plug heat range is correct, the plug electrode shows a light brown or tan color.

Spark plugs of a different heat range may be chosen according to the following table.

NGK	REMARKS
B6ES (BR6ES)	If the standard plug is apt to get wet, replace with this plug.
<b>B7ES (BR7ES)</b>	<b>Standard</b>
B8ES (BR8ES)	If the standard plug is apt to overheat, replace with this plug.

*Note:*

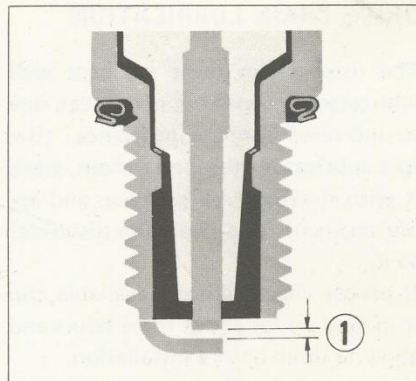
*The parenthesized figures show the specification for Canada market.*

*Caution:*

- 1) The heat range selection may be made only under the condition that the carburetion is set properly.*
- 2) If another brand of spark plug is to be used other than NGK consult your authorized Suzuki dealer.*
- 3) When installing the spark plug, screw it in with your fingers to prevent stripping the threads, then tighten with a torque wrench to 2.5 ~ 3.0 kg-m (18.0 ~ 22.0 ft-lb).*



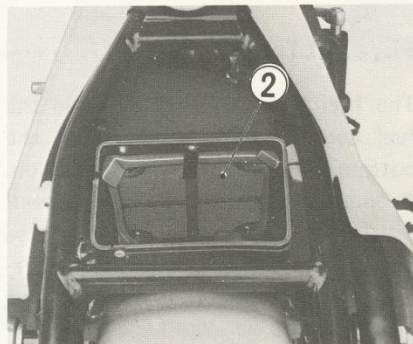
When carbon accumulates on the spark plug, a hot, strong spark will not be produced. Remove carbon deposits with a wire or pin and adjust the spark plug gap ① to 0.7 ~ 0.8 mm (0.028 ~ 0.032 in.) by measuring with a feeler gauge.



## AIR CLEANER

When the air cleaner is clogged with dust, it affects the engine performance and therefore, it should be cleaned periodically.

- 1) Wash the filter with gasoline.
- 2) After wringing gasoline out of the filter ② soak it with the recommended SUZUKI CCI oil or motor oil.
- 3) Wring oil out of the filter and then fit it to the element.



### *Caution:*

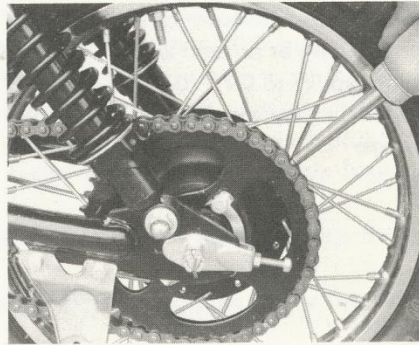
*If the element is not installed properly, dirt and dust may enter, resulting in rapid wear of the piston rings and cylinder.*



## DRIVE CHAIN LUBRICATION

The drive chain must be kept well lubricated; otherwise it may break due to increased running resistance. Before lubricating the drive chain, wash it with detergent or gasoline, and apply chain oil (molybdenum disulfide) to it.

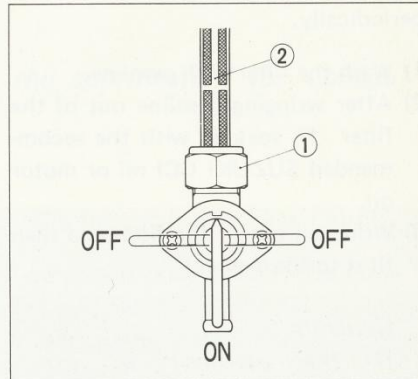
If proper chain oil is not available, dip it in gear oil for about three hours and allow to drain before installation.



## FUEL FILTER

The fuel filter is incorporated in the fuel cock which is mounted on the bottom of the fuel tank at the left side. Accumulation of dirt in the filter will restrict the flow of the fuel and cause the carburetor to malfunction, therefore, the fuel filter should be serviced periodically.

1. Drain the fuel from the fuel tank.
2. Remove the fuel cock by unscrewing the fitting nut ①.
3. Wash the screen filter ② in cleaning solvent.



# ENGINE

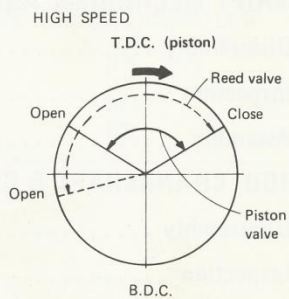
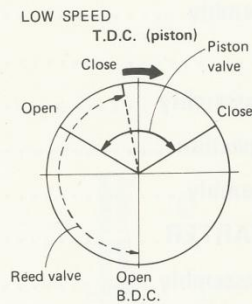
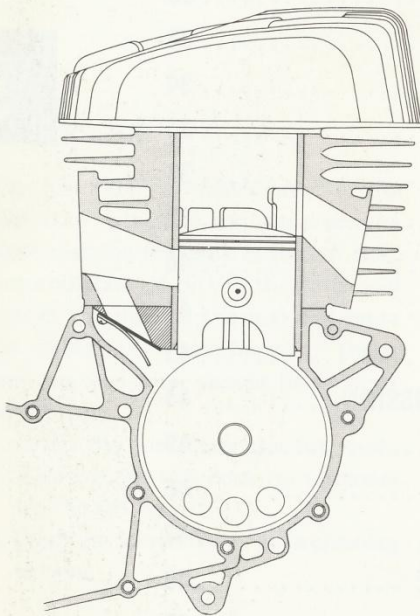
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## SUZUKI "POWER REED"

POWER REED signifies that the intake system feeds the mixture through two distinct actions, one by the piston valve and the other by the reed valve. The open-close timing of reed valve changes freely to suit the mixture requirement of the engine, as will be noted in the circle diagrams given below. Against this characteristic, piston valve is characterized by its low resistance to mixture flow though its timing does not change. These two characteristics additively show up to great advantage in the high speed region. Here's how:

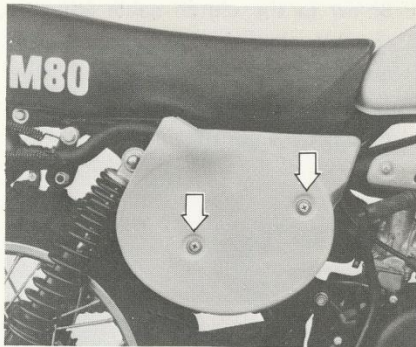
In the RM80, the port timing is slightly delayed as far as inlet port is concerned. This delay is calculated to produce greater output torque in the low and medium speed region. Stated otherwise, piston valve closes the suction port earlier and thus minimizes the chances of mixture blowback when the engine is in that speed region. In the high speed region, the amount of mixture being drawn in would be less than when there were no delay in port timing. This deficiency, however, is made up for by the action of reed valve to increase output power and torque in this speed region.



Port timing diagrams where piston valve and reed valve are used.

## ENGINE REMOVAL

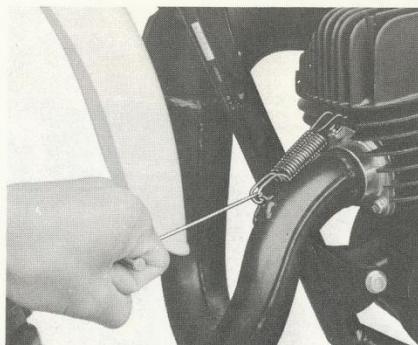
1. Take down right frame cover.



2. Remove muffler.
  - (1) Remove two nuts.

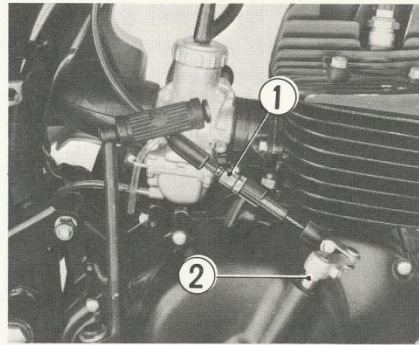


- (2) Unhook two springs.





3. Screw in the clutch cable adjuster ① all the way (to loosen the clutch), disconnect the clutch cable from clutch release pinion ② and take off the adjuster.



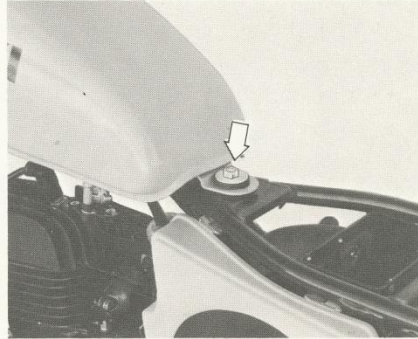
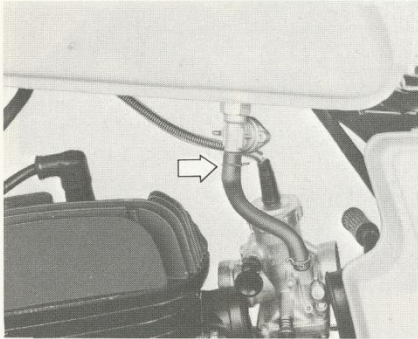
4. Remove carburetor.



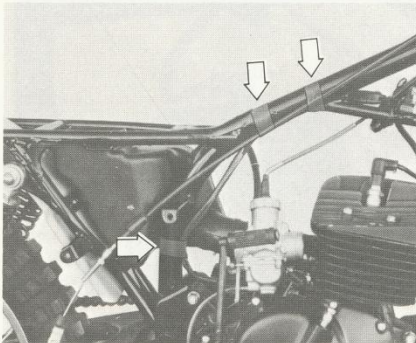
5. Take off seat.



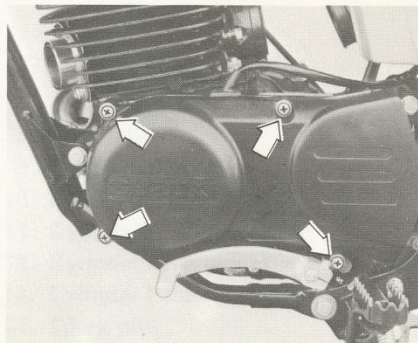
6. Take down fuel tank.



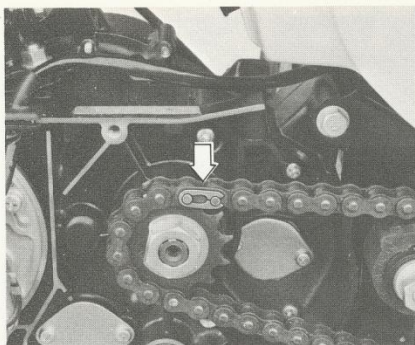
7. Disconnect lead wires.



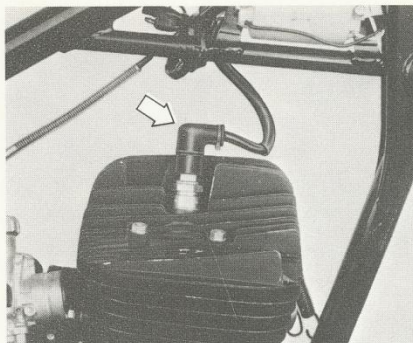
8. Take down left crank case cover.



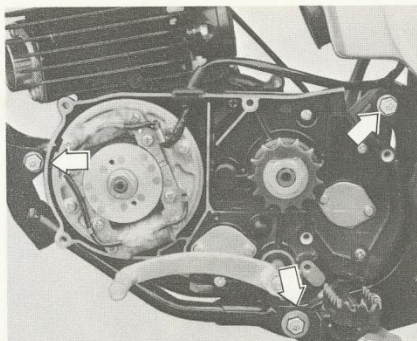
9. Remove drive chain.



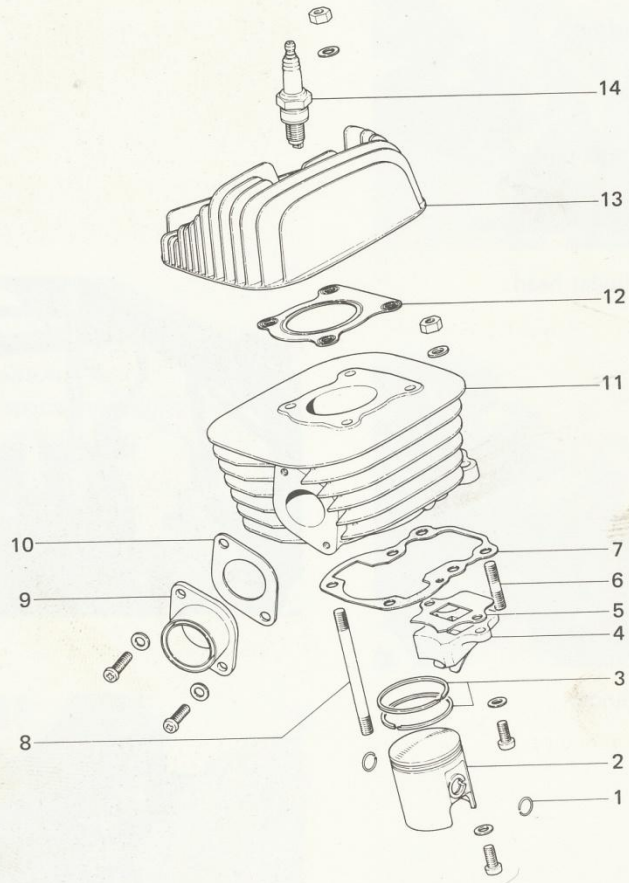
10. Disconnect spark plug cap.



