SUZUKI

TS125

SERVICE MANUAL

SR-2801E
(E)

SERVICE DATA AND TIGHTENING TORQUE

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Torque				
kg-cm	x	.07233	=	lb-ft
kg-m	x	7.233	=	lb-ft
	x	100	=	kg-cm
lb-ft	x	.1383	=	kg-m
	x	13.83	=	kg-cm
kgf.m	x	10	=	Newton meter (N.m) or Joule (J)
Pressure				
kg/cm^2	x	14.22	=	lbs/in^2 or psi
	x	.0001	=	kg/m^2
	x	100	=	kPa
kPa	x	.01	=	kg/cm^2
lbs/in^2 or psi	x	.07031	=	kg/cm^2
Velocity				
m/sec.	x	3.6	=	km/h
	x	3.281	=	ft/sec.
	x	2.237	=	miles/h
miles/h	x	1.6093	=	km/h
	x	1.467	=	ft/sec.
	x	.4470	=	m/sec.
km/h	x	.2778	=	m/sec.
	x	.9113	=	ft/sec.
	x	.6214	=	miles/h
Power				
hp	x	.7457	=	kw
	x	76.12	=	kg-m/sec.
kw	x	1.3405	=	hp
	x	101.97	=	kg-m/sec.
Square Measure				
m^2	x	1 550	=	in^2
	x	10.764	=	ft^2
cm^2	x	.155	=	in^2
	x	.0001	=	m^2
ft^2	x	.092903	=	m^2
in^2	x	6.4516	=	cm^2

Temperature

F = 9/5 x C + 32 F : Fahrenheit
C = 5/9 x (F – 32) C : Centigrade

Capacity				
Ah	x	3.6	=	kC

Throttle cable

There should be 0.5 - 1.0 mm (0.02 - 0.04 in) play A on the throttle cable.

To adjust the throttle cable play:

- Tug on the throttle cable to check the amount of play.
- If it is found to be out of adjustment, loosen the lock nut ① and screw the adjuster ② in or out until proper adjustment is obtained.

Fig. 3-19.

- Secure the adjuster ② again with the lock nut ① when proper adjustment is obtained.

Oil pump cable

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

- Adjust the oil pump control cable with the cable adjuster ③ so that aligning mark ⑤ aligns to the index mark ⑥ when the throttle valve dent mark ⑦ is at the upper part of the carburetor aligning hole ⑧ by turning throttle grip.
- Be sure to secure the adjuster ③ with the lock nut ④.

NOTE: Oil pump cable adjustment must be done after the throttle cable adjustment.

Fig. 3-20.

Fig. 3-21.

Transmission Oil

Change at initial 1 000 km and every 3 000 km

After a long period of use, viscosity of the transmission oil will deteriorate and quicken the wear of sliding and interlocking surfaces. Renew the transmission oil periodically following the procedure below.

- Remove the oil filler cap ① and oil drain plug ② located on the bottom of the engine and drain the used oil from the transmission case.

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

- Reinstall the drain plug.

SPECIAL TOOLS

Special tools assure three things: 1) improved workmanship; 2) speedy execution of jobs for which they are meant; and 3) protection of parts and components against damage. Here are the special tools prescribed for the Model TS125.

1  Con-rod stopper (09910-20115)	2  Piston pin puller (09910-34510)	3  Crankcase separating tool (09910-80113)
4  6 mm hexagon L type wrench (09911-70120)	5  Oil seal remover (09913-50110)	6  Bearing and oil seal installing tool (09913-70122)
7  Bearing and oil seal installing tool (09913-80111)	8  Clutch spring hook (09920-20310)	9  Clutch sleeve hub holder (09920-53710)
10  Spark plug wrench (09930-10111)	11  Rotor remover shaft set (09930-30102)	12  Rotor remover attachment (09930-30161)
13  Engine sprocket and flywheel holder (09930-40113)	14  Timing gauge (09931-00112)	15  Steering stem lock nut wrench (09940-10122)

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ENGINE

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Fig. 7-45. Flatten primary drive gear washer.

Fig. 7-46. Using special tool (part No. 09910-20115), remove primary drive gear nut and take off drive gear.

Fig. 7-47. Remove key and take off spacer.

Fig. 7-48. Using special tool (part No. 09920-70111), remove circlip, and draw out kick starter idle gear.

Fig. 7-49. Pull out gearshift shaft.

Fig. 7-50. Pull out kick starter drive gear and oil pump drive gear.

Reed Valve

The reed valve assembly is treated as a unit in the supply of replacement parts: its individual parts are not supplied as such. However, it is permissible to disassemble the reed valve assembly in place, as shown in Fig. 7-86, for servicing; if it has to be disassembled, be sure to adhere to the following two rules in reassembly:

- Check the clearance Ⓐ between reed valve and its seat and the dimension Ⓑ. If the clearance Ⓐ is noted to exceed 0.2 mm (0.008 in), replace the whole reed valve assembly. The dimension Ⓑ is at least 1 mm (0.04 in).

