SUZUKI

TS185

SERVICE MANUAL

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.

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

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.

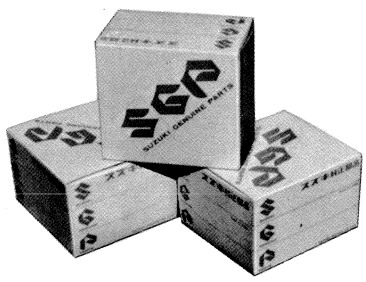
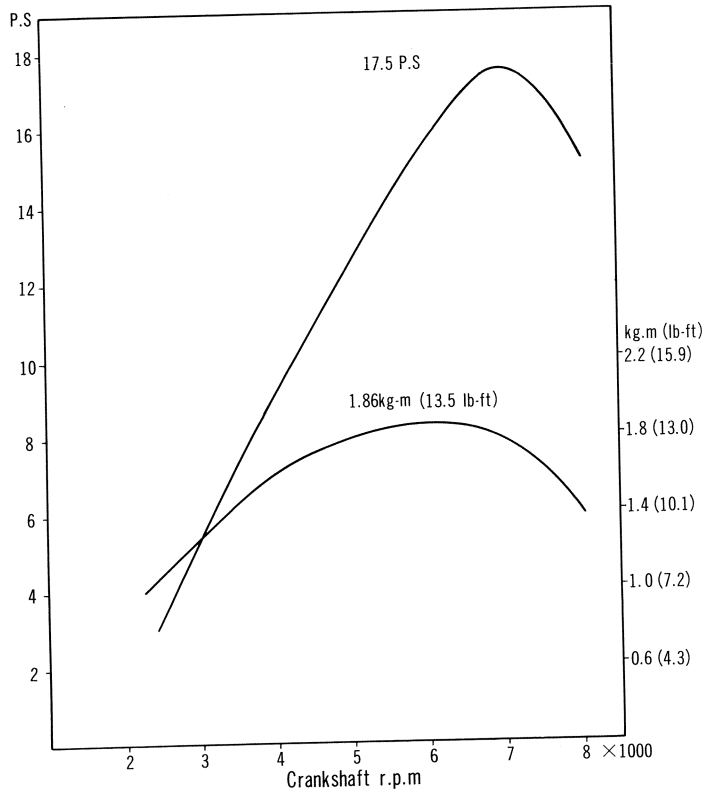


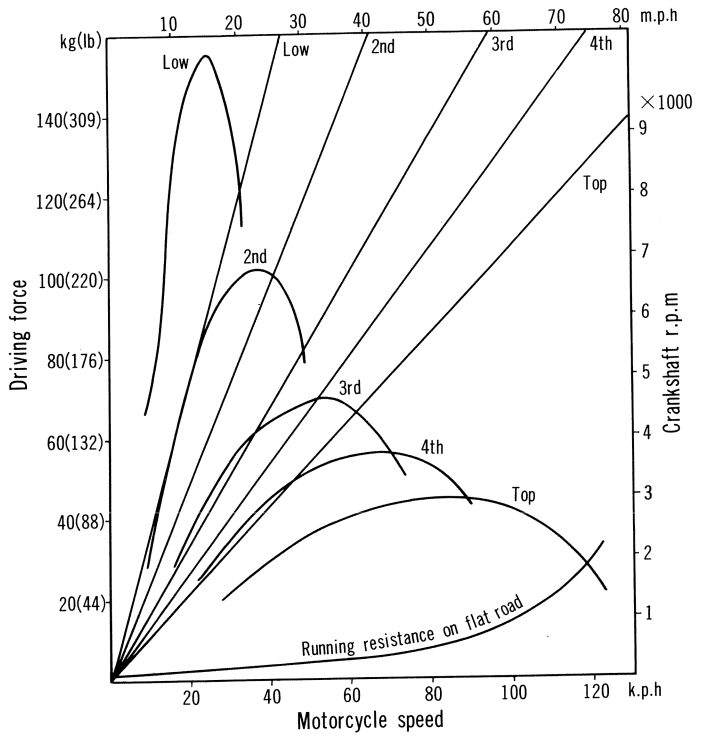
Fig. 2–3–1 Suzuki genuine parts

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.

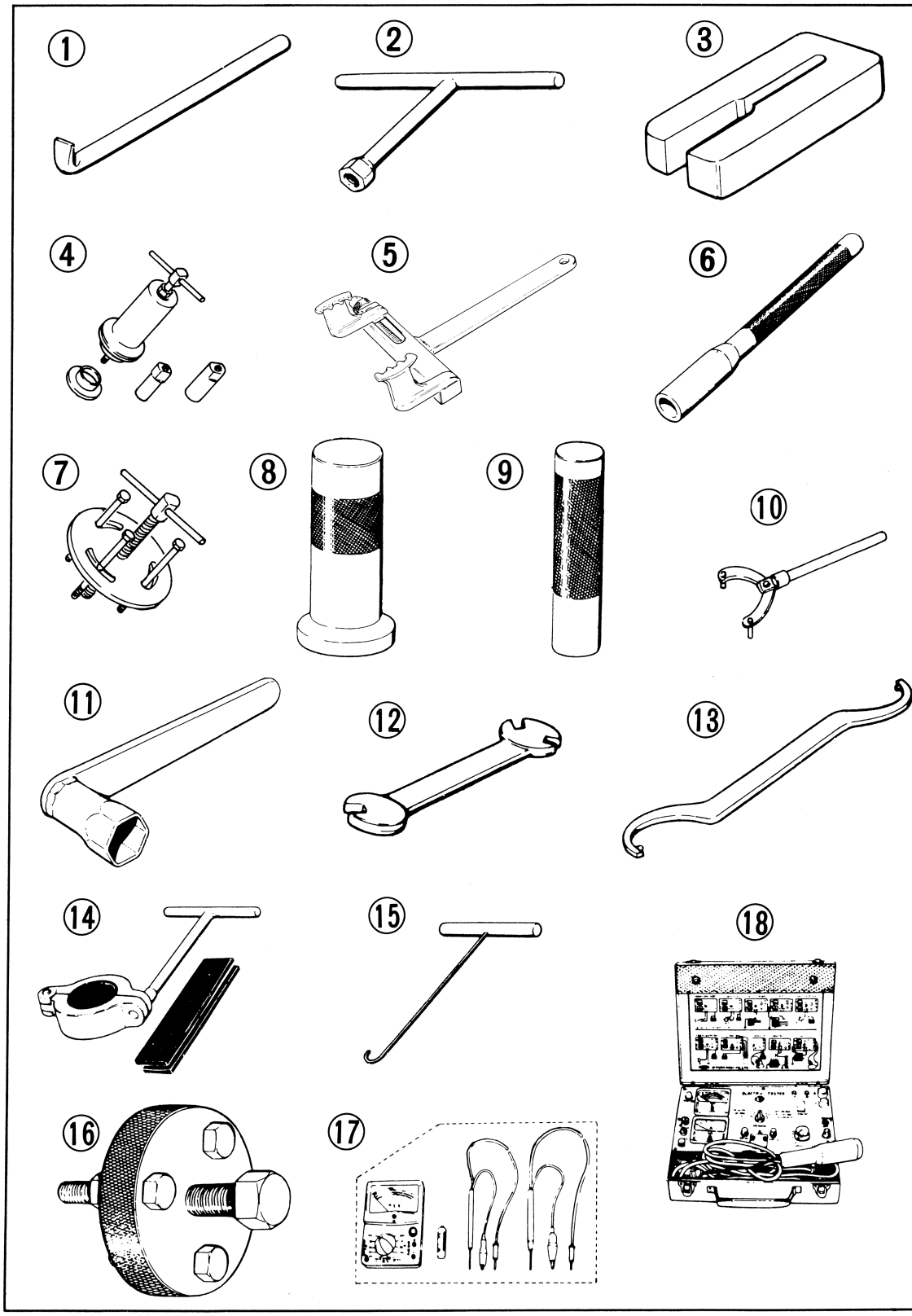
Transmission System	
Clutch	Wet multi-disc
Speeds	5-speeds, constant mech
Gear shifting	Left foot, lever-operated return change
Gear ratios Low	2.75 : 1
2nd	1.81 : 1
3rd	1.25 : 1
4th	1.00 : 1
Top	0.80 : 1
Primary reduction ratio	3.21 : 1
Final reduction ratio	3.25 : 1
Suspension	
Front suspension	Hydraulically 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.	09913–50120	Oil seal remover	remove oil seals
2.	09910–10710	8 mm stud installing tool	install 8 mm studs
3.	09910–20115	Piston holder	prevent crankshaft from turning
4.	09910–32812	Crankshaft assembling tool	assemble crankcase
5.	09920–53710	Clutch sleeve hub holder	hold clutch sleeve hub
6.	09920–60310	Clutch sleeve hub holder handle	hold clutch sleeve hub
7.	09910–92810	Crankshaft remover	remove crankshaft
8.	09913–70122	Bearing & oil seal installing tool	install bearings & oil seals
9.	09913–80112	Bearing & oil seal installing tool	install bearings & oil seals
10.	09930–40113	Flywheel rotor and Engine sprocket holder	hold flywheel rotor to loosen nut and hold engine sprocket
11.	09930–10111	Spark plug wrench	loosen or tighten spark plug
12.	09940–60113	Spoke nipple wrench	loosen or tighten spoke nipples
13.	09940–10122	Steering stem nut wrench	loosen or tighten steering stem nut
14.	09941–00110	Front fork outer tube nut wrench set	loosen or tighten front fork outer tube nut
15.	09920–20310	Clutch spring hook	remove or install clutch spring pin
16.	09930–30713	Flywheel rotor remover	remove flywheel rotor
17.	09900–25002	Pocket tester	check P.E.I. unit
18.	09900–28106	Electro tester	check all electrical equipment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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.

