

1982 (Pink Cover)

SUZUKI

OWNER'S MANUAL

GS850G

IMPORTANT BREAK-IN INFORMATION FOR YOUR MOTORCYCLE

The first 1,000 miles (1,600 km) are the most important miles in the life of your motorcycle. Proper break-in operation during this time will help ensure maximum life and performance from your new motorcycle. Suzuki parts are manufactured of high quality materials, and machined parts are finished to close tolerances. Proper break-in operation allows the machined surfaces to polish each other and mate smoothly.

Vehicle reliability and performance depend on special care and restraint exercised during the break-in period. It is especially important that you avoid operating the engine in a manner which could expose the engine parts to excessive heat.

Please refer to the Break-In section (page 21) for specific break-in recommendations.

FOREWORD

THANK YOU for choosing Suzuki. We at Suzuki have designed, tested and produced this motorcycle using the most modern technology available to provide you with many happy, enjoyable, safe miles of riding. Motorcycling is one of man's most exhilarating sports and to insure your riding enjoyment, you should become thoroughly familiar with the information presented in this Owner's Manual before riding the motorcycle.

The proper care and maintenance that your motorcycle requires is outlined in this manual. By following these instructions explicitly you will insure a long trouble free operating life for your motorcycle. This motorcycle also conforms to the U.S. Environmental Protection Agency emission regulations which apply to new motorcycles. The proper adjustment of engine components is necessary for this motorcycle to comply with the EPA regulations. Therefore, please follow the maintenance instructions closely to ensure emission compliance. Your Suzuki dealer has experienced technicians that are trained to provide your machine with the best possible service with the right tools and equipment.

SUZUKI MOTOR CO., LTD.

IMPORTANT NOTICE

Please read this manual and follow its instructions carefully.

*To emphasize special information the words **WARNING**, **CAUTION** and **NOTE** carry special meanings and should be carefully reviewed.*

- WARNING** The personal safety of the rider may be involved. Disregarding this information could result in injury to the rider.
- CAUTION** These instructions point out special service procedures or precautions that must be followed to avoid damaging the machine.
- NOTE** Special information to make maintenance easier or important instructions more clear.

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All information, illustrations, photographs and specifications contained in this manual are based on the latest product information available at the time of publication. Due to improvements or other changes, there may be some discrepancies in this manual. Suzuki reserves the right to make changes at any time.

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ACCESSORY INSTALLATION AND PRECAUTION SAFETY TIPS

There are a great variety of accessories available to Suzuki owners.

Suzuki cannot have direct control over the quality or suitability of accessories you may wish to purchase. The addition of unsuitable accessories can lead to unsafe operating conditions. It is not possible for Suzuki to test each accessory on the market or combinations of all the available accessories; however, your dealer can assist you in selecting quality accessories and installing them correctly.

Use extreme caution when selecting and installing the accessories for your Suzuki. We have developed some general guidelines which will aid you when deciding whether, and how to equip your motorcycle.

- (1) Never exceed the GVWR (Gross Vehicle Weight Rating) shown on the Safety Label Attached to the steering stem frame tube. The GVWR is the combined weight of the machine, accessories, payload, rider and passenger. When selecting your accessories, keep in mind the weight of the rider and passenger as well as the weight of the accessories. The additional weight of the accessories may not only create an unsafe riding condition but may also affect the steering ease.

GVWR – GS850G : 1080 lbs (490 kg) at the tire pressure (cold) : Front 28 psi (2.00kg/cm²), Rear 40 psi (2.80 kg/cm²)

- (2) Anytime that additional weight or aerodynamic affecting accessories are installed, they should be mounted as low as possible, as close to the motorcycle and as near the center of gravity as is feasible. The mounting brackets and other attachment hardware should be carefully checked to insure that it provides for a rigid, non-moveable mount. Weak mounts can allow the shifting of the weight and create a dangerous unstable condition.
- (3) Inspect for proper ground clearance and bank angle. An improperly mounted load could critically reduce these two safety factors. Also determine that the "load" does not interfere with the operation of the suspension, steering or other control operations.

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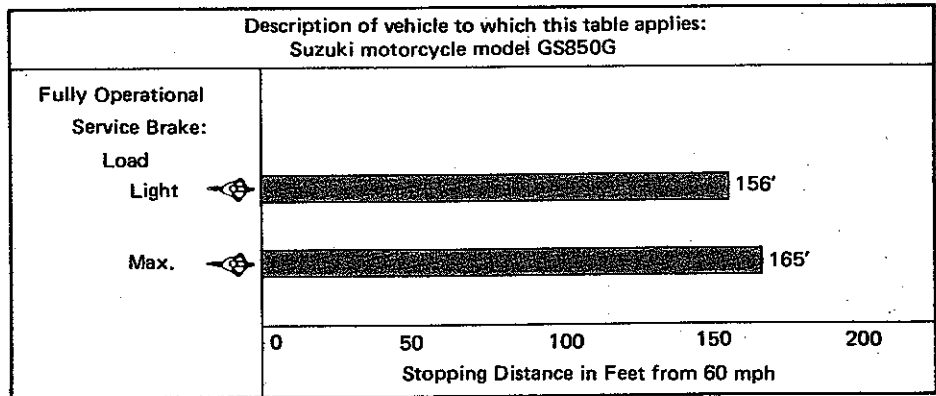
- (4) Accessories fitted to the handlebars or the front fork area can create serious stability problems. This extra weight will cause the motorcycle to be less responsive to your steering control. The weight may also cause oscillations in the front end and lead to instability problems. Accessories added to the handlebar or front fork of the machine should be as light as possible and kept to a minimum.
- (5) Windshields, fairings, backrests, saddlebags, travel trunks, etc., may affect the stability of the motorcycle due to their aerodynamic effects. The motorcycle may be affected by a lifting condition or by an instability in cross winds or when being passed or passing large vehicles. Improperly mounted or poorly designed accessories can result in an unsafe riding condition, therefore, caution should be used when selecting and installing all accessories.
- (6) Certain accessories displace the rider from his normal riding position. This limits the freedom of movement of the rider and may limit his control ability.
- (7) Additional electrical accessories may overload the existing electrical system. Severe overloads may damage the wiring harness or create a dangerous situation due to the loss of electrical power during the operation of the motorcycle.

When carrying a load on the motorcycle, mount it as low as possible and as close as possible to the machine. An improperly mounted load can create a high center of gravity which is very dangerous and makes the motorcycle difficult to handle. The size of the "load" can also affect the aerodynamics and handling of the motorcycle. Balance the load between the left and right side of the motorcycle and fasten it securely.

VEHICLE STOPPING DISTANCE

This figure indicates braking performance that can be met or exceeded by the vehicle to which it applies, without locking the wheels, under different condition of loading.

NOTICE: The information presented represents results obtainable by skilled driver under controlled road and vehicle conditions, and the information may not be correct under other conditions.



SAFE-RIDING RECOMMENDATION FOR MOTORCYCLE RIDERS

Motorcycle riding is great fun and an exciting sport. Motorcycle riding also requires that some extra precautions be taken to insure the safety of the rider and passenger. These precautions are:

WEAR A HELMET

Motorcycle safety equipment starts with a quality safety helmet.

One of the most serious injuries that can happen is a head injury. **ALWAYS** wear a properly approved helmet. You should also wear suitable eye protection.

RIDING APPAREL

Loose fancy clothing can be uncomfortable and unsafe when riding your motorcycle. Choose good quality motorcycle riding apparel when riding your motorcycle.

INSPECTION BEFORE RIDING

Review thoroughly the instructions in the "INSPECTION BEFORE RIDING" section of this manual. Do not forget to perform an entire safety inspection to insure the safety of the rider and its passenger.

FAMILIARIZE YOURSELF WITH THE MOTORCYCLE

Your riding skill and your mechanical knowledge form the foundation for safe riding practices. We suggest that you practice riding your motorcycle in a non-traffic situation until you are thoroughly familiar with your machine and its controls. Remember practice makes perfect.

KNOW YOUR LIMITS

Ride within the boundaries of your own skill at all times. Knowing these limits and staying within them will help you to avoid accidents.

BE EXTRA SAFETY CONSCIOUS ON BAD WEATHER DAYS

Riding on bad weather days, especially wet ones, requires extra caution. Braking distances double on a rainy day. Stay off of the painted surface marks, manhole covers and greasy appearing areas as they can be especially slippery. Use extreme caution at railway crossings and on metal gratings and bridges. Whenever in doubt about road conditions, slow down!

MOTORCYCLE SAFETY FOUNDATIONS "RIDING TIPS FOR THE MOTORCYCLIST" HANDBOOK

This special manual, supplied in the pouch with your Owner's Manual, contains safety tips on a wide variety of topics. This manual can increase your riding enjoyment and safety and should be read thoroughly.

SERIAL NUMBER LOCATION

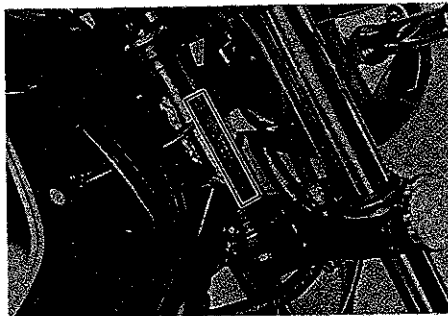
The frame and/or engine serial numbers are used to register the motorcycle. They are also used to assist your dealer when ordering parts or referring to special service information.

The frame number is stamped on the steering head tube and the I.D. plate. The engine serial number is stamped on the right side of the crankcase assembly.

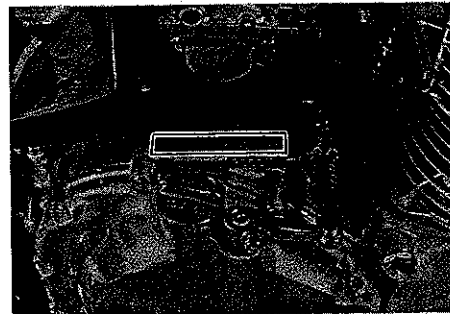
Please write down here for your future reference.

Frame No.:

Engine No.:

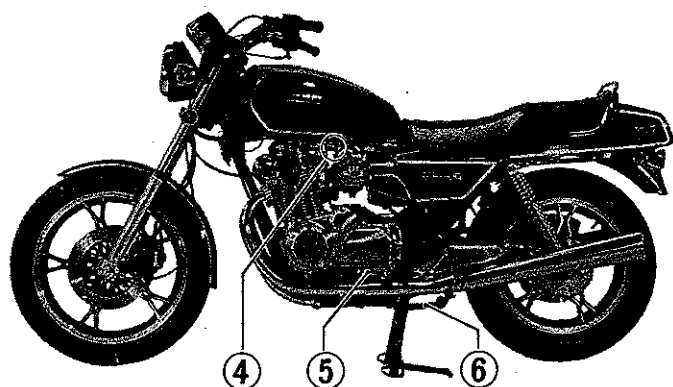
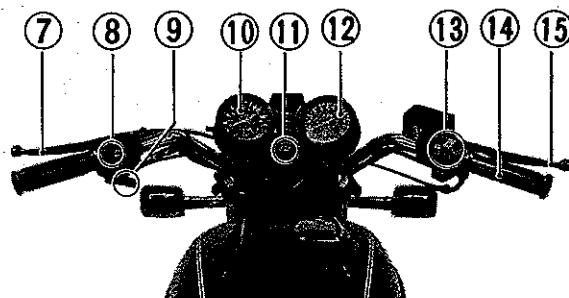
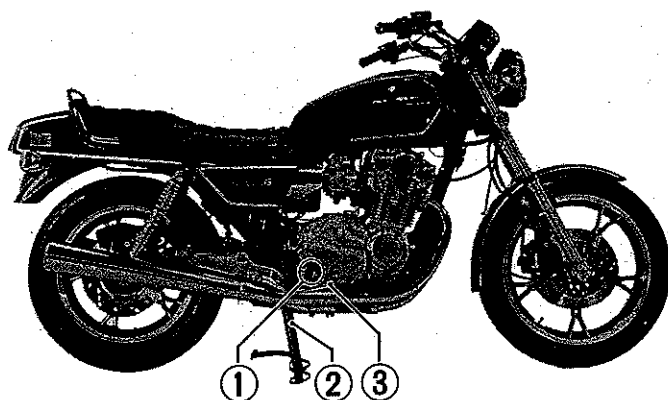


Frame number



Engine number

LOCATION OF PARTS

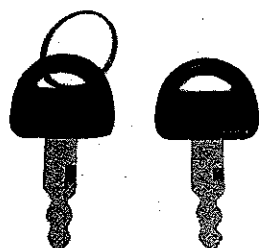


- | | |
|--------------------------------|--------------------------|
| ① Engine oil inspection window | ⑨ Carburetor choke lever |
| ② Center stand | ⑩ Speedometer |
| ③ Rear brake pedal | ⑪ Ignition switch |
| ④ Fuelcock | ⑫ Tachometer |
| ⑤ Gearshift lever | ⑬ Right handlebar switch |
| ⑥ Side stand | ⑭ Throttle grip |
| ⑦ Clutch lever | ⑮ Front brake lever |
| ⑧ Left handlebar switch | |

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CONTROLS

KEY



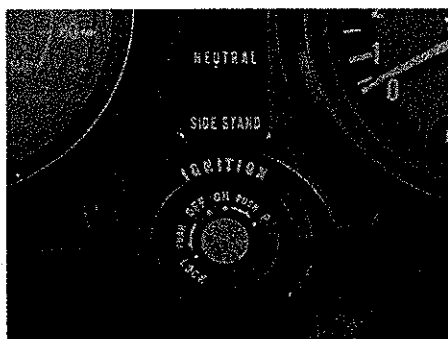
This motorcycle comes equipped with two (2) identical keys. Keep the spare key in a safe place.

Your motorcycle ignition keys are stamped with an identifying number. This number is used when making replacement keys.

Please write your key number in the box provided for your future reference.

KEY NO.: 347

IGNITION SWITCH



The ignition switch has four (4) positions:

"OFF" POSITION

All electrical circuits are cut off.

"ON" POSITION

The ignition circuit is completed and the engine can now be started. The headlight and taillight will automatically be turned on when the key is in this position. The key cannot be removed from the ignition switch in this position.

