

**SUZUKI**

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**GS850G**

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**SERVICE MANUAL**

99500-38002-03E  
(英)































































































































































































































































































## SPECIFICATIONS

### DIMENSIONS AND DRY MASS

Overall length .....	2 195 mm (86.4 in)
Overall width .....	865 mm (34.1 in)
Overall height .....	1 190 mm (46.9 in)
Wheelbase .....	1 500 mm (59.1 in)
Ground clearance .....	170 mm ( 6.7 in)
Seat height .....	795 mm (31.3 in)
Dry mass .....	245 kg (540 lbs)

### ENGINE

Type .....	Four-stroke, air-cooled, DOHC
Number of cylinders .....	4
Bore .....	69.0 mm (2.717 in)
Stroke .....	56.4 mm (2.220 in)
Piston displacement .....	843 cm <sup>3</sup> (51.4 cu. in)
Compression ratio .....	8.8 : 1
Carburetor .....	MIKUNI BS32SS, four
Air cleaner .....	Polyurethane foam element
Starter system .....	Electric
Lubrication system .....	Wet sump

### TRANSMISSION

Clutch .....	Wet multi-plate type
Transmission .....	5-speed constant mesh
Gearshift pattern .....	1-down, 4-up
Primary reduction .....	1.775 (87/49)
Gear ratios, Low .....	2.500 (35/14)
2nd .....	1.777 (32/18)
3rd .....	1.380 (29/21)
4th .....	1.125 (27/24)
Top .....	0.961 (25/26)

### SECONDARY DRIVE

Type .....	Shaft drive
Secondary reduction .....	1.062 (17/16)
Final reduction .....	3.090 (34/11)

**CHASSIS**

Front suspension	Telescopic, pneumatic/coil spring, oil dampened
Rear suspension	Swingign arm, oil dampened, damper 4-way/ spring 5-way adjustable
Steering angle	40° (right and left)
Caster	62° 10'
Trail	* 116 mm (4.57 in)
Turning radius	* 2.5 m (8.5 ft)
Front brake	Disc brake, twin
Rear brake	Disc brake
Front tire size	3.50H19 4PR (Tubeless tire)
Rear tire size	4.50H17 4PR (Tubeless tire)
Front tire pressure	1.75 kg/cm <sup>2</sup> (24 psi) (Normal solo riding)
Rear tire pressure	2.00 kg/cm <sup>2</sup> (28 psi) (Normal solo riding)

**ELECTRICAL**

Ignition type	Transistorized
Ignition timing	17° B.T.D.C. below 1 500 r/min and 37° B.T.D.C. above 2 350 r/min
Spark plug	NGK B8ES or NIPPON DENSO W24ES-U
Spark plug gap	0.6 – 0.8 mm (0.024 – 0.031 in) both NGK and NIPPON DENSO
Battery	12V 50.4 kC (14 Ah)/10 HR
Generator	Three-phase A.C. generator
Fuse	10/10/10/10/15A

**CAPACITIES**

Fuel tank including reserve	22 L (5.8 US gal)
reserve	4.2 L (4.4 US qt)
Engine oil change	3.0 L (3.2 US qt)
filter change	3.6 L (3.8 US qt)
overhaul	3.8 L (4.0 US qt)
Secondary bevel gear oil	340 – 400 ml (11.5 – 13.5 US oz)
Final bevel gear oil	280 – 330 ml ( 9.5 – 11.2 US oz)
Front fork air pressure	0.6 kg/cm <sup>2</sup> (8.5 psi)
Front fork oil	255 ml (8.62 US oz) in each leg

Specifications subject to change without notice.

\* Asterisk indicates new D model specifications.





