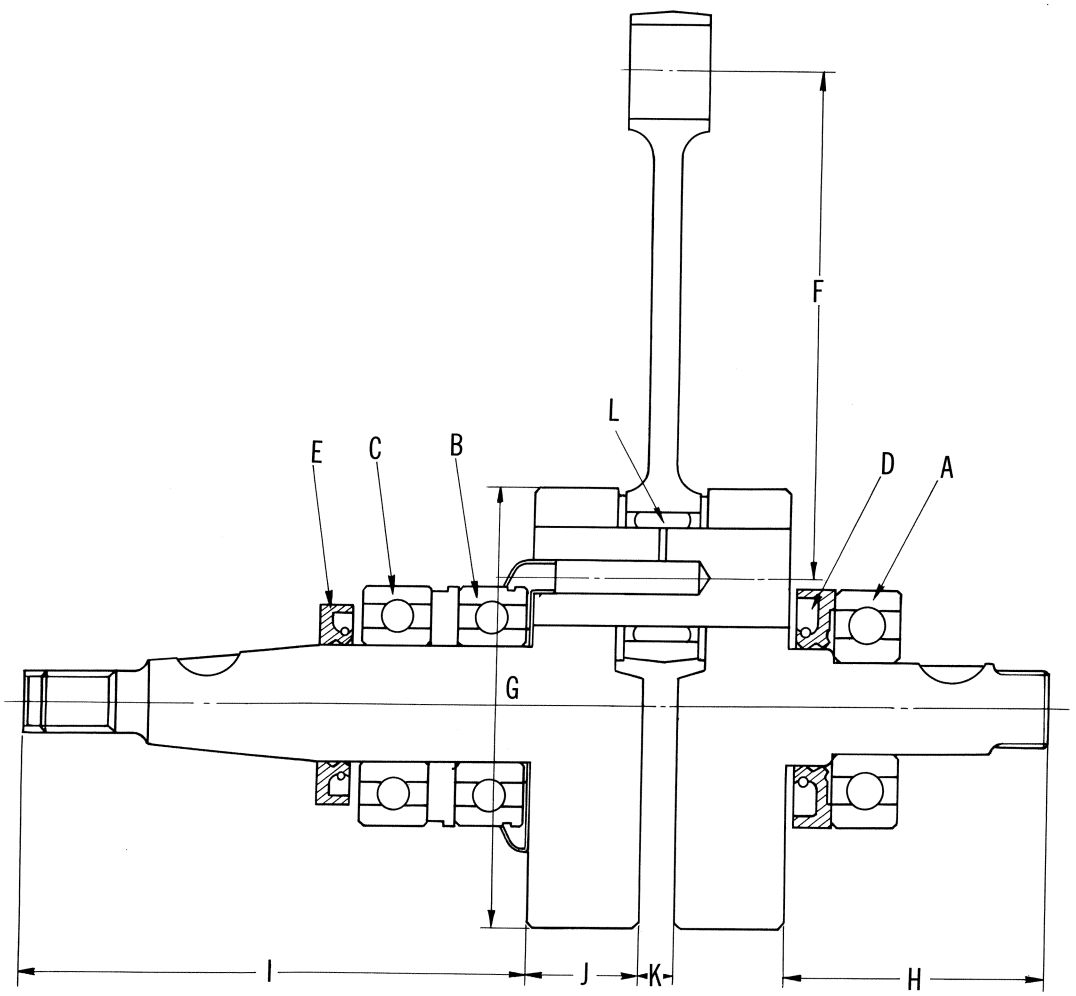


Fig. 6–1–1

	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

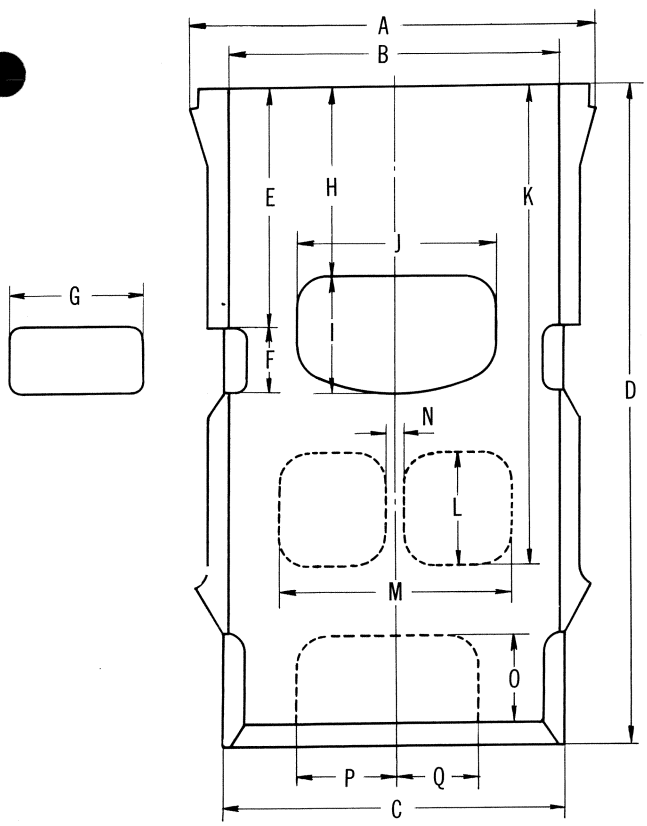


Fig. 6–2–1

	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

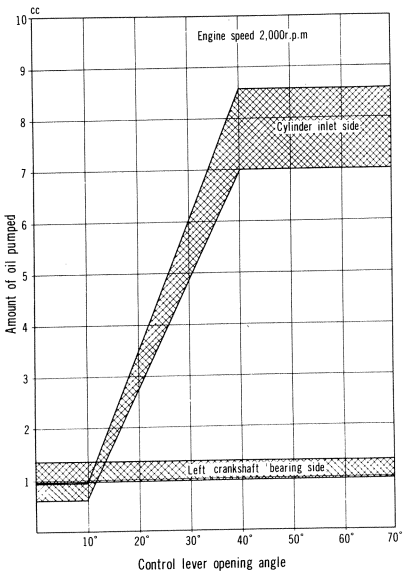


Fig. 6–3–1 Oil pump performance curves

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

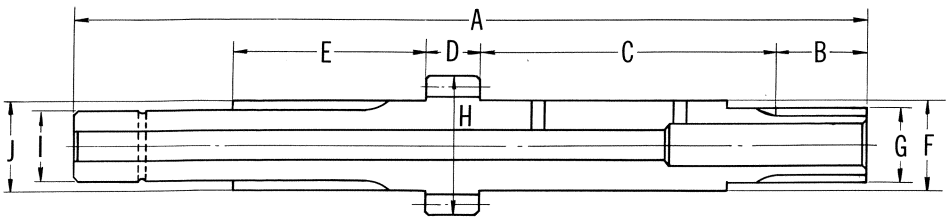


Fig. 7–1–1

	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.)

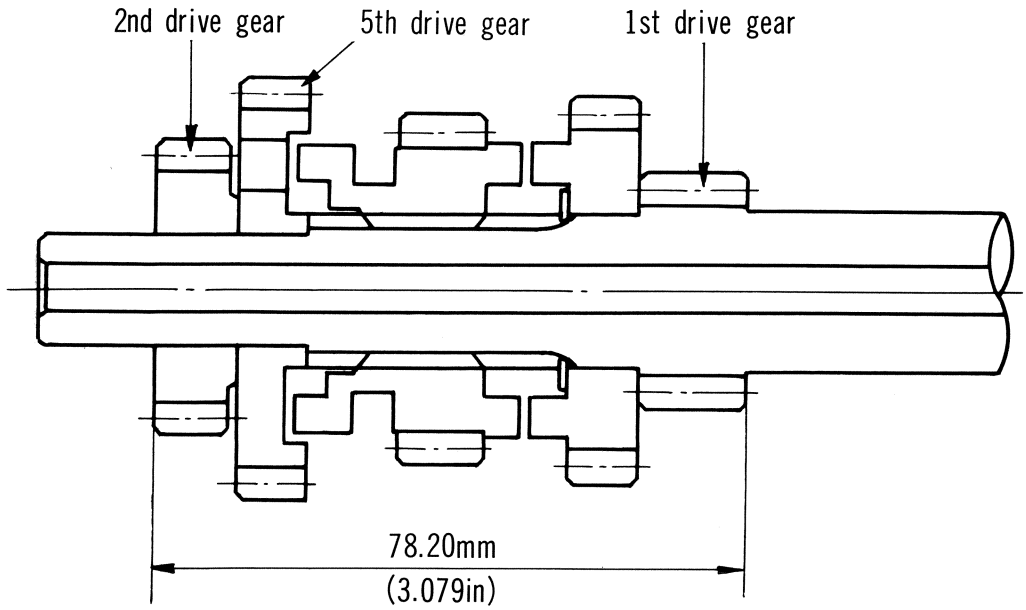


Fig. 7–1–2

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

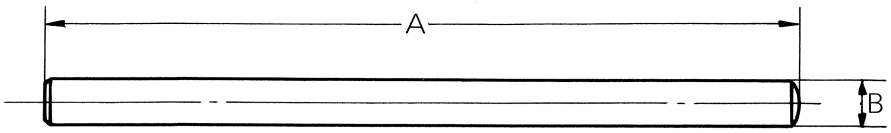


Fig. 7–2–1

	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)

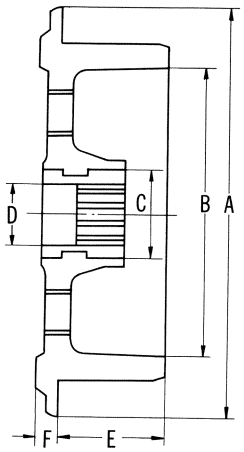


Fig. 7–2–2

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

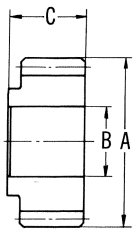


Fig. 7–3–1

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

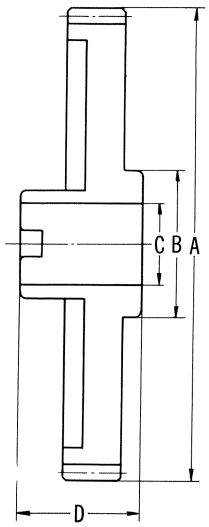
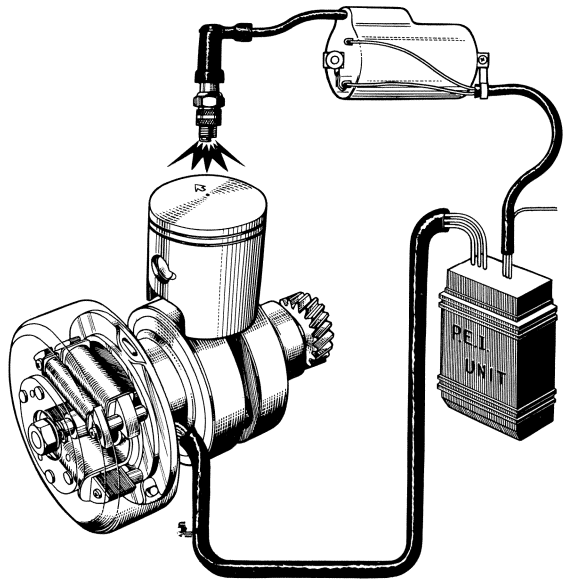


Fig. 7–4–1

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

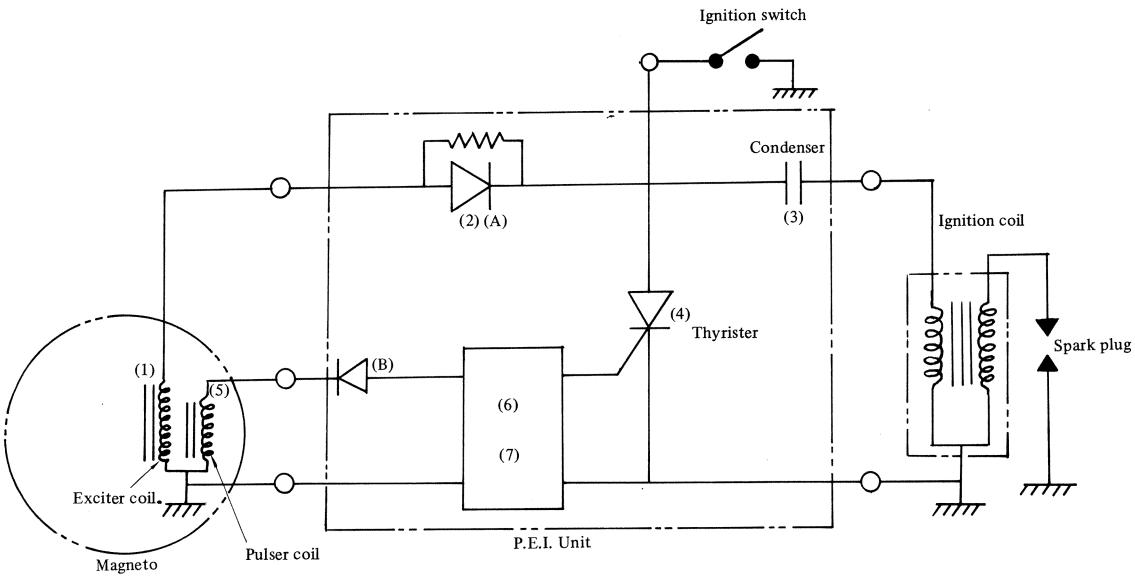


Fig. 8–2–1

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.

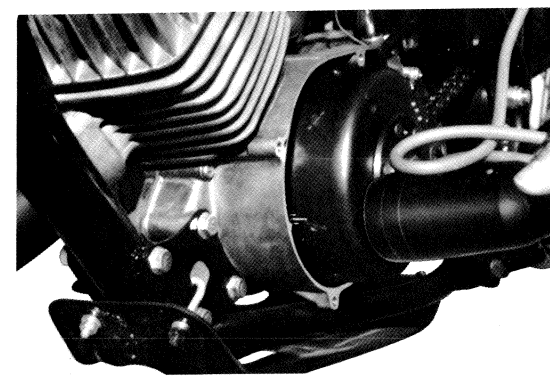


Fig. 8–4–1 Checking ignition timing

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.