"PARKING" POSITION ("P" POSITION)

When parking the motorcycle, turn the handlebar all the way to the right or to the left. Push down and turn the key to

the parking position. The key can now be removed and the taillight will remain lit and the steering will be locked. This position is for night time roadside parking to increase visibility.

"LOCK" POSITION

To lock the steering, turn the handlebar all the way to the right or the left. Push down and turn the key to the "LOCK" position and remove the key. All electrical circuits are cut off.

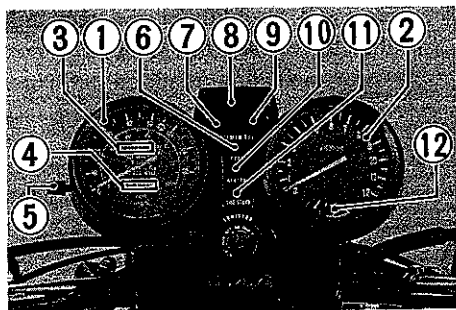
CAUTION:

Start the engine promptly after turning the ignition key to the "ON" position. The reason for this is that the headlight and taillight come on at the same time the ignition is turned on and will cause the battery to lose power.

WARNING

Before turning the ignition switch to the (P) "PARK" or "LOCK" position, stop the motorcycle and place the motorcycle on either the side stand or the center stand.

INSTRUMENT PANEL



SPEEDOMETER ①

The speedometer indicates the road speed in miles per hour and kilometers per hour.

TACHOMETER ②

The tachometer indicates the engine speed in revolutions per minute (r/min).

ODOMETER ③

The odometer registers the total distance that the motorcycle has been ridden.

TRIP METER ④

The trip meter is a resetable odometer located in the speedometer assembly. It can be used to indicate the distance traveled on short trips or between fuel stops. Turning the knob ⑤ counter-clockwise will return the meter to zero.

TURN SIGNAL INDICATOR LIGHT ⑥

When the turn signals are being operated either to the right or left side, the amber indicator light will flash.

HIGH BEAM INDICATOR LIGHT ⑦

The blue indicator light will be lit when the headlight high beam is turned on.

GEAR POSITION INDICATOR ⑧

The numeral in this indicator shows the gear position, 1,2,3,4, or 5. The numeral disappears as you shift back to neutral; NEUTRAL INDICATOR LIGHT (green) will burn instead.

OIL PRESSURE INDICATOR LIGHT ⑨

With the ignition switch in the "ON" position but the engine not started, the oil pressure indicator light should be lit. As soon as the engine is started, the light should go out.

CAUTION:

Whenever the oil pressure indicator lights up, indicating no oil pressure, stop the engine immediately. First check the oil level and determine if the proper amount of oil is in the engine. If the oil level is low, refill

the engine to the correct level. If the light still does not go out, then have your authorized Suzuki dealer inspect your motorcycle to determine the difficulty. Do not operate the motorcycle when the light is lit as it may cause serious damage to the internal parts of the engine or transmission.

NEUTRAL INDICATOR LIGHT ⑩

The green light will come on when the transmission is in neutral. The light will go out when you shift into any gear other than neutral.

SEID STAND CHECK LIGHT ⑪

Before starting off, check that the side stand is returned to its normal position with side stand check light.

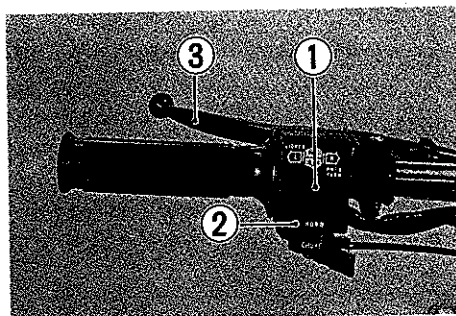
After kicking up the side stand the side stand check light should go out.

FUEL GAUGE ⑫

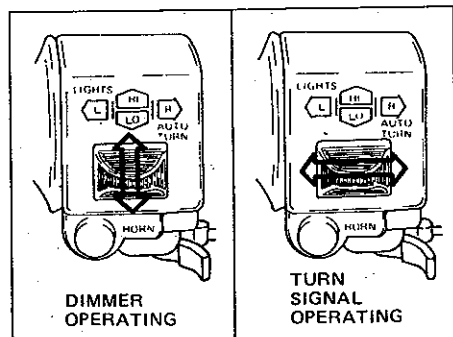
The fuel gauge indicates the amount of gasoline remaining in the fuel tank. The "E" mark indicates the tank is empty or nearly so. The "F" mark indicates the fuel tank is full.

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LEFT HANDLEBAR



- ① Lights operating switch
- ② Horn button
- ③ Clutch lever



LIGHTS OPERATING SWITCH DIMMER OPERATING

When the lights operating switch is pushed up to the "HIGH" position, the high beam will be lit and the switch return to the center position. At the same time that the high beam is lit, the high beam indicator will also light in the center instrument panel. When the switch is pushed down to the "LO" position, the low beam will be lit and the switch return to the center position.

TURN SIGNAL OPERATING

Pushing the lights operating switch to the right or left lights up the right-hand or left-hand turn signal respectively, in that order. Returning the switch to center position puts out the signal, but you need not do so if a self-cancelling device is provided on the machine. After running for approx. 10 seconds total with a speed of 15 km/h (9.3 mph) or higher after switching on a turn signal, the cancelling device automatically turns off the light switch. The cancelling device works like a timer, counting time only when the machine is

running with the above-indicated speed. "10 seconds total" thus excludes any low-speed running duration.

WARNING:

Always use the turn signal when you intend to change lanes or make a turn.

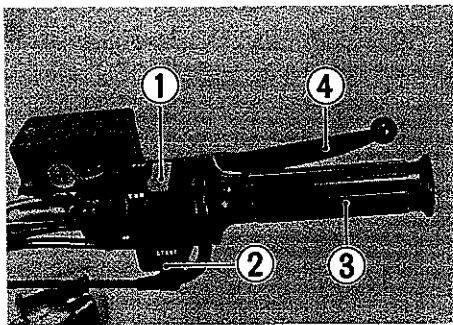
HORN BUTTON

Press the button to operate the horn.

CLUTCH LEVER

The clutch lever is used to disengage the drive to the rear wheel when starting the engine or shifting the transmission gear. Squeezing the lever disengages the clutch.

RIGHT HANDLEBAR



- ① Engine kill switch ③ Throttle grip
② Electric starter button ④ Front brake lever

ENGINE KILL SWITCH

The engine "kill switch" is located on the top of the right handlebar grip switch housing. This is a "rocker" style switch which pivots in the center.

In the "RUN" position the ignition circuit is on and the engine will operate. The switch is intended primarily as a safety or emergency switch. When the switch is in the "OFF" position neither the starter motor, nor the ignition circuit will be energized.

THROTTLE GRIP

Engine speed is controlled by the position of the throttle grip. Twist it toward you to increase engine speed. Turn it away from you to decrease the engine speed.

ELECTRIC STARTER BUTTON

Push the electric starter button in to engage the starter motor. The transmission should be in neutral for safety and the clutch disengaged during starting.

NOTE: The starter disconnect switch is equipped on this motorcycle. If the clutch lever is not disengaged, the starter motor will not rotate.

CAUTION:

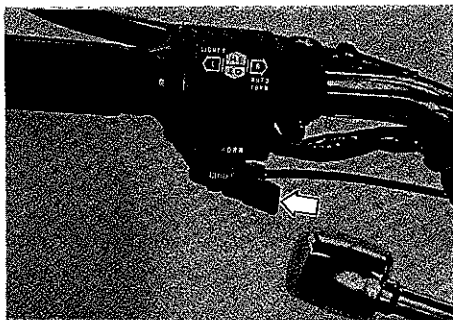
Do not engage the starter motor for more than five seconds at a time as it may overheat the wiring harness and starter motor. If the engine does not start after several attempts, check the fuel supply and ignition systems. (Refer to the troubleshooting section).

FRONT BRAKE LEVER

The front brake is applied by squeezing the brake lever gently towards the throttle grip. This motorcycle is equipped with a disc brake and excessive pressure is not required to slow the machine down properly. The brake light will be lit when the lever is squeezed inward.

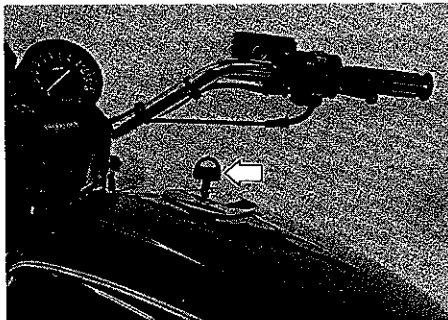
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CARBURETOR CHOKE LEVER



The carburetors are equipped with a "choke" system to provide easy starting. When starting a cold engine, turn the choke lever all the way left and engage the electric starter. After the engine starts, try to limit the engine speed to approximately 2500 r/min by varying the choke lever position. The choke system will operate only when the throttle is in the closed position as opening the throttle will bypass the choke system. When the engine is warm, the choke system does not need to be used for starting. Always be certain to return the choke lever back to its normal position after the engine reaches normal operating temperatures.

FUEL TANK CAP

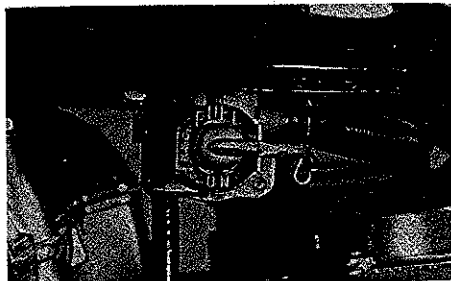
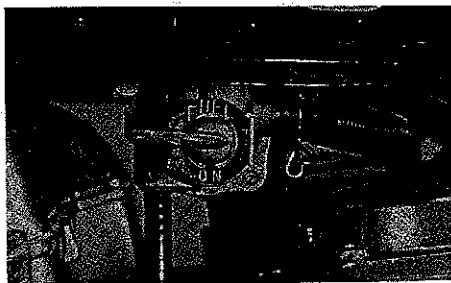


The fuel tank cap is a new low profile style which blends in smoothly with the lines of the fuel tank. To open the fuel tank cap insert the ignition key and turn the key clockwise. With the key still held in a clockwise position, lift up on the key and remove the filler cap. To install the fuel tank cap, face the arrow mark on the cap forward, simply line up the fuel tank cap guide pins and push down until the locking pins click into position. The key must be in the cap lock or turned before installing cap. Turn the key counter-clockwise and remove it.

WARNING:

When refueling, always shut the engine off and turn the ignition key to the "OFF" position. Never refuel around an open flame.

FUELCOCK



This motorcycle is equipped with an automatic type, diaphragm style fuelcock. There are three positions: "ON", "RESERVE" and "PRIME".

"ON" The normal position for the fuelcock lever is on the "ON" position. In this position, no fuel will flow from the fuelcock to the carburetor unless the engine is running or being started.

"RESERVE"

If the fuel level in the tank is too low, turn the lever to the "RESERVE" position to use the 4.2 liters (4.4 US qt.) of the reserve fuel supply. In this position, no fuel will flow from the fuelcock to the carburetor unless the engine is running or being started.

"PRIME"

If the motorcycle has run out of fuel or has been stored for an extended period, there may not be any gasoline in the carburetors. In this instance the fuel-

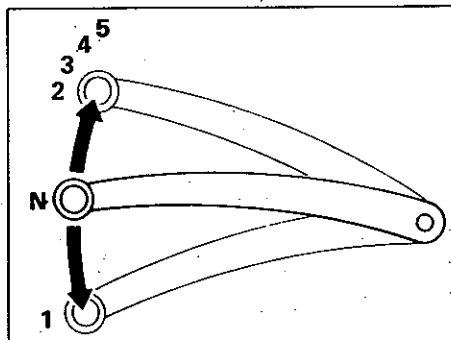
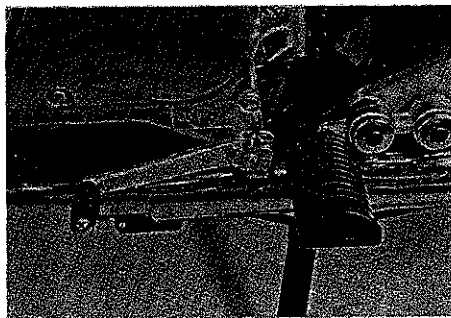
cock lever should be moved to the "PRIME" position. This will allow the fuel to flow directly into the carburetors even though the engine is not operating. Upon starting the engine, be sure to return the lever to the "ON" position or, if necessary, to the "RESERVE" position.

CAUTION:

Leaving the fuelcock in the "PRIME" position may cause the carburetors to overflow and fuel to run into the engine. It is possible that this may cause severe mechanical damage when the engine is started.

NOTE: After switching the fuel tank supply to the "RESERVE" position, it is advisable that the tank be refilled at the closest gas station. After re-fueling be sure to move the fuelcock to the "ON" position.

GEARSHIFT LEVER



This motorcycle is equipped with a 5-speed constant mesh transmission which operates as shown in the figure. The shift lever is attached to a ratchet type mechanism in the transmission. Each time that a gear is selected, the gear shift lever will return to its normal position ready to select the next gear. Neutral is located between low and 2nd gear. Low gear is engaged by depressing the lever downward from the neutral position. Shifting into the higher gears is accomplished by lifting up on the shift lever once for each gear. It is not possible to up shift or down shift more than one gear at a time due the ratchet mechanism being used. When shifting from low to 2nd gear or 2nd gear to low, neutral will be automatically skipped. When neutral is desired, depress or lift the lever to a position halfway between low and 2nd gear.

CAUTION:

When the transmission is in neutral the green indicator light on the instrument panel will be lit. However, even though the light is lit, cautiously release the clutch lever slowly to determine whether the transmission is positively in neutral.

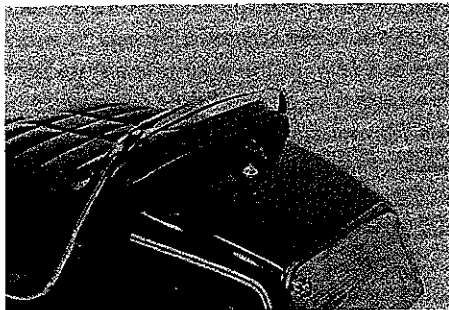
Reduce your road speed before downshifting. When downshifting, the engine RPM's should be increased before the clutch is engaged. This will prevent unnecessary wear on the drivetrain components and rear tire.