11. Take down engine.



## CYLINDER HEAD, CYLINDER AND PISTON



1. Circlip
2. Piston
3. Piston ring
4. Reed valve
5. Gasket
6. Stud bolt
7. Cylinder gasket

8. Stud bolt
9. Exhaust pipe frange
10. Exhaust frange gasket
11. Cylinder
12. Cylinder head gasket
13. Cylinder head
14. Spark plug

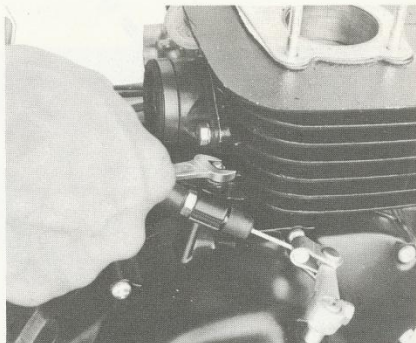


## DISASSEMBLY

1. Take down right frame cover.
2. Remove muffler.
3. Take off seat.
4. Take down fuel tank.
5. Disconnect spark plug cap.
6. Remove cylinder head.



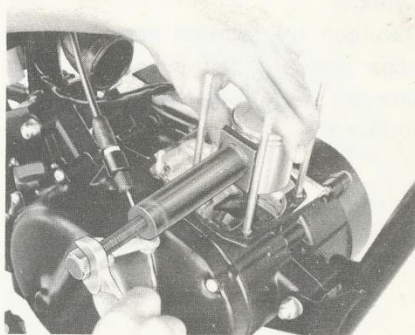
7. Remove carburetor.
8. Remove cylinder.



9. Remove piston pin clip.



10. Draw out piston pin and take off piston.  
Use special tool (09910-34510),  
Piston pin puller.



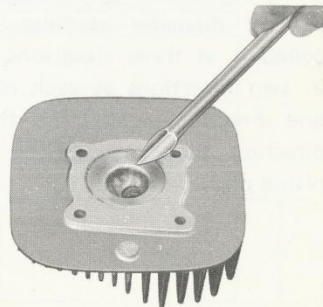
## INSPECTION

### Decarbonizing

#### Cylinder head

Observe the combustion chamber surface, on which more or less carbon will be found, and evaluate the amount and the shade of color of the carbon as a basis for diagnosing the fuel combustion.

Remove the carbon and clean the cylinder head.



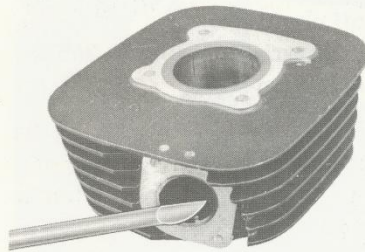
### **Piston**

Observe the carboned condition of the piston crown. This observation, together with the observed condition of the cylinder head, is an important guide for adjusting the carburetor. Decarbon the piston crown, taking care not to mar the metal.



### **Cylinder**

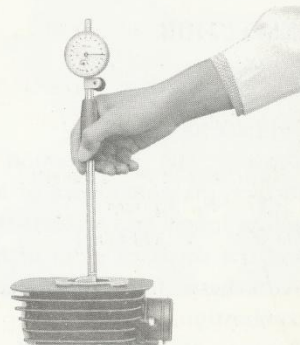
Decarbon the exhaust ports and the upper part of the cylinder, taking care not to damage the cylinder wall surface.



### **Piston-to-cylinder clearance**

Check the cylinder for wear, and determine the piston-to-cylinder clearance, as follows:

Using a cylinder gauge, take a total of six diameter readings on the cylinder, at three elevations, shown, in two directions at each elevation: one direction parallel and the other direction transverse to the axis of piston pin.



Of the six readings, compute the difference between the largest and the smallest reading. If this difference exceeds the limit, stated below, rebore the cylinder to the next oversize or replace it by a new one:

**Uneven wear limit: 0.1 mm (0.004 in.)**

**Note:**

*Three oversize pistons are available: 0.5, 1.0 and 1.5 mm. After reboring, be sure to lightly chamfer the port edges with a scraper and smoothen the chamfers with sandpaper.*

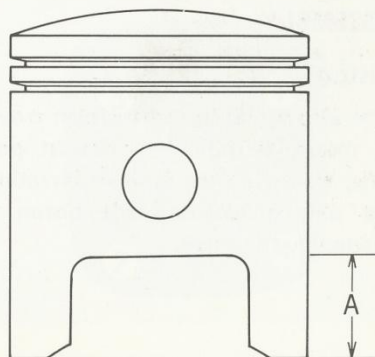
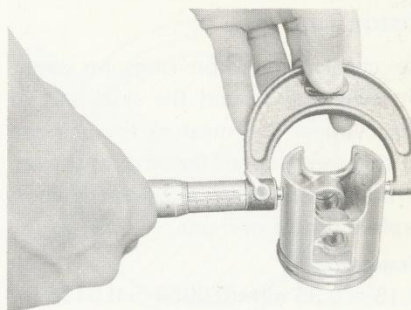
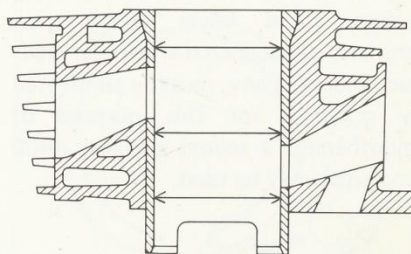
Piston-to-cylinder clearance is the difference between two diameter readings, one taken on the piston at the height "A" in the direction transverse to the axis of piston pin hole and the other taken on cylinder bore at about 5 mm (0.4 in.) above the exhaust port in the fore-aft direction.

**Height "A" 18 mm (0.71 in.)**

The clearance is prescribed to be within the following range:

**Piston-to-cylinder clearance**  
**0.050 ~ 0.080 mm**  
**(0.0020 ~ 0.0031 in.)**

To rebore the cylinder to the next oversize, check the available clearance with the replacement (oversize) piston and determine the amounts of stock to be removed by boring and honing to bring the resultant clearance into the range specified above.





### **Piston sanding**

A piston found scored at its sliding surface could lower engine performance or roughen the cylinder wall. Such scores, if any, must be eliminated by grinding; for this purpose of smoothening a scored surface, #400 sandpaper may be used.



### **Piston ring gap**

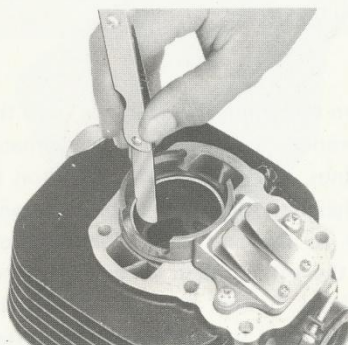
To check the piston rings for wear, fit each ring around the skirt part of the cylinder and measure the end gap in this condition of the ring, as shown. If the reading taken exceeds the limit, replace it by a new one.

#### **Standard**

0.15 ~ 0.35 mm (0.0059 ~ 0.0138 in.)

#### **Service limit**

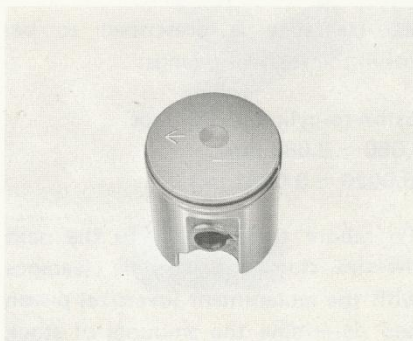
0.8 mm (0.0315 in.)



## **ASSEMBLY**

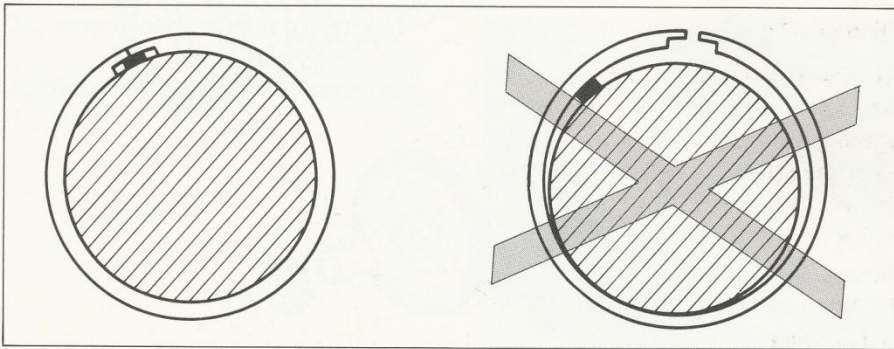
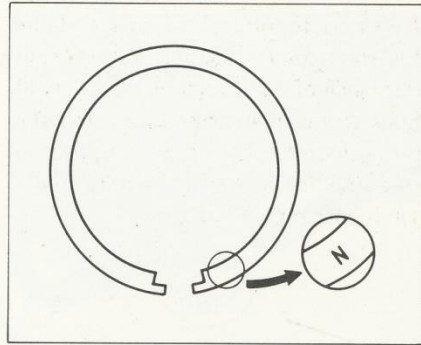
### **Piston**

The arrow mark on the piston crown is meant to point to exhaust port side, that is, in the forward direction. Be sure to position the piston as guided by this mark.



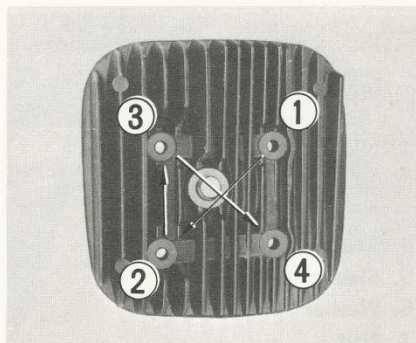
## Piston rings

The top (first) and bottom (second) rings are identical, there being no need to discriminate one from the other. Each ring has a punched mark at its end. The marked side comes on top, that is, the ring takes its position with the marked side facing the cylinder head. It is extremely important that, when the piston is fed into the cylinder, each ring in place should be so positioned as to hug the locating pin.

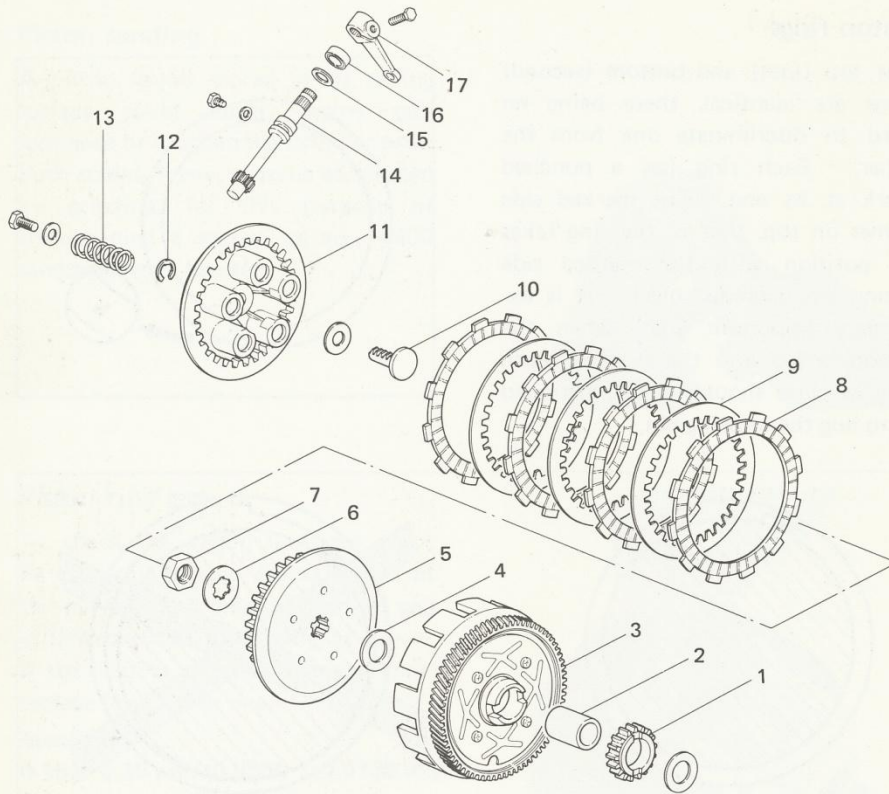


## Cylinder head

After setting the cylinder head in place, run in the cylinder head nuts with fingers, making each nut fingertight. Using the wrench, tighten the nuts sequentially and uniformly to equalize the pressure, moving the wrench from one nut to another in the order indicated by numbering.



# CLUTCH

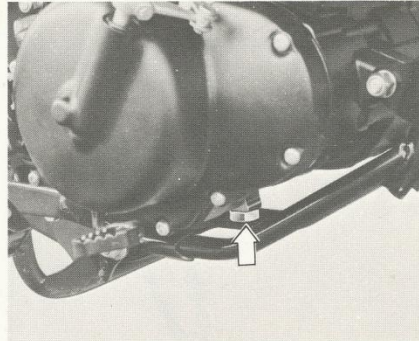


1. Kick starter driven gear
2. Spacer
3. Primary driven gear
4. Trust washer
5. Sleeve hub
6. Washer
7. Nut
8. Clutch drive plate
9. Clutch driven plate

10. Release rack
11. Clutch pressure plate
12. E ring
13. Spring
14. Pinion release
15. Washer
16. Oil seal
17. Release arm

## DISASSEMBLY

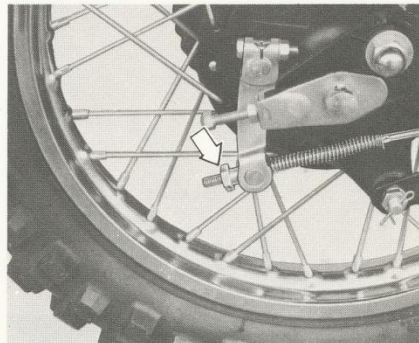
1. Drain out transmission oil.



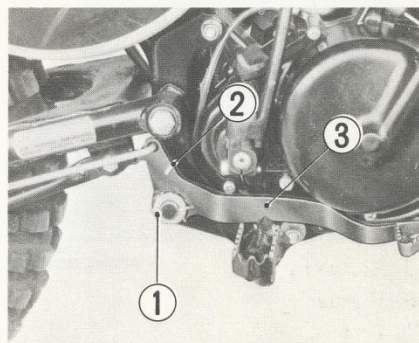
2. Disconnect clutch cable.