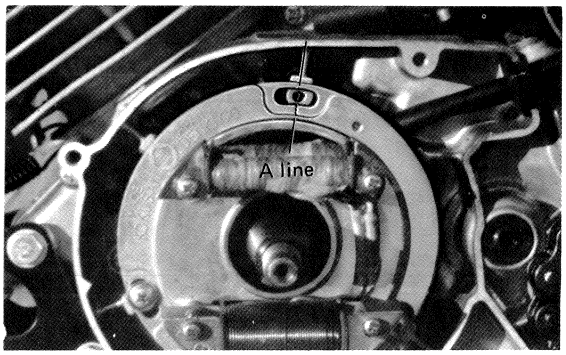


Fig. 8–4–2 Adjusting ignition timing

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

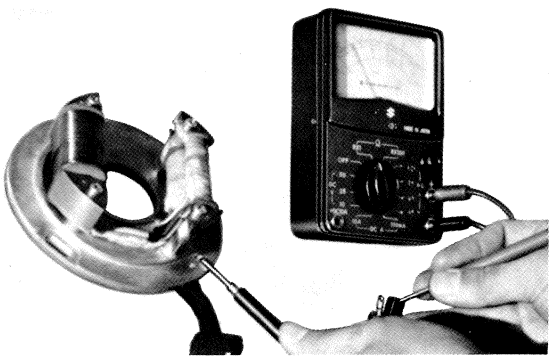


Fig. 8–5–1 Measure the resistance of exciter coil

B. Pulser coil

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

normal state	approx. 75 Ω

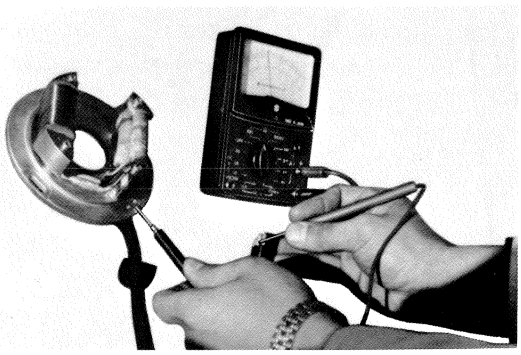


Fig. 8–5–2 Measure the resistance of pulser coil

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.

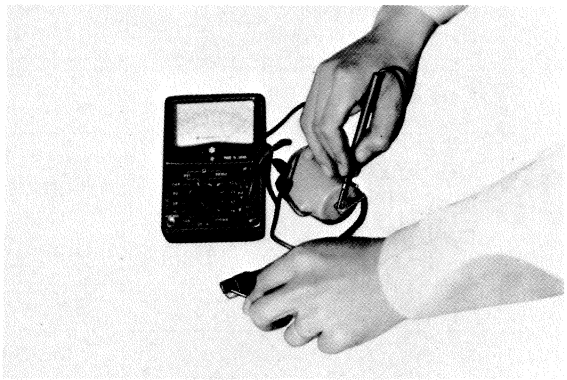


Fig. 8–5–3 Measure the resistance of ignition coil

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.

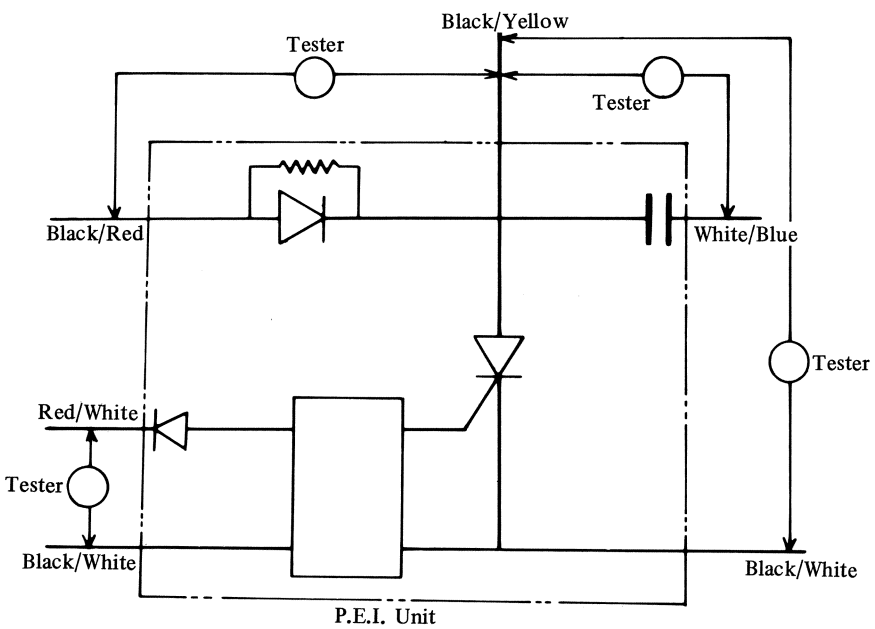


Fig. 8–5–3. P.E.I. unit circuit check chart by using pocket tester

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.

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

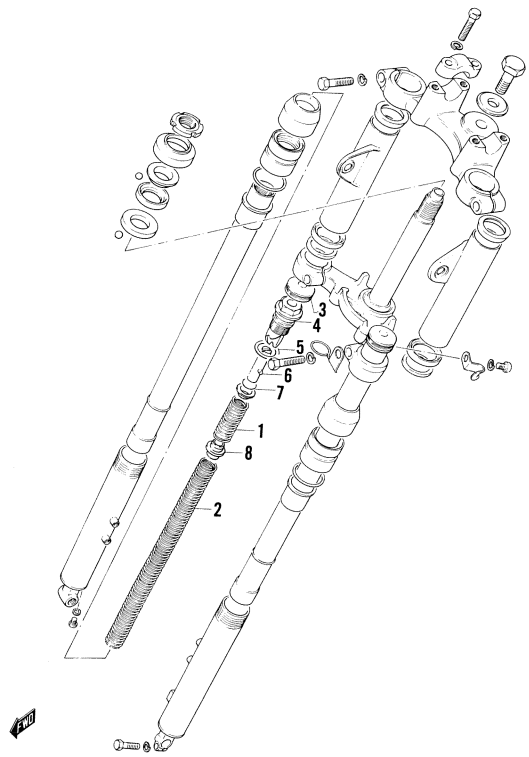


Fig. 9–1–1

9–1–2. Front fork spring characteristic

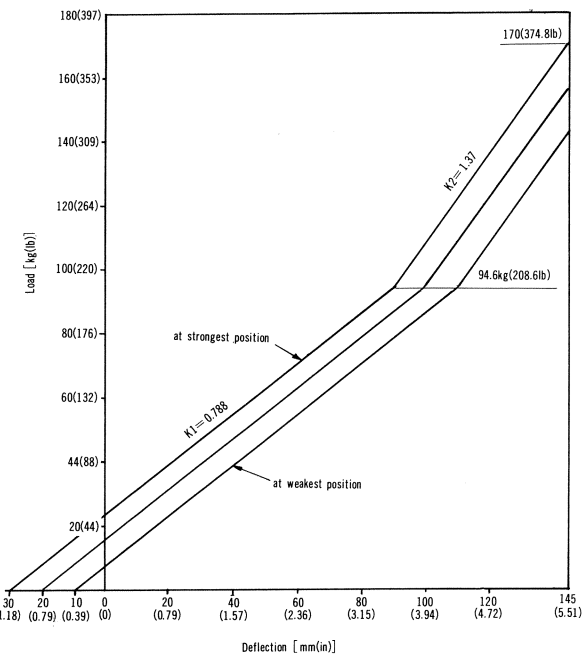


Fig. 9–1–2

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.

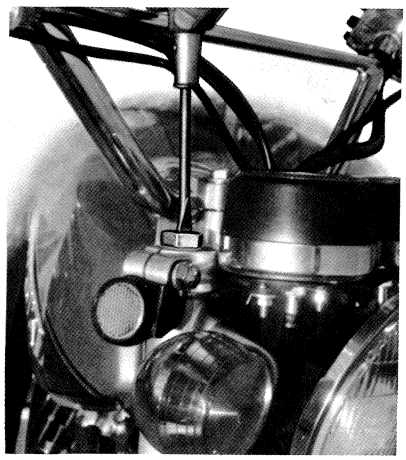


Fig. 9–1–3

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)

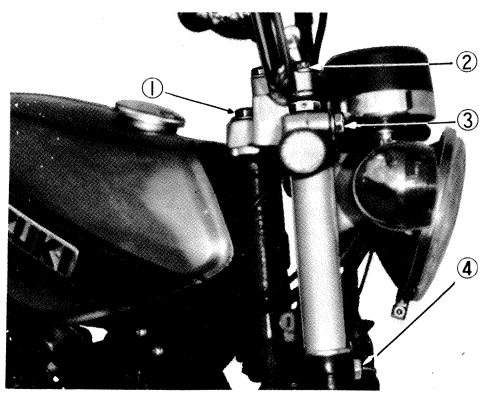


Fig. 9–1–4

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

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.

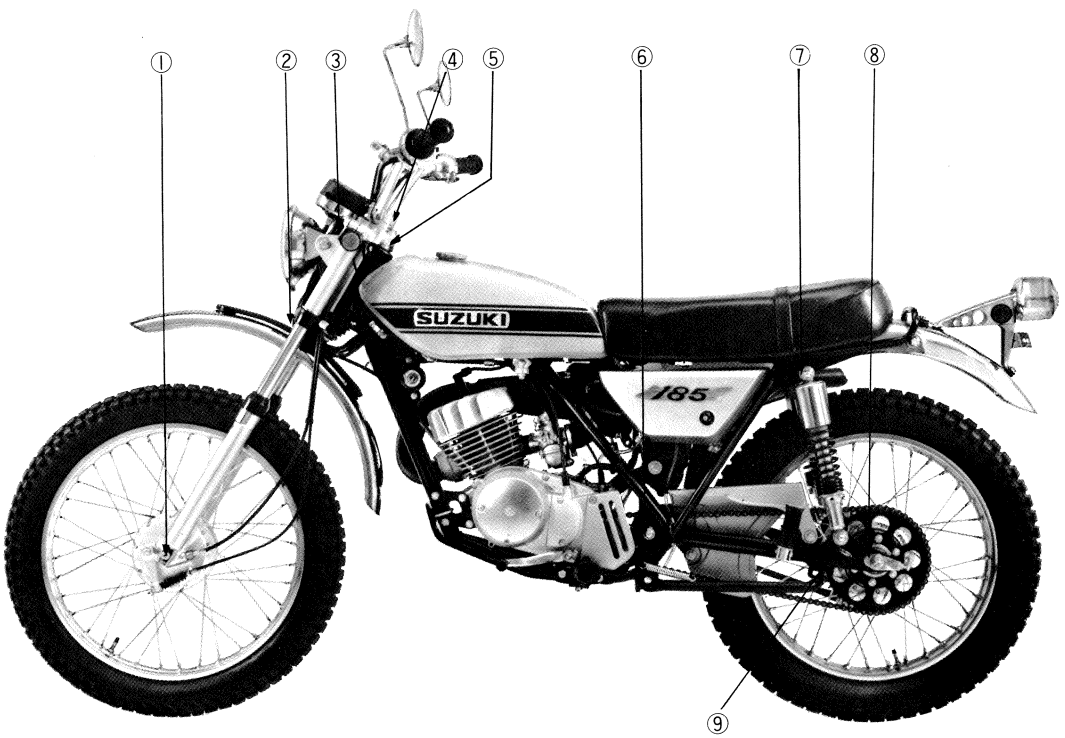


Fig. 11–1–1

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)

NEW MODEL
TECHNICAL BULLETIN

SUZUKI

TS185A

INTRODUCTION

The new Model SUZUKI TS185A motorcycle is the subject matter of this BULLETIN. The Model TS185A is the 1976 version of Model TS185M, and is the latest generation of the TS185 series originally developed for those riders to whom 250-cc machines are a bit too large and 125-cc machines are a bit too small. Filling this gap, TS185 machines were met with great success in capturing a large, distinct group of motorcyclists: they found in these machines the powerfulness of larger engines and the maneuverability of smaller machines in the on-road as well as the off-road driving for which the models of this series are meant.

The new model is intended to refresh the interest of that group of riders in the SUZUKI TS185 and to win new 185-cc fans. Many changes are made in it from its predecessor, to warrant the claim of newness: the engine develops more power, and steering and driving stability is improved.