REAR BRAKE PEDAL



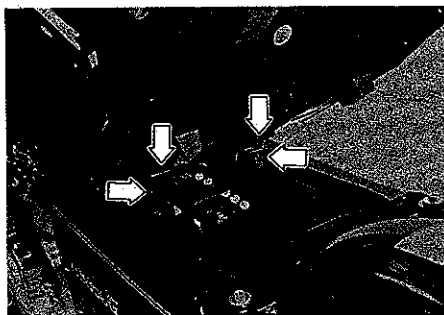
Depressing the rear brake pedal will apply the rear disc brake. The brake light will be lit when the rear brake is operated.

SEAT LOCK



Seat lock

The seat lock is located back side of the seat. To remove the seat, insert the ignition key and turn it clockwise until the lock is released. Raise and slide back the seat by hand and unhook the seat hooks from the seat holding hooks. To lock the seat, hook the seat hooks into the seat holding hooks certainly, and push down firmly and lock the seat.



Seat holding hooks

HELMET HOLDER

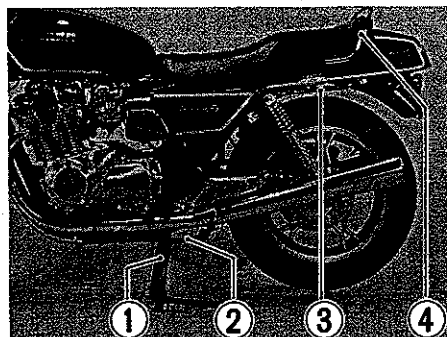


The helmet holder is located under the left side of the seat. Insert the key, and twist it clockwise to open one of the latches and twist it counterclockwise to open the other side of the latches. Hook your helmet fastener ring to the latch and return back the latch to the closed position to lock the holder.

WARNING

Do not operate the motorcycle with a helmet fastened to the helmet holder. The helmet may be caught in the wheel causing an accident, or interfere with safe operation of the motorcycle.

STANDS



- | | |
|----------------|-----------------------|
| ① Center stand | ③ Lift bar |
| ② Side stand | ④ Passenger hand rail |

The motorcycle is equipped with both a center stand and a side stand. To Place the motorcycle on the center stand, place your foot firmly on the stand extension and then rock the motorcycle to the rear and upward with the lift bar with your right hand, while steadying the handlebars with your left hand.

CAUTION: The hand rail is designed to be used as passenger hand hold only. Attempting to place or remove the motorcycle on or from the center stand using the passenger hand rail will damage it.

FUEL

Use only unleaded or low-lead type gasoline of at least 85 – 95 pump octane ($\frac{R+M}{2}$ method) or 89 octane or higher rated by the Research method. If engine pinging is experienced, substitute another brand as there are differences between brands.

NOTE: Unleaded and low-lead gasoline will extend spark plug life.

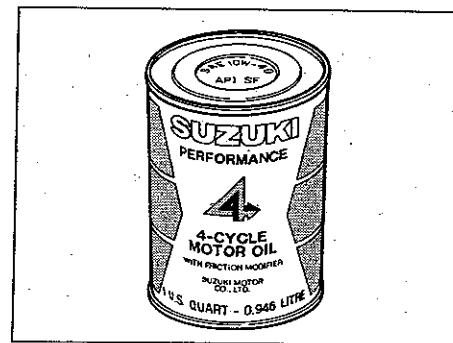
GEAR OIL

Use SAE90 hypoid gear oil which is rated GL-5 under API classification system. If you operate the motorcycle where ambient temperature is below 0 °C (32 °F), use SAE80 hypoid gear oil.

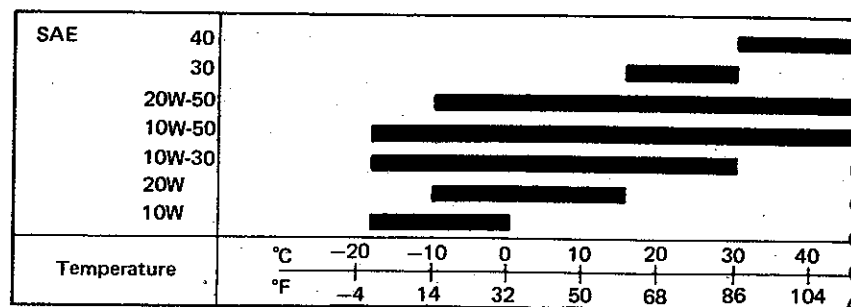
ENGINE OIL

SUZUKI recommends the use of **SUZUKI PERFORMANCE 4 MOTOR OIL** or an oil which is rated SE or SF under the API (American Petroleum Institute) classification system.

The viscosity rating should SAE 10W-40. If an SAE 10W-40 oil is not available, select an alternate according to the chart below.



This is a very high performance, SAE 10W-40 SF oil is with special friction modifier added.



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BREAK-IN

The foreward explains how important proper break-in is to achieving maximum life and performance from your new Suzuki. The following guidelines explain proper break-in procedures.

MAXIMUM ENGINE RPM RECOMMENDATIONS

This table shows the maximum recommended engine rpm during the break-in period.

Initial 500 miles (800 km)	Below 4 000 rpm
Up to 1,000 miles (1,600 km)	Below 6 000 rpm
Over 1,000 miles (1,600 km)	Below 9 000 rpm

VARY THE ENGINE SPEED

The engine speed should be varied and not held at a constant speed. This allows the parts to be "loaded" with pressure, and then unloaded, allowing the parts to cool. This aids the mating process of the parts.

It is essential that some stress be placed on the engine components during break-in to ensure this mating process. Do not, though, apply excessive load on the engine.

AVOID CONSTANT LOW SPEED

Operating the engine at constant low speed (light load) can cause parts to glaze and not seat in. Allow the engine to accelerate freely through the gears, without exceeding the recommended maximum limits. Do not, however, use full throttle for the first 1,000 miles (1,600 km).

ALLOW THE ENGINE OIL TO CIRCULATE BEFORE RIDING

Allow sufficient idling time after warm or cold engine start up before applying load or revving the engine. This allows time for the lubricating oil to reach all critical engine components.

OBSERVE YOUR FIRST, AND MOST CRITICAL, SERVICE

The 600 miles (1,000 km) service is the most important service your motorcycle will receive. During break-in all of the engine components will have worn in and all of the other parts will have seated in. All adjustments will be restored, all fasteners will be tightened, and the dirty oil and oil filter will be replaced.

Timely performance of the 600 miles service will ensure optimum service life and performance from the engine.

CAUTION:

The 600 miles service should be performed as outlined in the Periodic Maintenance Schedule portion of this Owner's Manual. Pay particular attention to the cautions and warning in page 27.

INSPECTION BEFORE RIDING

Before riding the motorcycle, be sure to check the following items. Never underestimate the importance of these checks and perform all of them before riding the machine.

WHAT TO CHECK	CHECK FOR:
Steering	1) Smoothness 3) No play or looseness 2) No restriction of movement
Brakes	1) Correct pedal and lever play 3) No fluid leakage 2) No "sponginess"
Tires	1) Correct pressure 3) No cracks or cuts 2) Adequate tread depth
Fuel	Enough fuel for the planned distance of operation
Lighting	Operation of all lights — HEADLIGHT, TAILLIGHT, BRAKE LIGHT, INSTRUMENT LIGHTS, TURN SIGNALS, LICENSE PLATE LIGHT
Indicator Lights	Oil Pressure, High beam, Neutral, Turn signal, Side stand check
Horn and "Kill Switch"	Correct function
Engine Oil	Correct level
Throttle	1) Correct play in the throttle cable 2) Smooth operation and positive return of the throttle grip to the closed position
Clutch	1) Correct play in the cable 2) Smooth and progressive action
Gear Oil	Correct level
Air Forks	1) Smooth movement 2) Recommended air pressure

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RIDING TIPS

STARTING THE ENGINE

Check that the fuelcock lever is in the "ON" position and that the engine kill switch is in the "RUN" position. Insert the ignition key into the ignition switch and turn it clockwise one notch to the "ON" position. The neutral indicator light will light if the transmission is in neutral.

CAUTION:

Always start the engine with the transmission in neutral, the clutch lever pulled in, and the rider in the normal riding position.

When the engine is cold:

Turn the carburetor choke lever to the engaged position all the way. Close the throttle completely and squeeze the clutch lever. Push the electric starter button and the engine will start. Immediately after the engine starts, keep the engine revolutions to a maximum of 2 500 r/min by using the choke lever position for throttle control. Return the choke lever all the way back to its normal disengaged position

approximately 50 seconds after the engine starts. In extremely cold weather it may be necessary to use the choke longer than 50 seconds.

When the engine is warm:

Open the throttle 1/8th to 1/4th turn and push the electric starter button. Operation of the carburetor choke system is usually not necessary when the engine is warm.

WARNING:

Do not run the engine indoors where there is little or no ventilation available. Carbon monoxide fumes are extremely poisonous. Never leave the motorcycle running while unattended, even for a moment.

STARTING OFF

Pull the clutch lever in and pause momentarily. Engage first gear by depressing the gear shift lever downward. Twist the throttle grip toward you and at the same time release the clutch lever gently and smoothly. As the clutch engages, the motorcycle will start moving forward.

To shift to the next higher gear, accelerate gently, then close the throttle and pull the clutch lever in simultaneously. Lift the gear shift lever upward to select the next gear and release the clutch lever and open the throttle again. Select the gears in this manner until top gear is reached.

USING THE TRANSMISSION

The transmission is provided to keep the engine operating smoothly in its normal operating rpm range. The gear ratios have been carefully chosen to meet the characteristics of the engine. The rider should always select the most suitable gear for the prevailing conditions. Never slip the clutch to control road speed, but rather downshift to allow the engine to run within its normal operational range. The table below shows the gear shift point for each gear.

Shifting up schedule

miles/h	0 – 6	12 – 19	19 – 25	25 – 31	Over 31
Gear position	1st	2nd	3rd	4th	5th
km/h	0 – 10	20 – 30	30 – 40	40 – 50	Over 50

Shifting down schedule

miles/h	19	12
Gear position	5th → 4th	4th → 3rd
km/h	30	20

*Disengage the clutch when speed drops below 15 km/h (9 miles/h).

RIDING ON HILLS

- When climbing steep hills, the motorcycle may begin to slow down and “lug” the engine excessively. At this point you should shift to a lower gear so that the engine will again be operating in its normal power range. Shift rapidly to prevent the motorcycle from losing momentum.
- When riding down a hill, the engine may be used for braking by shifting to a lower gear.
- Be careful, however, not to allow the engine to over rev.

WARNING

- (1) If this is the first time that you have ridden a machine of this type, we suggest that you practice on a non-public road to become thoroughly familiar with the controls and operation of the motorcycle.
- (2) Before starting off, always return the side stand to its normal “up” position.
- (3) Slow down to a safe speed before negotiating a corner.
- (4) Don’t down shift in the middle of cornering.
- (5) Onehand riding is extremely dangerous. Keep both hands firmly on the handlebars and both feet securely on the foot rests. Under no circumstances should both hands be removed from the handlebars.

USING THE BRAKES AND PARKING

- Twist the throttle grip away from yourself to close the throttle completely.
- Apply the front and rear brakes evenly and at the same time.
- Downshift through the gears as road speed decreases.
- Select neutral with the clutch lever squeezed towards the grip (disengaged position) just before the motorcycle stops. Neutral position can be confirmed by observing the neutral indicator light.
- Disengage the clutch when speed drops below 15 km/h (9 miles/h).

NOTE: Inexperienced riders tend to use the rear brake only. This can lead to premature brake wear and excessive stopping distances.

- Apply the brakes lightly and with great care on a wet highway pavement or other slippery surfaces and at all corners. Any abrupt braking on slippery or irregular roads can be particularly dangerous.
- If the motorcycle is to be parked on the side stand and on a slight slope, you may wish to leave the motorcycle in 1st gear to prevent it from rolling off of the side stand. Return to neutral before starting engine.
- Turn the ignition switch to the “OFF” position to stop the engine.
- Lock the steering for security.
- Remove the ignition key from the switch.

HIGH SPEED RIDING

The rear suspension spring setting should be adjusted to meet the suspected road conditions and motorcycle speeds to increase the stability. Tire pressures should also be increased for high speed riding as described on page 45.

CAUTION:

Never allow the engine to exceed 9,000 r/min in any gear.

WARNING

High speed cruising requires special care. Be sure that you review the pre-ride instruction chart and that your machine is in top condition. Do not exceed the legal speed limits.

WARNING

Using only the front or rear brake is dangerous and can cause skidding and loss of control.

EPA

MAINTENANCE, REPLACEMENT, OR REPAIR OF THE EMISSION CONTROL DEVICES AND SYSTEMS MAY BE PERFORMED BY ANY MOTORCYCLE REPAIR ESTABLISHMENT, OR INDIVIDUAL USING ANY MOTORCYCLE PART WHICH HAS BEEN CERTIFIED UNDER THE PROVISIONS IN THE CLEAN AIR ACT Sec. 207 (a) (2).

COMPLIANCE LABEL

The EPA compliance label is located on the rear fender. It provides much of the data required to perform an engine tune up on your GS850G.

EXHAUST SYSTEM

Do not modify this exhaust system. This is designed to give maximum performance without excessive noise.

VEHICLE EMISSION CONTROL INFORMATION
 SUZUKI MOTOR CO., LTD. DISPLACEMENT: 843cc
 ENGINE FAMILY NAME: CSK084344AD SUZUKI: GS85
 EXHAUST EMISSION CONTROL SYSTEM: ENGINE MODIFICATION
 ENGINE TUNE-UP SPECIFICATIONS: ALL ADJUSTMENTS ARE TO BE PERFORMED WITH TRANSMISSION IN NEUTRAL.
 VALVE LASH: 0.03-0.08 mm
 IGNITION TIMING: 17° BTDC AT IDLE SPEED.
 IDLE SPEED: 1,050 RPM ADJUSTMENT IS MADE BY TURNING THE THROTTLE STOP SCREW.
 IDLE AIR/FUEL: NO ADJUSTMENT IS NECESSARY.
 FUEL: LOW-LEADED OR UNLEADED GASOLINE
 ENGINE OIL: SE OR SD IN API CLASSIFICATION, AND VISCOSITY RATING OF SAE 10W-40
 REFER TO YOUR OWNER'S MANUAL FOR ADDITIONAL MAINTENANCE INSTRUCTIONS.
 THIS VEHICLE CONFORMS TO U.S. EPA AND CALIFORNIA REGULATIONS APPLICABLE TO 1982 MODEL YEAR NEW MOTORCYCLES.