3. Remove kick starter lever.

4. Disconnect rear brake adjusting nut.

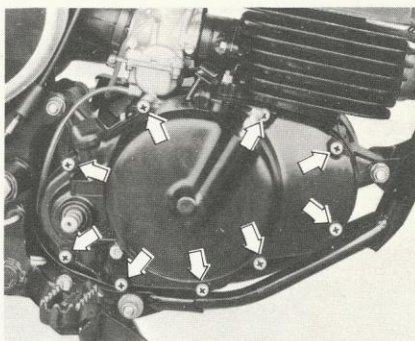


5. Pull off split pin ①, and pull out one end of brake pedal return spring ② from transmission case by pulling rear brake pedal ③ toward you.

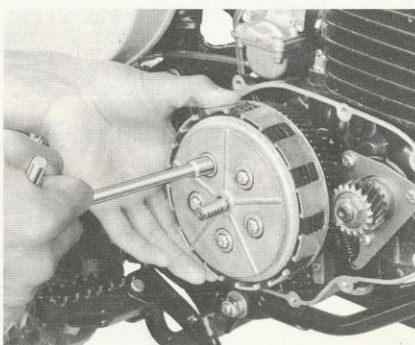




6. Remove right crankcase cover.



7. Lift out clutch pressure plate and clutch plates.



8. Remove clutch sleeve hub and primary driven gear.  
Use special tool  
(09920-53710),  
Clutch sleeve hub holder.



## INSPECTION

### Clutch plate

Because the clutch plates remain wet with oil in the normal operating condition disassembly will be found with little or no wear. After long use, however, the plates might exhibit more or less wear to give rise to a slipping tendency in the clutch. For this reason, it is essential that the plates be checked for thickness, using calipers, as shown, and be replaced if found to have worn down beyond the service limit.

### Drive plate

#### Standard

2.9 ~ 3.1 mm (0.114 ~ 0.122 in.)

#### Service limit

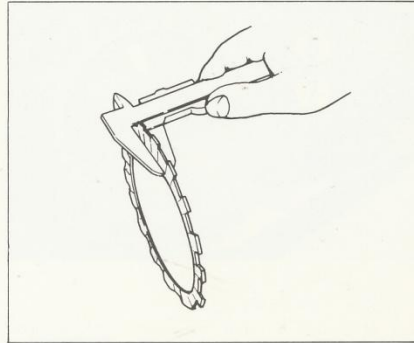
2.7 mm (0.106 in.)

### Driven plate

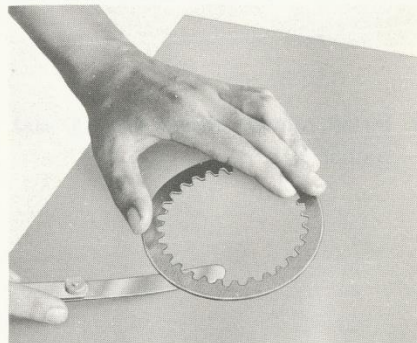
Check driven plates for flatness. Flatness readings are taken with a thickness gauge on the plate placed on the surface plate

#### Service limit

0.1 mm (0.004 in.)



Drive plate



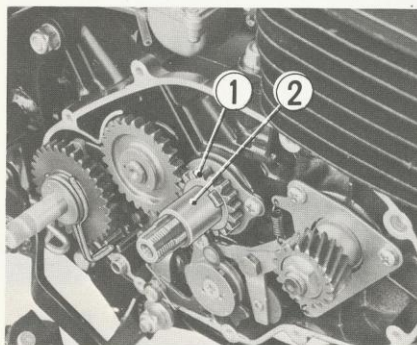
Driven plate

## ASSEMBLY

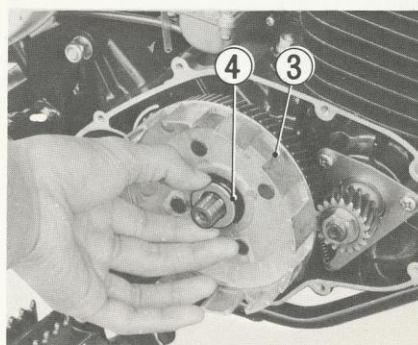
1. Install thrust washer.



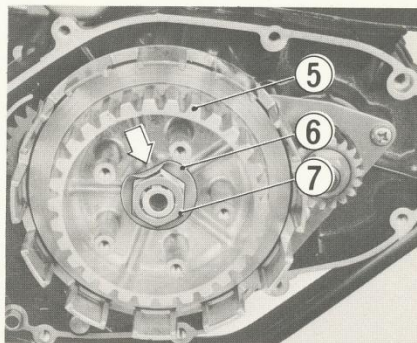
2. Install kick starter driven gear ① and spacer ②.



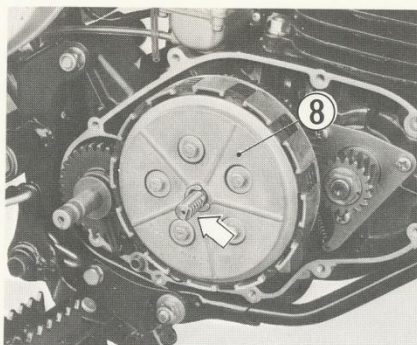
3. Install primary driven gear ③ and washer ④.



4. Install sleeve hub ⑤.
5. Install washer ⑥, screw in nut ⑦ and lock the nut by bending the tongue of washer.

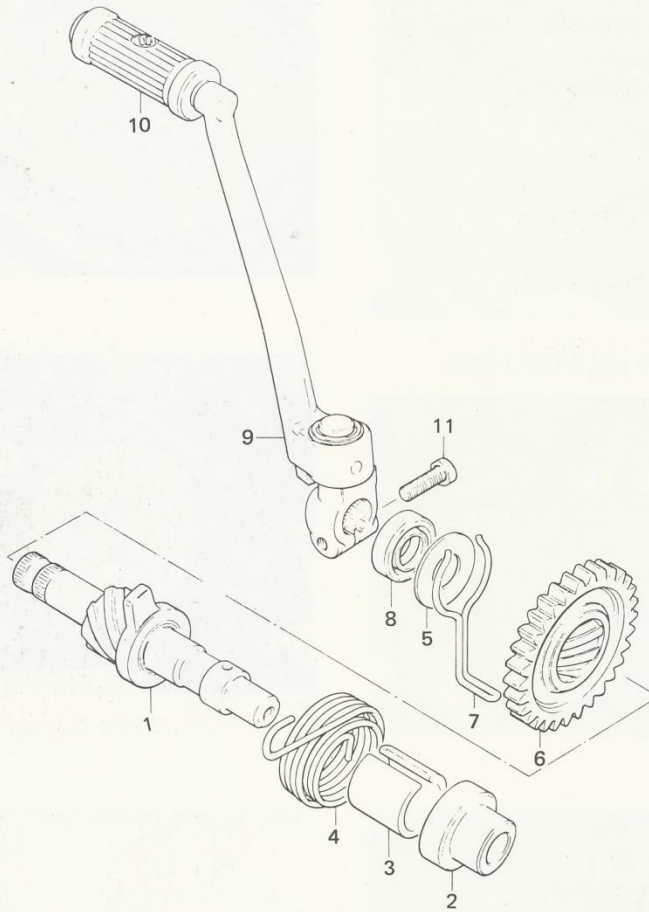


6. Install drive and driven plates.
7. Install pressure plate ⑧.
8. Fit gear of the clutch release pinion rod to rack of clutch release rod.





## KICK STARTER

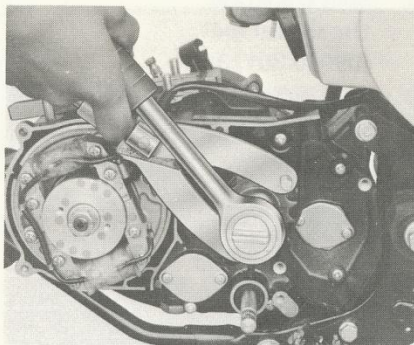


1. Kick starter shaft
2. Kick starter shaft holder
3. Shaft spring guide
4. Kick starter shaft spring
5. Kick starter shaft washer
6. Kick starter drive gear

7. Retainer spring
8. Oil seal
9. Kick starter lever
10. Rubber
11. Bolt

## DISASSEMBLY

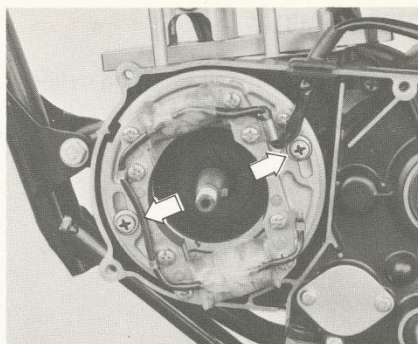
1. Remove cylinder head and cylinder.  
(See page 28 – 29)
2. Disconnect clutch cable.
3. Remove left crankcase cover.
4. Remove gearshift lever.
5. Remove drive chain.
6. Remove engine sprocket.  
Use special tool  
(09930-40113),  
Engine sprocket and flywheel holder.



7. Take out rotor.  
Use following special tools.  
Rotor remover shaft  
(09930-30101)  
Rotor remover attachment  
(09930-30210)

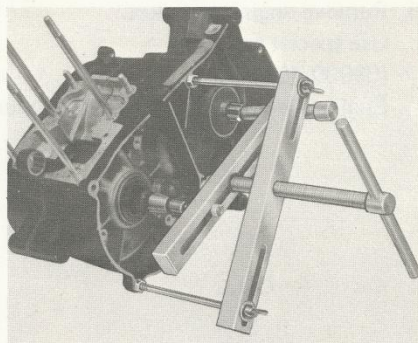


8. Take down stator.



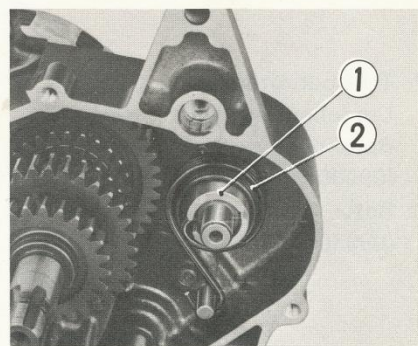
9. Take down engine.  
(See page 26)

10. Split crankcase.  
Use special tool  
(09910-80113),  
Crankcase separating tool.



11. Remove kick shaft spring guide①.

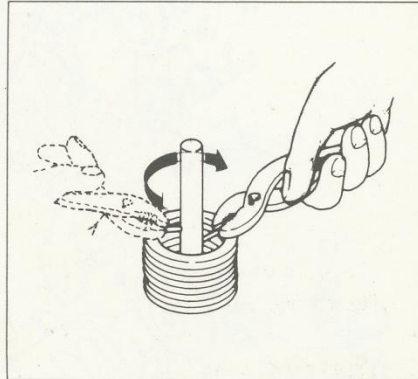
12. Remove kick return spring②.



## ASSEMBLY

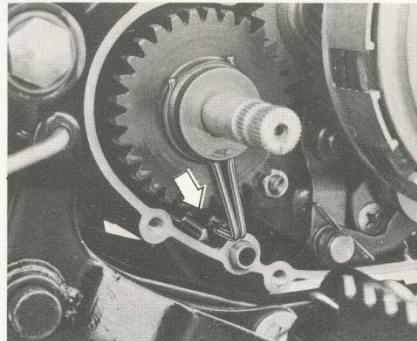
### Kick starter return spring

The kick starter return spring is to be installed after setting the shaft in the crankcase. To install this spring, hitch the inner end of the spring to the stopper provided on the crankcase, turn the shaft clockwise as viewed from kick lever side end until the shaft will not turn any further, and then rotate the spring about 180 deg. to insert the other end of the spring into the hole provided in kick starter shaft. Insert the spring guide, and retain it by fitting a circlip.



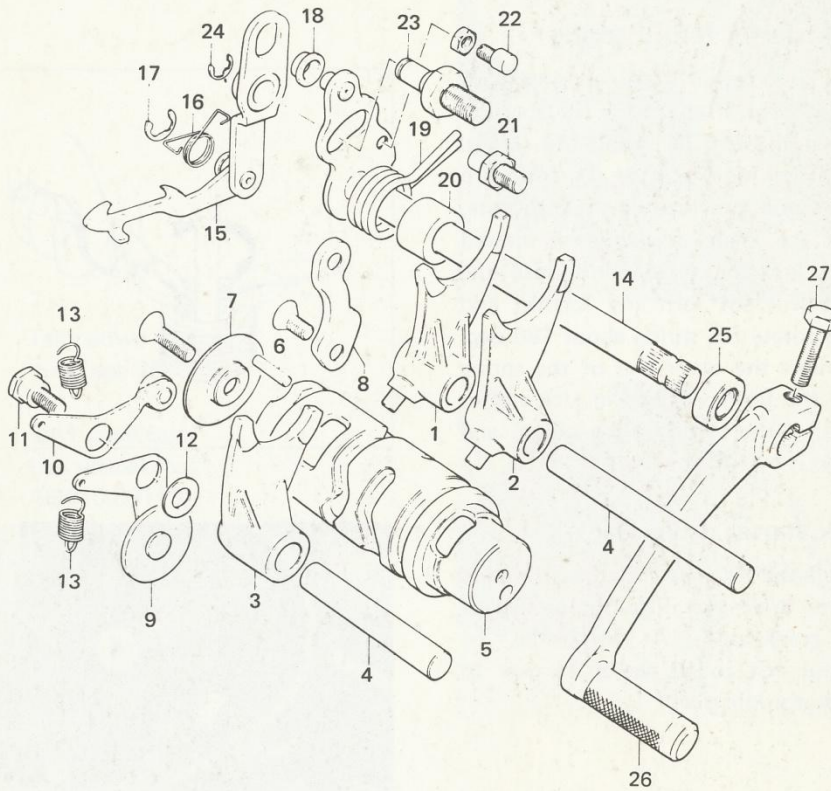
### Kick starter drive gear

Install the retainer spring of the kick starter drive gear into the groove of the crankcase. At this time, be careful not to fit the drive gear to the stator idle gear.