This BULLETIN describes the new 1976 version to help our SUZUKI salesmen and servicemen in achieving the intended ends.

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

SUZUKI TS185A FEATURES

ENGINE

Four scavenging ports. About 8% more horsepower than the TS185M, by improved port timing and carburetor jetting.

Accurate throttle valve control by forced-actuation valve in the carburetor.

Smooth, light-touch clutch lever due to clutch release mechanism of rack-and-pinion type.

Energetic appearance of the engine with special black coating.

CHASSIS

Fuel tank and muffler cover reshaped; headlamp housing painted black. Newness is visually accentuated in black motif with these and the black engine.

Reduced unsprung weight with sturdy, lightweight aluminum-alloy rims for both front and rear wheels. The wheels behave better in compliance to ground surface to make for improved steering and riding stability.

Front fork damper improved over that of the TS185M to add to the stability.

Softer-touch handle grips, made anti-slip in the palm of the hand by changing the material from vinyl to rubber: less fatigue of the hands even during bumpy off-road driving.

Front footrests made anti-slip by changing the material from rubber to steel: no fear of slipping in rainy weather.

ELECTRICAL

Point-less **E**lectronic **I**gnition system, as in the TS185M, for stable fuel ignition.

Larger turn signal lamps than those of the TS185M for greater safety in street driving.

SPECIFICATIONS

MODEL SUZUKI TS185A	
DIMENSIONS AND WEIGHT	
Overall length	2,035 mm (80.1 in)
Overall width	845 mm (33.3 in)
Overall height	1,125 mm (44.3 in)
Wheelbase	1,335 mm (52.6 in)
Ground clearance	240 mm (9.4 in)
Dry weight	97 kg (214 lbs)
ENGINE	
Type	Two-stroke cycle, air cooled gasoline engine
Intake system	Piston valve
Number of cylinder	1
Bore	64.0 mm (2.52 in)
Stroke	57.0 mm (2.24 in)
Piston displacement	183 cc (11.2 cu.in)
Corrected compression ratio	6.2
Carburetor	VM26SS (Forced throttle-return system)
Air cleaner	Polyurethane foam element
Starter system	Primary kick
Lubrication system	SUZUKI "CCI"
TRANSMISSION SYSTEM	
Clutch	Wet multi-plate type
Transmission	5-speed, constant mesh
Gearshift pattern	One down-four up
Primary reduction	3.211 (61/19)
Final reduction	3.250 (39/12)
Gear ratios low	2.750 (33/12)
2nd	1.813 (29/16)
3rd	1.250 (25/20)
4th	1.000 (23/23)
top	0.800 (20/25)
Drive chain	#520, 96 links
CHASSIS	
Front suspension	Telescopic fork with hydraulic damper, spring 3-step adjustable
Rear suspension	Swinging arm with hydraulic damper, spring 5-step adjustable
Steering angle	40° (right and left)
Caster	60°
Trail	134 mm (5.3 in)
Turning radius	2.37 m (7.8 ft)
Front brake	Right hand operated, internal expanding
Rear brake	Right foot operated, internal expanding
Front tire	2.75-21, 4PR Semi-knobby
Rear tire	3.50-18, 4PR Semi-knobby
ELECTRICAL SYSTEM	
Ignition type	SUZUKI "PEI" (Pointless Electronic Ignition)
Ignition timing	23° B.T.D.C. at 4,000 rpm
Spark plug	NGK B-7HS or Nippon Denso W22FS
Battery	6V 4AH
Generator	Flywheel magneto
Fuse	15A
Headlamp	6V 25/25W (6V 30/30W: for U.S.A. & Canada markets)
Tail/Brake lamp	6V 6/10W (6V 3/21 cp)
Turn signal lamp	6V 8W x 4 (6V 21 cp x 4)
Speedometer lamp	6V 3W
Tachometer lamp	6V 3W
Neutral indicator lamp	6V 3W
High beam indicator lamp	6V 1.7W
Turn signal indicator lamp	6V 1.7W
CAPACITIES	
Fuel tank	7.0 liter (1.8/1.5 US/Imp gal) including 2.0 liter (4.2/3.5 US/Imp pt) reserve
Engine oil tank	1.2 liter (2.5/2.1 US/Imp pt)
Transmission oil	550 cc (1.2/1.0 US/Imp pt) for oil change 650 cc (1.4/1.1 US/Imp pt) for filling up dry gear box as after overhaul
Front fork oil	122 cc (4.1/4.3 US/Imp oz) in each fork leg

* Specifications are subject to change without notice.

DETAILS OF CHANGES
(as contrasted to the TS185M)

ENGINE

Cylinder head

For greater cooling effect, the number of fins as well as the fin area is increased, and the hole for decompression is eliminated. The number of cylinder head bolts is now 6 (six), as compared with 4 (four) in the TS185M, so that the gasketed joint is tighter.

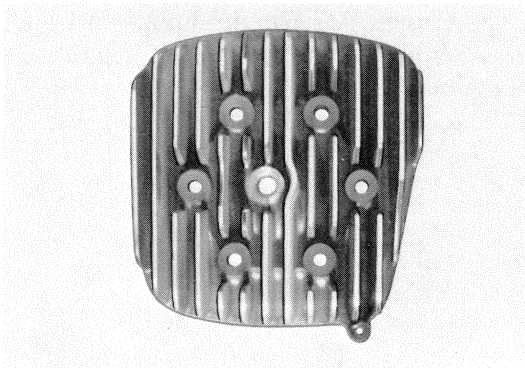


Fig. 1 TS185A cylinder head

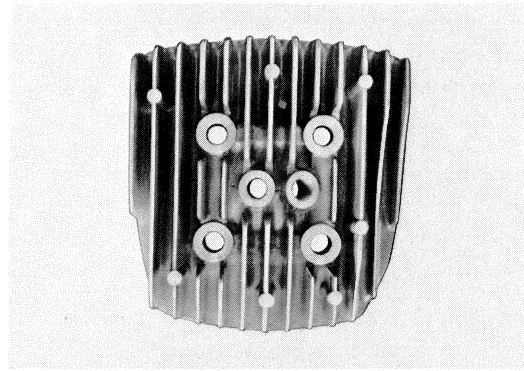


Fig. 2 TS185M cylinder head

Cylinder

Four sleeved scavenging ports are provided. Port timing too has been revised for inlet, exhaust and scavenging ports. These, combined together, represent a significant change from the two-scavenging-port cylinder of the TS185M.

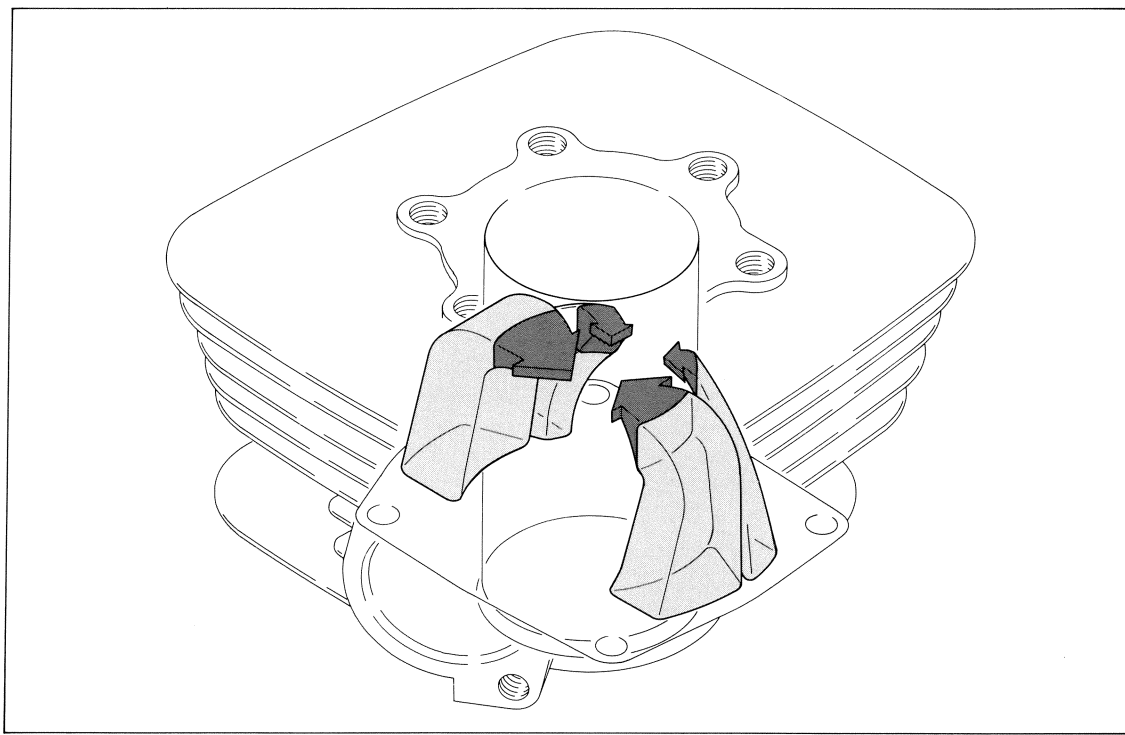


Fig. 3 TS185A four scavenging ports

NOTE: The face of the crankcase for mating with the cylinder is reshaped to accommodate the change from two scavenging ports to four. Piston, piston rings and crankshaft assembly, however, remain the same as those of the TS185M.

Carburator

Two throttle control cables are used: one closing the throttle valve and the other opening the same. In short, throttle valve is force-actuated both ways from the throttle grip. This feature stands out as a marked difference from the single-cable throttle control of the TS185M.

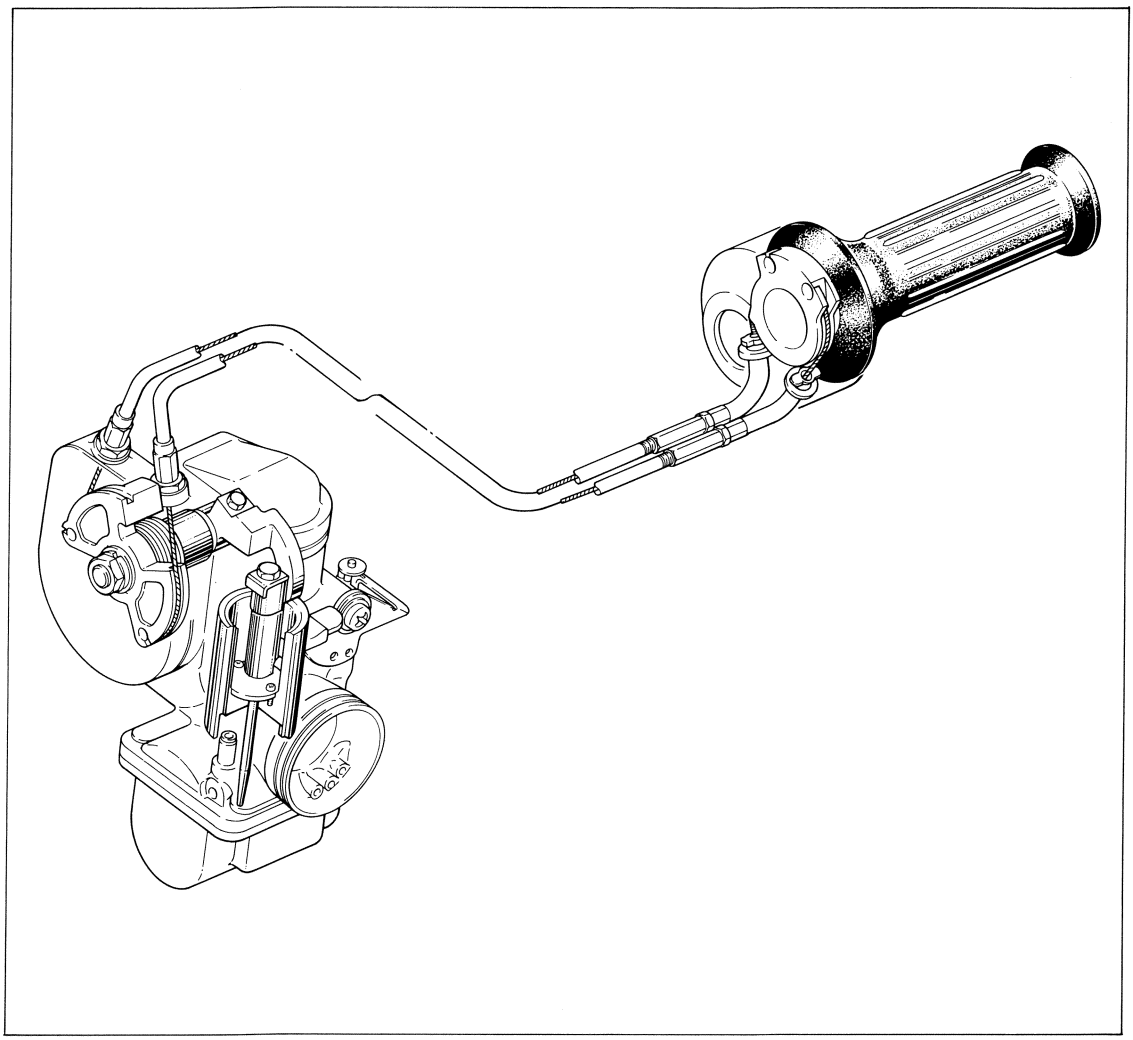


Fig. 4 Two-cable actuated throttle valve

How the carburetor jetting has been changed is indicated in this table:

