SUZUKI

SERVICE MANUAL

MODEL
TS185

99301-29000

SR-2900

Printed in Japan © 75-9

SUZUKI

SUZUKI MOTOR CO., LTD.

FOREWORD

Since the TS185 is basically similar to the TS125 in many parts of the engine and chassis, this Service Manual is limited to the description of difference in construction, handling and service data between the TS185 and the TS125.
Accordingly, when you service the TS185, it is advisable to refer to the TS125 Service Manual in addition to this manual.
It is sincerely hoped that you will find this manual very helpful in your service activity.

April, 1971
SUZUKI MOTOR CO., LTD.
Export Service Section

CONTENTS

1. RIGHT AND LEFT SIDE VIEWS

Fig. 1–1–1

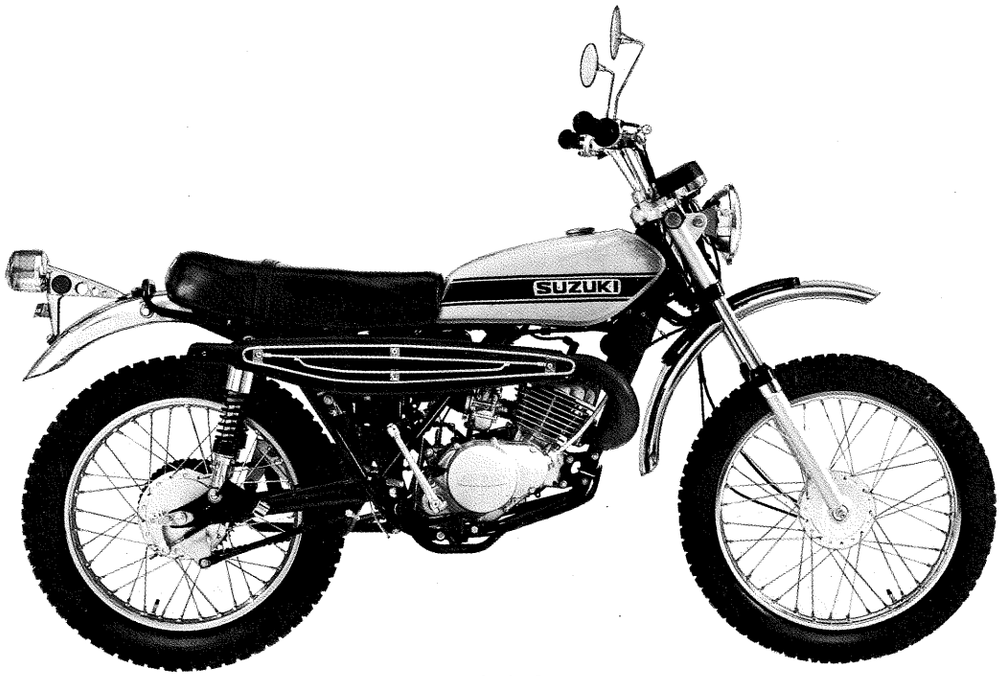


Fig. 1–1–2

2. TIPS ON OPERATING

Please advise your customers to follow these tips to keep the motorcycle in peak condition and it will give top performance at all times.

2-1. Breaking in

The life of the motorcycle depends on the breaking-in of the engine and the way in which the motorcycle is treated.

Just as with a new-born baby, the engine must be given the best care possible. During the breaking-in period, do not ride the motorcycle at high speeds nor allow the engine to run wide open. Keep to the specified breaking-in engine r.p.m. limits. Gradually raise the engine r.p.m. as the covered milage increases.

for first 800 km (500 mi) . . . . . below 5,500 r.p.m.
for the next 800 km (500 mi) . . . . . below 7,000 r.p.m.

Always keep the engine r.p.m. below 8,000 as overstraining the engine has a bad effect on it. Do not allow the pointer of the engine tachometer to stay in the red zone (8,000 – 10,000 r.p.m.).

2-2. Fuel

The engine's moving parts such as crankshaft, crankshaft bearings, con-rod, piston and cylinder wall are positively lubricated by fresh oil which is separately pressure-delivered from the variable displacement oil pump. This unique force oiling system is called "Suzuki C.C.I.". Put gasoline only in the fuel tank and lubrication oil in the oil tank. Recommended fuel for the TS185 as for all Suzuki motorcycles, is a regular grade gasoline. For the Suzuki C.C.I. system, use of Suzuki C.C.I. Oil is highly recommended, but if it is not available, non diluent (non-self mixing type) Two Stroke Oil or Outboard Motor Oil with around SAE #30 can also be used.

2-3. Genuine Parts

When replacing parts, always use genuine Suzuki parts, which are precision-made under severe quality controls. If imitation parts (not genuine parts) are used, good performance cannot be expected from the motorcycle and in the worst case, they can cause a breakdown.

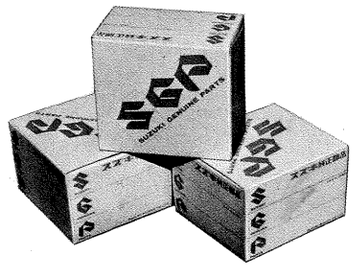
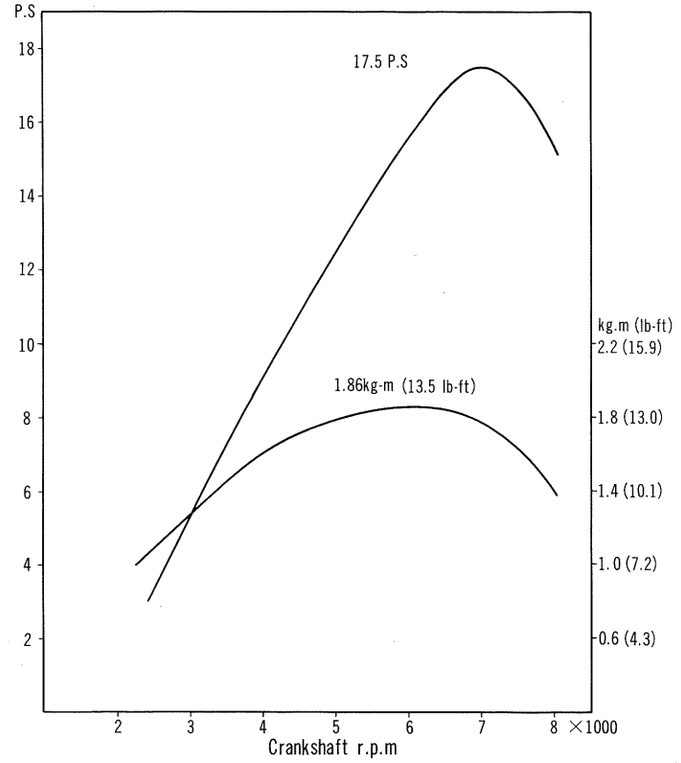