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PERIODIC MAINTENANCE SCHEDULE

MAINTENANCE SCHEDULE

The chart indicates the intervals between periodic services in miles (kilometers) and months. At the end of each interval, be sure to inspect, check, lubricate and service as instructed. If your motorcycle is used under high stress conditions such as continuous full throttle operation, or operation in a dusty climate certain services should be performed more often to insure reliability of the machine as explained in the maintenance section. Your Suzuki dealer can provide you with further guidelines. Steering components, suspension and wheel components are key items and require very special and careful servicing. For maximum safety we suggest that you have these items inspected and serviced by your authorized Suzuki dealer or a qualified service mechanic.

CAUTION:

Periodical inspections may reveal one or more parts that may need replacement. Whenever replacing parts on your motorcycle, it is recommended that you use Genuine Suzuki replacement parts or their equivalent. Whether you are an expert or do-it-yourself mechanic, Suzuki recommends that those items on the Inspection Chart marked with an asterisk (*), be performed by your authorized Suzuki dealer or a qualified service mechanic. You may perform the unmarked items easily by referring to the instructions in this section.

WARNING

Proper break-in maintenance (600 miles or 1,000 km) is a MANDATORY item for making certain that your machine is reliable and gives full performance at all times. Be sure that this periodic maintenance is performed thoroughly and in accordance with the instructions in this manual.

INTERVAL: THIS INTERVAL SHOULD BE JUDGED BY ODOMETER READING OR MONTHS, WHICHEVER COMES FIRST.	miles	600	4,000	7,500	11,000	15,000
	km	1,000	6,000	12,000	18,000	24,000
	months	2	12	24	36	48
Battery (Specific gravity of electrolyte)		—	I	I	I	I
* Cylinder head nut & exhaust pipe bolt		T	T	T	T	T
Air cleaner element		—	C	C	C	C
* Tappet clearance		I	I	I	I	I
Spark plug		—	C	R	C	R
* Fuel line		Replace every two years.				
Engine oil and oil filter		R	R	R	R	R
Carburetor idle rpm		I	I	I	I	I
Clutch		I	I	I	I	I
Secondary and Final Gear oil		Change oil at initial 600 miles (1,000 km) and there- after every 7,500 miles (12,000 km).				

NOTE: T = Tighten, I = Inspect, R = Replace, C = Clean.

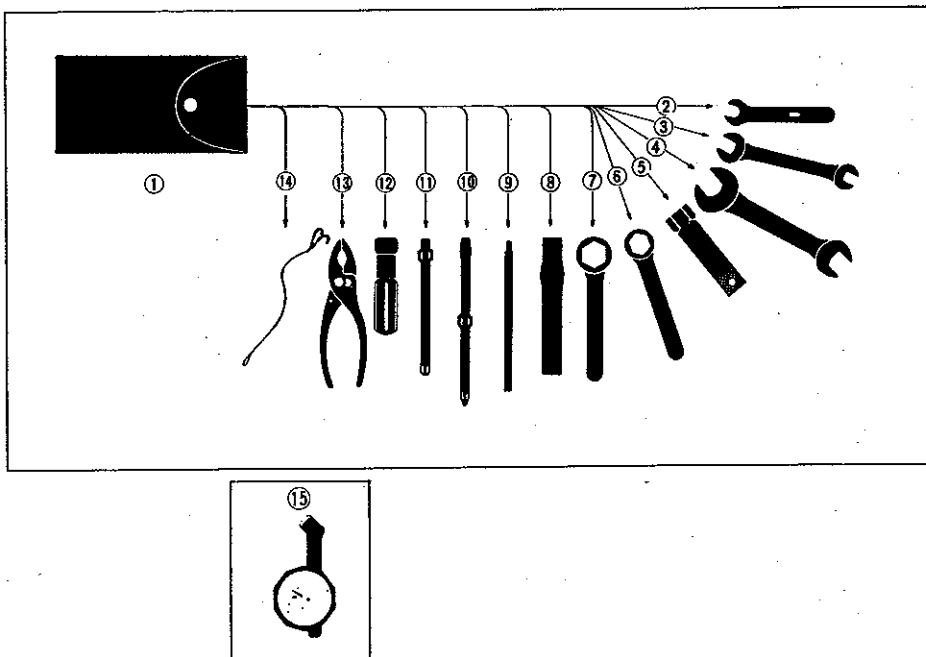
INTERVAL: THIS INTERVAL SHOULD BE JUDGED BY ODOMETER READING OR MONTHS, WHICHEVER COMES FIRST.	miles	600	4,000	7,500	11,000	15,000
	km	1,000	6,000	12,000	18,000	24,000
	months	2	12	24	36	48
* Brake hose		Replace every two years				
* Brake		I	I	I	I	I
Tires		I	I	I	I	I
* Steering stem		I	I	I	I	I
* Chassis bolt and nut		T	T	T	T	T
Front forks		—	—	I	—	I
		Check air pressure every 6 months.				

NOTE: T = Tighten, I = Inspect, R = Replace, C = Clean.

TOOLS

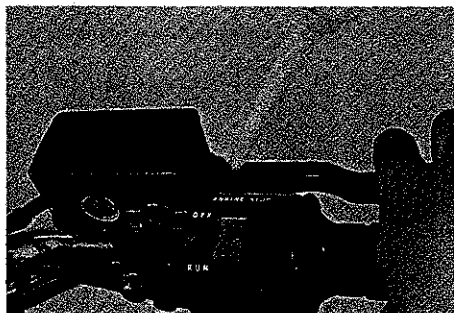
To assist you in the performance of periodic maintenance, a tool kit is located under the seat and consists of the following items.

Ref. No.	Item
1.	Tool Bag
2.	8 mm Open End Wrench
3.	10 x 12 mm Open End Wrench
4.	14 x 17 mm Open End Wrench
5.	Spark Plug Wrench
6.	19 mm Ring Wrench
7.	24 mm Ring Wrench
8.	Box Wrench Handle
9.	Ring Wrench Handle
10.	Combination Screwdriver
11.	Cross Head Screwdriver
12.	Screwdriver Handle
13.	Pliers
14.	Swinging arm Wire
15.	Front Fork Air Pressure Gauge

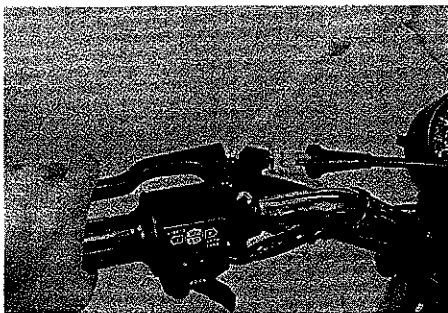


OILING CHART

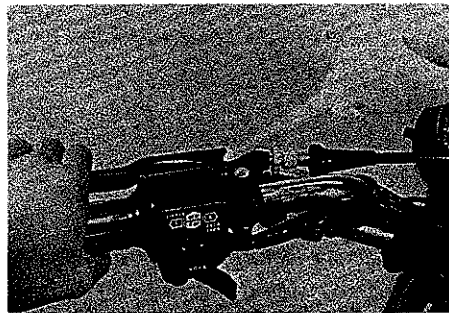
Proper lubrication is important to smooth operation and long life of each working part of your motorcycle and also for safe riding. It is a good practice to oil the machine after a long rough ride and after getting it wet in the rain or after washing it. Major oiling points are indicated below.



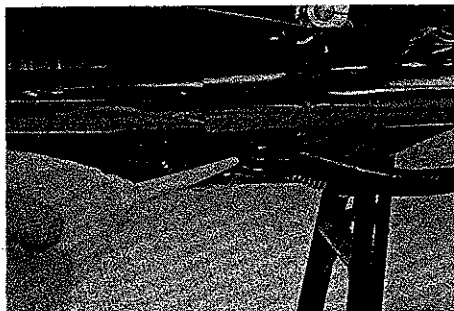
Brake lever holder



Clutch cable



Clutch lever holder

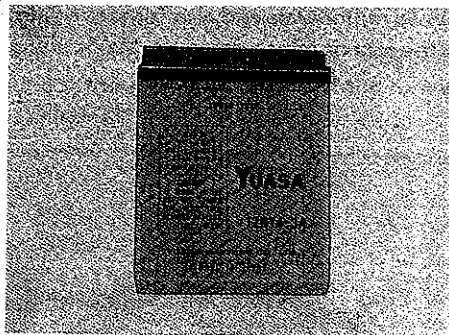


Side stand pivot

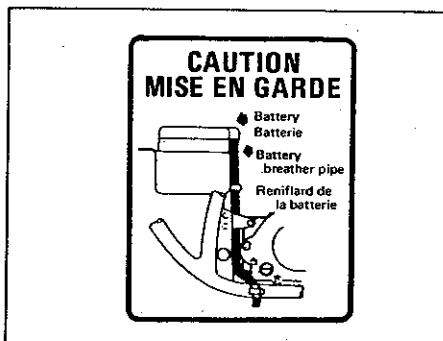


Rear brake rod link

BATTERY



The battery solution level may be inspected by removing the right frame cover. The solution level must be kept between the upper and lower level lines at all times. If the solution level is below the lower limit line, add **ONLY** distilled water up to the upper limit line. **NEVER** use tap water.



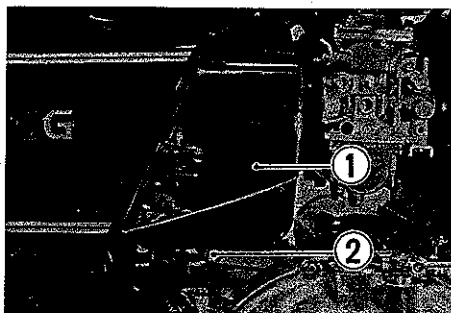
WARNING
Once the battery has been initially serviced, **NEVER** add diluted sulphuric acid.

CAUTION:
Be careful not to bend, obstruct, or change the routing of the air vent tube from the battery. Make certain that the vent tube is attached to the battery vent fitting and that the opposite end is always open.

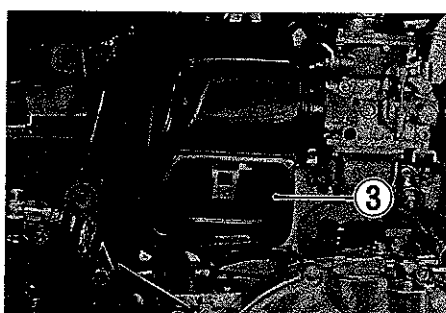
NOTE: Every 4,000 miles (6,000 km) have your dealer check the specific gravity of the battery's cells with a battery hydrometer. This will determine the exact condition of each of the six (6) cells.

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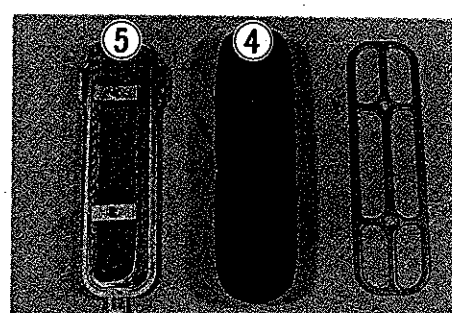
AIR CLEANER



- ① Air cleaner case cover
- ② Screw



- ③ Air cleaner element



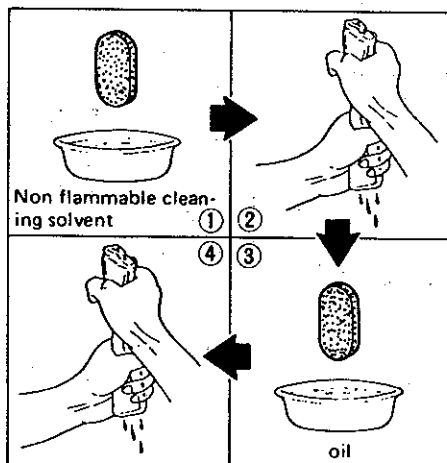
- ④ Polyurethane filter
- ⑤ Element frame

If the air cleaner is clogged with dust, intake resistance will increase with a resultant decrease in output and an increase in fuel consumption. Check and clean the cleaner every 4 000 miles (6 000 km) according to the following procedures.

- 1) Remove the right frame cover.
- 2) Remove air cleaner case cover by unscrewing the one fitting screw.

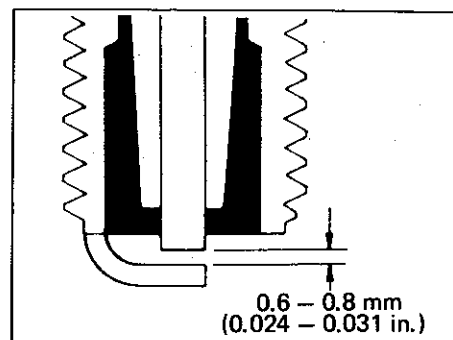
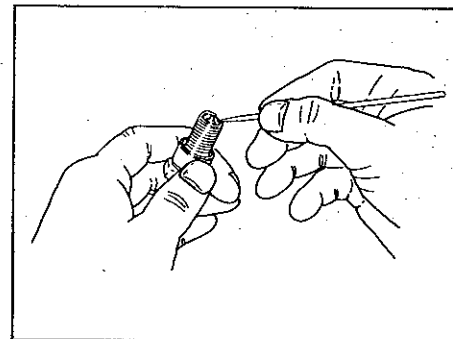
- 3) Take out the air cleaner element from the air cleaner case by pulling the air cleaner element after lifting it up.
- 4) Take the polyurethane filter out of the element frame by unscrewing two screws.
- 5) Fill a washing pan of a proper size with non flammable cleaning solvent. Immerse the element in the solvent and wash it clean.