Description	TS185A	TS185M
Type	VM26SS	VM24SH
Bore size	26 mm	24 mm
Main jet	#130	#125
Air jet	2.5 mm	—
Jet needle	5EI16-3	5DH4-3
Needle jet	O-9	O-4
Throttle valve cutaway	2.0	2.5
Pilot jet	#25	#25
By-pass	1.2 mm	1.4 mm
Pilot outlet	0.6	0.7
Pilot air adjusting screw	1-1/2 turns back	1-1/2 turns back
Float level	14.8 mm (0.58 in)	17.3 mm (0.68 in)
Body mark	29630	29604

Air cleaner

A larger polyurethane foam element, providing a wider area of effective filtration, is used so that the air cleaner will offer less resistance to the flow of intake air.

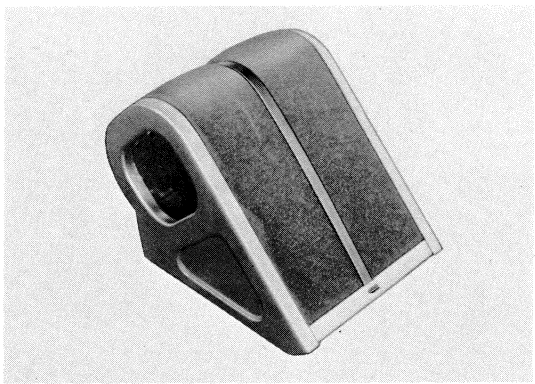


Fig. 5 TS185A air cleaner

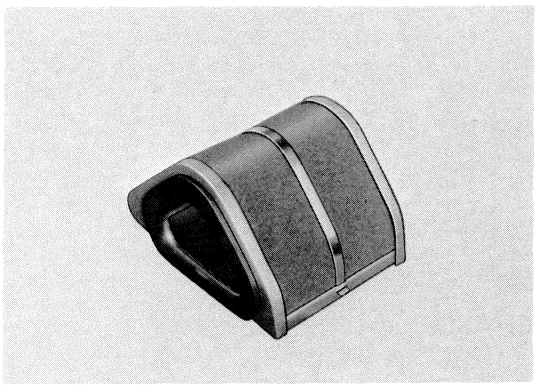
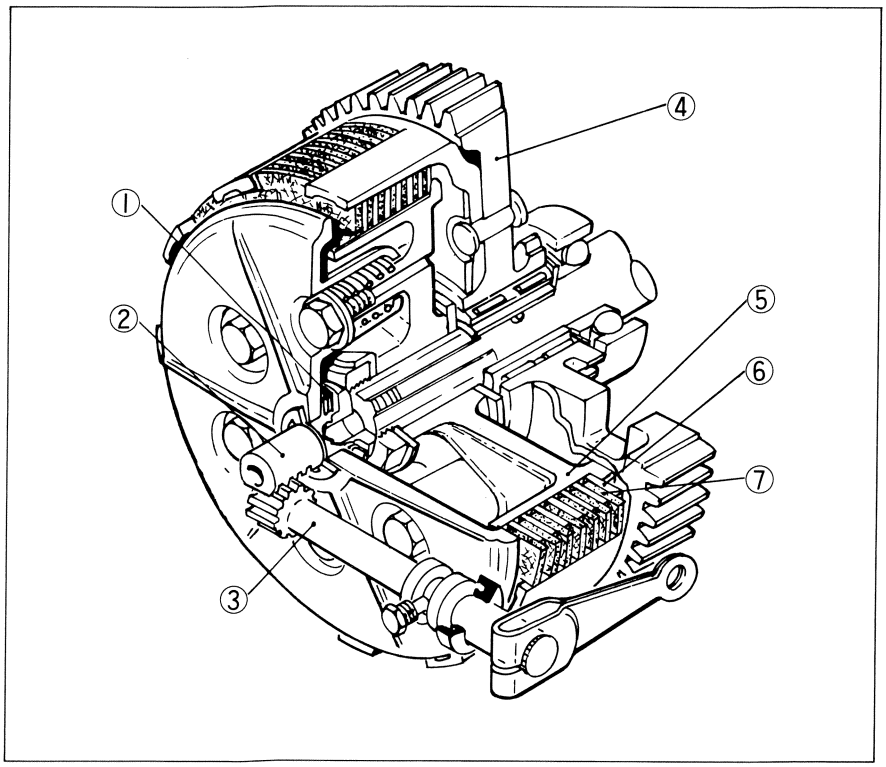


Fig. 6 TS185M air cleaner

NOTE: The muffler remains unchanged.

Clutch

The clutch release mechanism is of the same rack-and-pinion type as that used in the RM series of machines. This feature is a change from the screw type mechanism of the TS185M.



① Clutch release thrust bearing
② Clutch release rack
③ Clutch release pinion
④ Primary driven gear
⑤ Clutch sleeve hub
⑥ Clutch driven plate
⑦ Clutch drive plate

Fig. 7 Clutch release mechanism

NOTE: Incorporation of the rack-and-pinion mechanism for clutch release control has necessitated the shapes of engine covers, right and left, to be changed.

CHASSIS

Fuel tank and muffler cover

Changes on these items are mainly visual. Painted anew and reshaped to generate an image of mechanical beauty, the tank and cover add to the fresh appearance just right for an on-road off-road machines.

Handle grips

Instead of vinyl grips as in the TS185M, rubber grips are used. The new grips are soft to touch, and are more functional than the vinyl ones.

Wheel rims

Aluminum-alloy rims, lighter in weight than the ones heretofore used, are in the front and rear wheels to reduce that part of the machine weight not resiliently supported. The lighter wheels have less chances of becoming air-borne than steel-rim wheels (used in the TS185M) on rough ground: this accounts for the greater stability of the new model.

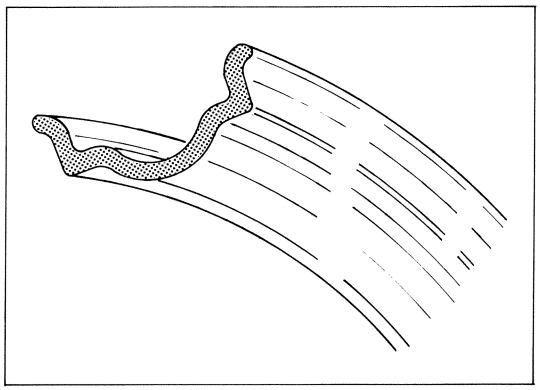


Fig. 8 TS185A wheel rim

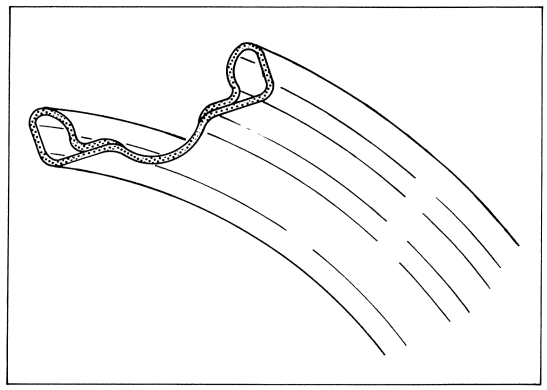


Fig. 9 TS185M wheel rim

Front fork damper

The internal oil passage of the cylinder is made larger by increasing the OD and ID to ensure the smoother oil movement in the cylinder, thereby providing more resilient and responsive cushioning action. In the other respects, the front fork remains unchanged: its stroke is the same 145 mm, and its spring tension can be varied in the same three steps. Improved steerability is obtained by this feature coupled with the lighter front wheel.

Dimensions	TS185A	TS185M
Cylinder OD	13.0 mm (0.51 in)	10.0 mm (0.39 in)
Cylinder ID	8.0 mm (0.31 in)	6.1 mm (0.24 in)

NOTE: Oil capacity is changed. See page 12.

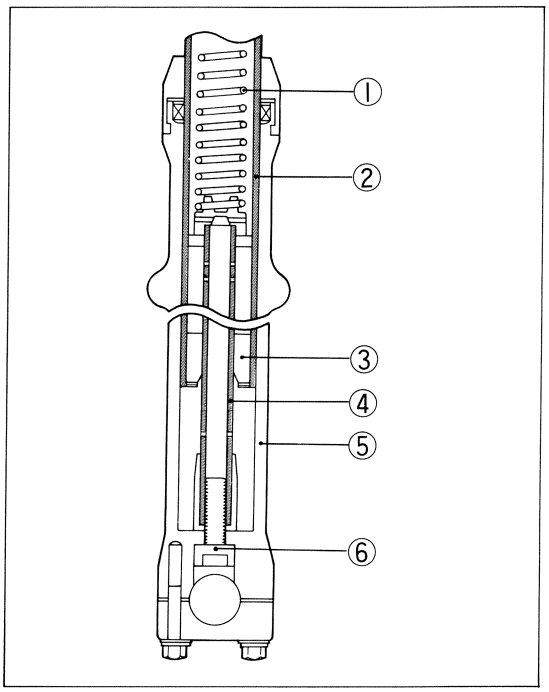


Fig. 10 Front fork cross section

① Spring
② Inner tube
③ Piston
④ Cylinder
⑤ Outer tube
⑥ Allen-head bolt

ELECTRICAL

Turn signal lamps

The lamps are one-size larger than those of the TS185M and flicker more brightly for easier recognition by others in the traffic. This feature is for on-road safety, calculated to enhance the suitability of this dual-use machine to street and highway cruising.

SERVICING AND MAINTENANCE

The following information relates to the services deserving special mention or differing from the practices prescribed for the TS185M:

ENGINE

Carburetor services

1. Throttle valve removal

The throttle valve may have to be removed for servicing; its removal is necessary also when the jet needle has to be repositioned. The removal procedure is as follows:

- Disconnect and remove the two throttle cables, and then dismount the carburetor.
- Loosen two screws securing the carburetor top cover ①, and remove the cover.
- Loosen bolt ② securing the throttle valve arm, and draw out throttle valve shaft. Take out the valve ③.
- To reposition the jet needle ④ in place, remove two screws ⑤. This allows the needle to come off.