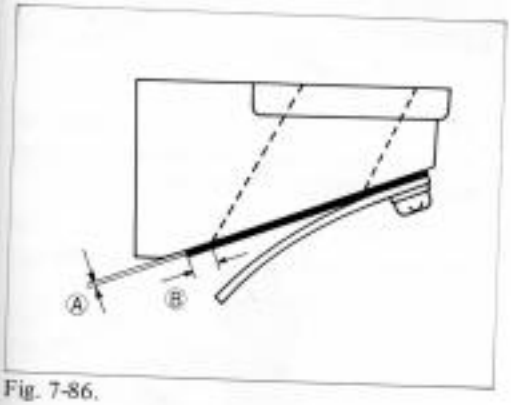

Fig. 7-86.

- Tighten screws to a torque of anywhere between 0.7 and 0.9 Nm, with "Thread lock cement" (part No. 99000-32040) applied to screw threads.

ig. 7-87.

Fig. 7-88.

Reed valve fitting screws tightening torque	0.7 - 0.9 Nm (0.07 - 0.09 kg-m, 0.50 - 0.65 lb-ft)

Fig. 7-120.

- Before inserting the piston in the cylinder, be sure to apply SUZUKI CCI Oil or two-stroke oil to the outer surfaces of the piston and piston ring grooves.

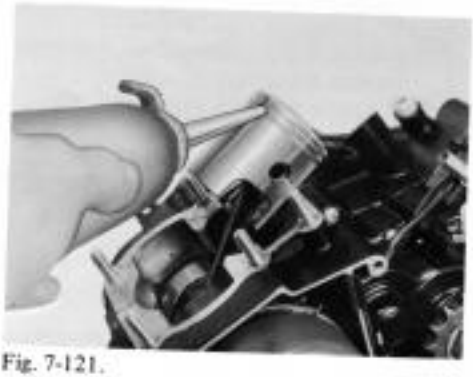

Fig. 7-121.

Cylinder

The reed valve is located on the underside of the inlet port formed of the cylinder. Before securing the cylinder to the crankcase, examine the reed valve carefully, making sure that there is no foreign matter (A) stuck between reed valve and valve stopper. Poor engine performance is often due to neglect of this attention.

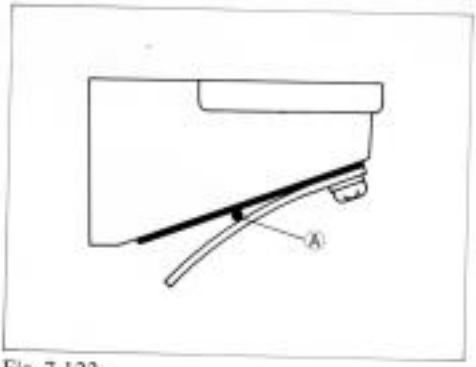

Fig. 7-122.

Cylinder Head

After installing the cylinder head, gradually tighten the nuts by repeating the cross pattern shown in Fig. 7-123, to evenly distribute the pressure.

Cylinder head nut tightening torque	23 - 27 Nm (2.3 - 2.7 kg-m / 16.5 - 19.5 lb-ft)

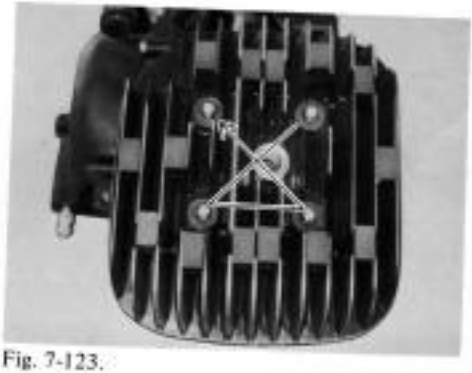

Fig. 7-123.

Fig. 9-7.

NOTE: Whenever the point gap is reset, be sure to then reset the ignition timing.

Inspect the point surface condition. If either surface is burnt or pitted, remove and polish with an oil stone. Wash the points carefully with gasoline before reinstalling.

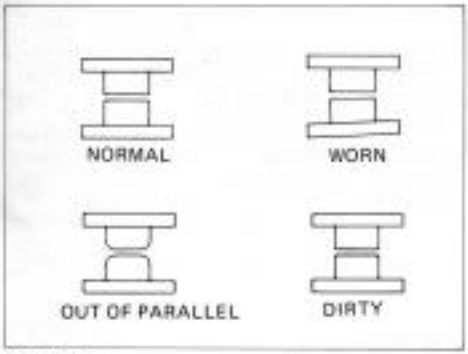

Fig. 9-8.