- 6) Squeeze the solvent off the washed element by pressing it between the palms of both hands: do not twist and wiring the element or it will develop fissures.
- 7) Immerse the element in a pool of motor oil, and squeeze the oil off the element to make it slightly wet with the oil.



CAUTION:
Before and during the cleaning operation, examine the element to see if it has a rupture or crack. A ruptured or cracked element must be replaced. If driving under dusty condition, wash the air cleaner element more frequently. The surest way to wear down the engine quickly is to leave out the element or to use a ruptured element. Be sure that the air cleaner is in good condition at all times. The life of the engine depends largely on this component!

SPARK PLUGS



Every 4,000 miles (6,000 km), remove the carbon deposits from the spark plug with a small wire brush or a spark plug cleaning machine. Readjust the spark plug gap to 0.6 – 0.8 mm (0.024 – 0.031 in.) by using a spark plug gap thickness gauge.

The spark plugs should be replaced every 7,500 miles (12,000 km).

Whenever removing the carbon deposits, be sure to observe the operational color of each spark plug's porcelain tip. This color tells you whether or not the standard spark plug is suitable for your type of usage. If the standard plug is wet appearing or very dark in color, the hotter spark plug may be more suitable. A normal operating spark plug should be very light gray in color. If the spark plug is very white or glazed appearing, then it has been operating much too hot. This spark plug should be replaced with the colder plug.

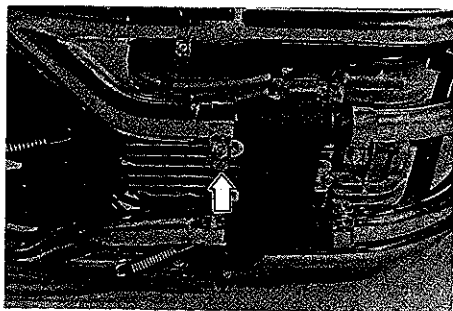
CAUTION:

The standard spark plug for the GS 850G has been carefully selected to meet the vast majority of all operational ranges. If the spark plug color indicates that other than a standard spark plug be used, it is best to consult your Suzuki dealer before selecting an alternate plug or heat range. The selection of an improper spark plug can lead to severe engine damage.

NGK	NIPPON DENSO	REMARKS
B7ES	W22ES-U	If the standard plug is apt to get wet, replace with this plug.
B8ES	W24ES-U	Standard
B9ES	W27ES-U	If the standard plug is apt to overheat, replace with this plug.

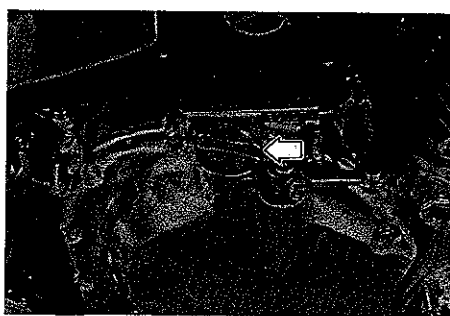
B8ES

ENGINE OIL AND FILTER CHANGE



Drain plug

Superior engine life depends much on the selection of quality oil and the periodic changing of the oil. Daily oil level checks and periodic changes are two of the most important maintenances to be performed.



Oil filler cap



Engine oil inspection window

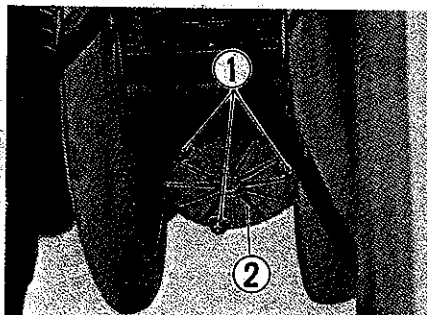
CAUTION:

Never operate the motorcycle if the engine oil level is below the "L" (low) line in the inspection window. Never fill the engine oil level above the "F" (full) line.

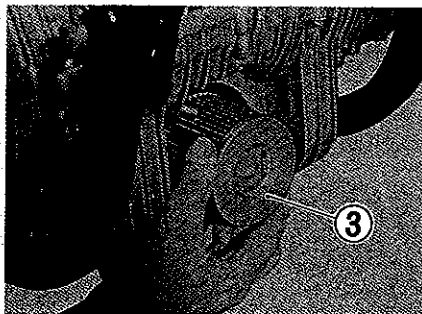
Change the engine oil and oil filter at the initial 600 miles (1,000 km) and also at the initial 4,000 miles (6,000 km) check up. Thereafter, the oil and oil filter should be changed every 4,000 miles (6,000 km). The oil should always be changed when the engine is hot so that the oil will drain thoroughly from the engine. The procedure is as follows:

NOTE: About 3,000 ml (3.2 US qt.) of oil will be required when changing oil only.

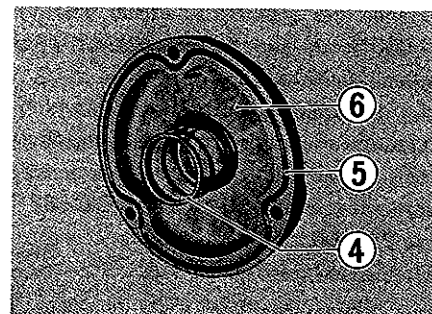
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① Nut ② Filter cap



③ Oil filter



④ Spring ⑤ "O" ring ⑥ Filter cap

- (1) Place the motorcycle on the center stand.
- (2) Drain the engine oil by removing the drain plug from the bottom of the engine.
- (3) Remove the three (3) nuts holding the filter cap in place.

- (4) Remove the filter cap, pull out the element and replace with a new oil filter element. The rubber sealing ring is installed facing the engine.
- (5) Before replacing the oil filter cover, check to be sure that the filter spring and the cap "O" ring are installed correctly.
- (6) Replace the oil filter cover and tighten the nuts securely.
- (7) Replace the drain plug and tighten it securely. Add fresh oil through the filler hole approximately 3,600 ml (3.8 US qt.) will be required.

- (8) Start the engine and allow it to idle for several seconds.
- (9) Turn the engine off and wait approximately one (1) minute, then recheck the oil level in the engine oil inspection window. The oil level should be at the "F" mark. If lower than the "F" mark, add oil until it reaches the mark.

CAUTION:

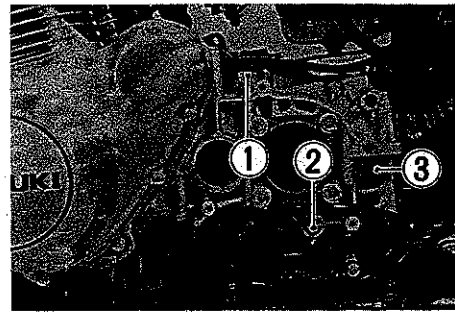
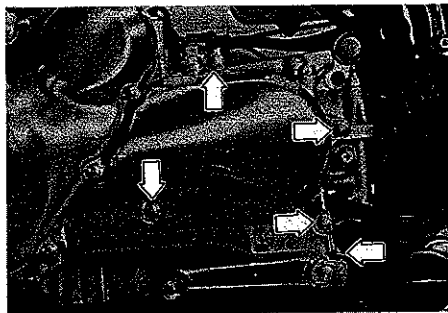
Be sure to always use the specified engine oil described on page 20.

GEAR OIL CHANGE

Change the gear oil at initial 600 miles (1,000 km), and thereafter every 7,500 miles (12,000 km).

Use SAE 90 hypoid gear oil which is rated GL-5 under API classification system. If you operate the motorcycle where ambient temperature is below 0°C (32°F), use SAE 80 hypoid gear oil.

The procedure is as follows:



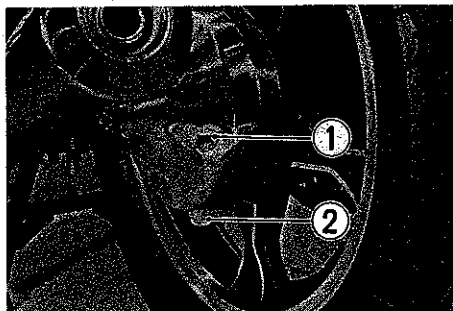
- ① Oil filler cap ③ Oil level screw
② Drain plug

SECONDARY GEAR OIL CHANGE

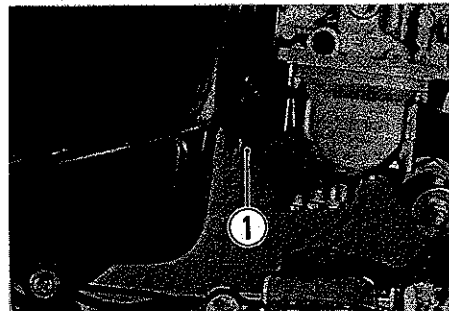
1. Place the machine on the center stand.
2. Remove the gearshift lever, and take off the secondary cover by removing the four (4) fitting bolts.
3. Remove the oil filler cap.
4. Drain the oil by removing the drain plug from the bottom of the secondary gear case.
5. Reinstall the drain plug and tighten it securely after all the oil has been drained out.

6. Remove the oil level screw, and add fresh oil through the filler hole until the oil drains out from the oil level hole. Approximately 340 – 400 ml (11.5 – 13.5 US oz.) of oil will be required.
7. Reinstall the oil level screw and the oil filler cap.

CARBURETOR



- ① Oil filler cap
② Drain plug



- ① Throttle stop screw

FINAL GEAR OIL CHANGE

1. Place the machine on the center stand.
2. Remove the oil filler cap.
3. Drain the oil by removing the drain plug from the bottom of the final gear case.
4. Reinstall the drain plug and tighten it securely after all the oil has been drained out. Add fresh oil through the filler hole until the oil drains out from the oil filler hole. Approximately 280 – 330 ml (9.5 – 11.2 US oz.) of oil will be required.
5. Reinstall the oil filler cap.

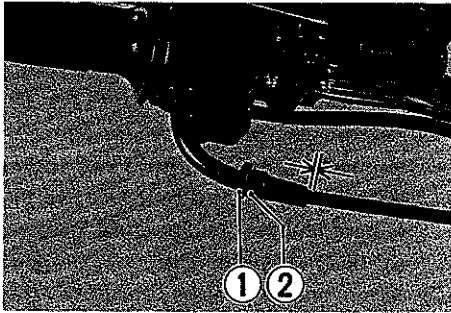
Undisturbed carburetion is the basis of the performance you ought to expect of your engine. The carburetor is factory-set for the best carburetion. Do not attempt to alter its setting. There are two items of adjustment, however, under your care: carburetor idle rpm and throttle cable play.

Adjust the carburetor idle rpm and throttle cable play at initial 600 miles (1,000 km) and every 4,000 miles (6,000 km).

CARBURETOR IDLE RPM ADJUSTMENT

- (1) Start up the engine and warm it up by running it at 2,000 r/min for 10 minutes in summer (where ambient temperature is 30°C (86°F) or thereabout) or for 20 minutes in winter (where ambient temperature is down to -5°C (23°F) or thereabout).
- (2) After engine warms up, turn the throttle stop screw ① located on the carburetor in or out so that engine may run at 950 – 1,150 r/min.

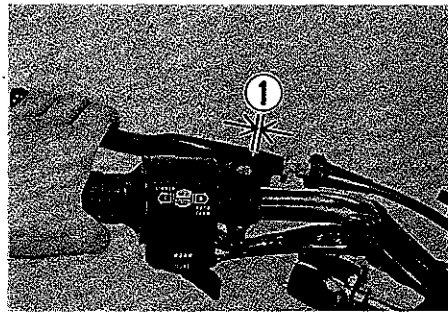
THROTTLE CABLE ADJUSTMENT



- ① Lock nut
- ② Throttle cable adjuster

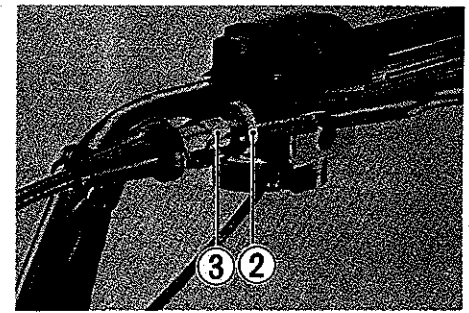
- 1) Loosen lock nut.
- 2) Adjust the cable slack by turning adjuster in or out to obtain the correct slack 0.5 – 1.0 mm (0.02 – 0.04 in.).
- 3) After adjusting the slack, tighten the lock nut.

CLUTCH ADJUSTMENT



- ① Clutch cable play

At initial 600 miles (1,000 km) and every 4,000 miles (6,000 km), adjust the clutch by means of the clutch cable adjuster. The play of the clutch cable should be 2 - 3 mm (0.08 - 0.12 in.) as measured at the clutch lever holder before the clutch begins to disengage. If you find the play of the clutch incorrect, adjust it in the following way.



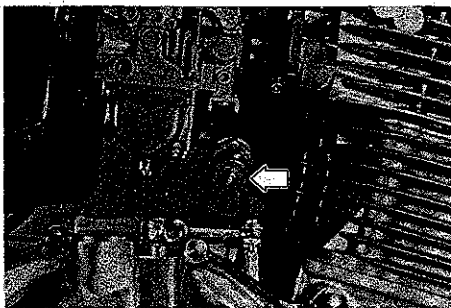
- ② Lock nut ③ Cable adjuster

- (1) Loosen the clutch cable adjuster lock nut.
- (2) Turn the clutch cable adjuster to provide the specified play (2 - 3 mm).
- (3) Tighten the lock nut.

At the same intervals, lubricate the clutch cable with motor oil.

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CAMSHAFT DRIVE CHAIN TENSIONER



The camshaft drive chain is kept in proper adjustment by an AUTOMATIC camshaft drive chain tensioner. This automatic tensioner never needs servicing by the customer and the camshaft drive chain itself need not be checked for stretch or wear.

CAUTION:

Never attempt to turn the tensioner wheel in either direction. Turning the wheel even slightly can jam the mechanism which will prevent it from adjusting the chain properly. An improperly adjusted chain can cause severe engine damage.