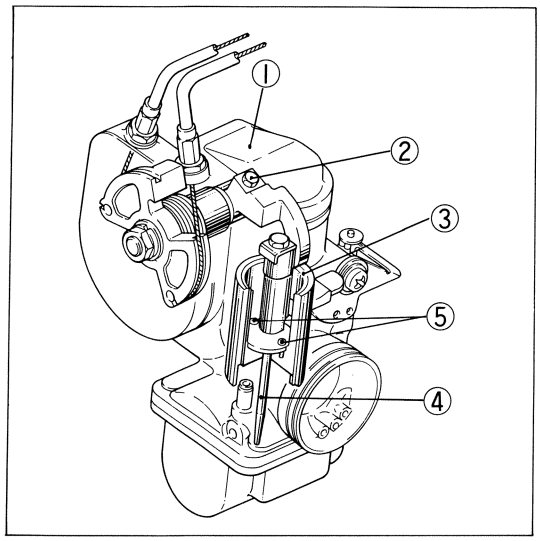
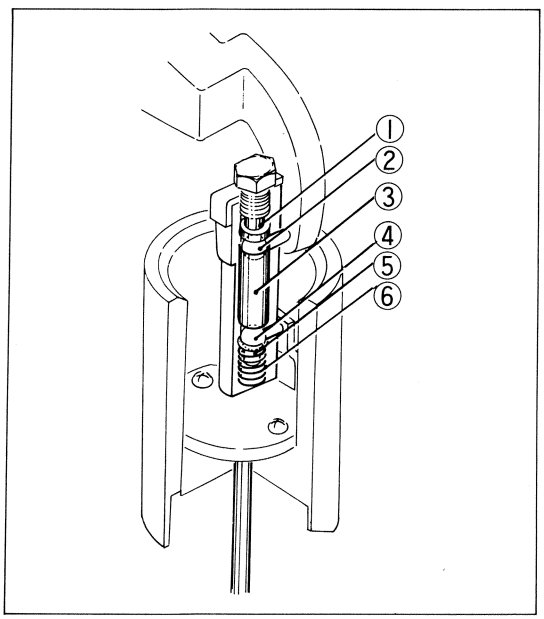


Fig. 11 Throttle valve mechanism

- When installing throttle valve, be sure to assemble the parts correctly by referring to Fig. 12.



① Pin
② Throttle valve arm
③ Pin
④ Bracket
⑤ Pin
⑥ Spring

Fig. 12 Throttle valve parts

2. Float height adjustment

Check and adjust the float height in this sequence:

- Remove carburetor float chamber. Hold the carburetor upside down.
- Fixate float ③ in a position at which the tongue part of float arm ① touches needle valve ② lightly.
- Under this condition, measure the distance Ⓐ. Bend float arm ① more or less, as necessary, to make this distance — float height — measure 14.8 mm.

Float height specification Ⓐ	14.8 mm (0.58 in)

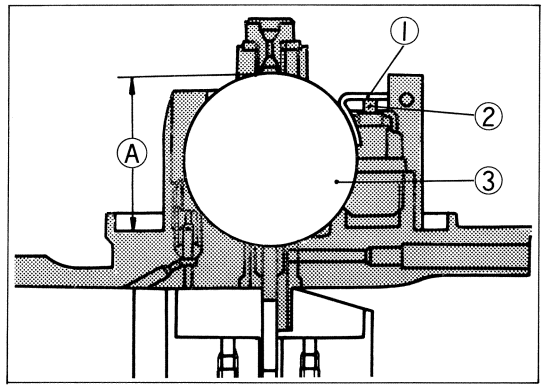


Fig. 13 Float height

Oil pump adjustment

- This adjustment refers to the oil pump control cable, and is to be effected by means of the cable adjustor ③.
- Three alignment marks are involved: mark ⑤, which is meant for mark ⑥, and mark ① meant for hole ②.
- As the throttle grip is turned to actuate the throttle valve, bringing dent mark ① of this valve to the upper part of carburetor alignment hole ②, the mark ⑤ should come into alignment to index mark ⑥.
- The oil pump adjustment consists in satisfying this requirement, and is to be effected by setting the cable adjustor ③.
- After setting the adjuster, be sure to secure it by tightening its lock nut ④.

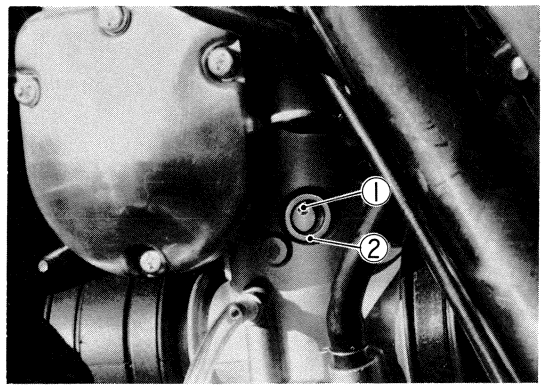


Fig. 14 Carburetor alignment

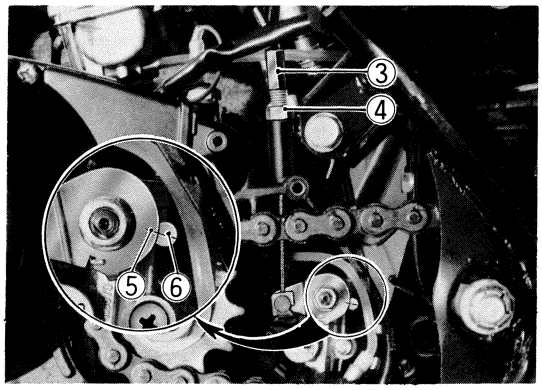


Fig. 15 Oil pump adjustment

Air cleaner services

1. Air cleaner removal

Removing the 3 screws securing the frame cover, left, allows the air cleaner and oil tank to come off for removal. Air cleaner ① is on the inner side of the tank.

IMPORTANT: The top one of the securing screws of left frame cover fastens the grounding end of BLACK/WHITE electrical cord ②. When remounting the air cleaner and oil tank, be sure to reconnect this cord.

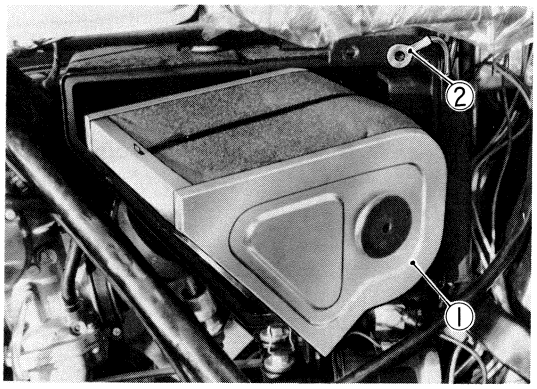
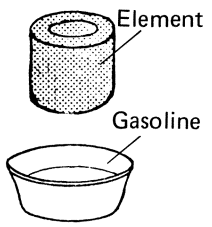
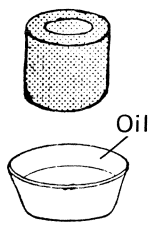


Fig. 16 Air cleaner removal

2. Cleaner element servicing

The polyurethane foam element is meant to be washed clean periodically, and lasts long if each washing is carried out properly, as sequentially explained here, so that its foam texture will not break:

WASHING PROCEDURE

①	②	③	④
			
Wash with gasoline	Squeeze without twisting, and dry.	Immerse in SUZUKI CCI oil or SAE 30 motor oil.	Squeeze without twisting, and install.

CAUTION: Squeezing here means "pressing the element in the palm" and not twisting. Stretching or twisting could break the texture of the element.

Transmission reassembly

When reassembling the transmission in overhauling work, be particularly careful about the positions of gears, washers, circlips, etc., being installed one by one: the standard practice is to reassemble as guided by a visual reference such as the one shown in Fig. 17.

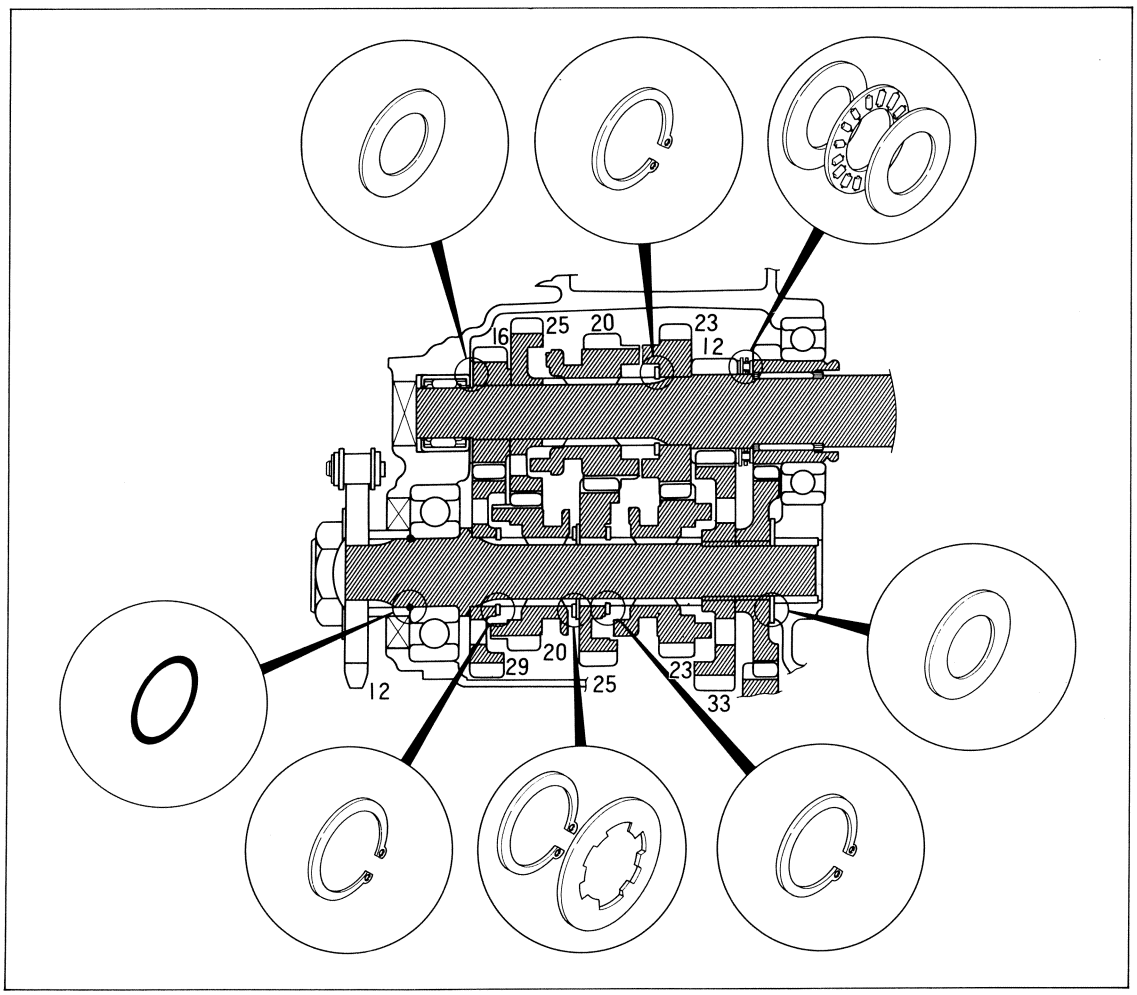


Fig. 17 Transmission gears

CHASSIS

Front fork oil change

The amount of oil needed to fill up the front forks is smaller than in the TS185M because of the changes in cylinder design.

FRONT FORK OIL CAPACITY (Fork oil specification: SAE 10W/20 motor oil)

TS185A	122 cc (4.1/4.3 US/Imp oz) (each leg)
TS185M	124 cc (4.2/4.4 US/Imp oz) (each leg)

ELECTRICAL

Checking the ignition timing

Use ELECTRO-TESTER type SS-II (part No. 09900-28103).

Run the engine at 4,000 rpm, and cast the timing light ① onto the mark ② on crankcase to see if this mark points to the middle line Ⓑ, preferably, or to anywhere between lines Ⓐ and Ⓒ on rotor as it should; if not, it means that ignition is not taking place at the right moment. The method of correction follows:

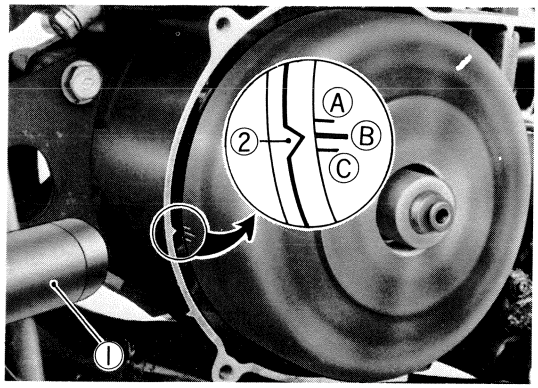


Fig. 18 Ignition timing check

Setting the generator stator for ignition timing

- Remove rotor.
- Loosen the 3 screws securing stator ③ in place.
- Move the stator in place, pointing index line Ⓓ – one of the two lines marked on stator at its top part – to the center of screw ④. See Fig. 19. Line Ⓓ is the **left** one of the two.
- Tighten the 3 screws to secure stator in that position.
- Mount rotor.