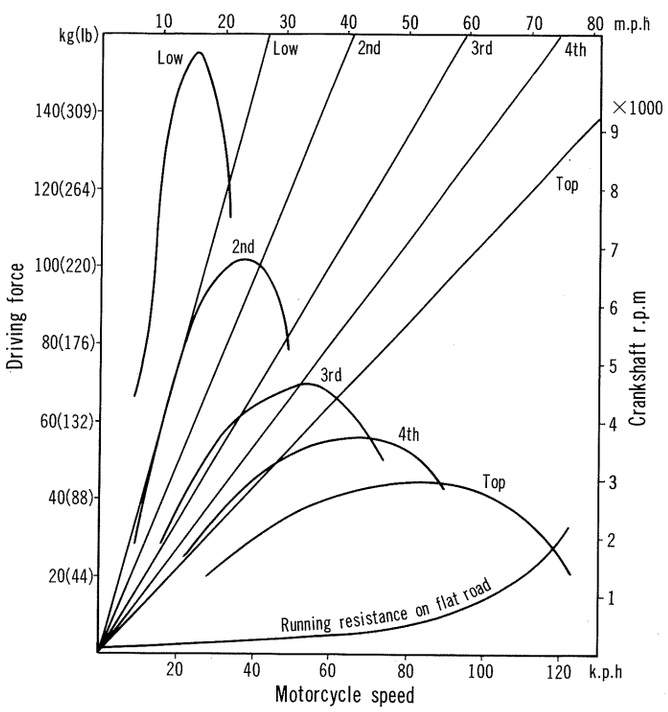
Fig. 2–3–1 Suzuki genuine parts

3. PERFORMANCE CURVES

3–1. Engine Performance Curves



3–2. Motorcycle Performance Curves



4. SPECIFICATIONS

Name	Suzuki TS185
Dimensions and Weight	
Overall length	2,020 mm (79.5 in)
Overall width	840 mm (33.0 in)
Overall height	1,135 mm (44.7 in)
Wheelbase	1,340 mm (52.8 in)
Road clearance	240 mm (9.4 in)
Tires, front	3.00 – 19″ 4 PR
rear	3.50 – 18″ 4 PR
Dry weight	99 kg (217 lb)
Performance	
Maximum speed	112 – 120 kph (70 – 75 mph)
Climbing ability	35°
Braking distance	14 m (46.3 ft) @ 50 kph (31 mph)
Engine	
Maximum horse power	17.5 ps @ 7,000 r.p.m.
Maximum torque	1.86 kgm (13.5 lb-ft) @ 6,000 r.p.m.
Type	2 cycle, air cooled, piston valve, single cylinder
Cylinder	Sleeved aluminum
Bore x Stroke	64 x 57 mm (2.52 x 2.24 in)
Piston displacement	183 cc (11.2 cu in)
Corrected compression ratio	6.2 : 1
Starter	Kick (PRI)
Fuel System	
Carburetor	VM 24 SH
Air cleaner	Resin-processed fibrous tissue
Fuel tank capacity	7.0 ltr (1.8/1.5 gal, US/Imp)
Lubrication System	
Engine	C.C.I. (Posi Force Lubrication)
Oil tank capacity	1.1 ltr (1.2/0.98 qt, US/Imp)
Gear box	550 cc (1.16/0.98 pt, US/Imp)
Ignition System	
Spark plug	NGK B77HC
Ignition	P.E.I. (Pointless Electronic Ignition)
Ignition timing	16° at 1,000 r.p.m. and 24° at 6,000 r.p.m. B.T.D.C.

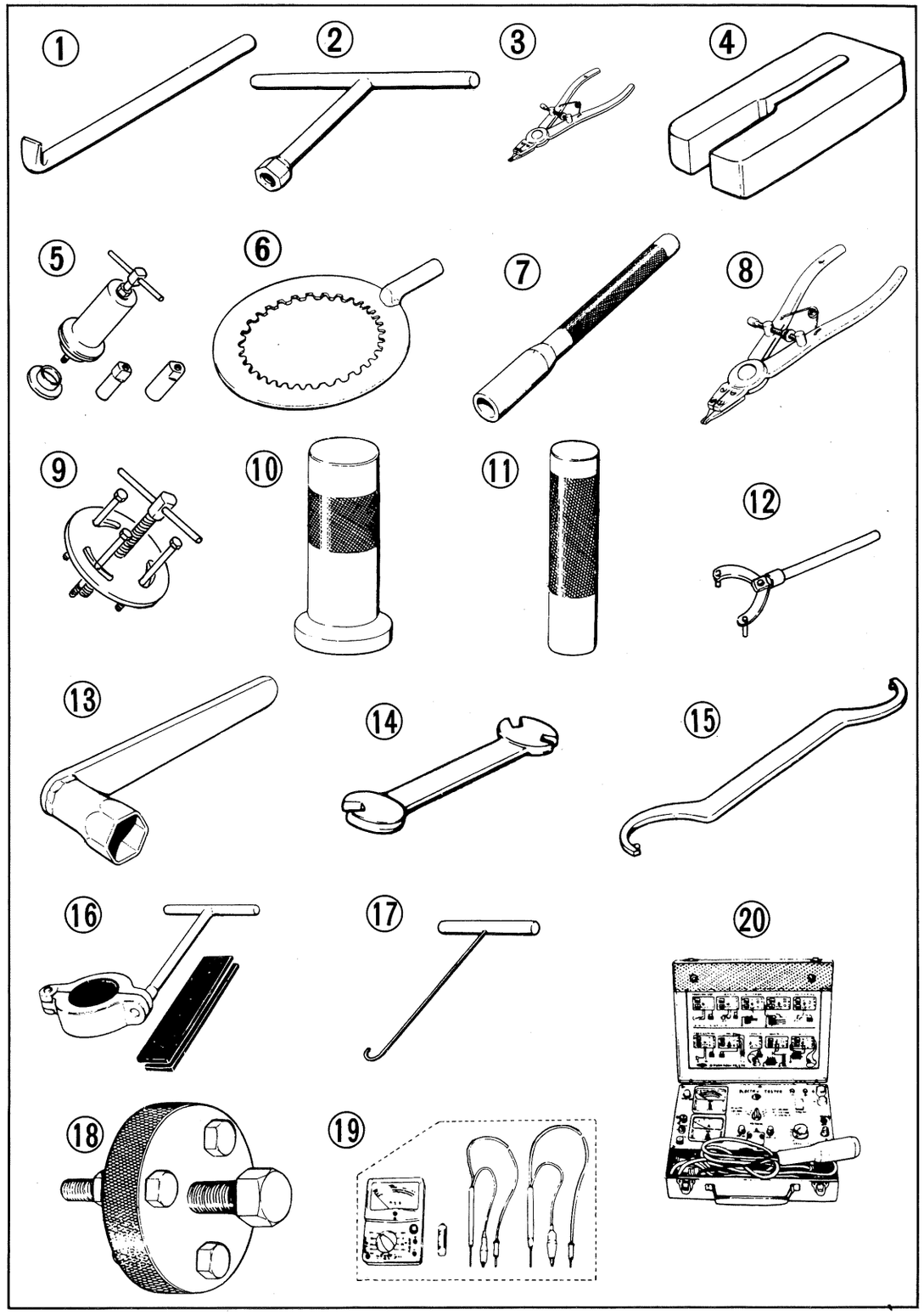
Transmission System		
Clutch		Wet multi-disc
Speeds		5-speeds, constant mech
Gear shifting		Left foot, lever-operated return change
Gear ratios	Low	2.75 : 1
	2nd	1.81 : 1
	3rd	1.25 : 1
	4th	1.00 : 1
	Top	0.80 : 1
Primary reduction ratio		3.21 : 1
Final reduction ratio		3.25 : 1
Suspension		
Front suspension		Hydraulically damped telescopick fork with 3-ways adjustable
Rear suspension		Swinging arm with 5-ways adjustable hydraulically damped
Steering		
Steering angle		40° (right & left)
Trail		134 mm (5.27 in)
Castor		60°
Turning radius		2,400 mm (94.5 in)
Brakes		
Front brake		Right hand, internal expanding
Rear brake		Right foot, internal expanding
Electrical Equipment		
Generator		Flywheel magneto
Battery		6V 4AH
Fuse		15A
Head lamp		6V 25/25W
Tail/brake lamp		6V 3/10W (For U.S.A & CANADA 6V 3/21 cp)
Turn signal lamp		6V 8W x 4 (For U.S.A & CANADA Optional)
Neutral indicator lamp		6V 3W
Speedometer lamp		6V 3W
Turn signal indicator lamp		6V 1.7W
High beam indicator lamp		6V 1.7W

* The specifications subject to change without notice.

5. SPECIAL TOOLS

Special tools listed here are used to disassemble, assemble and perform other maintenance and service. These special tools make works easy which cannot be done simply with ordinary tools and also do not damage parts. It is recommended to provide these special tools as shop equipment.

No.	Part number	Name	Service
1.	09913–50110	Oil seal remover	remove oil seals
2.	09910–10710	8 mm stud installing tool	install 8 mm studs
3.	09920–70111	Snap ring opener	fit or remove circlips
4.	09910–20111	Piston holder	prevent crankshaft from turning
5.	09910–32810	Crankshaft assembling tool	assemble crankcase
6.	09920–52810	Clutch sleeve hub holder	hold clutch sleeve hub
7.	09920–60310	Clutch sleeve hub holder handle	hold clutch sleeve hub
8.	09920–70120	Spring opener	fit or remove rear sprocket drum circlip
9.	09910–92810	Crankshaft remover	remove crankshaft
10.	09913–70122	Bearing & oil seal installing tool	install bearings & oil seals
11.	09913–80110	Bearing & oil seal installing tool	install bearings & oil seals
12.	09930–40113	Flywheel rotor and Engine sprocket holder	hold flywheel rotor to loosen nut and hold engine sprocket
13.	09930–10111	Spark plug wrench	loosen or tighten spark plug
14.	09940–60112	Spoke nipple wrench	loosen or tighten spoke nipples
15.	09940–10122	Steering stem nut wrench	loosen or tighten steering stem nut
16.	09941–00110	Front fork outer tube nut wrench set	loosen or tighten front fork outer tube nut
17.	09920–20310	Clutch spring hook	remove or install clutch spring pin
18.	09930–30713	Flywheel rotor remover	remove flywheel rotor
19.	09900–25001	Pocket tester	check P.E.I. unit
20.	09900–28102	Electro tester	check all electrical equipment



6. ENGINE

The TS185 engine has the basically same construction as the TS125 engine. However, there is a big difference in displacement between 185 cc and 125 cc, and as a result, the TS185 engine is much larger in engine output than the 125. Accordingly, the load imposed on engine parts will also be different between both engines, and so if they are compared precisely, there are some differences from each other.