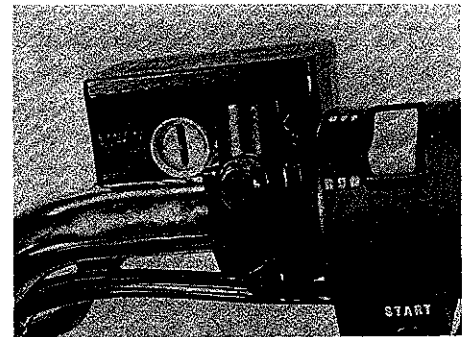
BRAKES

The GS850G utilizes front and rear disc brakes. Properly operating brake systems are vital to safe riding. So be sure to perform the brake inspection requirements as scheduled. The brakes should be inspected at the initial 600 miles (1,000 km) inspection and every 4,000 miles (6,000 km) thereafter, by your authorized Suzuki dealer.

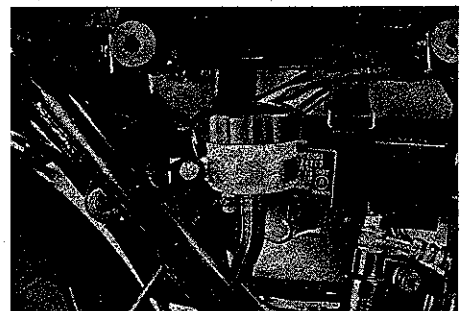
BRAKE FLUID

WARNING:

Brake fluid may be harmful if swallowed or if it comes in contact with skin or eyes. Contact your physician immediately. If swallowed induce vomiting. If brake fluid gets into the eyes or in contact with the skin, it should be flushed thoroughly with plenty of water.



Front reservoir



Rear reservoir

CAUTION:

The GS850G uses a glycol-based brake fluid. Do not use or mix different types of brake fluid such as silicone-based or petroleum-based fluid, otherwise serious damage will result to the brake system. Never use any brake fluid that has been stored in a used or unsealed container. Never reuse brake fluid left over from the last servicing and stored for long periods as it absorbs moisture from the air. Use only DOT 3 or DOT 4 brake fluid. Do not spill any brake fluid on painted or plastic surfaces as it will damage the surface severely.

Be sure to check the brake fluid level in the front and rear reservoirs. If the level is found to be lower than the full mark, replenish with brake fluid that meets Suzuki's requirements. As the brake pads wear, the fluid level will drop to compensate for the new position of the brake pads. Replenishing the brake fluid reservoir is considered normal periodic maintenance.



Front brake pads

Inspect the front brake pads by noting whether or not the friction pads are worn down to the red limit line. If a pad is worn to the red limit line it must be replaced with a new one.

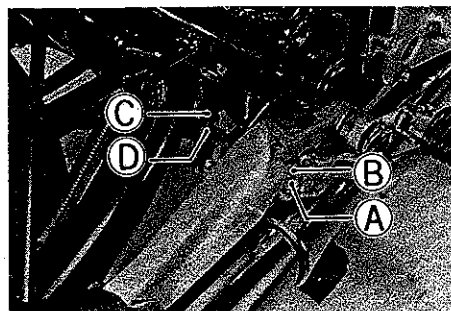
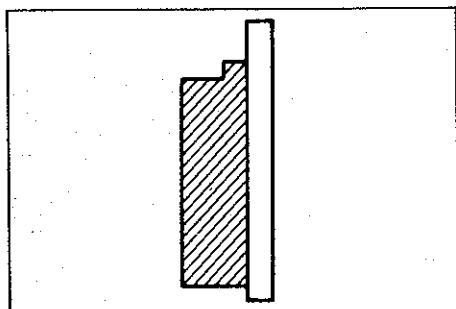


Rear brake pads

Inspect the rear brake pads for wear by noting whether or not the pad is worn down to the red limit line. If the a pad is worn to the red limit line, the pad must be replaced with a new one. It is necessary to remove the pad inspection cap.

WARNING:

If the brake system or pads need to be repaired or serviced we strongly advise you to have your authorized Suzuki dealer perform service. He has the correct tools and has been trained to perform the job in a safe and economical manner.

REAR BRAKE PEDAL ADJUSTMENT**CAUTION:**

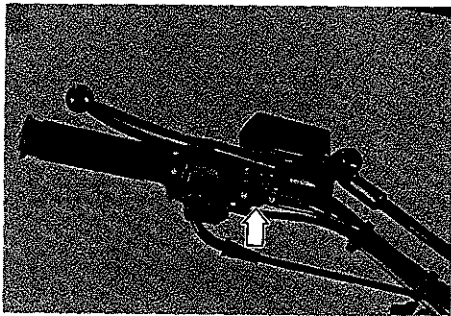
Disc brake systems operate under extremely high pressures. For safety, the brake hose and brake fluid should be changed at intervals of no longer than two (2) years. Inspect your brake system for the following items daily.

The rear brake pedal must have a specified amount of clearance at all times or the disc brake pads will rub the disc causing damage to the pads and to the disc surface. Adjust the brake pedal in the following manner:

- (1) Inspect the front and rear brake system for signs of fluid leakage.
- (2) Inspect the brake hose for leakage or a cracked appearance.
- (3) The brake lever should have the specified stroke and be firm at all times.
- (4) Check the wear of the disc brake pads.

- (1) Loosen lock nut (A) and turn the stopper bolt (B) away from the stopper lug.
- (2) Loosen lock nut (C), and rotate the push rod (D) to locate the pedal 20 mm (0.8 in.) below the top face of the foot rest. Be sure to measure this clearance carefully.
- (3) Retighten lock nut (C) to secure the push rod (D) in the proper position.
- (4) Adjust the clearance between the tip of the return stopper bolt (B) and the stopper lug so that the clearance is zero. Retighten the nut (A).

FRONT BRAKE LIGHT SWITCH



The front brake light switch is located beneath the front brake lever. Loosen the switch fitting screws and adjust the actuating point by moving the switch body to the right or to the left so that the brake light will come on just before a pressure rise is felt at the lever.

REAR BRAKE LIGHT SWITCH



The rear brake light switch is located under the right frame cover. To adjust the brake light switch: raise or lower the switch so that the brake light will come on just before a pressure rise is felt when the brake pedal is depressed.

TO ADJUST THE SIDE STAND CHECK LIGHT SWITCH



To adjust the side stand check light switch: move the switch right or left so that the warning light in the check panel will turn off when the side stand is returned to its normal up position.

TIRES: TUBELESS TYPE

This motorcycle is equipped with tubeless-type tires. These tires have passed rigid factory testing on this motorcycle and their use will ensure handling and high speed stability.

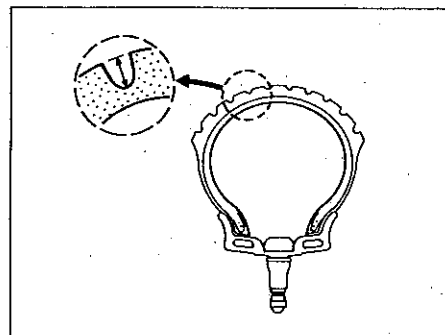
Check the tire inflation pressure and tire tread condition at the initial 600 miles (1 000 km) and each 4 000 miles (6 000 km) inspection. For maximum safety and good tire life, the tire pressures should be inspected more often.

NOTE: Tubeless tires, unlike tube equipped tires, have some self sealing properties. If the tire pressure has dropped, inspect the tire very carefully for punctures, nails or a damaged rim.

*Tire pressure should be measured when the tires are cold.

TIRE PRESSURE

Insufficient air pressure in the tires not only hastens tire wear but also seriously affects the stability of the motorcycle. Under inflated tires make smooth cornering difficult and over inflated tires decrease the amount of tire in contact with the ground which can lead to skids and loss of control. Be sure that the tire pressure is within the specified limits at all times. Tire pressure should only be adjusted when the tires are cold.



TIRE TREAD CONDITION

Operating the motorcycle with excessively worn tires will decrease riding stability and can lead to loss of control. It is recommended that the front tire be replaced when the remaining depth of the tire tread becomes 1.6 mm (0.06 in) or less. The rear tire should be replaced when the depth of the tire becomes 2.0 mm (0.08 in) or less.

COLD INFLATION TIRE PRESSURE	FRONT						REAR					
	SOLO RIDING			DUAL RIDING			SOLO RIDING			DUAL RIDING		
	kPa	P.S.I.	KG/CM ²	kPa	P.S.I.	KG/CM ²	kPa	P.S.I.	KG/CM ²	kPa	P.S.I.	KG/CM ²
NORMAL RIDING	175	24	1.75	175	24	1.75	200	28	2.00	225	32	2.25
CONTINUOUS HIGH SPEED RIDING	200	28	2.00	200	28	2.00	225	32	2.25	280	40	2.80
TIRE SIZE	FRONT: 3.50H 19 4PR						REAR: 4.50H 17 4PR					

$$F4 \text{ } 26 + 8 = 34$$

$$R = 32 + 8 = 40$$

← Too low for
← modern tires

WARNING

The use of a tire other than original equipment can lead to serious stability problems and possible loss of control. Suzuki strongly recommends that you use only the specified (BRIDGESTON (R0) 4.50H 19 4PR front tire and 4.50H 17 4PR rear tire due to our familiarity with their performance.

Tubeless type tires require that special precautions be taken when changing tires or repairing flats.

- Tubeless tires depend upon the seal between the tire bead and the wheel rim to retain air. Damage to the tire bead surface or the inner wheel rim surface will result in air leak. For this reason, special care must be taken when removing or installing the tire from the wheel. Special tire irons and rim protectors or a specialized tire mounting machine are required to prevent damage.

- Punctures in tubeless tires should be repaired by dismounting the tire and applying an internal patch.
- The use of tubeless tire plugs (external repair) to repair punctures is not recommended, as the cornering forces generated by a motorcycle may cause them to work loose.
- If the puncture is in the sidewall area or if the hole is greater than 6 mm (0.2 in) in diameter, the tire must be replaced.

After reinstalling a repaired tire, you should not exceed 50 mph (80 km/h) for at least 24 hours, because repair failure and tire deflation may result. Never exceed 80 mph (130 km/h) with a repaired tire.

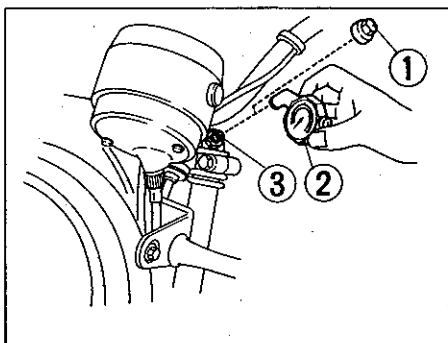
Proper wheel balancing is necessary for safe and stable handling of the motorcycle. You should not removed or change the wheel balance weights. After tire replacement or repair, the wheel must be rebalanced. Trust this work only to someone with the proper tools and equipment.

Due to the importance of tire repair and replacement, we recommend that you consult an authorized Suzuki dealer to perform these services. If an authorized Suzuki dealer is not available, go to an authorized tire repair station with tubeless-tire-on-alloy-wheel experience.

FRONT SUSPENSION

The GS850G front suspension is pneumatic/coil spring or more commonly referred to as "air" forks. Each fork tube contains compressed air and a light coil spring as well as fork oil. The air pressure is adjustable so that you can obtain the degree of softness or firmness suitable to your type of riding and comfort.

The GS850G is serviced at the factory with 0.6 kg/cm² (8.5 psi) of air pressure in the front forks.



- ① Air valve protection cap ③ Air valve
② Air pressure gauge

CHECKING FORK AIR PRESSURE

The motorcycle should be placed on its center stand and all weight removed from the front end by jacking up the front of the chassis or engine. Remove the air valve protection caps and use the air pressure gauge to check the front fork air pressure. To raise the pressure, use a hand pump to add air, to each fork leg. To lower the pressure, bleed the air out from the valve.

CAUTION:

Do not attempt to alter the front fork air pressure setting by using a high pressure tire filler such as is available in gas stations. A hand type pump must be used so that no damage will occur to the fork assembly. Never use any air containing inflammable gases. Instead of ordinary air, nitrogen gas may be substituted if available. When pumping air in, never increase the pressure above 2.5kg/cm² (35 psi). This is the maximum permissible pressure to avoid fork oil seal and valve damage.

CAUTION:

Be sure to keep the air pressure always at 0.6 kg/cm² (8.5 psi).

WARNING

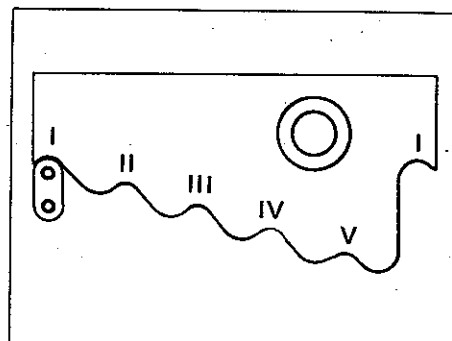
Equalize the air pressures of the two fork tubes. The maximum allowable difference is 0.1 kg/cm² (1.4 psi). This will prevent unnecessary stress on the front axle and on the fork leg assemblies.

NOTE: Fork air pressure, as with tire pressure, should be checked periodically (monthly) and especially after periods of non-use. When checking the pressure, be sure to apply the pressure gauge squarely to the air valve. After taking a reading, remove the gauge quickly. This must be done as some pressure is lost when removing the gauge. The loss ranges from 0.05 to 0.10 kg/cm² (0.7–1.4 psi). Take this loss of air pressure into consideration when adjusting for your final air pressure.

REAR SUSPENSION

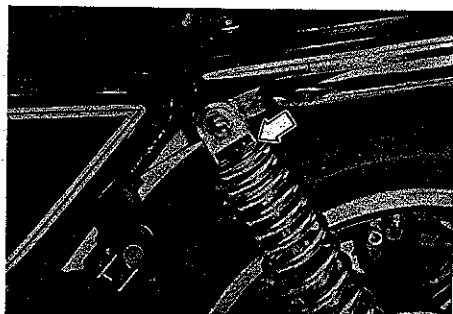
The rear shock absorber's spring preload and damping rate are adjustable. Spring preload can be altered to five different settings and the damping rate to four different settings.

These two variables can be adjusted to optimize the handling of the machine and the smoothness of the ride based on the speed, load, and road conditions.