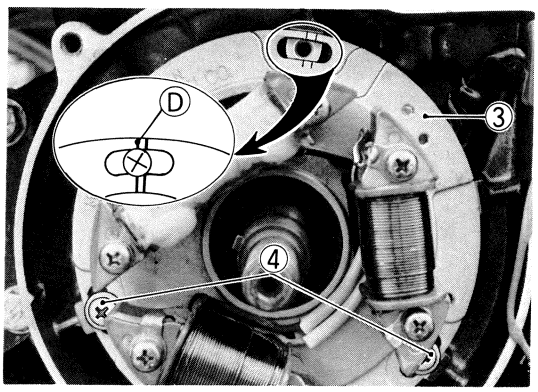


Fig. 19 Adjustment ignition timing

CAUTION: The above procedure applies to those TS185A machines supplied to other markets than U.S.A. and Canada.
TS185A machines supplied to these two excluded markets have the lighting switch locked in "ON" position; in these machines, index line Ⓔ to be centered to screw ④ is the right one of the two, as shown in Fig. 20.

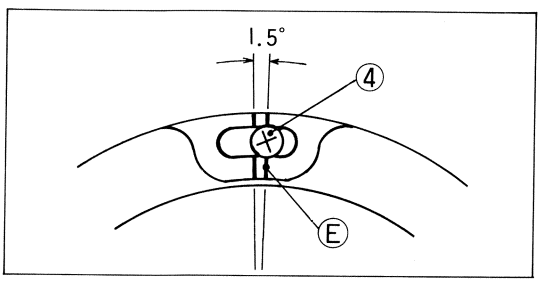


Fig. 20

SERVICE DATA

Major specifications and governing data to be observed in inspecting, checking and adjusting the various parts of the new TS185A machines are as follows:

Description	Data

ENGINE

Cylinder/piston clearance	0.045 - 0.055 mm (0.0018 - 0.0021 in) Based on piston diameter reading taken at 26 mm above skirt end.
Engine idling speed	1,300 rpm
Pilot air adjusting screw setting	1½ turns back from fully closed position
Carburetor float height	14.8 mm (0.58 in) as distance A, shown in page 10.

DRIVE TRAIN

Transmission oil specification	SAE 20W/40 multigrade motor oil
Quantity needed for oil change	550 cc (1.2/1.0 US/Imp pt)
Quantity needed for filling after overhauling	650 cc (1.4/1.1 US/Imp pt)
Drive chain slack	15 - 20 mm (0.6 - 0.8 in)

CHASSIS

Front fork oil (each leg)	122 cc (4.1/4.3 US/Imp oz), SAE 10W/20 motor oil

IGNITION SYSTEM

Ignition timing	23° B.T.D.C. at 4,000 rpm
Spark plug (standard)	NGK B-7HS or Nippon Denso W22FS
Spark plug gap	0.6 - 0.7 mm (0.024 - 0.028 in)

INTERCHANGEABILITY OF PARTS

Components and parts involved in the improvements accomplished in Model TS185A over Model TS185M are related, with respect to interchangeability, to their TS185M counterparts as described hereunder:

Description	Interchangeability

ENGINE

Cylinder head	Not interchangeable. TS185M cylinder head has 4 bolts while that of TS185A has 6 bolts.
Cylinder	Not interchangeable. TS185M cylinder has 2 scavenging ports while that of TS185A has four.
Carburetor assembly	Not interchangeable. The carburetor of TS185M is different in basic construction from that of TS185A.
Air cleaner element	The element used in TS185A is larger and will not fit into the air cleaner of TS185M.
Oil pump	Not interchangeable. The difference is in oil pumping capacity and also in match mark location.
Clutch cable	No interchangeable. The difference is in cable length.

NOTE: Interchangeability is retained between the two models in regard to piston and piston rings and also to clutch plates, drive and driven.

CHASSIS

Front footrest	The TS185A steel footrest, complete with its bracket, may be used in place of their counterparts in TS185M.
Front fork assembly	It is permissible to install TS185A front forks in the TS185M machines. This replacement is recommendable for steering stability.
Wheel rims (F & R)	The new wheel rims of TS185A may be applied to TS-185M machines to good advantage; but do not replace these aluminum-alloy rims by the steel ones of TS185M. The steering stability of the new model prohibits such replacement.
Handle grip	Not interchangeable. The grip of the new model is designed for two throttle control cables while that of TS185M is a one-cable type.

NOTE: Interchangeability is preserved between the brake shoes, front and rear, of the new model and those of the old model.

TIGHTENING TORQUE CHART FOR TS185A

Important fastening parts in the new Model TS185A are listed in this chart, together with their torque specifications. When tightening these parts in servicing work or inspecting them for tightness, be sure to refer to and adhere to the specified torque ranges.

Description	Q'ty	Tightening Torque	
		kg-cm	lb-ft
ENGINE			
Cylinder head nut	6	230 - 270	17 - 19
Primary drive gear nut	1	400 - 550	29 - 39
Clutch sleeve hub nut	1	200 - 300	15 - 21
Flywheel rotor nut	1	550 - 650	40 - 47
Engine sprocket nut	1	400 - 600	29 - 43
Engine mount nut (bolt diam. 8 mm)	3	130 - 230	10 - 16
Engine mount nut (bolt diam. 10 mm)	1	250 - 400	18 - 28
CHASSIS			
Handlebar clamp bolt	4	120 - 200	9 - 14
Steering stem head bolt	1	350 - 550	26 - 39
Front fork cap	2	150 - 300	11 - 21
Front fork upper clamp bolt	2	200 - 300	15 - 21
Front fork lower clamp bolt	2	250 - 350	18 - 25
Front axle nut	1	360 - 520	26 - 37
Front axle holder nut	4	150 - 250	11 - 18
Brake cam lever nut (front & rear)	2	50 - 80	4 - 5
Rear axle nut	1	360 - 520	26 - 37
Rear swinging arm pivot nut	1	450 - 700	33 - 50
Rear shock absorber fitting nut	4	200 - 300	15 - 21
Rear torque link nut	2	100 - 150	8 - 10

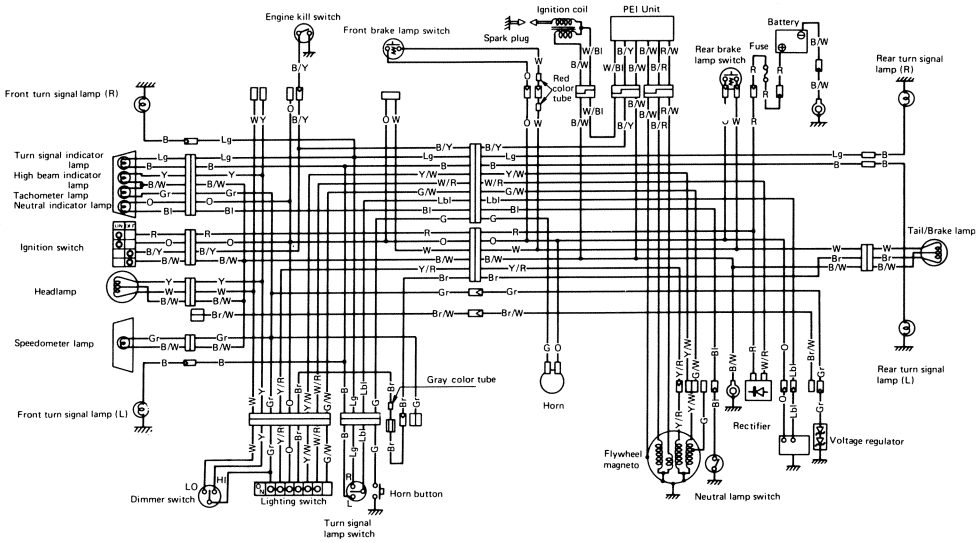
SPECIAL TOOLS NEEDED FOR MODEL TS185A

The same special tools prescribed for the old model – TS185M – are needed for the new model. They are listed here again for your reference. Special tools speed up servicing work, assure good workmanship and prevent damage to the machine. Make sure that you have all of them on hand for ready use.

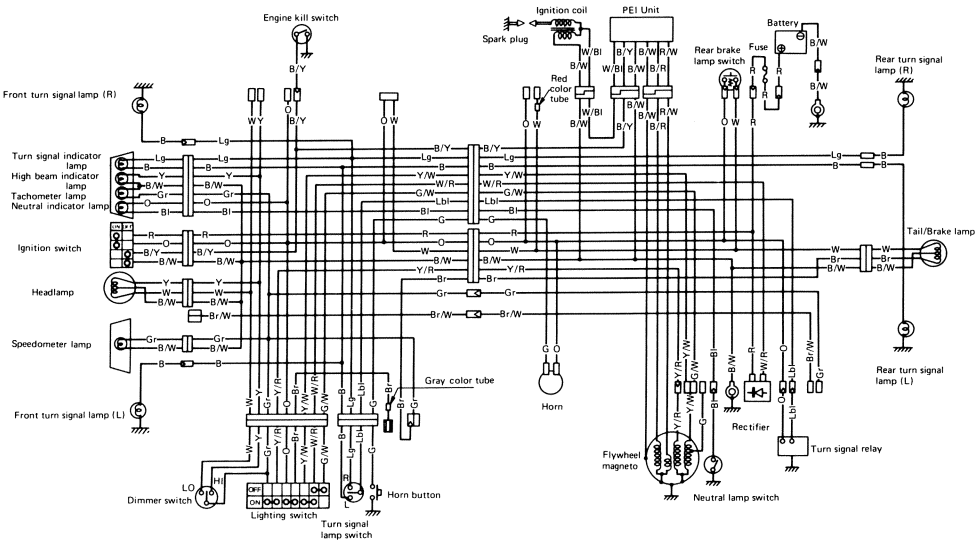
Ref. No.	Tool No.	Tool Name
1	09910-10710	8 mm stud installing tool (for installing cylinder stud bolts)
2	09910-20115	Piston holder
3	09910-80115	Crankcase separating tool
4	09911-70120	6 mm hexagon L type wrench (for driven Allen-head bolts on front forks)
5	09913-50120	Oil seal remover
6	09913-70122	Bearing & oil seal installing tool (I.D.: 40.5 mm, O.D. : 50.0 mm)
7	09913-80112	Bearing & oil seal installing tool (I.D.: 25.5 mm, O.D.: 34.0 mm)
8	09920-20310	Clutch spring hook
9	09920-53710	Clutch sleeve hub holder
10	09920-06107	Snap ring opener
11	09930-10111	Spark plug wrench
12	09930-30102	Rotor remover shaft
13	09930-30190	Rotor remover attachment
14	09930-40113	Engine sprocket &flywheel holder
15	09940-10122	Steering stem lock nut wrench
16	09940-52810	Front fork oil seal installing tool (I.D.: 30.0 mm, O.D.: 40.5 mm)
17	09940-60113	Spoke nipple wrench
18	09900-06104	Snap ring remover
19	09900-09002	Shock driver set
20	09900-20804	Thickness gauge
21	09900-21602	Oil pump discharge amount measuring tool
22	09900-25002	Pocket tester
23	09900-26003	Engine tachometer
24	09900-28106	Electro tester (type SS-II)
25	09900-28403	Hydrometer