6–1. Crankshaft

6–1–1. Description and comparison of crankshafts

The crankshaft of the TS185 is designed upon experience in many races so that it will withstand larger loads. That is, the connecting rod big end bearing cage is plated with silver to quicken its break-in and improve radiant efficiency as well. As a result, it will bear a long period of continuous high speed operation.

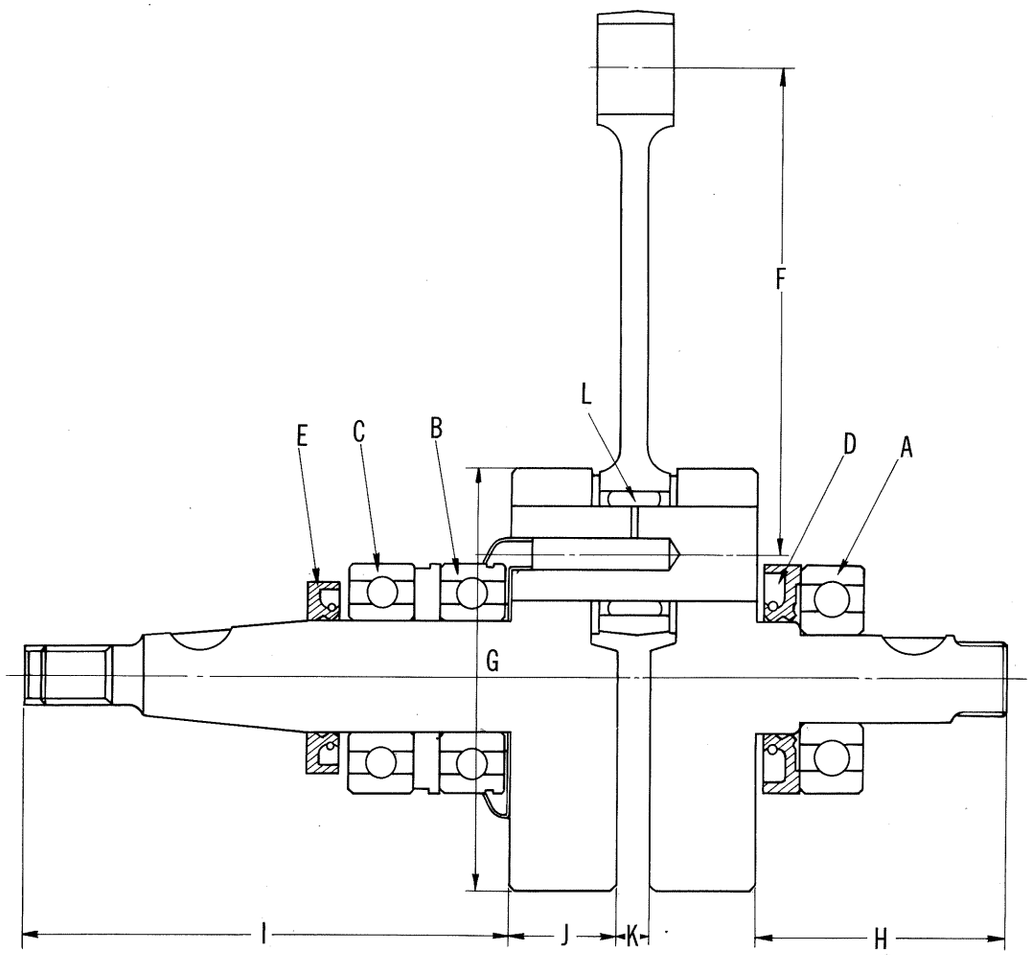


Fig. 6–1–1

	ITEM \ MODEL	TS185 mm (in)	TS125 mm (in)
A	Crankshaft right bearing	I.D.20 (0.78), O.D.52 (2.04) W. 15 (0.59)	Common to TS185
B	Crankshaft left inner bearing	I.D.25 (0.98), O.D.52 (2.04) W 15 (0.59)	I.D.25 (0.98), O.D.62 (2.44) W.17 (0.66)
C	Crankshaft left outer bearing	I.D.25 (0.98), O.D.52 (2.04) W 15 (0.59)	
D	Crankshaft right oil seal	I.D.26 (1.02), O.D.52 (2.04) W 8 (0.31)	Common to TS185
E	Crankshaft left oil seal	I.D.25 (0.98), O.D.44 (1.73) W 7 (0.27)	Common to TS185
F	Connecting rod length	110 (4.33)	100 (3.93)
G	Crankshaft wheel diameter	96 (3.77)	87 (3.42)
H	Crankshaft right journal length	56 (2.20)	56 (2.20)
I	Crankshaft left journal length	111.5 (4.38)	98 (3.85)
J	Crankshaft wheel thickness	24 (0.94)	24.5 (0.96)
K	Distance between crankshaft wheels	8 (0.31)	7 (0.27)
L	Number of big-end rollers	14 pcs.	13 pcs.

6–2. Description and Comparison of Cylinders

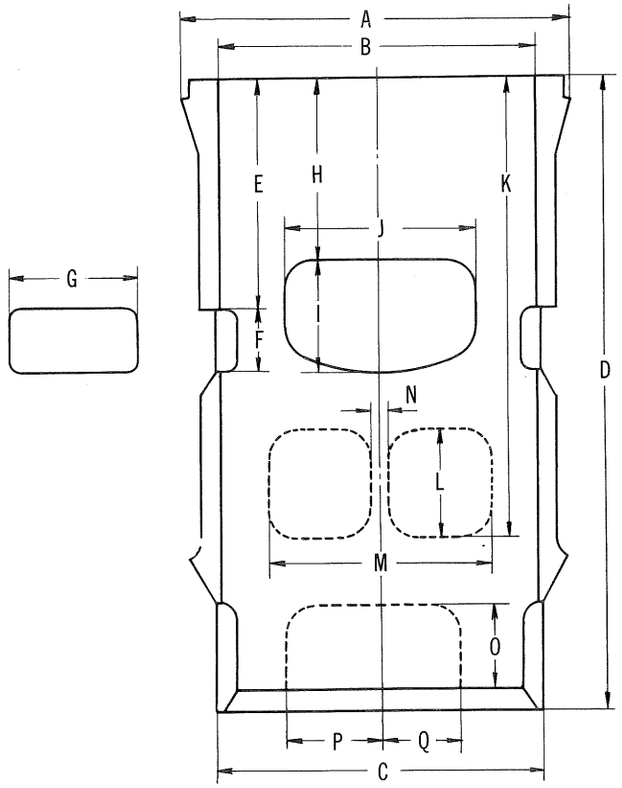


Fig. 6–2–1

	TS185 mm (in)	TS125 mm (in)
A	78 (3.07)	70 (2.75)
B	64 ~ 64.015 (2.5196 ~ 2.5202)	56 ~ 56.015 (2.2047 ~ 2.2053)
C	72 (2.83)	64 (2.51)
D	127.5 (5.02)	112 (4.40)
E	46.5 (1.83)	40.5 (1.59)
F	12 (0.47)	11 (0.43)
G	31.5 (1.24)	28 (1.10)
H	37 (1.45)	31 (1.22)
I	21.5 (0.84)	20.5 (0.80)
J	39 (1.53)	34 (1.33)
K	92 (3.62)	81.5 (3.20)
L	20.5 (0.80)	18 (0.70)
M	45 (1.77)	39 (1.53)
N	3 (0.11)	3 (0.11)
O	22 (0.86)	21 (0.82)
P	19 (0.74)	16 (0.62)
Q	16 (0.62)	17 (0.66)

6–3. Oil Pump

The lubrication system of the TS185 is the same as that of the TS125, but as mentioned below, the oil pump discharge volume differs. This is because the oil pump is designed to feed the oil to the engine depending on the load and speed of the engine. That is, the TS185 oil pump is different from the TS125 in construction and reduction ratio from crankshaft to oil pump. However, no details of the oil pump construction will be given, because the pump is not built for disassembling.