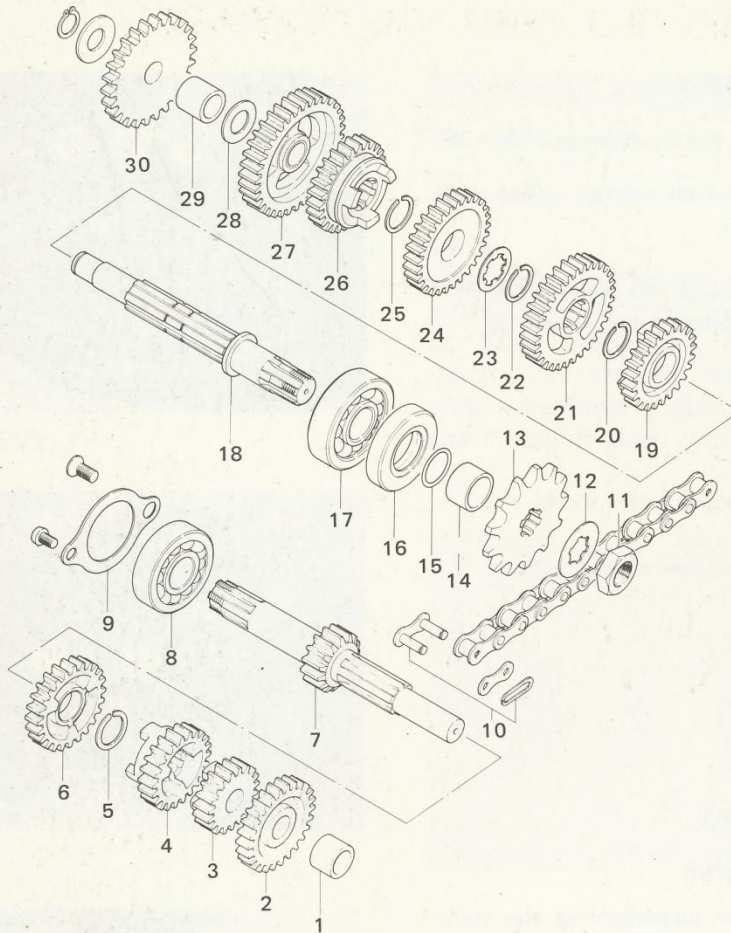




# GEARSHIFT MECHANISM AND TRANSMISSION



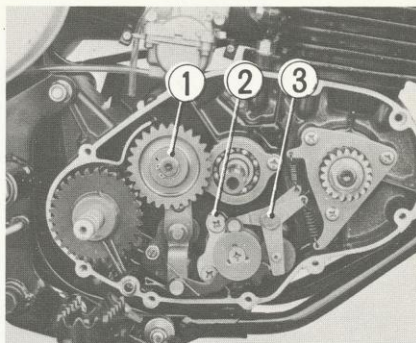
- |                              |                            |
|------------------------------|----------------------------|
| 1. 4th driven gearshift fork | 15. Gearshift pawl         |
| 2. 2nd driven gearshift fork | 16. Spring                 |
| 3. 3rd drive gearshift fork  | 17. E ring                 |
| 4. Gearshift shaft           | 18. Roller                 |
| 5. Gearshift cam             | 19. Spring                 |
| 6. Gearshift cam drive pin   | 20. Spacer                 |
| 7. Drive pin retainer        | 21. Stopper                |
| 8. Gearshift cam guide       | 22. Return spring set bolt |
| 9. Gearshift cam stopper     | 23. Gearshift arm stopper  |
| 10. Cam neutral stopper      | 24. E ring                 |
| 11. Bolt                     | 25. Oil seal               |
| 12. Washer                   | 26. Gearshift lever        |
| 13. Spring                   | 27. Bolt                   |
| 14. Gearshift shaft          |                            |



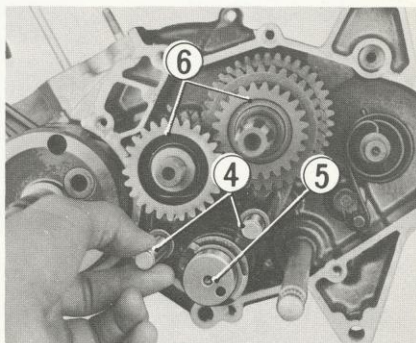
- |                     |                     |                            |
|---------------------|---------------------|----------------------------|
| 1. Spacer           | 11. Nut             | 21. 2nd driven gear        |
| 2. 5th drive gear   | 12. Washer          | 22. Circlip                |
| 3. 2nd drive gear   | 13. Engine sprocket | 23. Washer                 |
| 4. 3rd drive gear   | 14. Spacer          | 24. 3rd driven gear        |
| 5. Circlip          | 15. O ring          | 25. Circlip                |
| 6. 4th drive gear   | 16. Oil seal        | 26. 4th driven gear        |
| 7. Countershaft     | 17. Bearing         | 27. 1st driven gear        |
| 8. Bearing          | 18. Drive shaft     | 28. Washer                 |
| 9. Bearing retainer | 19. 5th driven gear | 29. Spacer                 |
| 10. Chain joint     | 20. Circlip         | 30. Kick starter idle gear |

## DISASSEMBLY

1. Remove clutch. (See page 35 – 36)
2. Remove kick starter. (See page 41 – 42)
3. Remove kick idle gear ①, gearshift cam-stopper ② and - guide ③.



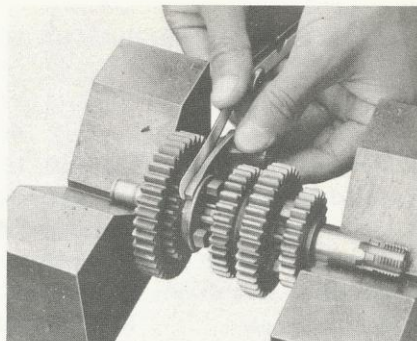
4. Remove gear shift fork ④.
5. Draw out gear shift cam ⑤.
6. Remove gears ⑥.



## INSPECTION

### Transmission

Just before disassembling the transmission in engine disassembly, inspect the gears inside the transmission for damage and for meshed condition, and check the clearance of each shift fork in the groove. There are three forks to be checked for clearance: use the **thickness gauge** (Special Tool No. 09900-20804) as shown.





If a shift fork exhibiting an excessive clearance is re-used, the gear will tend to come off the engagement in the subsequent service, and therefore must be replaced. If the clearance with the replacement shift fork is noted to be still too large to come within the standard range, then the gear too must be replaced.

Fork and gear	Standard	Limit
3rd 4th 5th	0.15 – 0.25 mm (0.006 – 0.010 in.)	0.45 mm (0.018 in.)

Shift fork clearance specification.

**Note:**

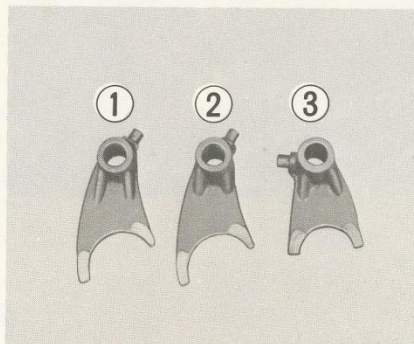
*Clearance readings are valid only when the shift forks are checked as fitted into their respective gears. For details, refer to the cross sectional view of the transmission given in page 45.*

**ASSEMBLY**

**Gearshift fork**

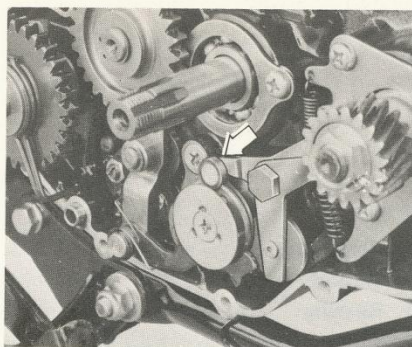
There are 3 pcs. of the gear shift fork and each gear shift fork has a different shape.

- ① 4th driven gear shifting fork
- ② 2nd driven gear shifting fork
- ③ 3rd drive gear shifting fork



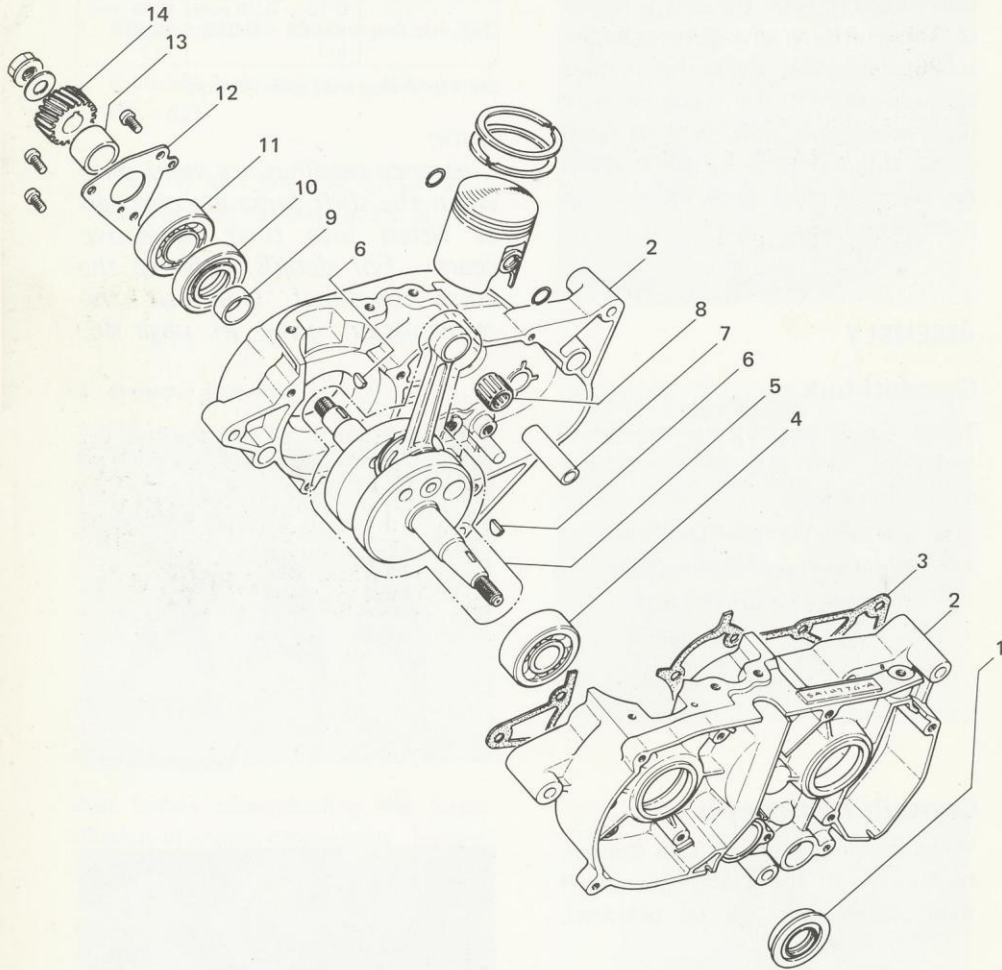
**Gearshift cam stopper**

When installing gearshift cam stopper, be sure to fit the stopper to cut-off part of the cam (neutral position).





## CON-ROD, CRANKSHAFT & CRANKCASE

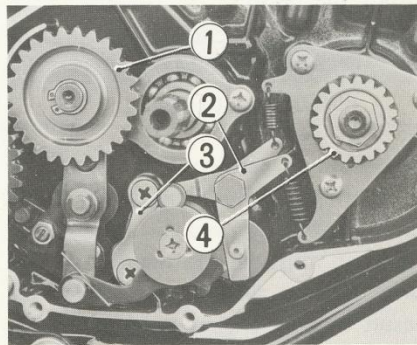


1. Oil seal
2. Crankcase
3. Gasket
4. Bearing
5. Crankshaft
6. Key
7. Crank pin

8. Bearing
9. Crankshaft spacer
10. Oil seal
11. Bearing
12. Bearing retainer
13. Primary drive gear spacer
14. Primary drive gear

## DISASSEMBLY

1. Take down engine. (See page 23 – 26)
2. Remove cylinder head, cylinder and piston. (See page 28 – 29)
3. Remove clutch. (See page 35 – 36)
4. Remove kick idle gear ①, gearshift cam stopper ②, gearshift cam guide ③ and primary drive gear ④.



5. Split crankcase. (See page 41 – 42)
6. Draw out crankshaft.

## INSPECTION

### Crankshaft

Set the crankshaft on "V" blocks, as shown, and, with a dial gauge arranged in the manner indicated, take a runout reading on the shaft on each side. This reading is the crankshaft deflection, which is required to be within this limit:

Crankshaft deflection limit
0.05 mm (0.002 in.)

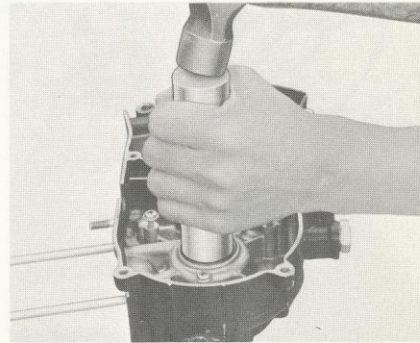
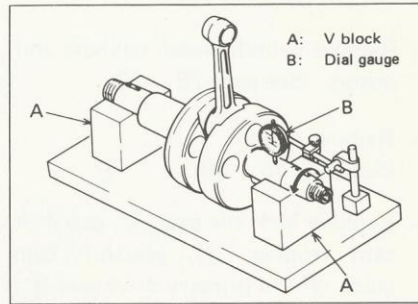
A deflection reading is a measure of straightness of the crankshaft. If the crankshaft is bowed to exceed the limit, it must be replaced by a new one. Using such a crankshaft will result in poor engine performance or, for worse, in an engine failure.