WIRING DIAGRAM

FOR USA AND CANADA MARKETS



FOR OTHER MARKETS THAN USA AND CANADA



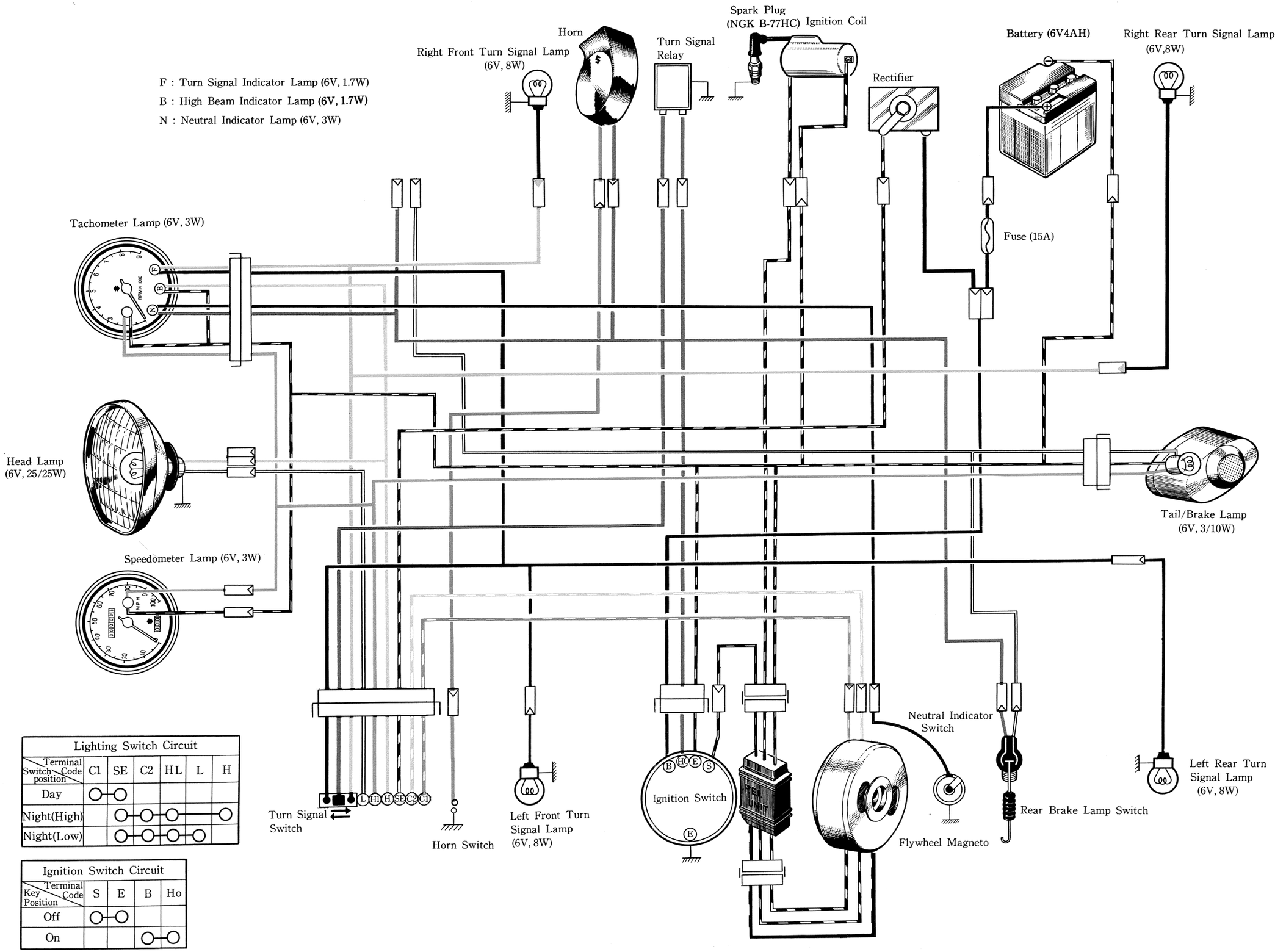
B	Black	W	White	B/Y	Black with yellow tracer
Bl	Blue	Y	Yellow	G/W	Green with white tracer
Br	Brown	Lbl	Light blue	R/W	Red with white tracer
G	Green	Lg	Light green	W/Bl	White with blue tracer
Gr	Gray	B/R	Black with red tracer	W/R	White with red tracer
O	Orange	B/W	Black with white tracer	Y/R	Yellow with red tracer
R	Red	Br/W	Brown with white tracer	Y/W	Yellow with white tracer

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	Every 3,000 km	Every 6,000 km	Every 12,000 km
	750 mi	Every 2,000 mi	Every 4,000 mi	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)	

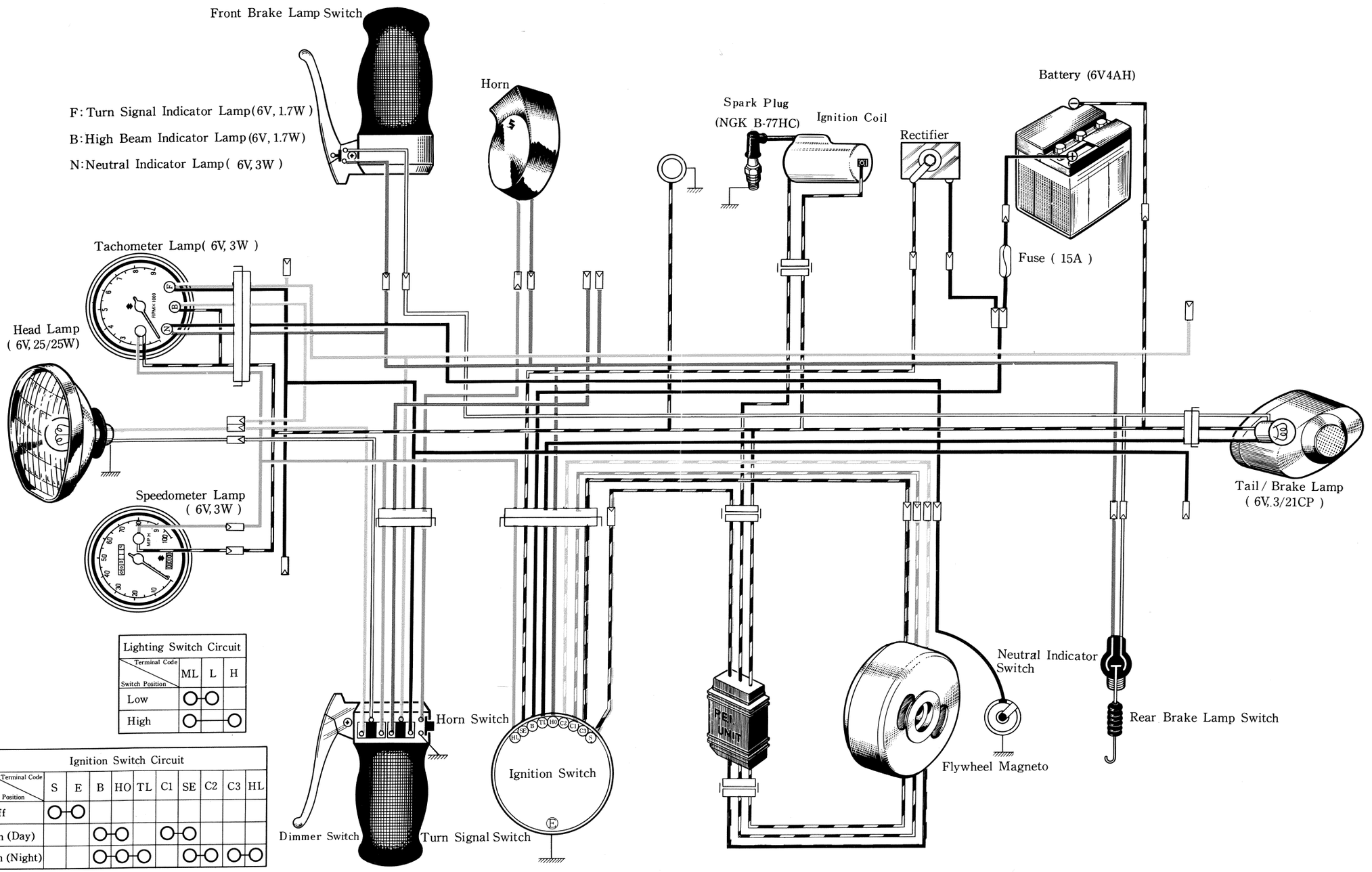
13. WIRING DIAGRAM (FOR EXPORT STANDARD)



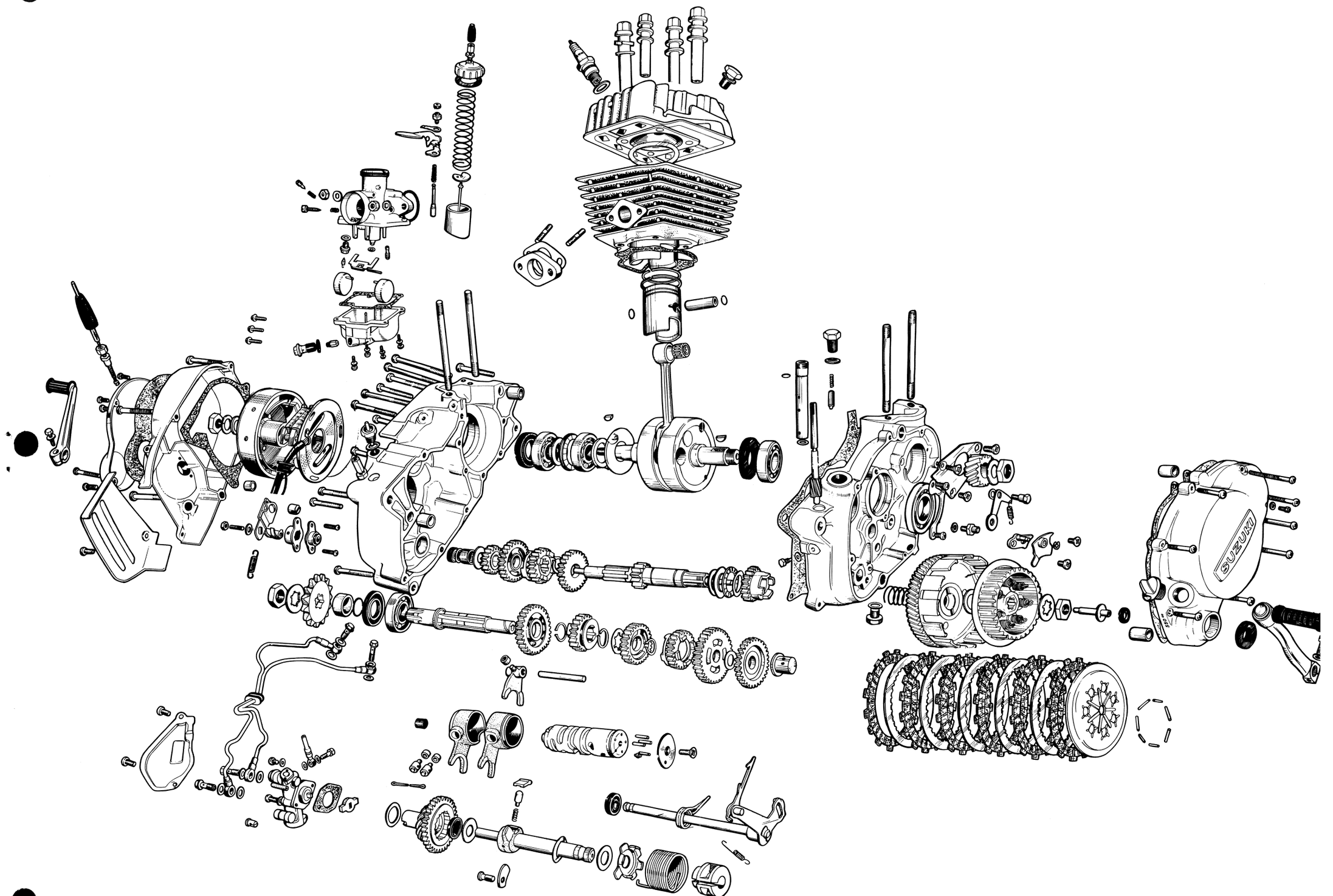
Lighting Switch Circuit						
Terminal / Switch position / Code	C1	SE	C2	HL	L	H
Day	○	○				
Night(High)		○	○	○		○
Night(Low)		○	○	○	○	

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

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



15. ENGINE EXPLODED VIEW



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