6–3–1. Oil pump performance

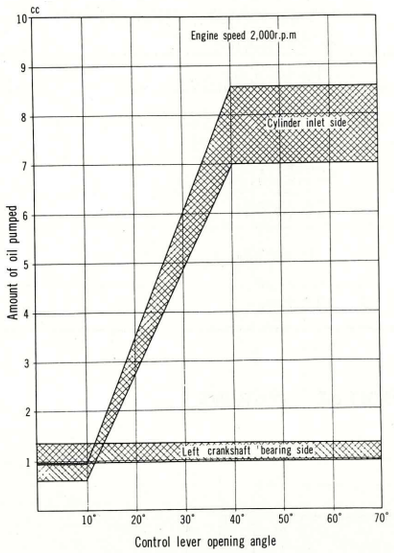


Fig. 6–3–1 Oil pump performance curves

Amount of oil pumped in ten minutes with engine speed kept at 2,000 r.p.m.

When oil pump control lever fully opened

Cylinder side upper limit	8.56 cc
lower limit	7.00 cc
Crankshaft bearing side upper limit	1.35 cc
lower limit	0.98 cc

When oil pump control lever fully closed

Cylinder side upper limit	0.95 cc
lower limit	0.60 cc
Crankshaft bearing side upper limit	1.35 cc
lower limit	0.98 cc

Oil pump reduction ratio

Gear	Teeth
Primary pinion	19
Primary gear	61
Kick starter gear	18
Kick starter idle gear	29
Kick starter pinion	31

Oil pump reduction ratio
61/19 x 31/18 = 5.52 : 1

6–4. Carburetor

The TS185 carburetor is VM-24SH, which is the same type as the TS125. Accordingly, for adjustment and inspection, refer to the TS125 Service Manual. But it should be noted that to produce an optimum mixture for the engine, carburetor settings are not the same, as described below.

Specification

ITEM	TS185	TS125
Main jet	#130	For standard spec. #120, For U.S.A & CANADA #125
Jet needle	5DH4, clipped into 2nd groove	4DH5, clipped into 2nd groove
Needle jet	0 – 6	0 – 4
Throttle valve cut away	# 2.5	# 3
Pilot jet	# 25	#25
Pilot outlet	0.7 mm (0.027 in)	0.7 mm (0.027 in)
Pilot air adjusting screw	1½ turns back open	1¼ turns back open
Needle valve seat	2.0 mm (0.078 in)	2.0 mm (0.078 in)
Starter jet	# 80	#80
By path	1.4 mm (0.055 in)	1.4 mm (0.055 in)
Fuel level	6.8 mm (0.268 in)	6.8 mm (0.268 in)

MEMO

7. TRANSMISSION AND CLUTCH

The TS185 transmission and clutch are the same as the TS125 in operating theory and construction. But on the TS185, the clutch has larger capacity in order to carry bigger engine power. The length of the counter shaft is longer than the TS125 accordingly.

7–1. Transmission

As a result of an increase in the clutch capacity, the counter shaft is made longer in overall length than the TS125. At the same time, the bearing on the left end of the counter shaft is changed from ball bearing to needle bearing.

7–1–1. Counter shaft

A. Description of counter shaft

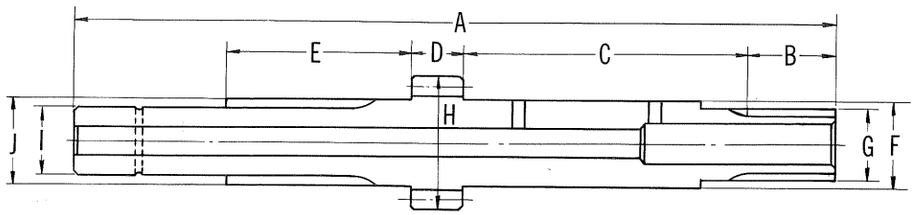


Fig. 7–1–1

Fig. 7–1–1

	TS185 mm (in)	TS125 mm (in)		TS185 mm (in)	TS125 mm (in)
A	185 (7.28)	174 (6.85)	G	16 (0.62)	16 (0.62)
B	22 (0.86)	17.5 (0.68)	H	31 (1.22)	31 (1.22)
C	68 (2.67)	68 (2.67)	I	15 (0.59)	15 (0.59)
D	14 (0.55)	14 (0.55)	J	21 (0.82)	20 (0.78)
E	44 (1.73)	44 (1.73)	N.T.	12	12
F	21 (0.82)	21 (0.82)			

B. Note on handling of the counter shaft

Both TS185 and TS125 engines have second drive gears press-fitted in the counter shafts, and therefore, when the second drive gear is removed from the counter shaft and refitted, it is necessary to measure the distance from the first drive gear outer end to the second drive gear outer end, as in the manner shown below. (After refitting, make sure that 5th drive gear turns smoothly.)

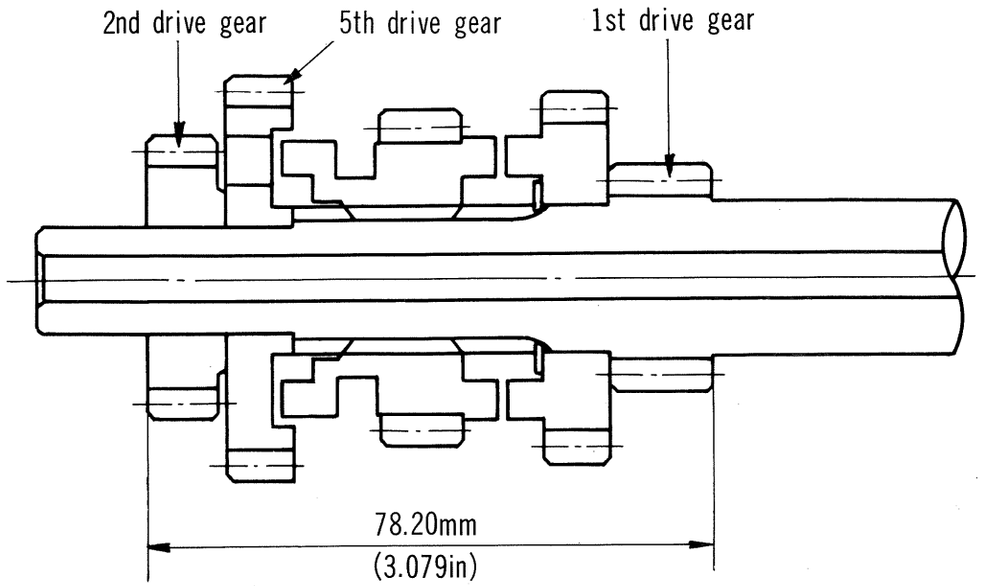


Fig. 7–1–2

Standard Distance	78.20mm (3.079 in)

7–2. Clutch

The clutch is similar to the TS125 in construction and function, but the TS185 requires larger torque. For this reason, the clutch is given a larger capacity. Accordingly, the following parts differ between the TS185 and the TS125 clutches.

A. Number of clutch plate

	TS185	TS125
Clutch cork plates	6	5
Clutch steel plates	5	4

B. Free length of clutch spring

	TS185	TS125
Standard	32mm (1.25 in)	29.9mm (1.17 in)
Limit	33mm (1.29 in)	30.9mm (1.21 in)

C. Clutch push rod

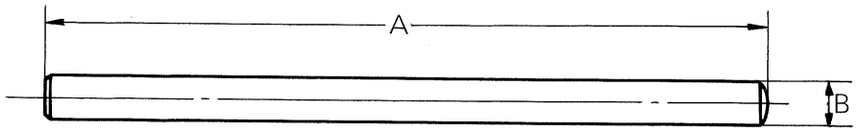


Fig. 7–2–1

	A	B	Q'ty
TS185	100mm (3.93 in)	6mm (0.23 in)	2
TS125	97mm (3.81 in)	6mm (0.23 in)	2

D. Clutch sleeve hub

	A	B	C	D	E	F
TS185 mm (in)	114 (4.48)	81 (3.18)	29 (1.14)	17 (0.66)	30 (1.18)	6 (0.23)
TS125 mm (in)	114 (4.48)	81 (3.18)	29 (1.14)	17 (0.66)	26 (1.02)	6 (0.23)

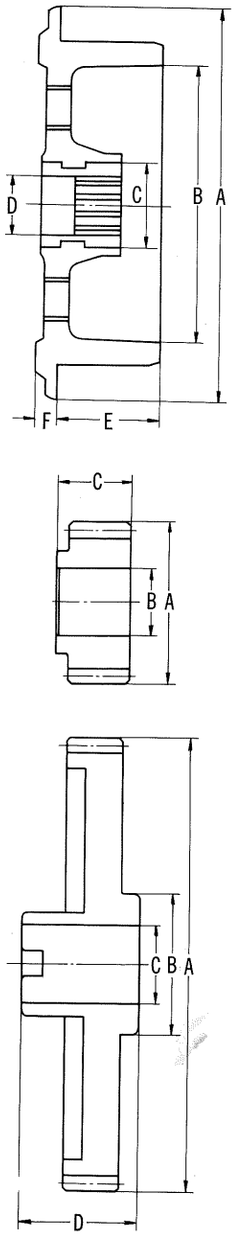


Fig. 7–2–2

7–3–1 Primary pinion

	A	B	C	N.T.
TS185 mm (in)	46.8 (1.84)	20 (0.78)	21.5 (0.84)	19
TS125 mm (in)	41.4 (1.62)	20 (0.78)	21.5 (0.84)	16

