SUZUKI

DR650SE

OWNER'S MANUAL

This owner's manual contains
important safety information.
Please read it carefully.

Part No. 99011-32E63-03A
June, 2008 (TK) EN

California Proposition 65 Warning

⚠ WARNING

Engine exhaust, some of its constituents, and certain product components contain or emit chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

This manual should be considered a permanent part of the motorcycle and should remain with the motorcycle when resold or otherwise transferred to a new owner or operator. The manual contains important safety information and instructions which should be read carefully before operating the motorcycle.

IMPORTANT

WARNING/CAUTION/NOTE

Please read this manual and follow its instructions carefully. To emphasize special information, the symbol ⚠ and the words WARNING, CAUTION and NOTE have special meanings. Pay special attention to the messages highlighted by these signal words:

⚠ WARNING

Indicates a potential hazard that could result in death or injury.

CAUTION

Indicates a potential hazard that could result in motorcycle damage.

NOTE: Indicates special information to make maintenance easier or instructions clearer.

WARNINGs and CAUTIONs are arranged like this:

⚠ WARNING-or-CAUTION

The first part will describe a POTENTIAL HAZARD and WHAT CAN HAPPEN if you ignore the WARNING or CAUTION.

The second part will describe HOW TO AVOID THE HAZARD.

FOREWORD

Motorcycling is one of the most exhilarating sports and to ensure 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 ensure 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 authorized Suzuki dealer has experienced technicians that are trained to provide your machine with the best possible service with the right tools and equipment.

All information, illustrations 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 between information in this manual and your motorcycle. Suzuki reserves the right to make production changes at any time, without notice and without incurring any obligation to make the same or similar changes to vehicles previously built or sold.

Suzuki Motor Corporation believes in conservation and protection of Earth's natural resources. To that end, we encourage every vehicle owner to recycle, trade in, or properly dispose of, as appropriate, used motor oil, coolant, and other fluids, batteries, and tires.

SUZUKI MOTOR CORPORATION

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THE SPORT OF MOTORCYCLING

THE SPORT OF MOTORCYCLING

Your motorcycle and this owner's manual have been designed by people like you who enjoy motorcycling. People become motorcyclists for many reasons. For starters, street riding is fun and invigorating. But no matter why you became a motorcyclist, or how experienced you are, you will eventually face some challenging situations. In preparing for these challenges, you will be fine-tuning your coordination, concentration, and attitude. Learning the skills and strategies associated with motorcycling is the basis for safely participating in this sport. Many motorcyclists find that as they become better riders, they also get more enjoyment from the freedom unique to motorcycling.

Please remember:

MOST ACCIDENTS CAN BE AVOIDED

The most common type of motorcycle accident in the U.S. occurs when a car traveling towards a motorcycle turns left in front of the motorcycle. Is that because other drivers are out to get motorcyclists? No, other drivers simply don't always notice motorcyclists.

Ride defensively. Wise motorcyclists use a strategy of assuming they are invisible to other drivers, even in broad daylight. Pay careful attention to other motorists, especially at intersections, because they may not be paying attention to you. Select a lane position that gives you the best view of others, and other motorists the best view of you. Wear bright, reflective clothing. Put reflective strips on your helmet.

IF YOU DON'T HAVE A HELMET, BUY A HELMET AND WEAR IT EVERY TIME YOU RIDE

Most accidents occur within a few miles of home, and almost half occur at speeds of less than 30 mph. So even if you're just going on a quick errand, be prepared - strap on your helmet before you take off.

Helmets do not reduce essential vision or hearing. Generally, helmets do not cause or intensify injury if you crash. Helmets simply help your skull protect your intelligence, your memory, your personality, and your life.

Your eyesight is equally valuable. Wearing suitable eye protection can help keep your vision unblurred by the wind and save your eyes from airborne hazards like bugs, dirt, or pebbles kicked up by tires.

IF A COLLISION IS IMMINENT, DO SOMETHING

Many riders fear locking up their brakes or haven't learned to swerve to avoid an accident. Many inexperienced riders (and too many seasoned riders) use only their rear brake in an emergency, resulting in unnecessary impacts in some cases and unnecessarily high impact speeds in other cases. Your rear brake can only provide about 30% of your motorcycle's potential stopping power. The front and rear brakes can and should be used together to maximize braking effectiveness.

Experienced motorcyclists learn to "cover" the front brake lever by lightly resting a couple of fingers over the lever when riding in traffic and near intersections to give their reaction time a head start.

Emergency stopping and swerving are techniques that you should practice and master before you find yourself in an emergency situation. The best place to practice such techniques is in a controlled environment such as the Motorcycle Safety Foundation's (MSF) rider training courses. The MSF's Motorcycle Rider Courses (fundamental techniques) and Experienced Rider Courses (advanced strategies) present hands-on instruction of the basic principles of motorcycling and a variety of accident-avoidance maneuvers. Even a seasoned motorcyclist can improved his or her riding skills, and pick up a few new skills, through these courses. Some insurance companies even offer discounts to course graduates.

SPECIAL SITUATIONS REQUIRE SPECIAL CARE

Of course, there are some times when full-force braking is not the correct technique. When the road surface is wet, loose, or rough, you should brake with care. When you're leaned over in a corner, avoid braking. Straighten up before braking. Better yet, slow down before entering the corner.