### Oil seals

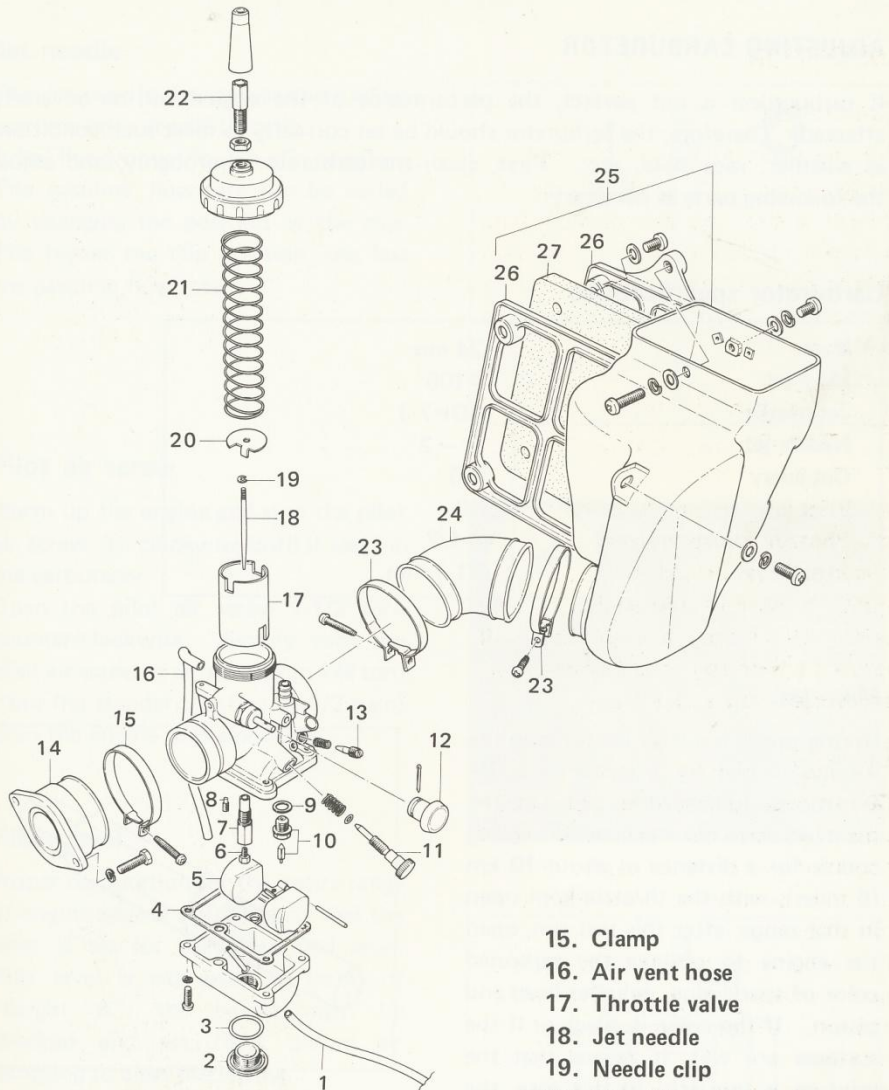
Do not re-use damaged oil seals. Make sure that each oil seal is in good condition, with its lip absolutely free of any damage or of evidence of distortion.

It is a good practice to discard all oil seals removed in engine disassembly and use new oil seals in engine reassembly.

When fitting an oil seal, be sure to have its lip part lightly coated with SUZUKI SUPER GREASE "A" and to install it with the **oil seal installing tool**. With this tool, the oil seal can be held true and square as it goes into its position.



## CARBURETOR AND AIR CLEANER



- 1. Over flow hose
- 2. Drain plug
- 3. Drain plug gasket
- 4. Float chamber gasket
- 5. Float
- 6. Main jet
- 7. Needle jet

- 8. Pilot jet
- 9. Valve seat gasket
- 10. Needle valve
- 11. Throttle stop screw
- 12. Holder
- 13. Pilot air screw
- 14. Intake pipe

- 15. Clamp
- 16. Air vent hose
- 17. Throttle valve
- 18. Jet needle
- 19. Needle clip
- 20. Throttle spring seat
- 21. Throttle valve return spring
- 22. Throttle cable adjuster
- 23. Clamp
- 24. Air inlet hose
- 25. Air cleaner
- 26. Holder
- 27. Element



## ADJUSTING CARBURETOR

If carburetion is not perfect, the performance of the engine will be adversely affected. Therefore, the carburetor should be set correctly to meet such conditions as weather, race field, etc.. First, clean the carburetor thoroughly, and adjust the following parts as necessary:

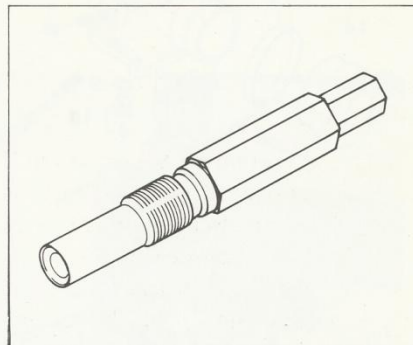
### Carburetor specifications

Bore	24 mm
Main jet	#105
Jet needle	4DH7-3
Needle jet	O - 2
Cut-away	3.0
Pilot jet	40
Pilot air adjusting screw	1-1/2
Float level	21.1 mm

### Main jet

During operation, this jet controls the supply of fuel for a range from 3/4 throttle to full throttle. To test the main jet, drive the machine on a racing course for a distance of about 10 km (6 miles), with the throttle kept open in that range; after this test run, open the engine to observe the carboned color of spark plug, cylinder head and piston. If the color is black or if the surfaces are wet, it means that the mixture is too rich: in this case, the main jet must be replaced by the one with a smaller number.

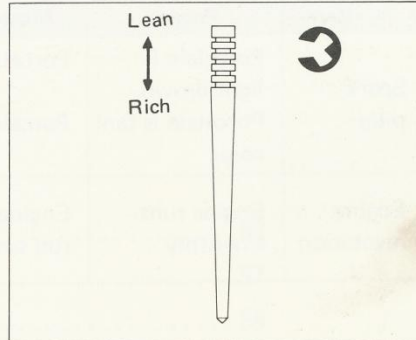
If a grey-brownish or whitish color is noted, it means that the mixture is too lean: in this case, a main jet with a larger number is needed.



### Jet needle

The jet needle determines the fuel-air mixture ratio at half-throttle.

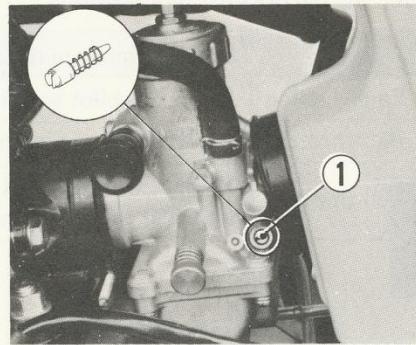
It has five grooves for the clip position. The gasoline flow rate can be varied by changing the position of the clip. The higher the clip position, the less the gasoline flow rate.



### Pilot air screw

Warm up the engine and turn the pilot air screw ① clockwise until it seats in the carburetor.

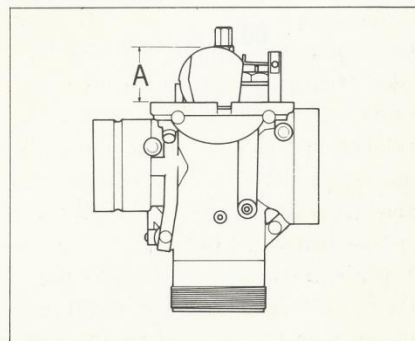
Open the pilot air screw 1-1/2 turn counter-clockwise. Slowly turn the pilot air screw in or out within 1/4 turn from the standard setting (1-1/2 turn) until the engine runs smoothly.



### Float level

Proper carburetion for the entire range of engine speeds assumes first that the float is set for the prescribed level. This level is expressed in terms of "height A"; the height must be checked and set right before attempting to alter the jetting.

Hold the removed carburetor upside down, taking care not to allow float arm pin and arm to slip off. Measure the distance A with calipers. If the caliper reading is off the specification (stated on next page), bend the tongue.



### How to judge carburetion

Item	Proper	Mixture is rich	Mixture is lean
Spark plug	Porcelain is light brown Porcelain is tan color	Porcelain is sooty Porcelain is oily	Porcelain is whitish Porcelain is burned away
Engine revolution	Engine runs smoothly	Engine does not run smoothly	Engine rpm fluctuates even if the throttle grip is held steady

### Over all carburetor adjustment

Item	When mixture is rich	When mixture is lean
Engine idling	Screw out pilot air screw	Screw in pilot air screw
Half-throttle	Raise needle clip position	Lower needle clip position
Full-throttle	Replace with main jet having a smaller calibration number	Replace with main jet having a larger calibration number

# CHASSIS

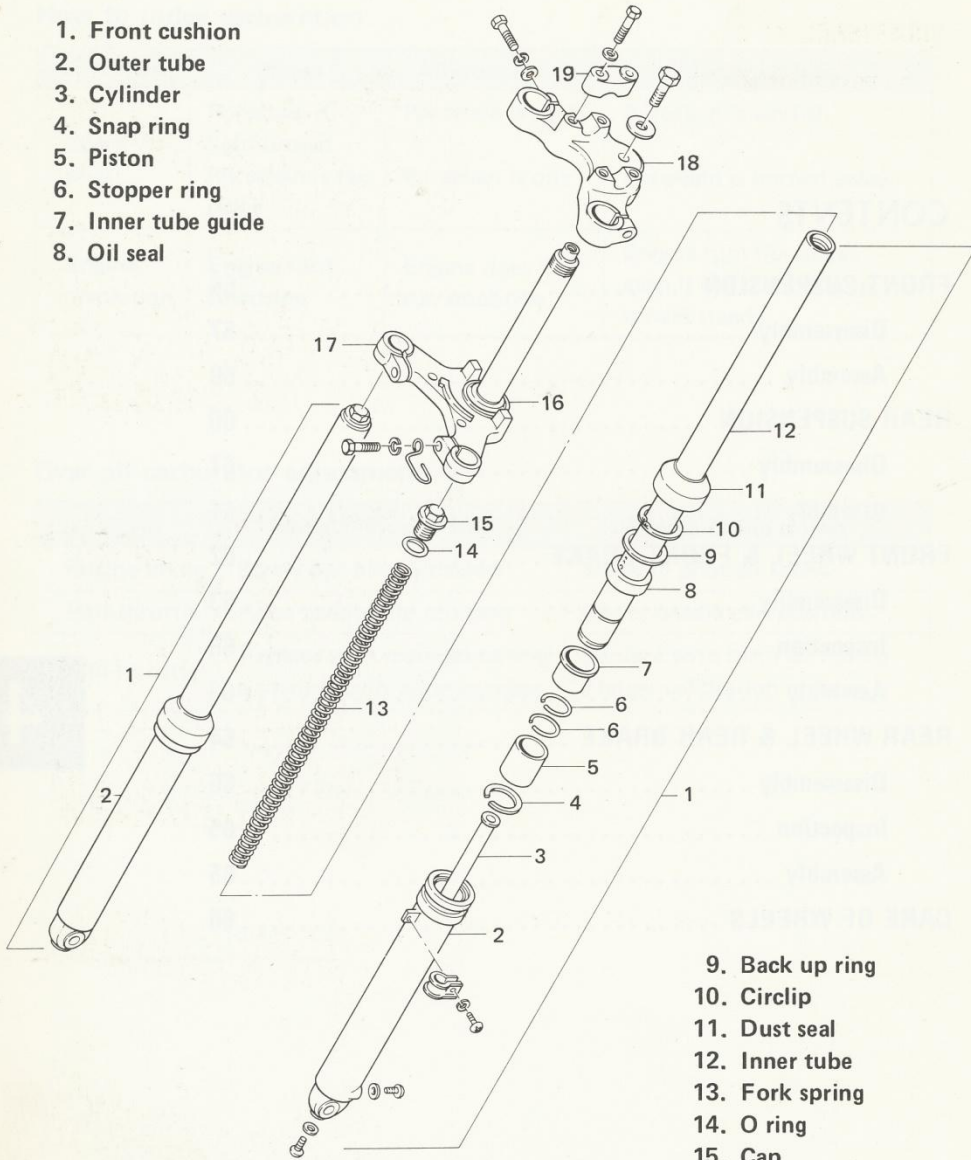
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# FRONT SUSPENSION

- 1. Front cushion
- 2. Outer tube
- 3. Cylinder
- 4. Snap ring
- 5. Piston
- 6. Stopper ring
- 7. Inner tube guide
- 8. Oil seal



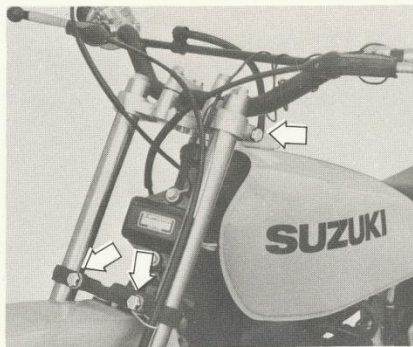
- 9. Back up ring
- 10. Circlip
- 11. Dust seal
- 12. Inner tube
- 13. Fork spring
- 14. O ring
- 15. Cap
- 16. Outer race
- 17. Steering stem
- 18. Steering stem head
- 19. Handlebar holder

## DISASSEMBLY

1. Remove number plate.



2. Remove inner tube head bolt and drain plug, and drain oil.  
(See page 16)

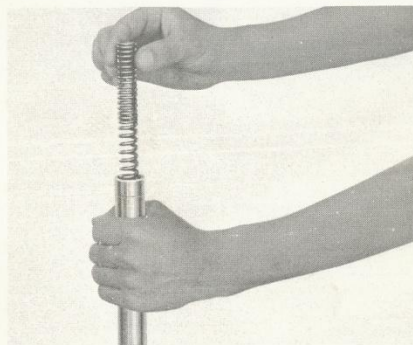


3. Loosen upper and lower bracket clamp bolts.

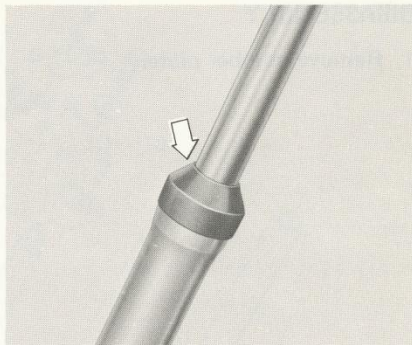
4. Pull out front axle and take down front wheel.