Fig. 7–3–1

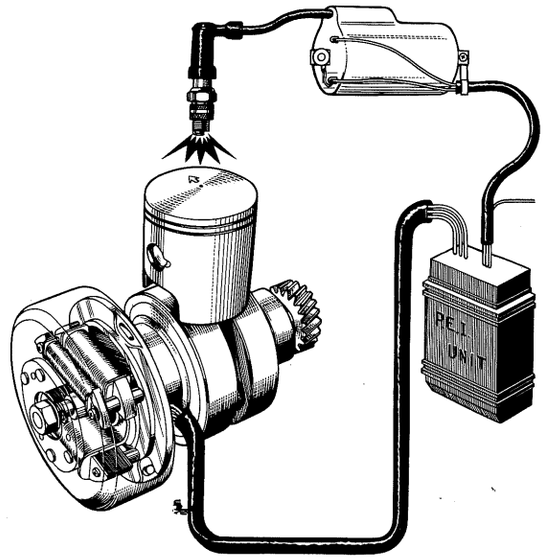
7–4–1 Primary gear

	A	B	C	D	N.T.
TS185 mm (in)	131.1 (5.16)	40 (1.57)	23 (0.90)	34 (1.33)	61
TS125 mm (in)	125.6 (4.94)	40 (1.57)	23 (0.90)	34 (1.33)	57

Fig. 7–4–1

8. ELECTRICAL EQUIPMENT

A very high voltage is required to produce the spark for igniting the air-fuel mixture compressed in the cylinder, a fact that is known by many.
Formerly the method of producing the high voltage was to have the low voltage and current generated in the magneto flow into the primary windings of the ignition coil, and by utilizing the induction effect created by the opening and closing of the contact points, produce high voltage in the secondary side that will cause spark to jump across the spark plug gap. In the newly adopted P.E.I. (Pointless Electronic Ignition) system, the capacitor action has been utilized to replace the above contact points so that this new system is also called C.D.I. (Capacitor Discharge Ignition) system.



8–1. Features of P.E.I. System

1) Possible to leave system unattended for long time
Due to absence of contact points, maintenance and adjustment work concerned with contact points are no longer required.

2) Improved sparking performance
Due to smaller voltage drop, the increased sparking energy makes it more advantageous as far as plug fouling is concerned.

3) Improved starting performance
Since the ignition timing has been provided with the characteristic of advancing in relation to engine speed, starting becomes easier and moreover, ignition timing to match high speed operation can be obtained.

4) Outstanding durability
High durability due to simplicity of construction and no wearing parts through elimination of contact points.

8–2. Basic Circuit and Construction of P.E.I. System

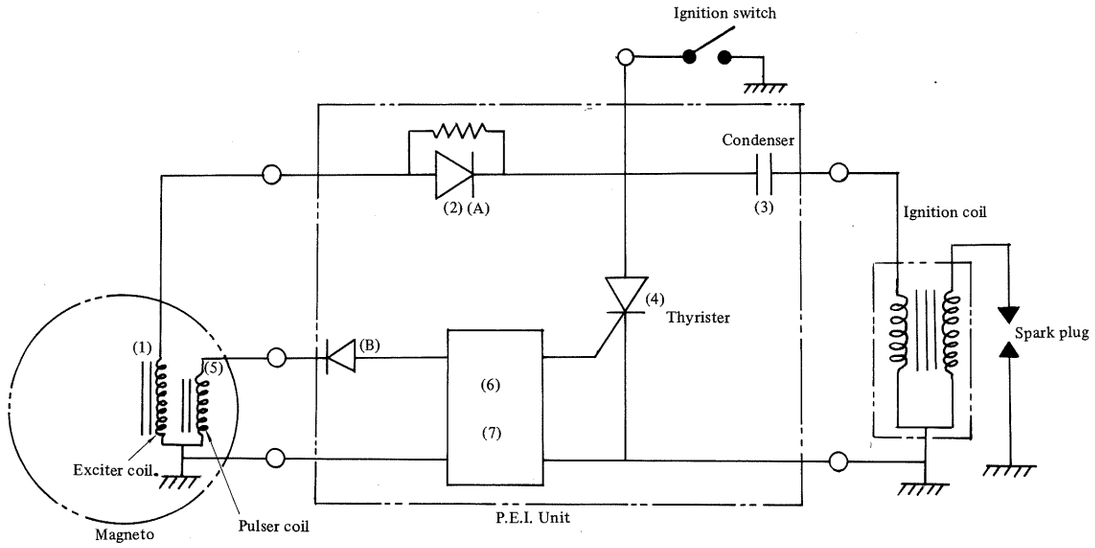


Fig. 8–2–1

1) Exciter coil
Generates voltage and current that serves to produce the spark.

2) Diode
Rectifies the exciter coil generated voltage (AC) into DC to enable charging the condenser (capacitor).

3) Condenser
Stores the current (100 – 300V) rectified by the diode and discharges it rapidly at the required ignition time to the primary side of the ignition coil.

4) Thyrister
Has the special property that in order to make the current flow in forward direction, a specified voltage must be impressed on the gate, otherwise the current will not start flowing.
This is the same as a switch that works by so-called signal voltage.

5) Pulser coil
Generates the signal voltage for opening the thyristor gate.

6) Phase inversion circuit
Consists essentially of silicon control rectifier, zenner diode which works as breaker and condenser which serves to store the current generated by the pulser coil. Enough current flows to open the thyrister gate when the pulser coil generated voltage reaches the zenner diode passage voltage. At this time, the condenser storing the exciter coil generated voltage starts to discharge and causes current to flow rapidly through the ignition coil primary side.

7) Zenner diode
Has the same properties as ordianry diode, but has in addition the special property of allowing the required current to flow in reverse direction when the voltage impressed in reverse direction reaches a certain value (Zenner voltage).

8–3. Principles of Operation

When the magnet rotates, alternating current is generated in the exciter coil. This current is rectified by the diode (A) and charges the condenser to 100 – 300V. At this time, the thyrister is in OFF state. Alternating current is also generated simultaneously in the pulser coil and this flows through the diode (B) and phase inversion circuit, this current differing in phase to that charging the condenser.
When this current reaches the voltage (Zenner voltage) that will actuate a phase inversion circuit, the thyrister gate is opened as a result and current flows in the thyrister gate. The thyrister which had been in OFF state is now turned ON so that the current charged in the condenser discharges rapidly through the thyrister to the ignition coil primary side. This discharge current creates inductive action between the ignition coil primary and secondary sides so that high voltage is produced in the secondary winding to force spark to jump across the spark plug gap.
The signal current flows through the thyrister gate for extremely short time so that the thyrister is able to return to OFF state when the sparking is completed. The above action is repeated to allow the engine to keep running.

8–4. Checking Ignition Timing

In this engine, the ignition timing is set by the pulser coil generated voltage so that the ignition timing cannot be checked in static state as in the former contact breaker points type ignition system. To check the ignition timing, start the engine and hold the engine speed at 4,000 rpm. With timing light (use Suzuki service tester), verify the ignition timing by observing whether the line stamped on the flywheel rotor (center line out of the three lines) aligns with the marks on the crankcase.
If the aligning marks fail to match when the ignition timing is checked by running the engine at 4,000 rpm and using timing light as described above, that is, if ignition timing adjustment is required, proceed as follows.

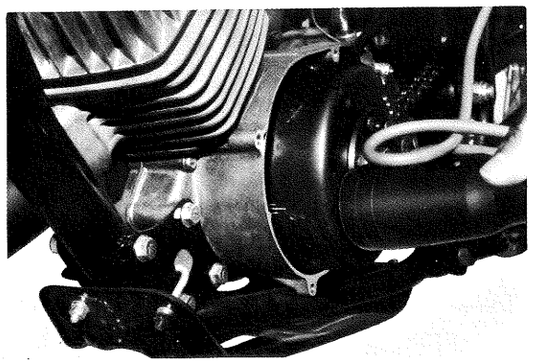


Fig. 8–4–1 Checking ignition timing

Loosen the three stator mounting screws and move the stator base so that the stamped line (A) on stator and the centerline of stator mounting screw hole will be in line. Then tighten the mounting screws.
Start the engine again and maintain it at 4,000 rpm.