## SPECIFICATIONS

### DIMENSIONS AND DRY MASS

Overall length .....	2 250 mm (88.6 in)
Overall width .....	855 mm (33.7 in)
Overall height .....	1 130 mm (44.5 in)
Wheelbase .....	1 510 mm (59.4 in)
Ground clearance .....	145 mm ( 5.7 in)
Seat height .....	765 mm (30.1 in)
Dry mass .....	243 kg (536 lbs)

### ENGINE

Type .....	Four-stroke, air-cooled, DOHC
Number of cylinders .....	4
Bore .....	69.0 mm (2.717 in)
Stroke .....	56.4 mm (2.220 in)
Piston displacement .....	843 cm <sup>3</sup> (51.4 cu. in)
Compression ratio .....	8.8 : 1
Carburetor .....	MIKUNI BS32SS, four
Air cleaner .....	Polyurethane foam element
Starter system .....	Electric
Lubrication system .....	Wet sump

### TRANSMISSION

Clutch .....	Wet multi-plate type
Transmission .....	5-speed constant mesh
Gearshift pattern .....	1-down, 4-up
Primary reduction .....	1.775 (87/49)
Gear ratios, Low .....	2.500 (35/14)
2nd .....	1.722 (31/18)
3rd .....	1.380 (29/21)
4th .....	1.125 (27/24)
Top .....	0.923 (24/26)

### SECONDARY DRIVE

Type .....	Shaft drive
Secondary reduction .....	1.062 (17/16)
Final reduction .....	3.090 (34/11)



















































































































- Coat caliper axle bolts ① with SUZUKI caliper axle grease ②, and install the bolts. Mount the caliper assembly, securing it to the front fork. Check that the pads are not in an abnormal dragging condition, i.e., dragging excessively on the disk.

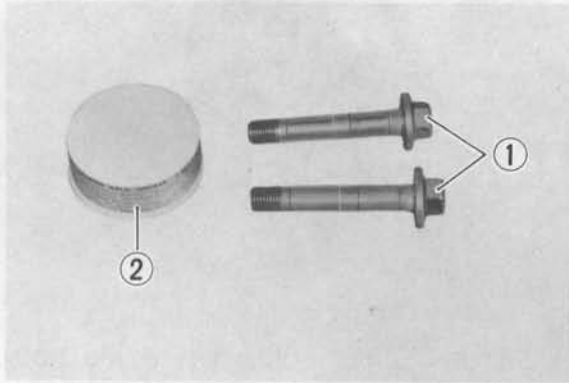


Fig. 11-96

## REAR BRAKE CALIPER

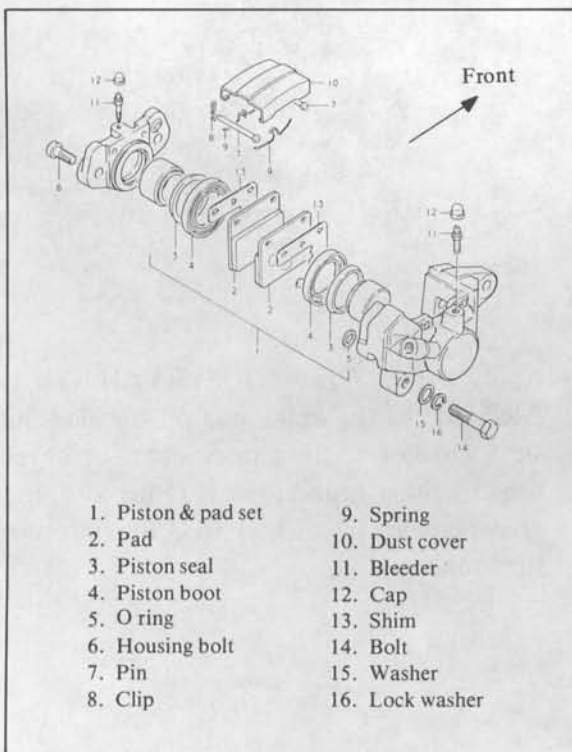


Fig. 11-97

### REMOVAL

- Remove the oil hose union bolt.

**CAUTION:**

*Brake fluid will damage paint and plastic.*

*Loosening the oil hose union bolt ① causes the brake fluid to flow out. Block the hose with a rag, etc., to prevent the brake fluid coming in contact with the motorcycle frame.*

- Remove the two caliper mounting bolts ②.
- Remove nut ③ together with the rear torque link bolt and rear caliper, and remove the wheel side bolt towards the wheel side.