5. Pull out front forks.

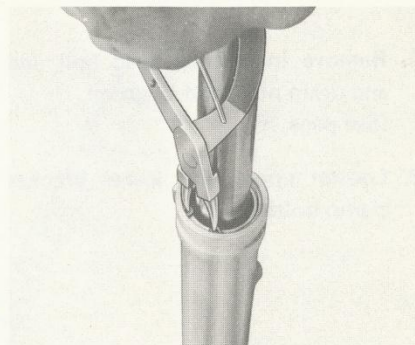
6. Remove springs.



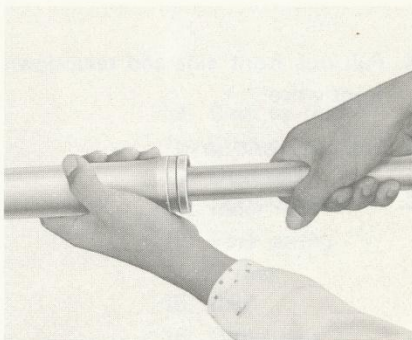
7. Remove oil seals.



8. Take off clips.



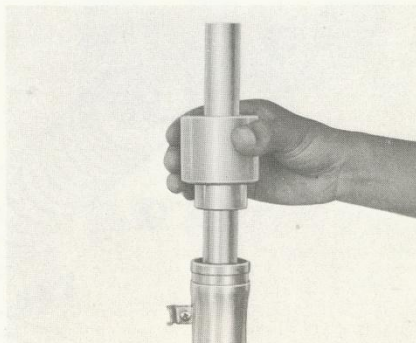
9. Pull out inner tube from outer tube.



## ASSEMBLY

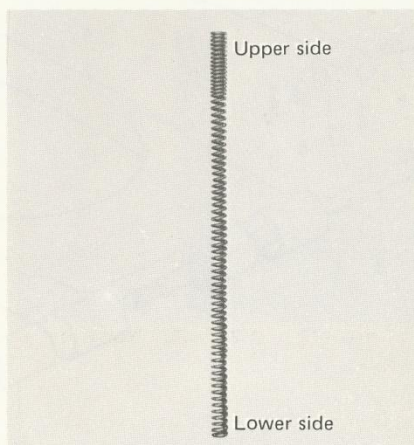
### Oil seal

Be sure to replace the oil seals after each disassembly. This is effected as follows: Remove circlip; make sure there is no oil remaining; warm up outer tube by applying heat to its outer surface; and draw out the oil seal. After setting the inner tube in place, install the new oil seal with **oil seal installing tool** (Special Tool No. 09940-54610).



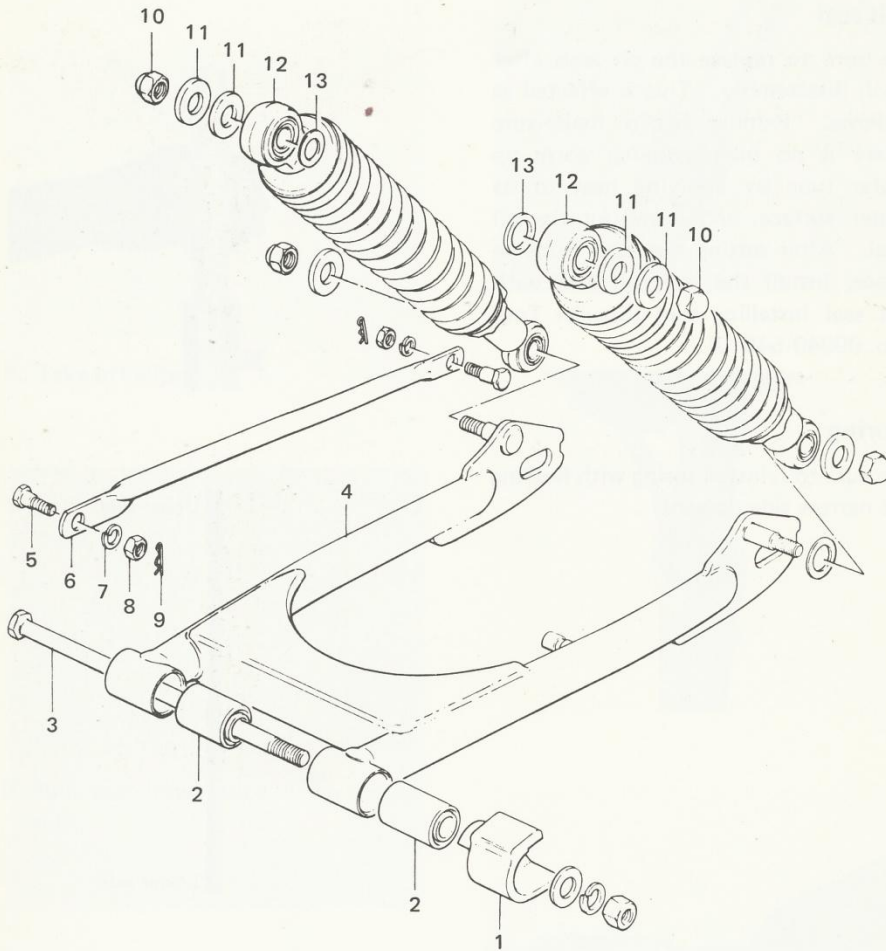
### Spring

Be sure to reinstall spring with holding its narrow side upward.





## REAR SUSPENSION

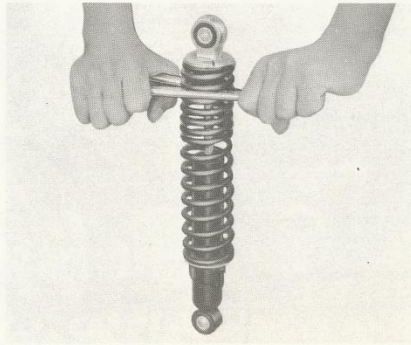


- 1. Chaine defense buffer
- 2. Bushing
- 3. Pivot shaft
- 4. Rear swinging arm
- 5. Bolt
- 6. Rear torque link
- 7. Washer

- 8. Bolt
- 9. Clip
- 10. Nut
- 11. Washer
- 12. Rear shock absorber
- 13. Washer

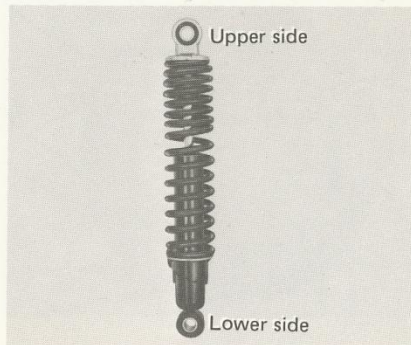
## DISASSEMBLY

1. Take down the two shock units from the machine.
2. Push down the coil spring to compress it.
3. Remove coil spring seat.

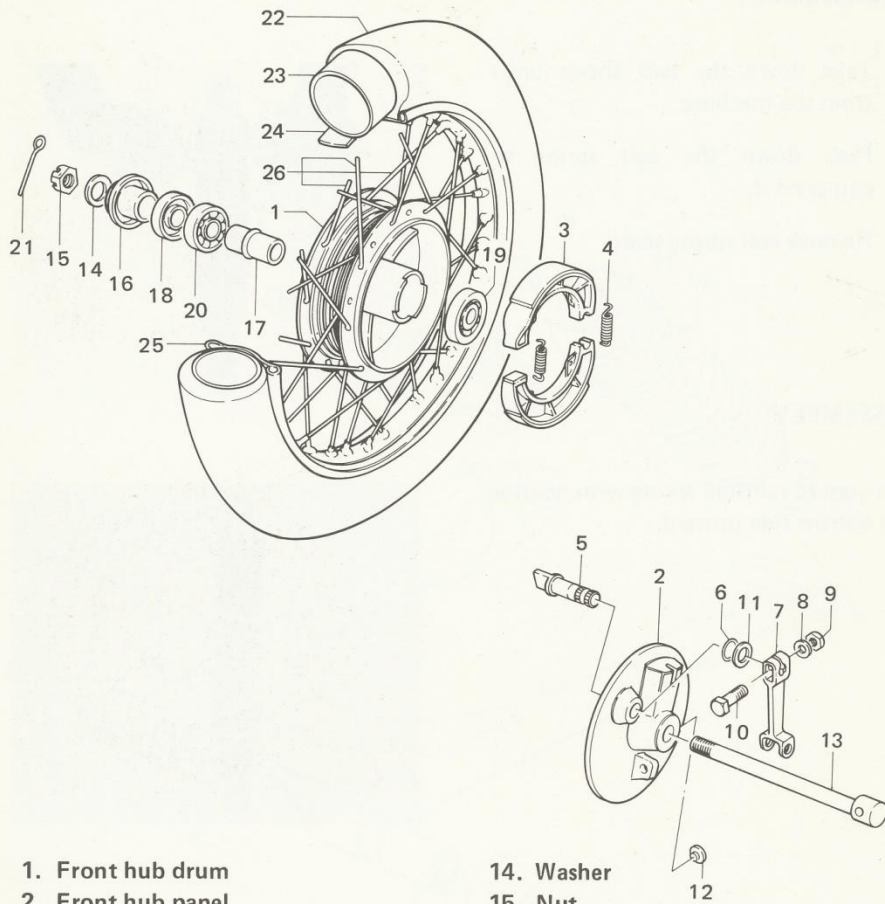


## ASSEMBLY

Be sure to reinstall spring with holding its narrow side upward.



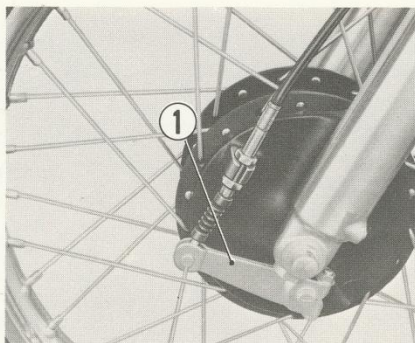
## FRONT WHEEL AND FRONT BRAKE



- |                                  |                          |
|----------------------------------|--------------------------|
| 1. Front hub drum                | 14. Washer               |
| 2. Front hub panel               | 15. Nut                  |
| 3. Brake shoe                    | 16. Spacer               |
| 4. Brake shoe spring             | 17. Spacer               |
| 5. Brake cam shaft               | 18. Oil seal             |
| 6. O ring                        | 19. Bearing              |
| 7. Brake cam lever               | 20. Bearing              |
| 8. Washer                        | 21. Cotter pin           |
| 9. Nut                           | 22. Tire                 |
| 10. Brake cam lever bolt         | 23. Inner tube           |
| 11. Dust seal washer             | 24. Inner tube protector |
| 12. Speedometer pinion hole plug | 25. Wheel rim            |
| 13. Front axle                   | 26. Spoke set            |

## DISASSEMBLY

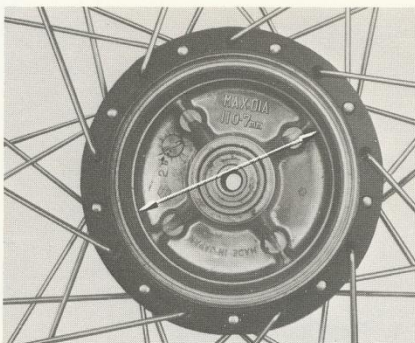
1. Loosen upper lock nut fully, and disconnect front brake cable from front brake cam lever ① with pullin up the lever.
2. Pull off split pin and remove axle nut.
3. Draw out front axle and take down front wheel.



## INSPECTION

A wear limit is specified for the drum of brake. The limit is indicated inside the drum, as shown. Upon disassembling the brake for servicing, be sure to check the drum I.D., and if the reading is noted to be equal to or in excess of the limit, replace the drum.

Front brake drum I.D.
Standard 110 mm (4.33 in.)
Wear limit 110.7 mm (4.36 in.)



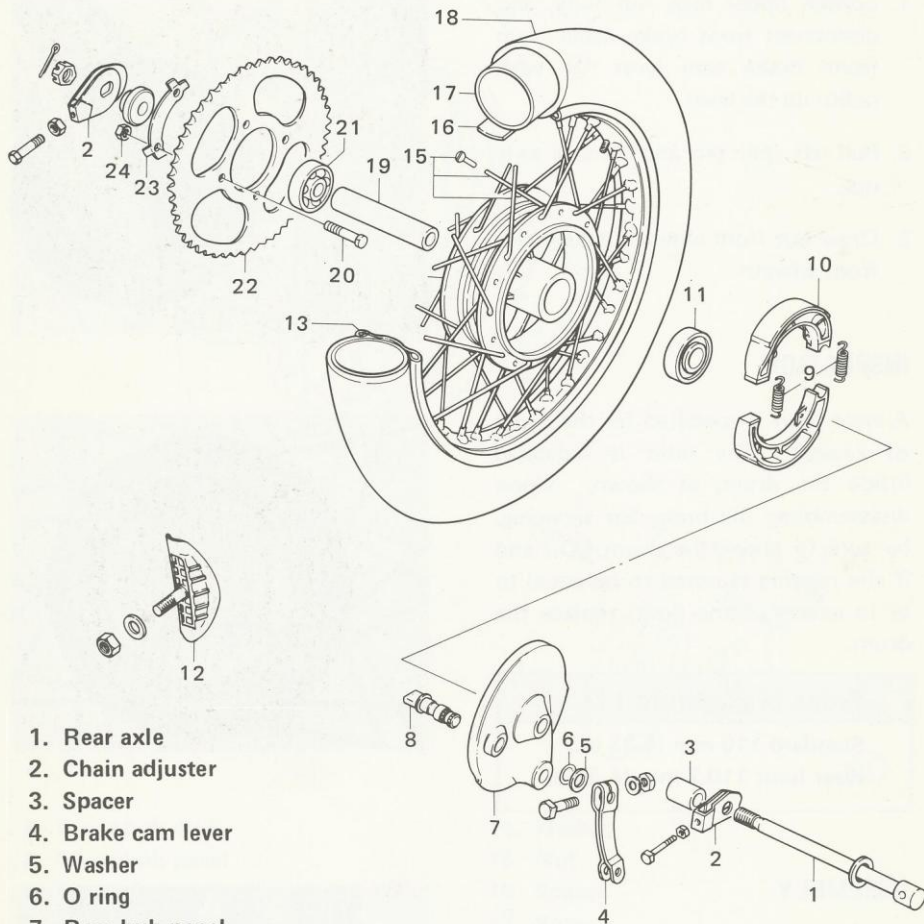
## ASSEMBLY

Fit tongue of front fork to groove of front brake panel.