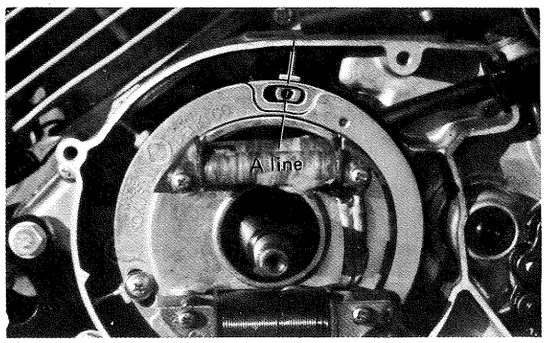


Fig. 8–4–2 Adjusting ignition timing

Check once more with timing light to see if the line stamped on flywheel rotor is aligned with the matching mark on the crankcase.

Note: The ignition timing has been accurately adjusted during the engine manufacturing process. Therefore, just aligning the line stamped on the stator with the centerline of stator mounting screw hole as described above should virtually ensure perfect timing.

8–5. Inspecting

If the engine fails to start or misfires, check the fallowing places.

8–5–1. stator

A. Exciter coil
Measure the resistance between the exciter coil lead wire (black/red) and coil plate.

normal state	approx. 220 Ω

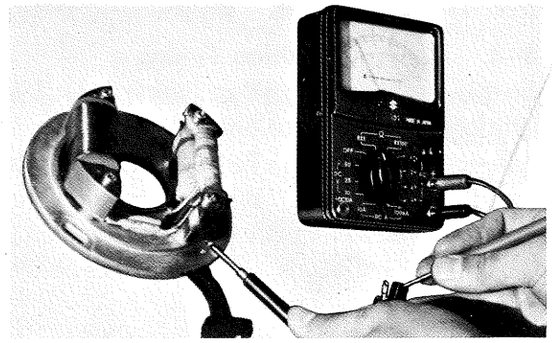


Fig. 8–5–1 Measure the resistance of exciter coil

B. Pulser coil
Measure the resistance between the pulser coil lead wire (red/white) and coil plate.

normal state	approx. 75 Ω

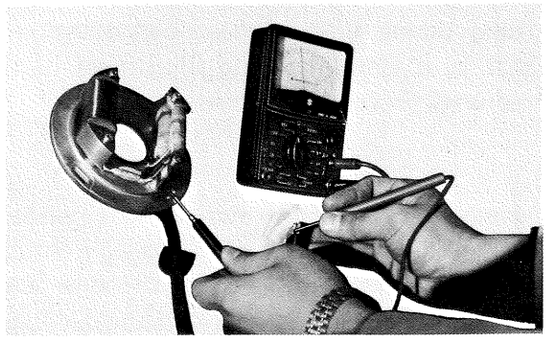


Fig. 8–5–2 Measure the resistance of pulser coil

8–5–2. Ignition coil

The ignition coil can be checked by two different methods, one by using an ignition coil tester (new equipment) and the other by measuring the resistances of the primary and secondary windings.

A. When using ignition coil tester
Make the coil test by using the new P.E.I. ignition coil tester. This new tester has been made available because the ignition coil in the P.E.I. system cannot be checked with the former SUZUKI Service Tester.

B. When measuring the resistances of primary and secondary windings

It is recommended that the ignition coil be tested by using special tester made for this purpose as described above. In case such a tester is not available, the condition of the ignition coil can be determined by using the following resistance values as reference.

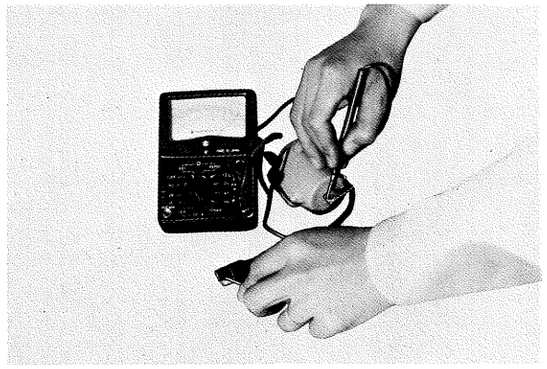


Fig. 8–5–3 Measure the resistance of ignition coil

normal state	Resistance at primary side	approx. 0.7 Ω
	Resistance at secondary side	approx. 12 K Ω

Note: Since the resistance cannot be measured to one-ohm units with the SUZUKI Service Tester, a tester capable of making such measurement must be used in this case.

MEMO

8–5–3. P.E.I. unit

Check the P.E.I. unit by using Suzuki Pocket Tester. Don't use Suzuki Service Tester, use of Service Tester may cause breakage of P.E.I. unit. If all conditions specified in the chart below are satisfied, the P.E.I. unit is in normal state. Even if only one point is defective, the P.E.I. unit should be replaced.

	Connect to Suzuki Pocket Tester (–) Terminal	Connect to Tester (+) Terminal	
1	Black/Yellow (Stop wire)	Black/White (Ground wire)	No continuity
2	Black/Yellow	Black/Red (Exciter wire)	Approx. 2MΩ indication
3	Black/Yellow	White/Blue (Ignition coil wire)	Pointer diflects once and returns immediately
4	Red/White (Pulser wire)	Black/White	No continuity
5	Black/White	Red/White	100 ~ 500Ω indication
6	Black/Red	Black/Yellow	Continuity
7	Black/White	Black/Yellow	Continuity

Notes: The designation "continuity" in the above chart denotes the ON direction of the diode and does not signify short-circuit condition.

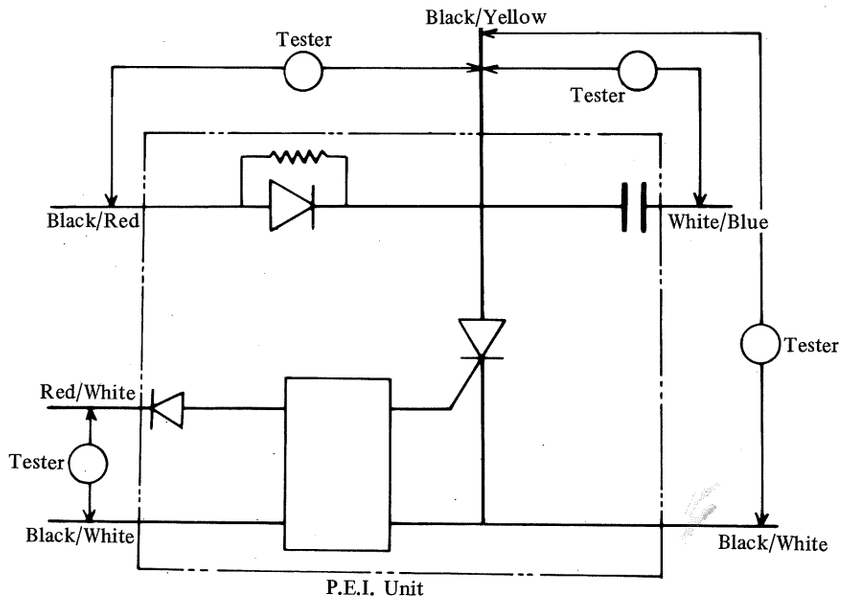


Fig. 8–5–3. P.E.I. unit circuit check chart by using pocket tester

9. CHASSIS

Except for the front forks, the chassis is similar to the TS125 in both construction and function. For adjustment and inspection, refer to the TS125 Service Manual.

9–1. Front Forks

On the TS185, new improvements are made to the front fork spring. That is, to secure stable steering even in any road conditions and better performance under severer running conditions, the front fork spring is so designed that the tension is adjustable in three ways.