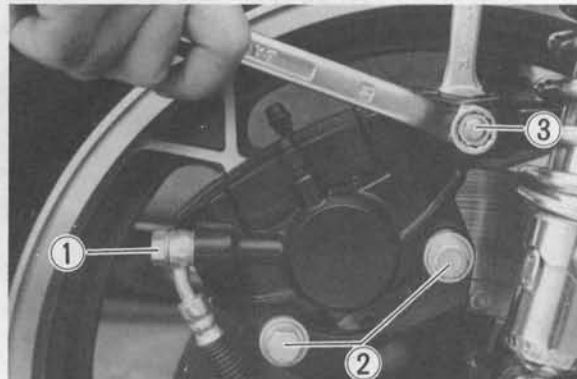


Fig. 11-98

- Remove the caliper assembly from the motorcycle frame by drawing it upwards.

### MOUNTING

- With the disk pads opened, insert the caliper assembly into the upper portion of the brake disk.
- It with the fastening nut.
- Next tighten the caliper mounting bolts.

Tightening torque	2.0–3.0 kg-m (14.5–21.5 lb-ft)
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- Install the torque link bolt and tighten the nut.

Tightening torque	2.0–3.0 kg-m (14.5–21.5 lb-ft)
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- Install the cotter pin into the torque link nut.
- When reconnecting the brake hose to the caliper body, be sure to point the hose in the direction shown to keep the hose away from other parts.

Tightening torque	1.5–2.5 kg-m (11.0–18.0 lb-ft)
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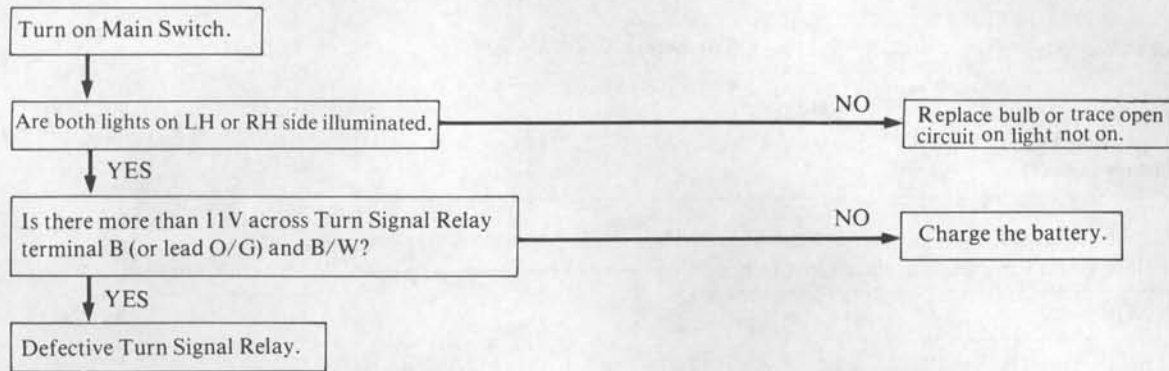








## 2. The turn signal light lights continuously (does not flash).



## 3. Flashing does not go off after $9 \pm 1$ sec at speeds faster than 15 km/h (9.3 mph)

Check Turn Signal Switch, Speed Sensor, and the speedometer cable in the following manner. If they are found to be normal, Control Unit may be defective.

### 3-1. Turn Signal Switch

Disconnect wires coming from Control Unit at the harness connector.

Using a circuit tester check that continuity is obtained, between leads B1 and B when Turn Signal Knob is switched to LEFT, and that continuity is not obtained when the knob is released. Continuity should be obtained between B1 and Lg when Turn Signal Knob is switched to RIGHT, and not obtained when the knob is released.

If above conditions are satisfied, Turn Signal Switch is normal.

### 3-2. Speed Sensor

Remove the meter cable from the speedometer.

Insert a straight slot screwdriver in the boss of the meter, and slowly turn the screwdriver one turn.

If continuity/no continuity is obtained between leads B/R and B1/R alternatively, i.e. for ON/OFF, ON/OFF, ON/OFF, ON/OFF, then the speed sensor is normal.