# REAR WHEEL AND REAR BRAKE

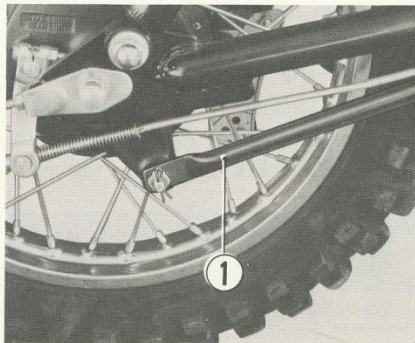


1. Rear axle
2. Chain adjuster
3. Spacer
4. Brake cam lever
5. Washer
6. O ring
7. Rear hub panel
8. Brake cam shaft
9. Brake shoe spring
10. Brake shoe
11. Rear hub bearing
12. Bead stopper
13. Wheel rim
14. Rear hub drum
15. Spoke set
16. Inner tube protector

17. Inner tube
18. Tire
19. Rear hub bearing spacer
20. Bolt
21. Rear hub bearing
22. Rear sprocket
23. Washer
24. Nut

## DISASSEMBLY

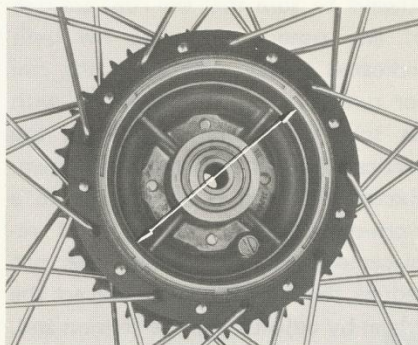
1. Disconnect rear brake adjusting nut.
2. Remove torque link ① from rear brake panel.
3. Remove drive chain.
4. Pull off split pin, screw out axle nut, draw out rear axle and take down rear wheel.



## INSPECTION

Refer to "INSPECTION" on page 63.

Rear drum I.D.
Standard 110 mm (4.33 in.)
Wear limit 110.7 mm (4.36 in.)



## ASSEMBLY

Reverse sequence of "DISASSEMBLY" above.

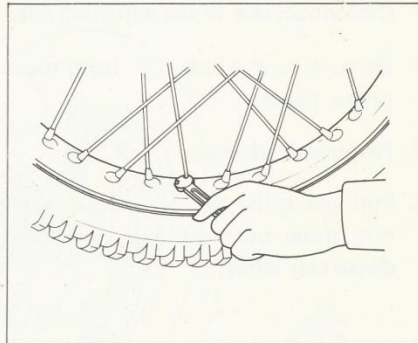
## CARE OF WHEELS

### RETIGHTENING SPOKE NIPPLES

After each race, check the nipples for tightness and, as necessary, retighten them to the torque value indicated below. Driving the machine with these nipples loose will damage not only the spokes but also the rim.

#### Tightening torque for spoke nipples:

20 ~ 30 kg-cm (1.4 ~ 2.2 lb-ft)



### RIM RUNOUT

Always be sure that the rims are free of any runout exceeding the limit indicated below. To check the rim for runout, use a dial gauge **A** with its spindle pointed squarely to the vertical flat of the rim, as shown. Excessive runout is usually due to a worn-down wheel bearing. If replacement of the bearing does not reduce the runout, try to correct the wheel by adjusting spoke tension and, if this should prove ineffective, then the rim must be replaced.

#### Standard rim runout:

1 mm (0.039 in.)

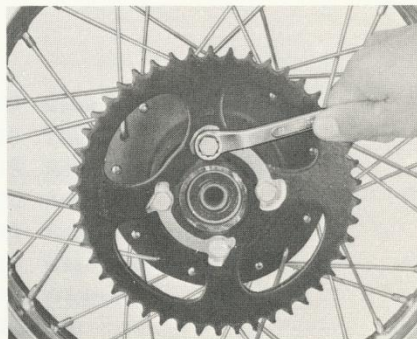
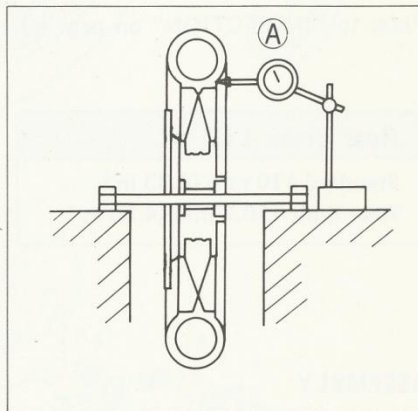
Runout limit: 2 mm (0.079 in.)

### RETIGHTENING THE REAR SPROCKET SCREW

After each race, retighten the rear sprocket screw to this torque value:

#### Tightening torque for rear sprocket screw:

250 ~ 400 kg-cm (18.1 ~ 29.0 lb-ft)



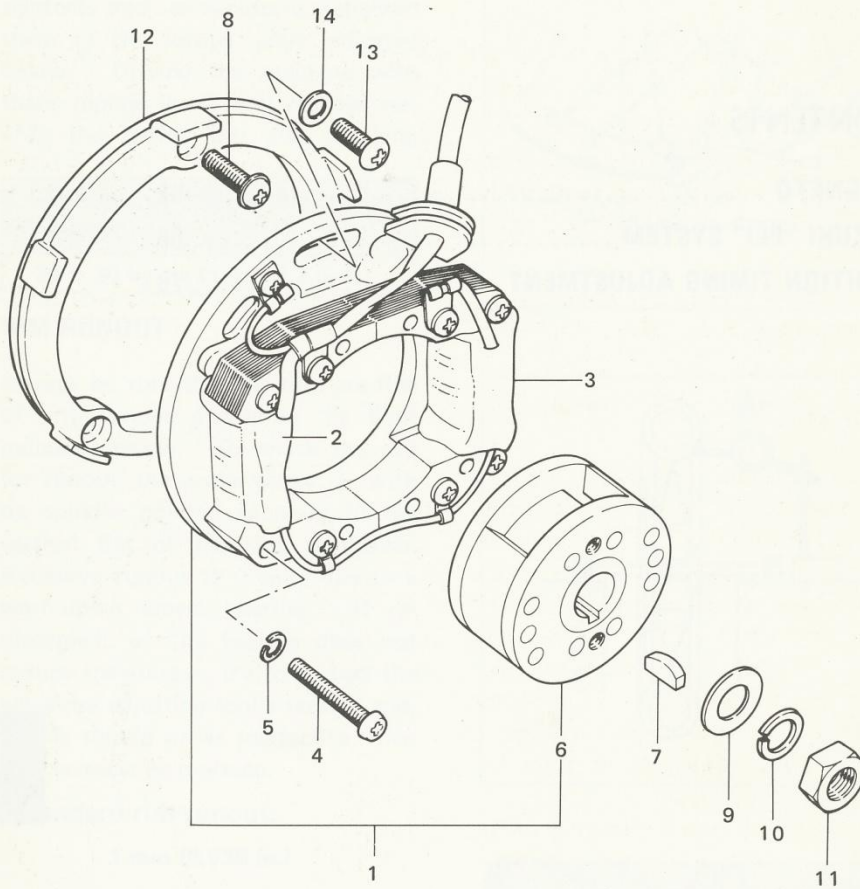
# ELECTRICAL

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IGNITION TIMING ADJUSTMENT .....	70



# MAGNETO



- |                     |                            |
|---------------------|----------------------------|
| 1. Magneto assembly | 8. Screw                   |
| 2. Pulser coil      | 9. Washer                  |
| 3. Primary coil     | 10. Lock washer            |
| 4. Screw            | 11. Nut                    |
| 5. Lock washer      | 12. Magneto stator adapter |
| 6. Rotor            | 13. Screw                  |
| 7. Key              | 14. Washer                 |

## SUZUKI "PEI" SYSTEM

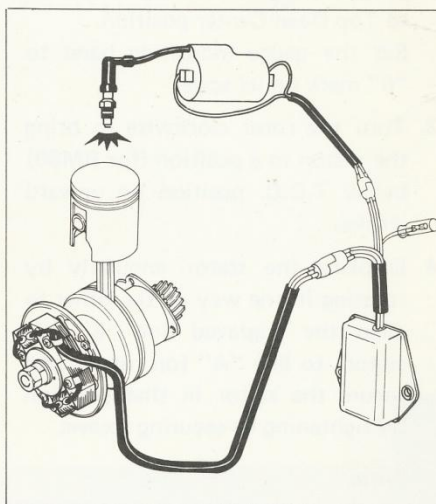
In RM80 igniting energy is supplied to the spark plug through electronically triggered capacitor discharge in a system comprising the magneto, CDI unit, ignition coil and spark plug. Three outstanding advantages of this proprietary system are:

1. High voltage induced in the secondary winding of the ignition coil is stable over the entire range of engine speeds, so that the igniting performance of the plug is dependable, regardless of whether the engine is running fast or slow.
2. There is no need of so frequently checking and adjusting the ignition system components as in the conventional system based on a breaker mechanism for make-break contacting action. Make-break action is electronic in the SUZUKI PEI system.
3. Ignition timing is automatically advanced in a manner best suited to the operating characteristic of the engine.

### CDI UNIT

The main components of this unit are: 1) capacitor, 2) an SCR (silicon controlled rectifier) element, and 3) timing circuit for triggering the gate of the SCR. The capacitor gets charged with the current supplied from the magneto, and discharges the stored current through the primary winding of the ignition coil when its gate is triggered by a pulse issuing forth from the timing circuit.

The CDI unit may be likened to the conventional contact breaker in that it electrically actuates the ignition coil. This actuation, however, is timed electronically.



### IGNITION COIL

An ignition coil specially designed for use with the CDI unit in the SUZUKI PEI system is provided as an individual unit mounted separate from the CDI unit. A characteristic feature of this coil is that the burst of sparking energy generated in its secondary side persists slightly longer for assuring positive ignition.

## IGNITION TIMING ADJUSTMENT

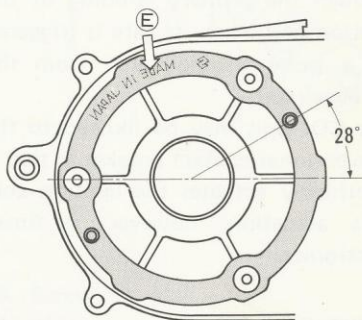
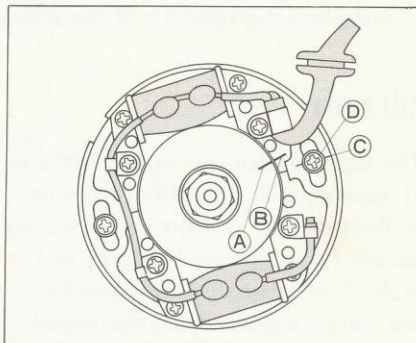
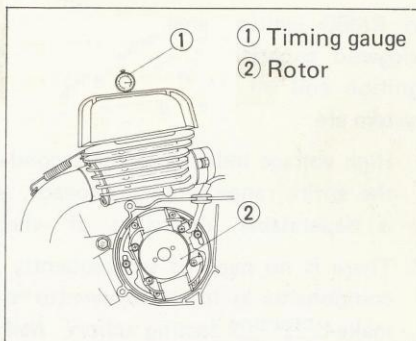
Unlike conventional contact-breaker ignition systems, the PEI system maintains its original ignition timing until the system becomes disturbed as in engine overhauling: ignition timing does not change at all as long as the system remains undisturbed.

The following adjusting procedure is actually a procedure to be followed in remounting the magneto stator to re-establish the specified ignition timing:

1. Install the **timing gauge** (Special Tool No.09931-00112) in the spark plug hole, as shown.
2. Turn the rotor while observing the gauge indication to bring the piston to Top Dead Center position.  
Set the gauge indicating hand to "0" mark on its scale.
3. Turn the rotor clockwise to bring the piston to a position (for RM80) below T.D.C. position on upward stroke.
4. Displace the stator angularly by rotating it one way or the other to align the engraved line "B" (on stator) to line "A" (on rotor), and secure the stator in that position by tightening its securing screws.

**Note:**

*If the timing gauge is not available, the foregoing procedure may be substituted for by a simplified method, which differs essentially in that the engraved line "C" (on stator) be aligned to the center of screw "D" and the stator be secured in that position.*



How to install stator adapter: be sure to set the adapter shown above. **E** indicates embossed mark on the reverse side of the adapter.

# SERVICE DATA

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## **TROUBLESHOOTING**

There can be various causes for problems which might occur on the motorcycle. The following procedures may be used to troubleshoot possible trouble spots.

### **ENGINE WILL NOT START**

#### **Fuel system**

1. Check that there is sufficient gasoline in the fuel tank.
2. Make sure the fuel petcock and fuel tank breather hose are not clogged.

#### **Spark plug**

1. Check that the spark plug gap has not been bridged and short circuited by carbon.
2. Check that the plug is not fouled with wet gasoline or oil.
3. Clean the spark plug gap and lay the connected spark plug against the cylinder head. Kick over the engine and see if a spark is produced. If not, replace the spark plug or check your ignition system.
4. To check the ignition system, remove the spark plug cap from the high tension wire and hold it about 7 mm (0.28 in.) from the cylinder head (ground). Kick the engine over and see if a spark jumps this gap. If so, the system is functioning and the problem is probably in the spark plug cap. If this does not produce a spark, have your Suzuki dealer check your ignition system.

### **CLUTCH SLIPPAGE**

1. If there is no clutch lever play, adjust the cable adjuster for 4 mm (0.16 in.) play.
2. The clutch will also slip if the plates are worn or the springs have weakened. If so, these items must be replaced.