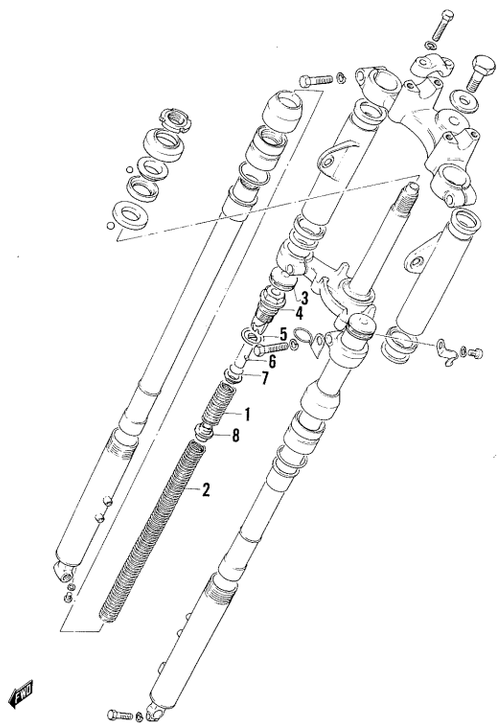


Fig. 9–1–1

9–1–1. Exploded view

1. Front fork spring No.1
2. Front fork spring No.2
3. Inner tube rubber cap
4. Inner tube cap
5. "O" ring
6. Spring adjusting rod
7. Spring sheet washer
8. Spring spacer

9–1–2. Front fork spring characteristic

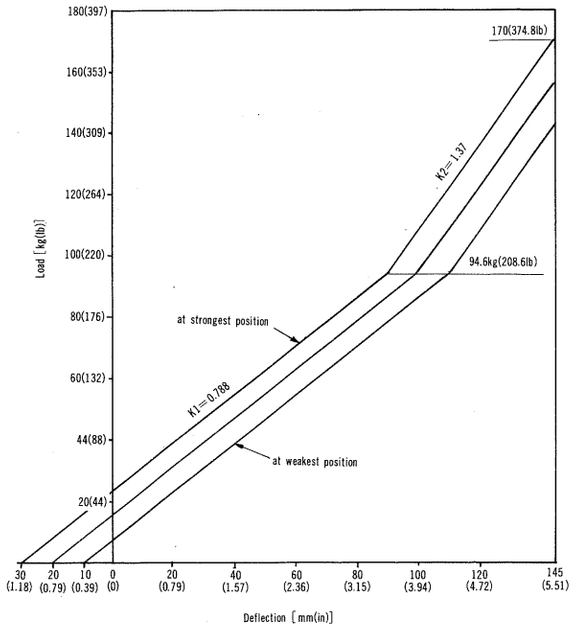


Fig. 9–1–2

9–1–3. Servicing

A. Quantity of the fork oil

For each leg	190 cc (0.41 pt/0.338 pt U.S/Imp)

The fork oil should be # 30 motor oil.

B. Adjusting of the fork spring

To adjust the spring tension, remove the inner tube rubber cap and turn the spring adjust rod (located inside the inner tube cap) with a plane screw driver (pushing it inward). When the machine is brand new, the adjust rod is so positioned as to provide the weakest spring tension. Adjustment should be made as required.

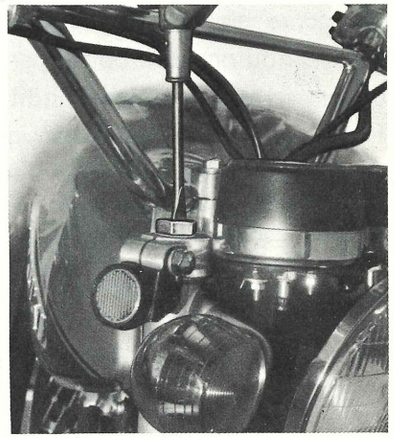


Fig. 9–1–3

C. Front forks tightening torque

1. Front fork upper bracket bolt .... 350 – 530 kg-cm (25 – 38 lb-ft)
2. Handle holder set bolt ..... 90 – 200 kg-cm (6 – 14 lb-ft)
3. Inner tube fitting upper bolt ..... 180 ~ 300 kg-cm (13 ~ 21 lb-ft)
4. Inner tube fitting lower bolt ..... 180 ~ 300 kg-cm (13 ~ 21 lb-ft)

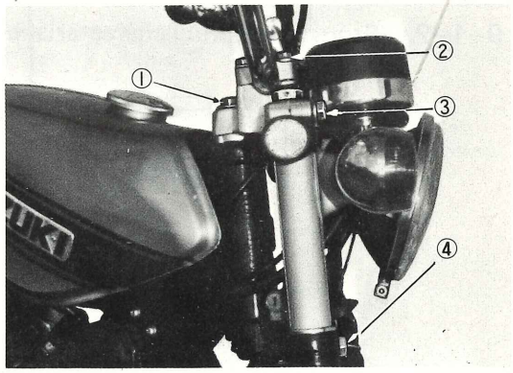


Fig. 9–1–4

10. IMPORTANT FUNCTIONAL PARTS

Suzuki always pursue not only extreme high performance, but also driver's safety in our products. But driver's safety could be realized under such conditions that are provided with both safety design and production for the products in manufacturer side, and good after sales service in dealer side.
In this connection, it is highly requested to check up the important items for motorcycle safety driving in accordance with following check list taking opportunities of periodical inspection.

Check list of important functional parts for safety driving

	Item	Check for
Fuel system	Fuel hose Fuel tank comp.	Fuel leakage Fuel leakage
Suspension system	Front forks ass'y	Blow-hole, Crack, Faulty welding of bracket
	Front forks comp. Front fork upper bracket comp.	Crack, Faulty welding
	Front suspention arm comp.	Crack, Faulty welding
	Front axle Rear axle	Crack
	Rear swinging arm comp.	Crack, Faulty welding
Steeting	Handle bar comp. Handle bar upper clamp Handle bar lower clamp	Crack
Braking system	Front hub drum comp. Rear hub drum comp. Front hub panel comp. Rear hub panel comp.	Crack, Blow-hole
	Front torque link Rear torque link	Crack
	Front brake shoe Rear brake shoe	Crack, Peeling off of lining
	Front brake cam shaft Rear brake cam shaft	Crack, Deformation of serration
	Rear brake rod ass'y	Crack
	Brake pedal	Crack, Faulty welding
	Brake lever	Crack, Casting blow-hole
	Front brake calbe ass'y	Detachment of cable end
	Rear brake cable ass'y	Detachment of calbe end
Frame	Frame	Crack, Faulty welding

9–1–

A.

B.

C.

11. TIGHTENING TORQUE FOR BOLTS AND NUTS

The following is the list of the tightening torque for bolts and nuts fitting the most important parts of motorcycle for the safety. Be sure to check the tightening torque on the list at every periodical inspection, i.e. first 1,000 km (750 mi) and every 6,000 km (4,000 mi) afterwards.

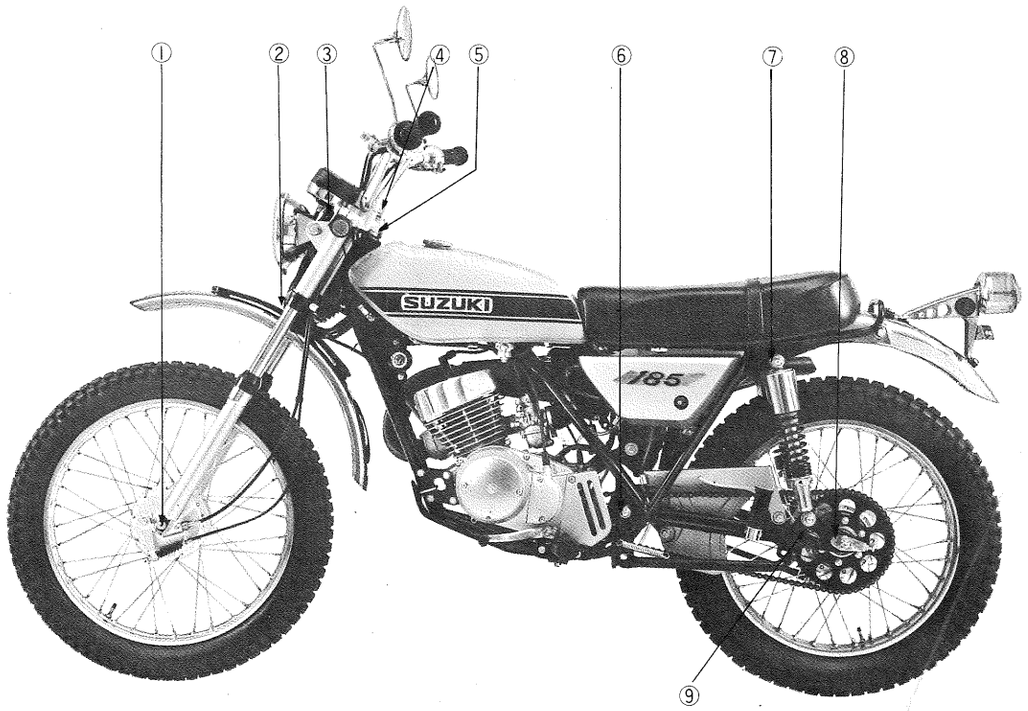


Fig. 11–1–1

Ref. No.	Description	Q'ty	Tightening torque kg-cm (lb-ft)
1	Front axle	1	360 ~ 520 (26 ~ 37)
2	Inner tube lower fitting bolts	2	200 ~ 300 (14 ~ 21)
3	Inner tube upper fitting bolts	2	180 ~ 300 (13 ~ 21)
4	Handle holder set bolts	4	90 ~ 200 (6 ~ 14)
5	Front fork upper bracket bolt	1	350 ~ 530 (25 ~ 38)
6	Rear swinging arm pivot shaft nut	1	450 ~ 700 (32 ~ 50)
7	Rear shock absorber upper nuts	2	180 ~ 280 (13 ~ 20)
8	Rear axle nut	1	360 ~ 520 (26 ~ 37)
9	Rear shock absorber lower nuts	2	180 ~ 280 (13 ~ 20)

s

ng the most impor-
torque on the list
000 km (4,000 mi)