Condenser

A condenser is connected in parallel with the contact points to store and then release electric current. The amount of charge the condenser can store is determined by its capacity.

The capacity should be checked using an electro-tester.

- Insert insulation between the points. The condenser body should be isolated from ground.
- Set the tester selector knob ① to "MF".
- Set the power switch ② to "ON" and calibrate the multimeter "D" scale ③ to the "CAL" position using the "MF" calibration screw ④.
- Connect the red (positive) lead to the condenser lead and the black (negative) lead to the condenser case mounting tab.
- Press the test button ⑤ and note the "D" scale reading.

  If the reading does not fall within the standard range, replace the condenser.

Standard condenser capacity range	0.18 ± 10% μ F

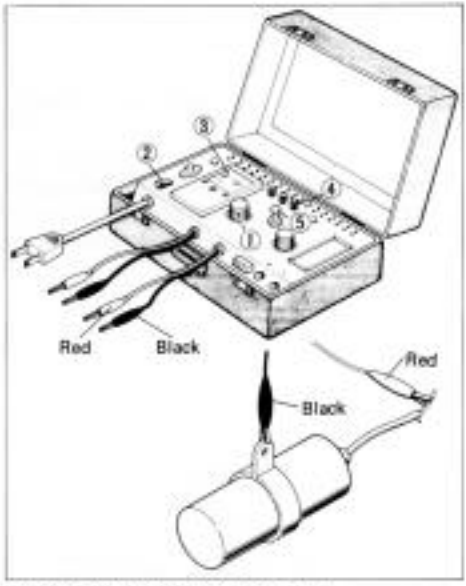

Fig. 9-9. Condenser capacity check.

Check Horn

After a long period of use, horn contacts will wear and the sound level may decrease. Inspect the sound level periodically and, if necessary, adjust following the procedure below.

- Disconnect the green wire ① from the horn terminal. Connect the (+) lead of the pocket tester (special tool) to the terminal.
- Connect the (−) lead of the pocket tester to the green wire.
- Set the knob of the pocket tester to "20A DC".

Fig. 9-29.

- Untighten the lock nut at the back of the horn.
- Turn on the ignition switch. Adjust the sound level by turning the adjusting screw while pressing the horn button. Tightening the adjusting screw makes the sound louder and untightening lowers the sound level.

Best horn sound	2 - 3 Amp.

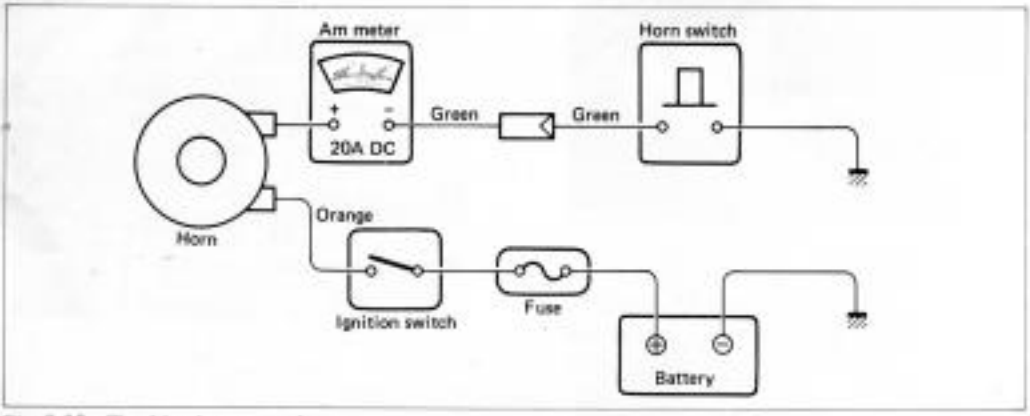

Fig. 9-30. Checking horn sound.

CAUTION: Do not turn the adjusting screw in too far, since doing so will increase horn current with the possibility of burning out the horn coil.

Fig. 10-7. Remove front fork by drawing it out.

Fig. 10-8. Remove steering stem upper bracket by loosening the stem bolt.

Fig. 10-9. Remove steering stem nut with special tool (part No. 09940-10122), and slide off the stem. Be careful not to let the steel balls fall off.

Inspection

Inspect and check the removed parts for the following abnormalities:

- Handle distortion
- Handlebar clamp wear at the surface in contact with the handlebars
- Broken cables and lead wires
- Race wear and brinelling
- Worn or damaged steel balls
- Distortion of steering stem

Replacement of Steering Stem Races

Disassembly

- Remove the steering stem.
- Remove the two inner races fitted to the top and bottom ends of the head pipe.

Fig. 10-10.

Installing the Races

- Oil the replacement inner races and force each inner race into the head pipe using the special tool (part No. 09941-34510) ①. Be sure to push the race all the way into the pipe, that is, until the jacking bolt of the special tool refuses to turn any further.