### **EXCESSIVE ENGINE VIBRATION**

1. Loose engine mounting bolt.
2. Crack in the frame.

### **ENGINE OVERHEATS**

1. Carburetion is lean caused by the carburetor setting (main jet selection) not being suitable for running conditions and weather.
2. Carbon has collected on the combustion chamber, piston crown, cylinder exhaust port and expansion chamber.
3. The spark plug has too hot a heat range.

### **BAD RUNNING STABILITY**

1. Improper front or rear tire air pressure.
2. Improper front or rear wheel alignment.
3. Improperly tightened front axle nut or steering stem lock nut.

### **ENGINE WILL NOT REV UP OR WILL NOT RUN SMOOTHLY**

1. The carburetor choke knob is not fully returned.
2. Too rich carburetion.
3. Clogged air cleaner element.

## **SERVICE AND MAINTENANCE AFTER COMPETITION**

Wash the motorcycle after each race. To obtain the best washing efficiency, wash the machine with hot water and detergent after having washed it with water. But never squirt water directly on the air cleaner or front and rear brake drums. After washing the motorcycle, wipe it with a dry cloth and run the engine to evaporate water on the engine components.

Running the engine also allows oil to be applied to the major components inside the engine, thus preventing rust. After washing, perform the service below in preparation for the next race.

### **AFTER EACH RACE**

Apply oil and grease to the rotating and sliding parts.

See if there are any cracks in the rear sprocket mounting drum shock damper.

Check each tightening bolt, nut and spoke nipple for tightness.

Clean the air cleaner element and fuel cock strainer.

### **AFTER FIVE RACES**

Check the front fork and rear shock absorber for oil leakage.

Check the front and rear brake shoes for wear.

Replace the transmission oil with fresh oil.

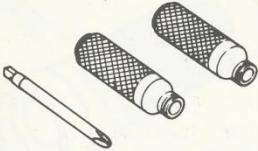
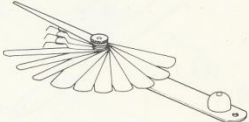
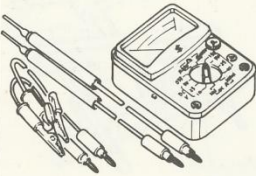
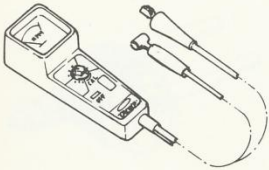
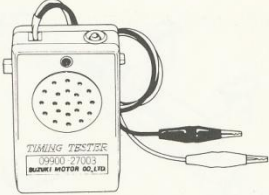
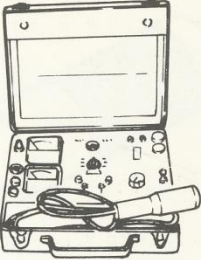
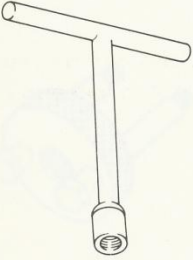
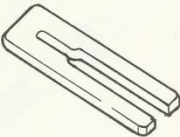
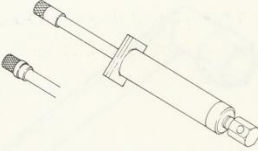
### **AFTER TEN RACES**

Remove the carbon deposited on the combustion chamber, piston crown, cylinder exhaust port and expansion chamber. Check the cylinder, piston and piston rings for wear.

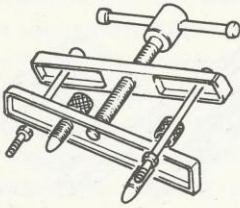
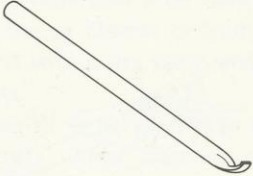
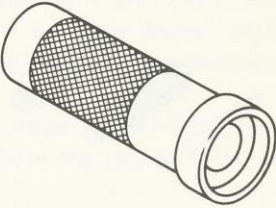
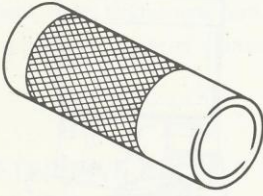
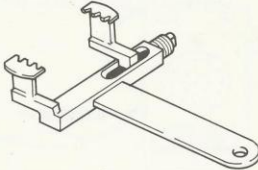
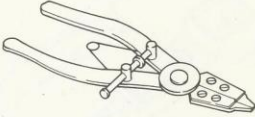
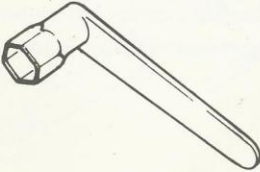
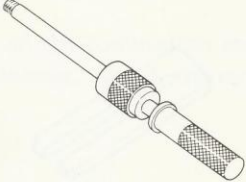

### **IN PREPARATION FOR RACING NEXT SEASON**

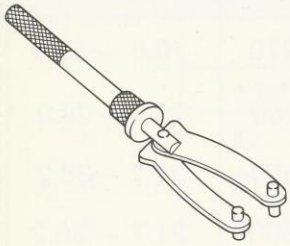
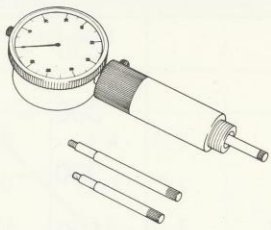
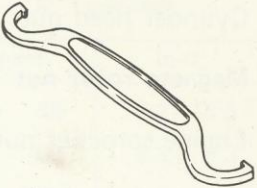

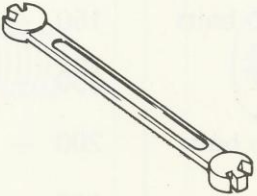
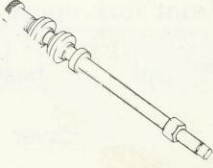
It is recommended that your RM80 be overhauled by an authorized Suzuki Service Shop to maintain its performance.

## SPECIAL TOOLS

		
<p>Shock driver set 09900-09002</p>	<p>Thickness gauge 09900-20804</p>	<p>Pocket tester 09900-25001</p>
		
<p>Engine tachometer 09900-26002</p>	<p>Timing tester 09900-27003</p>	<p>Electro tester 09900-28104</p>
		
<p>10 mm stud installing tool 09910-11510</p>	<p>Con-rod stopper 09910-20114</p>	<p>Piston pin puller 09910-34510</p>



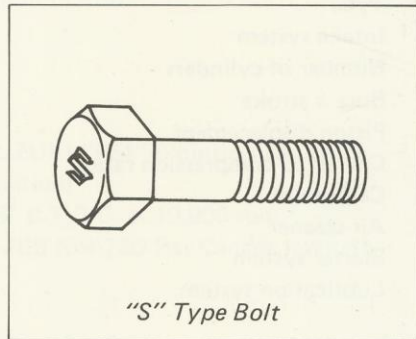
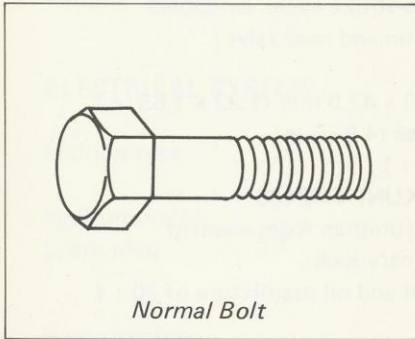
		
<p>Crankcase separating tool 09910-80113</p>	<p>Oil seal remover 09913-50110</p>	<p>Bearing and oil seal installing tool 09913-70122</p>
		
<p>Bearing and oil seal installing tool 09913-80111</p>	<p>Clutch sleeve hub holder 09920-53710</p>	<p>Snap ring opener 09920-70111</p>
		
<p>Spark plug wrench 09930-10111</p>	<p>Rotor remover shaft 09930-30101</p>	<p>Rotor remover attachment 09930-30210</p>

		
<p>Engine sprocket and flywheel holder 09930-40113</p>	<p>Timing gauge 09931-00112</p>	<p>Steering stem lock nut wrench 09940-10122</p>
		
<p>Front fork oil seal installing tool 09940-54610</p>	<p>Spoke nipple wrench 09940-60112</p>	<p>Steering inner race and swing arm bearing installing tool 09941-34510</p>

## TORQUE SPECIFICATIONS

	kg-cm	lb-ft
Cylinder head nuts	230 – 270	16.6 – 19.5
Magneto rotor nut	300 – 400	21.7 – 29.0
Engine sprocket nut	300 – 500	21.7 – 36.2
Clutch sleeve hub nut	300 – 500	21.7 – 36.2
Primary drive gear nut	400 – 600	29.0 – 43.4
Front axle nut	270 – 430	19.5 – 31.1
Front brake cam lever nut	50 – 80	3.6 – 5.8
Front fork upper clamp bolts	150 – 250	10.8 – 18.1
Steering stem head bolt	350 – 550	25.3 – 39.8
Front fork lower clamp bolts	200 – 300	14.5 – 21.7
Handlebar clamp bolts	120 – 200	8.7 – 14.5
Steering stem lock nut	600 – 1,000	43.4 – 72.3
Front fork cap bolt	150 – 300	10.8 – 21.7
Spoke nipples	20 – 30	1.4 – 2.2
Swinging arm pivot nut	200 – 300	14.5 – 21.7
Rear torque link nut	100 – 150	7.2 – 10.2
Rear axle nut	360 – 520	26.0 – 37.6
Rear brake cam lever nut	50 – 80	3.6 – 5.8
Rear sprocket bolts	250 – 400	18.1 – 29.0
Rear shock absorber nut	200 – 300	14.5 – 21.7

Bolt Diam. (mm)	Tightening Torque			
	Normal Bolt		"S" Type Bolt	
	kg-cm	lb-ft	kg-cm	lb-ft
5	20 - 40	1.4 - 2.9	30 - 60	2.2 - 4.3
6	40 - 70	2.9 - 5.1	60 - 100	4.3 - 7.3
8	90 - 140	6.5 - 10.1	130 - 230	9.4 - 16.6
10	180 - 280	13.0 - 20.3	250 - 400	18.1 - 29.0





## SPECIFICATIONS

### DIMENSIONS & WEIGHT

Overall length	1,715 mm (67.5 in.)
Overall width	775 mm (30.5 in.)
Overall height	970 mm (38.2 in.)
Wheelbase	1,170 mm (46.1 in.)
Ground clearance	180 mm ( 7.1 in.)
Dry weight	62 kg (137 lbs)

### ENGINE

Type	Two-stroke cycle, air-cooled
Intake system	Piston and reed valve
Number of cylinders	1
Bore x stroke	49.0 x 42.0 mm (1.93 x 1.65 in.)
Piston displacement	79 cc (4.8 cu-in)
Corrected compression ratio	7.0 : 1
Carburetor	MIKUNI VM24SS
Air cleaner	Polyurethan foam element
Starter system	Primary kick
Lubrication system	Fuel and oil premixture of 20 : 1

### TRANSMISSION SYSTEM

Clutch	Wet multi-plate type
Transmission	5-speed, constant mesh
Gearshift pattern	1-down 4-up, return type
Primary reduction	3.842 (73/19)
Final reduction	3.538 (46/13)
Gear ratios, Low	3.166 (38/12)
2nd	1.941 (33/17)
3rd	1.380 (29/21)
4th	1.083 (26/24)
Top	0.923 (24/26)
Drive chain	DAIDO or TAKASAGO #428, 106 links

## CHASSIS

Front suspension	Telescopic, oil dampened
Rear suspension	Swinging arm, oil dampened spring 5-way adjustable
Front brake	Internal expanding
Rear brake	Internal expanding
Front tire size	2.75-16-4PR
Rear tire size	3.60-14-4PR
Steering angle	45° (right and left)
Castor	61°40'
Trail	74 mm (2.9 in)
Turning radius	1.8 m (5.9 ft)

## ELECTRICAL SYSTEM

Ignition type	SUZUKI "PEI" (Pointless Electronic Ignition)
Ignition timing	16° B.T.D.C. at 10,000 rpm
Spark plug	B-7ES (BR-7ES For Canada market)

## CAPACITIES

Fuel tank	5.3 lit (1.4/1.2 US/Imp gal)
Transmission oil	650 cc (1.4/1.1 US/Imp pt)
Front fork oil	126 cc (4.26/4.44 US/Imp oz)

# MAINTENANCE SCHEDULE

The following list indicates the items and interval times of preventive maintenance by which the best riding conditions are assured.

Service Item	Each race Every 100 km (60 miles)	Every 2 races Every 200 km (120 miles)	Every 3 races Every 300 km (180 miles)	Every 5 races Every 500 km (300 miles)	Every 10 races Every 1,000 km (600 miles)	Remarks
Piston ring				Replace		
Transmission oil		Change				Change at initial 100 km
Engine sprocket					Replace	
Drive chain	Lubricate				Replace	Adjust slack every 40 km
Rear sprocket					Replace	
Drive chain buffer				Replace		
Spoke nipple						Within 0 - 50 km retighten every 10 km. After 50 km retighten every 50 km.
Air cleaner	Clean					
Kick starter lever	Apply grease					
Throttle, brake & clutch cable					Replace	
Bolts and nuts	Retighten					
Spark plug	Check & clean					Retighten initial 20 km

## OPTIONAL PARTS

PARTS	REMARKS	PARTS NO
Piston	0.5 mm (0.02 in.) oversize	12110 – 46710
	1.0 mm (0.04 in.) oversize	12110 – 46700
	1.5 mm (0.06 in.) oversize	12110 – 46720
Piston ring	0.5 mm (0.02 in.) oversize	12140 – 25762
	1.0 mm (0.04 in.) oversize	12140 – 28630
	1.5 mm (0.06 in.) oversize	12140 – 28640
Engine sprocket	12 teeth	27511 – 46700
	14 teeth	27511 – 27400
Rear shock absorber	Gas/oil type	62100 – 46730
Front fork spring	Softer type	51171 – 46730
2nd muffler	Low noise type	14300 – 46810
Muffler hanger brocket		14470 – 46700
Air cleaner cap	Low intake noise type	13721 – 46020
Chain tensioner	Automatic tensioning type	61350 – 46000





Prepared by

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