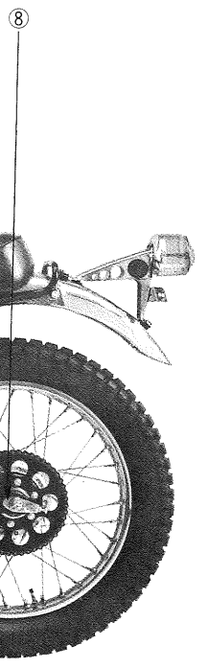


Fig. 11–1–1

rque kg-cm (lb-ft)
6 ~ 37)
4 ~ 21)
3 ~ 21)
6 ~ 14)
5 ~ 38)
2 ~ 50)
~ 20)
~ 37)
~ 20)

12. PERIODICAL INSPECTION

The chart below indicates time when inspections, adjustments and maintenance are required based on the distance the motorcycle runs, that is first 1,000 km (750 mi), and every 3,000 km (2,000 mi), 6,000 km (4,000 mi) and 12,000 km (8,000 mi) thereafter. According to the chart advise users to make the motorcycle checked and serviced at your shop.

Item \ Distance	1,000 km 750 mi	Every 3,000 km Every 2,000 mi	Every 6,000 km Every 4,000 mi	Every 12,000 km Every 8,000 mi
Oil pump	Check operation, adjust control lever adjusting marks	Check operation, adjust control lever adjusting marks		
Spark plug	Clean	Clean and adjust gap	Replace	
Gearbox oil	Change	Change		
Throttle and Brake cables	Adjust play	Adjust play	Lubricate	
Carburetor	Adjust with throttle valve screw and pilot air screw	Adjust with throttle valve screw and pilot air screw		Overhaul and clean
Magneto	Retighten magneto nut.			
Cylinder head and Cylinder	Retighten cylinder and cylinder head nuts	Retighten cylinder and cylinder head nuts	Remove carbon	
Battery	Check and service electrolyte solution	Check and service electrolyte solution		
Fuel cock	Clean fuel strainer		Clean fuel strainer	
Drive chain	Adjust	Adjust and lubricate	Wash	
Brakes	Adjust play	Adjust play		
Air cleaner		Clean		Replace
Throttle grip			Put grease in throttle grip	
Exahust pipe and Muffler			Remove carbon	
Steering stem	Check play Retighten stem nuts		Check play Retighten stem nuts	
Bolts, Nuts and Spokes	Retighten (See page 26)		Retighten (See page 26)	

13. WIRING DIAGRAM (FOR EXPORT STANDARD)

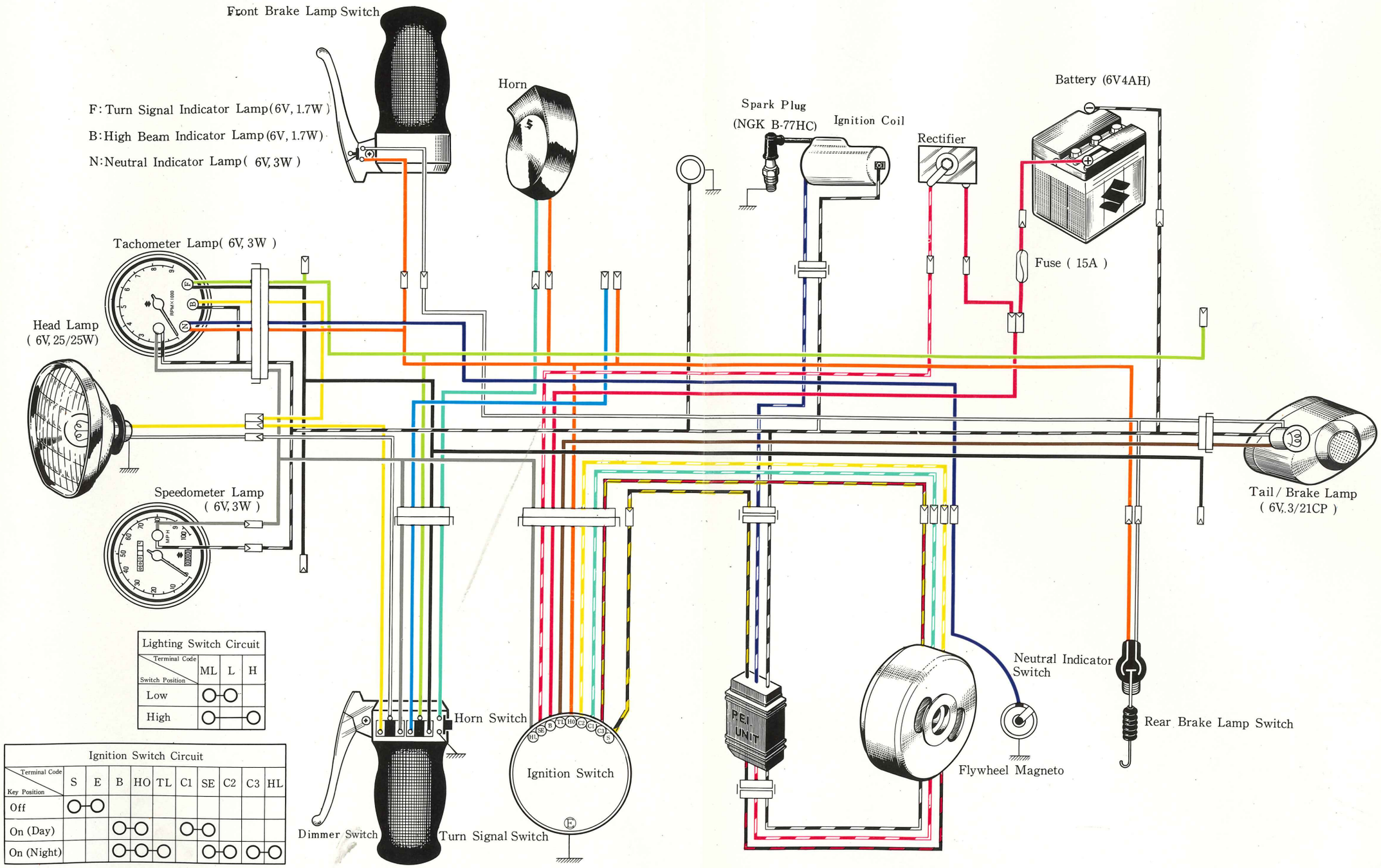
F : Turn Signal Indicator Lamp (6V, 1.7W)
B : High Beam Indicator Lamp (6V, 1.7W)
N : Neutral Indicator Lamp (6V, 3W)

Horn
Right Front Turn Signal Lamp (6V, 8W)
Turn Signal Relay
Spark Plug (NGK B-77HC)
Ignition Coil
Rectifier
Battery (6V4AH)
Right Rear Turn Signal Lamp (6V,8W)
Tachometer Lamp (6V, 3W)
Fuse (15A)
Head Lamp (6V, 25/25W)
Speedometer Lamp (6V, 3W)
Tail/Brake Lamp (6V, 3/10W)
Turn Signal Switch
Horn Switch
Left Front Turn Signal Lamp (6V, 8W)
Ignition Switch
Neutral Indicator Switch
Flywheel Magneto
Rear Brake Lamp Switch
Left Rear Turn Signal Lamp (6V, 8W)

Lighting Switch Circuit						
Terminal / Switch position / Code	C1	SE	C2	HL	L	H
Day	○	○				
Night(High)		○	○	○		○
Night(Low)		○	○	○	○	

Ignition Switch Circuit				
Terminal / Key Position / Code	S	E	B	Ho
Off	○	○		
On			○	○

14. WIRING DIAGRAM (FOR U.S.A & CANADA)



Lighting Switch Circuit			
Terminal Code / Switch Position	ML	L	H
Low	○	○	
High	○		○

Ignition Switch Circuit										
Terminal Code / Key Position	S	E	B	HO	TL	C1	SE	C2	C3	HL
Off	○	○								
On (Day)			○	○		○	○			
On (Night)			○	○	○		○	○	○	○

15. ENGINE EXPLODED VIEW