#### CAUTION:

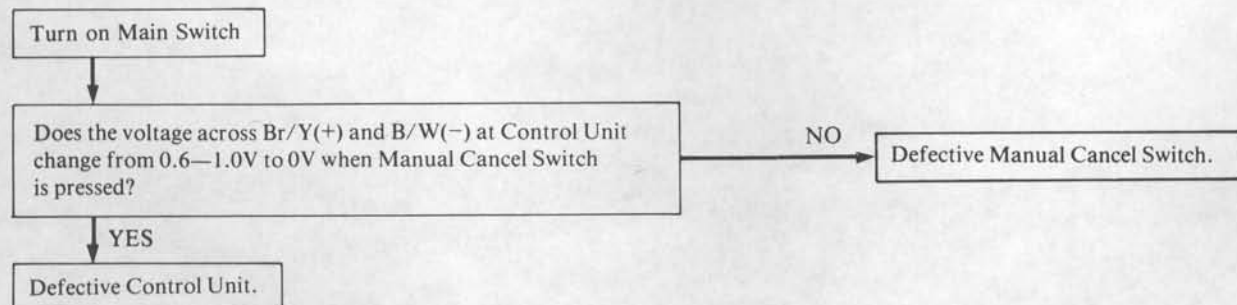
The lead relay used in the Speed Sensor is rated at 10 mA max.

Do not exceed the rated current when checking continuity, otherwise contacts may be damaged.

- Check speedometer cable and driving components.

## 4. Flashing does not go off when Manual Cancel Switch is pressed.

- Check that continuity between leads B/W and Br/Y is obtained when Manual Cancel Switch is pressed.

















































































































































































































































































































































































## SPECIAL MATERIALS

The materials listed below are needed for maintenance work on the GS850GL, and should be kept on hand for ready use. They supplement such standard materials as cleaning fluids, lubricants, emery cloth and the like. How to use them and where to use them are described in the text of this manual.

Material	Part
<p>99000-25030 SUZUKI SUPER GREASE "A"</p>	<ul style="list-style-type: none"> <li>* Oil seals</li> <li>* Throttle grip</li> <li>* Cables (Speedometer and tachometer)</li> <li>* Clutch release mechanism</li> <li>* Wheel bearings</li> <li>* Swinging arm bearing</li> <li>* Steering stem bearing</li> </ul>
<p>99000-32040 THREAD LOCK CEMENT</p>	<ul style="list-style-type: none"> <li>* Oil filter cover nut . . . . . 3 pcs</li> <li>* Camshaft end cap screw . . . . . 8 pcs</li> <li>* Front fork allen bolt . . . . . 2 pcs</li> <li>* Carburetor adjuster bracket . . . . . 2 pcs</li> <li>* Carburetor plate screw . . . . . 8 pcs</li> <li>* Carburetor starter shaft screw . . . . . 4 pcs</li> </ul>
<p>99000-32050 THREAD LOCK "1342"</p>	<ul style="list-style-type: none"> <li>* Gearshift cam guide screw . . . . . 2 pcs</li> <li>* Gearshift pawl screw . . . . . 2 pcs</li> <li>* Countershaft B/G retainer screw . . . . . 3 pcs</li> <li>* Driveshaft plate screw . . . . . 3 pcs</li> <li>* Generator starter screw . . . . . 3 pcs</li> <li>* Generator lead wire guide screw . . . . . 3 pcs</li> <li>* Engine oil pump screw . . . . . 4 pcs</li> <li>* Oil gallery plate screw . . . . . 3 pcs</li> <li>* Secondary drive bevel gear assy set bolt . . . . . 4 pcs</li> <li>* Secondary driven bevel gear assy set bolt . . . . . 4 pcs</li> <li>* Final bevel gear bearing holder screw . . . . . 3 pcs</li> <li>* Final bearing case bolt . . . . . 10 pcs</li> </ul>
<p>99000-32020 THREAD LOCK SUPER "1333B"</p>	<ul style="list-style-type: none"> <li>* Thread portion of secondary driven gear</li> <li>* Thread portion of final drive gear</li> <li>* Propeller shaft joint bolt . . . . . 4 pcs</li> <li>* Stator clutch allen bolt . . . . . 3 pcs</li> <li>* Cam chain guide bolt . . . . . 3 pcs</li> <li>* Gearshift stopper . . . . . 1 pc</li> </ul>



