SPRING ADJUSTMENT

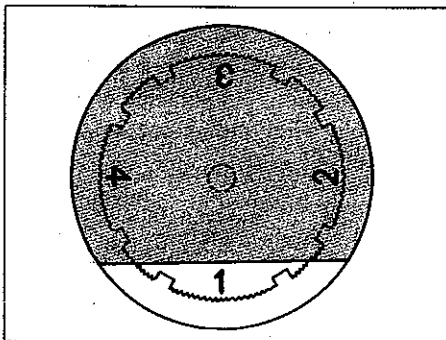
Turn the bottom spring seat, as shown in the photo, to the desired notch. This will change the preload on the spring and increase or decrease the stiffness of the ride. The GS850G as delivered from the factory is adjusted so that both springs are on the number 1 notch for the softest possible ride.



DAMPING ADJUSTMENT

To increase or decrease the damping force, turn this adjusting ring as shown in the photo. Damping adjustments are indicated by the numbers 1 thru 4 engraved on the adjusting ring. As you turn the adjusting ring, you will notice a click as you reach each number position. When changing the damping, always be sure that the adjusting ring stops with the number visible, that a click is noticed and the ring feels as if it were sitting in a detent or a notch.

Position 1 (softest) provides for the smallest amount of damping force, and position 4 (stiffest) for the largest amount. The GS850G is delivered from the factory with both rear dampers adjusted to the number 1 position (softest position).



CAUTION:

Do not operate rear damper units in any positions other than the click or detented positions. If position 2½, 3½, etc. is used, the damping force will automatically have the same damping force as number 4 (stiffest) position.

The rear suspension must be made stiffer if two persons are to ride the motorcycle or if accessories have been fitted to the motorcycle.

If the machine is to be used for high performance cruising, then the rear suspension should also be stiffened. A list of the recommended combinations is provided and should be followed.

Spring Setting	Damper Setting
I	1 or 2
II	2 or 3
III	3 or 4
IV	3 or 4
V	3 or 4

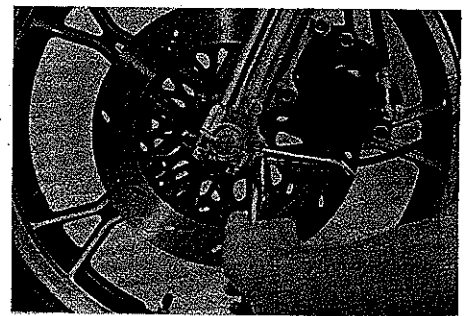
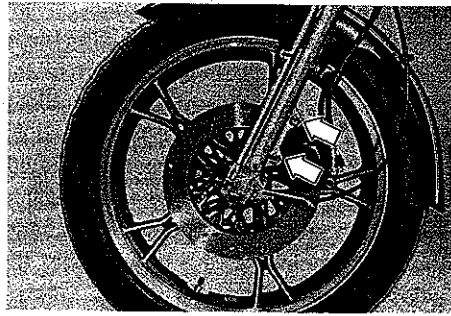
FRONT WHEEL REMOVAL

WARNING

Be sure to adjust the springs and dampers of the two shock absorbers equally. Making one shock absorber harder than the other will severely disturb the running stability of the machine.

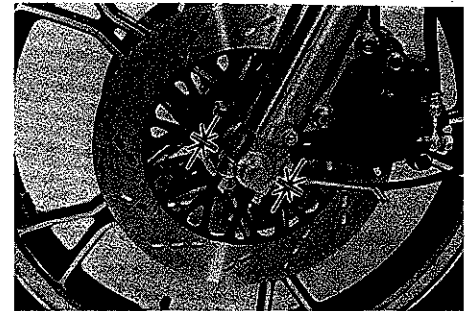
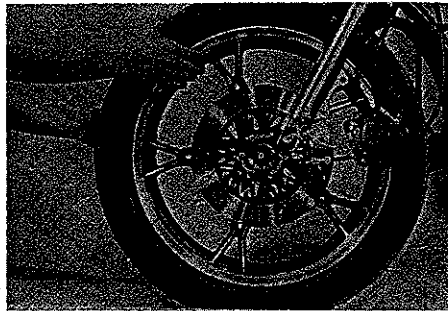
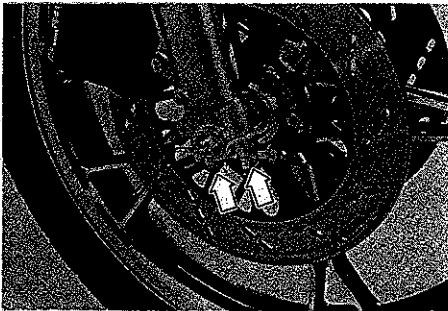
CAUTION:

Fork oil viscosity and level is critical to proper air fork operation. Draining or adding fork oil is best left to your Suzuki dealer as special tools and knowledge are necessary to perform this task.



- (1) Place the motorcycle on the center stand.
- (2) Remove either one of two calipers, left or right, from the fork by unfastening its two mounting bolts.
- (3) Disconnect the speedometer cable from the front wheel. When the cable is released, prevent the inner drive cable from sliding out of the outer cable housing.

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- (4) Remove left and right axle holder bolts.
- (5) Lift the front end of the motorcycle up and place a jack or a block under the engine or chassis tubes.
- (6) Slide the front wheel forward. To re-install the wheel assembly reverse the sequence as described.

CAUTION:

Before tightening the axle holders in place, locate the speedometer drive gear box so that the arrow on the gear box housing points up. This will align the speedometer cable properly when installed. To secure the axle properly, the axle holders should be tightened down so that the gap on each side of the cap is equal.

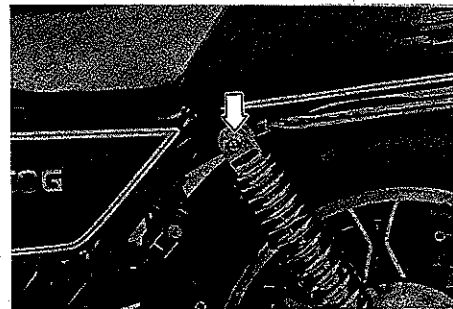
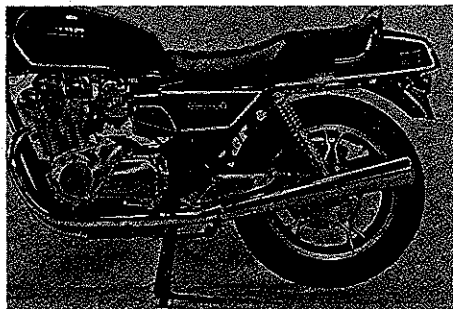
REAR WHEEL REMOVAL

WARNING

If the front wheel has to be removed, it is very important to have the loosened nuts and bolts torqued to the proper specifications. We suggest that you have this performed by a authorized Suzuki Dealer.

CAUTION:

Never squeeze the front brake lever with the front wheel removed. It is very difficult to force the pads back into the caliper assembly.



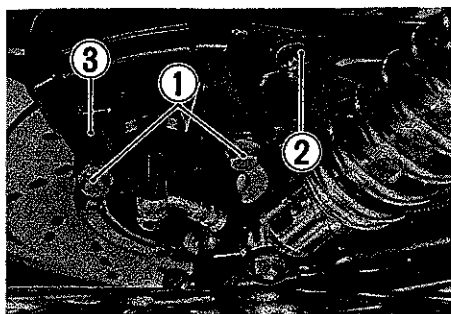
1. Locate the motorcycle on level ground and place the motorcycle on the centerstand.

2. Remove the upper shock absorber nuts and pull the top side of the shock absorbers free from the mounting lugs. This will allow the swingarm/bevel gear assembly to be easily moved.

CAUTION:

Take care not to burn yourself if the mufflers are hot.

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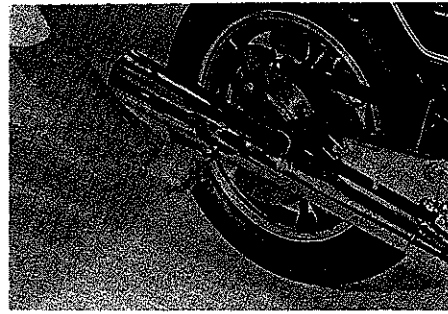


- ① Caliper mounting bolt
- ② Torque link bolt
- ③ Caliper

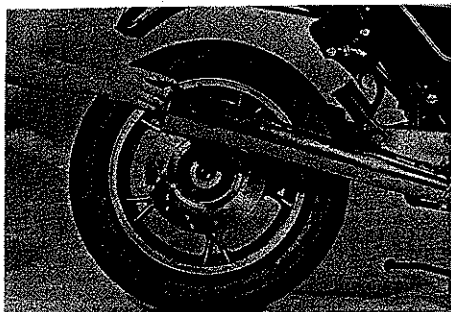
3. Remove the caliper mounting bolts, the torque link bolt cotter pin and the torque link bolt. Pivot the caliper out of the way.



4. Remove the cotter pin and loosen the axle nut.



5. Loosen the axle shaft holder bolt and draw out the axle shaft.



6. Remove the axle from the bevel gear housing. Remove the wheel from the splined drive and set the wheel assembly on the ground.
7. Remove the rear wheel assembly.

WARNING

If you have found it necessary to remove the rear wheel, it is very important that the nuts and bolts be torqued to the proper specification. We strongly recommend that you have these bolts checked and retorqued by your authorized Suzuki Dealer.

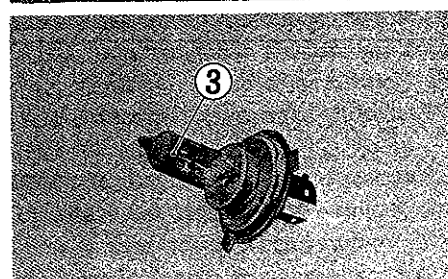
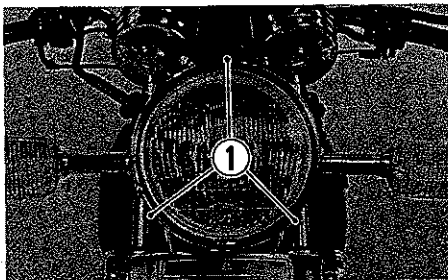
CAUTION:

- (1) Check all nuts, bolts and cotter pins after reinstalling the rear wheel.
- (2) While removing the caliper from the mounting bracket it is possible for the brake hose to touch the muffler. If the muffler is still hot, the hose could be damaged. Protect the hose with a cloth or wait until the muffler cools.
- (3) When reinstalling the rear caliper, be careful not to twist the brake hose or route it improperly.

LIGHT BULB REPLACEMENT

The wattage rating of each bulb is shown on the chart below. When replacing a burned out bulb, always use the exact same wattage rating. Using other than the specified rating can result in overloading the electrical system or premature failure of a bulb.

Headlight	12V 60/55W
Tail/Brake light	12V 8/23 (3/32 cp)
Turn signal light	12V 23W (32 cp)
License plate light	12V 8W (4 cp)



HEADLIGHT

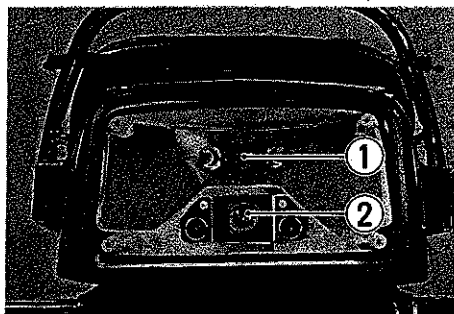
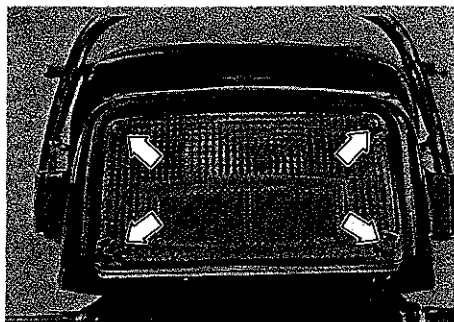
- (1) Remove three screws ①: take off the headlight assembly.
- (2) Roll up the rubber cap ② and unhook the bulb holder spring ③ and you can pull out the bulb ④.

CAUTION:

In this model, the halogen light is used for the headlight. When replacing the headlight bulb, be careful not to touch the lens of its bulb.

WARNING

After remounting the headlight assembly, be sure to check the horizontal adjustment.

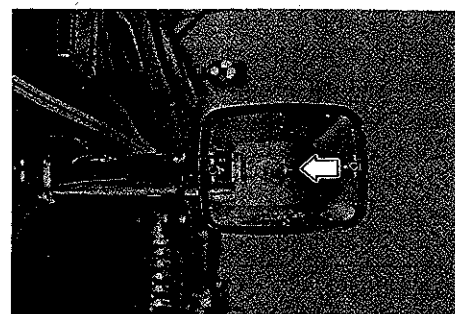


- ① Tail/Brake light
- ② License plate light

TAIL/BRAKE LIGHT

To replace the tail/brake light bulb follow these directions:

- (1) Remove the four screws and take off the lens.
- (2) Push the bulb in, twisting it to the left until the engagement pins are disconnected and remove the bulb. To fit the replacement bulb into position, push the bulb in firmly and twist it to the right while pushing in.



TURN SIGNAL LIGHT

- (1) Remove two screws and take off the lens.
- (2) Push the bulb, twisting it to the left, and pull it off.
- (3) To fit the replacement bulb, push it in and twist it to the right while pushing.

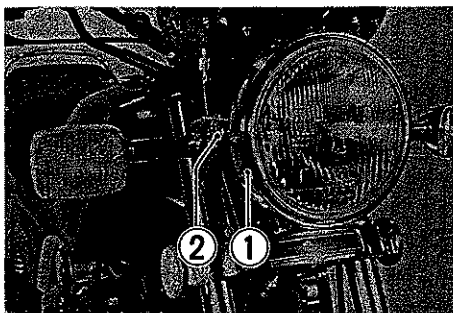
CAUTION:

When replacing the lens, do not overtighten the four securing screws.

CAUTION:

After setting the lens, be careful not to overtighten the two securing screws lest the lens should break.

HEADLIGHT



The headlight beam can be adjusted both horizontally and vertically if necessary.

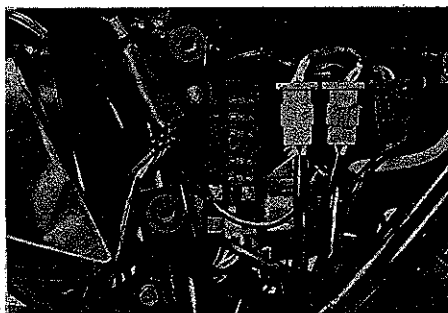
To adjust beam horizontally:

Turn the cross head screw ① located on the right side of the headlight unit clockwise or counter-clockwise.

To adjust beam vertically:

Loosen the headlight housing fitting bolt ② and move the headlight housing up and down as required.

FUSE BOX/OUTPUT TERMINAL



The fuse box/output terminal is located inside the left hand frame cover. There are five fuses. If there is a sudden halting of the engine while running or any electrical system failure then the fuses must be checked. In case one or more of the fuses blow there are two spare fuses, a 15A and a 10A fuses, located in the fuse box cover. For attaching electric accessories, the output terminal is provided under part of the fuse box.

When feeding current to an electric accessory from this output terminal, first remove fuse cover. Then, connect it to the terminal with extreme care not to

confuse its positive (+) and negative (—), following marks positive (+) and negative (—) on the terminal. After that, replace the fuse cover. The allowable current is 10A (12V).

CAUTION:

This output terminal is strictly provided for electric accessories, and so, any other usages are forbidden. In actual use for any electric accessory, please consult Suzuki dealer. It should be noted that a burnt out fuse should be replaced, removing fuse cover.

CAUTION:

Like other fuses, use none other than specified 10A fuse.

CAUTION:

Always be sure to replace the blown fuse with the correct amperage fuse. Never use a substitute, for example aluminum foil or wire, to replace a blown fuse. If the spare fuse installed blows out in a short period of time it means that you could have a major electrical problem. You should consult your Suzuki dealer immediately.

FUSE LIST

1. 15A MAIN fuse protects all electrical systems.
2. 10A HD. LAMP fuse protects headlight, taillight, license plate light, instrument light and high beam indicator light.
3. 10A SIGNAL fuse protects brake light, turn signal lights, turn signal indicator light and horn.
4. 10A IGNITION fuse protects the ignition system and electrical start system.
5. 10A OUTPUT TERMINAL fuse protects the electric accessories.

TROUBLESHOOTING

If the engine refuses to start, perform the following inspections to determine the cause.

- (1) Is there enough fuel in the fuel tank?
- (2) Is the fuel reaching the carburetors from the fuelcock?
- (3) Disconnect the fuel line from the carburetor, turn the fuelcock to the "PRIME" position and see if gasoline flows from the hose.
- (4) Then turn the fuelcock to the "ON" position and crank the engine for a brief moment and see if fuel still flows.
- (5) If it has been determined that fuel is reaching the carburetor, the ignition system should be checked next.



button with the ignition switch in the "ON" position and the engine "kill" switch in the "RUN" position. If the ignition system is operating properly, a blue spark should jump across the spark plug gap. If there is no spark, consult your Suzuki Dealer for repairs.

ENGINE STALLING

- (1) Check the fuel supply in the fuel tank.
- (2) Check the ignition system for intermittent spark.
- (3) Check the engine idle speed.

It is best to consult your Suzuki dealer before attempting to troubleshoot any problem. If the machine is still within the warranty, then the Suzuki dealer should definitely be consulted before any repairs are attempted on the machine by yourself. Tampering with the machine while in warranty may affect warranty consideration.

CAUTION:

It is best to consult your Suzuki dealer before attempting to troubleshoot any problem. If the machine is still within the warranty, then the Suzuki dealer should definitely be consulted before any repairs are attempted on the machine by yourself. Tampering with the machine while in warranty may affect warranty consideration.

WARNING

Do not allow the fuel to spill. Catch the fuel in a container.

- (1) Remove the spark plug and re-attach it to the spark plug lead.
- (2) While holding the spark plug firmly against the engine, push the starter

WARNING

Do not hold the spark plug close to the open spark plug hole in the cylinder head as gasoline vapor inside the cylinder could be ignited, creating a fire hazard.

PROCEDURE FOR STORAGE

Materials Needed

1. Motor Oil.
2. Commercial Gasoline Stabilizer.
3. Commercial Rust Preventative Fogging Oil. (outboard motor type)
4. Commercial Aerosol Rust Preventative (moisture displacing lubricant)
5. Commercial Vinyl and Rubber Preservative.
6. Hydrometer for Checking Battery Condition.
7. 1 Amp Battery Charger.

1. Place the motorcycle on its center stand.
2. Thoroughly clean the entire motorcycle. Run the bike until all traces of moisture are gone.
3. Pour the gasoline stabilizer into the fuel tank using the amount of stabilizer recommended by its manufacturer. Unstabilized fuel will form "gum" or "varnish" deposits that will plug the fuelcock and carburetor passageways.

NOTE: Make sure that the fuelcock lever is in the "ON" or "RESERVE" position. If the lever is left in the prime position,

fuel may leak into the engine.

NOTE: Steps 4a and 4b are for protecting the top end engine components from rust and corrosion. Step 4b is to be used only if fogging oil is not available. Do either 4a or 4b, but DO NOT do both.

- 4a. Remove the air cleaner element. While the engine is running at idle, spray the rust preventative fogging oil into the air cleaner box. Try to give each cylinder equal amounts of fogging oil. Do this until the engine stalls or emits smoke.
- 4b. Run the engine for a few minutes to get the stabilized fuel into the carburetors. Then, remove the spark plugs and pour 1 to 2 tablespoons of motor oil into each spark plug hole. Reinstall the spark plugs. DO NOT reinstall the spark plug caps at this time. Turn the engine over a few times with the electric starter. Now reinstall the spark plug caps.
5. Drain the old engine oil and remove the oil filter, but DO NOT replace it at this time. With fresh oil, refill the

crankcase all the way up to the filler cap hole. This step is necessary because the old oil contains acid, moisture and other contaminants that will damage the engine while it is stored.

6. Refill the fuel tank as completely as possible to eliminate any air space and to reduce the chances of the fuel becoming contaminated.
7. Remove the battery. Make sure to remove the negative terminal before the positive terminal. This will remove the battery from the circuit and will eliminate the chance of grounding the positive terminal with the screwdriver or wrench. Clean the outside of the battery with a mild baking soda and water solution and dry it carefully. Be sure not to get any solution inside the cells. Remove any corrosion from the terminals and from the wiring harness connections. Store the battery in a room that stays above freezing, off the floor, and preferably on a wooden shelf.
8. Spray all of the vinyl and rubber

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parts with the rubber preservative.

9. Spray the unpainted surfaces of the motorcycle with the rust preservative.
10. Deflate the tires to approximately 20 PSI and block up the front of the motorcycle so both front and rear tires are off of the ground. This will keep the tires from developing permanent "flat" spots.

During the storage period, be sure to do the following things:

Once A Week

Turn the engine over a few times by removing the spark plugs and putting the transmission in 5th gear and turning the rear wheel. This will keep the piston rings free and top end coated with oil. Reinstall the spark plugs and visually inspect your machine for any other things that would be detrimental to the condition of your motorcycle.

Once A Month

Recharge the battery with the one amp battery charger until it is fully charged. If the battery is not kept fully charged, it may become permanently damaged and will have to be replaced.

PROCEDURE FOR RETURNING TO SERVICE

1. Clean the entire motorcycle.

NOTE: Use of a commercial degreaser may stain the finish on the engine. Instead, use a mild detergent and water solution.

2. Drain the oil that was in the engine during the storage period. Install a new oil filter and fill the engine with oil as outlined in your owner's manual.
3. Reinstall the battery. Make sure that the vent hose is connected and routed properly. Install the positive terminal.
4. Lubricate all places as instructed in the lubrication table in the owner's manual.
5. Inflate the tires to the correct pressure.
6. Before starting the engine, remove the four spark plugs and slowly turn the engine over by putting it in 5th gear and turning the rear wheel. Listen for any abnormal noises and

check for smooth movement. If you think a problem has occurred, contact your local authorized Suzuki dealer for assistance. If there are no problems, reinstall the spark plugs and return the transmission in neutral.

7. Do the "Inspections Before Riding" as listed in the owner's manual.

Often times it's easier to let these sort of services be done by your dealer. Most dealers in the areas where motorcycle storage is common are set up to properly prepare motorcycles for storage. Whether you do it yourself, or have your dealer do it, we sincerely hope you follow our suggestions. This is the only way that your GS can serve you in the manner it was designed. If your dealer does the service for you, you should be among the first to be back on the road when winter becomes spring.

CAUTION:

Clean the brake disc with alcohol only. This will ensure positive braking.

SPECIFICATIONS

DIMMENSIONS 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	160 mm (6.3 in.)
Dry mass	245 kg (540 lbs)

ENGINE

Type	Four-stroke cycle, 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 ³ (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

Horsepower Approx 75
Top Speed Approx 125 mph

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 reduction	1.062 (17/16)
Final reduction	3.090 (34/11)

CHASSIS

Front suspension	Telescopic, pneumatic/coil spring, oil dampened
Rear suspension	Swinging arm, oil dampened, damper 4-way, spring 5-way adjustable
Steering angle	40° (right & left)
Caster	62° 10'
Trail	113 mm (4.45 in.)
Turning radius	2.6 mm (8.5 ft)

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Front brake	Disc brake, twin
Rear brake	Disc brake
Front tire size	3.50H19 4PR, Tubeless
Rear tire size	4.50H17 4PR, Tubeless

ELECTRICAL

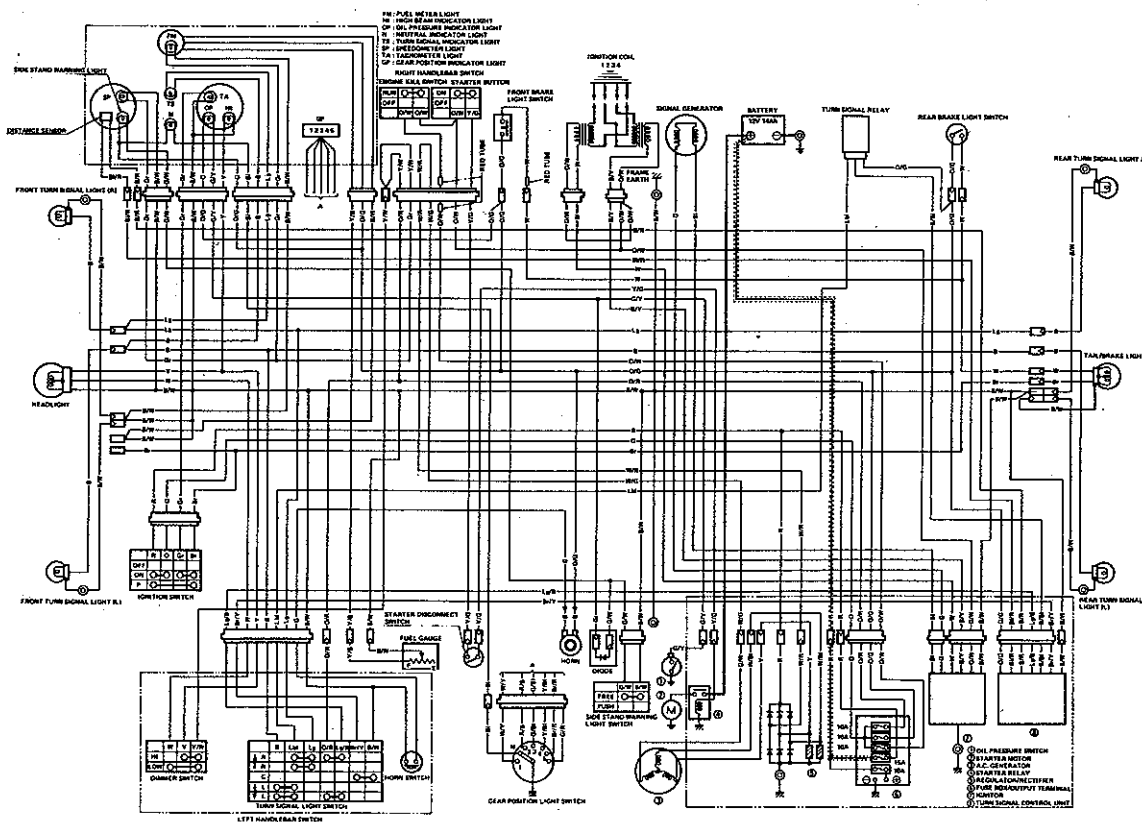
Ignition type	Transistorized
Ignition timing	17° B.T.D.C. below 1,500 rpm and 37° B.T.D.C. above 2,350 rpm
Spark plug	NGK B 8ES or NIPPON DENSO W24ES-U
Battery	12V 14Ah (50.4kC)/10 Hours
Generator	Three-phase A.C. generator
Fuse	10/10/10/10/15A

Headlight	12V 60/55W
Tail/Brake light	12V 8/23W(3/32 cp)
Turn signal light	12V 23W (32 cp)
License plate light	12V 8W (4 cp)
Speedometer light	12V 3.4W
Tachometer light	12V 3.4W
Neutral indicator light	12V 3.4W
High beam indicator light	12V 3.4W
Turn signal indicator light	12V 3.4W
Oil P. indicator light	12V 3.4W

CAPACITIES

Fuel tank including reserve	22 L (5.8 US gal)
reserve	4.2 L (4.4 US qt.)
Engine oil	3.0 L (3.2 US pt)
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)

WIRING DIAGRAM

**WIRE COLOR**

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

Prepared by
SUZUKI MOTOR CO., LTD.

Administration Department
Overseas Service Division
October, 1981
Part No. 99011-45130-03A
Printed in Japan

EMISSION CONTROL WARRANTY

SUZUKI MOTOR CO., LTD. warrants to the ultimate purchaser and each subsequent purchaser that his vehicle (GS850G) is designed, built, and equipped so as to conform at the time of sale with all U.S. emission standards applicable at the time of manufacture and that it is free from defects in materials and workmanship which would cause it not to meet these standards within the period of 5 years or 30,000 km (18,645 miles), whichever occurs first. Failures, other than those resulting from defects in material or workmanship, which arise solely as a result of owner abuse and/or lack of proper maintenance are not covered by the warranty.

SUZUKI MOTOR CO., LTD.

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