In these situations, the traction available between your tires and the road surface is limited. Overbraking when traction is limited will cause your tires to skid, possibly resulting in loss of directional control or causing you and your motorcycle to fall over.

KNOW YOUR LIMITS

Always ride within the boundaries of your own skills. Knowing these limits and staying within them will help you avoid accidents.

A major cause of accidents involving only a motorcycle (and no cars) is going too fast through a turn. Before entering a turn, select an appropriately low cornering speed.

Even on straight roads, ride at a speed that is appropriate for the traffic, visibility and road conditions, your motorcycle, and your experience.

Riding a motorcycle safely requires that your mental and physical skills are fully part of the experience. You should not attempt to operate a motor vehicle, especially one with two wheels, if you are tired or under the influence of alcohol or other drugs. Alcohol, illegal drugs, and even some prescription and over-the-counter drugs can cause drowsiness, loss of coordination, loss of balance, and especially the loss of good judgment. If you are tired or under the influence of alcohol or other drugs, PLEASE DO NOT RIDE your motorcycle.

BE EXTRA SAFETY-CONSCIOUS ON BAD WEATHER DAYS

Riding on bad weather days, especially wet ones, requires extra caution. Braking distances increase on a rainy day. Stay off the painted surface marks, manhole covers, and greasy-appearing areas, as they can be especially slippery. Use extra caution at railway crossings and on metal gratings and bridges. When it starts to rain, any oil or grease on the road rises to the surface of the water. Pull over and wait a few minutes until this oil film is washed away before riding. Whenever in doubt about road conditions, slow down!

PRACTICE AWAY FROM TRAFFIC

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. Again, consider taking one of the MSF's Rider Courses. Even experts will be pleased with the caliber of the information presented in these courses. As the MSF says: "The more you know, the better it gets !

INSPECTION BEFORE RIDING

Review the instructions in the "INSPECTION BEFORE RIDING" section of this manual. Perform an entire pre-ride inspection before you head out on the road. Spending a few minutes preparing your machine for a ride can help prevent accidents due to mechanical failure or costly, inconvenient breakdowns far from home.

ACCESSORIES AND LOADING

The accessories you use with your motorcycle and the manner in which you load your gear onto the bike might create hazards. Aerodynamics, handling, balance, and cornering clearance can suffer, and the suspension and tires can be overloaded. Read the "ACCESSORY USE AND VEHICLE LOADING" section.

CARRYING A PASSENGER, ON-ROAD

Carrying a passenger, when done correctly, is a great way to share the joy of motorcycling. You will have to alter your riding style somewhat since the extra weight of a passenger will affect handling and braking. You may also need to adjust tire pressures and suspension; please refer to the Tire Pressure and Loading section and the Suspension section for more details.

A passenger needs the same protection that you do, including a helmet and proper clothing. The passenger should not wear long shoe laces or loose pants that could get caught in the wheel or the chain. Passengers must be tall enough that their feet reach the footrests.

Note the limits on carrying a passenger off-road in the "ADDITIONAL CONSIDERATIONS WHEN RIDING OFF-HIGHWAY" section.

MOTORCYCLE SAFETY FOUNDATION'S "RIDING TIPS AND PRACTICE GUIDE" HANDBOOK (FOR OWNERS IN USA)

This special handbook, supplied with your owner's manual, contains a variety of safety tips, helpful hints, and practice exercises. This manual can increase your riding enjoyment and safety. You should read it thoroughly.

BE STREET SMART

Always heed speed limits, local laws, and the basic rules of the road. Set a good example for others by demonstrating a courteous attitude and a responsible riding style.

CONCLUSION

Traffic, road and weather conditions vary. Other motorists' actions are unpredictable. Your motorcycle's condition can change. These factors can best be dealt with by giving every ride your full attention.

Circumstances beyond your control could lead to an accident. You need to prepare for the unexpected by wearing a helmet and other protective gear, and learning emergency braking and swerving techniques to minimize the damage to you and your machine. The best way to learn basic riding skills and evasive maneuvers or refresh your own riding skills is to take one of the courses offered by the Motorcycle Safety Foundation. Your Suzuki dealer can help you locate the fundamental or advanced riding skills course nearest you, or owners in the USA can call toll-free 1-800-446-9227.

Good riding on your new Suzuki !

ADDITIONAL CONSIDERATIONS WHEN RIDING OFF-HIGHWAY:

A. **Off-highway riding calls for off-highway protective gear.**
In addition to the reasons cited above for wearing a helmet and eye protection on the street, the trail presents its own hazards. Visibility and trail conditions can vary greatly from section to section and season to season. These changes are sometimes unpredictable, and even an experienced rider can have an accident. There may be branches hanging over the trail at eye level. Wear a helmet and eye protection every time you ride.

Wear proper clothing when you ride. Avoid loose clothes or scarves, which could get caught in moving parts. Abrasion injuries can be minimized by wearing protective clothing including gloves, strong boots that fit over the ankle, long pants, and a long sleeve shirt or jacket. Experienced riders often wear a kidney belt and chest or back protector for additional comfort and protection.

B. **Carrying a Passenger, Off-Road.**
Although your Dual Sport motorcycle is equipped to carry a passenger, carrying a passenger or cargo while riding in rough terrain could be hazardous. Carrying a passenger or strapping cargo to the passenger seat can greatly reduce your ability to balance and steer the motorcycle and deal with quickly changing off-road conditions. Ride at a reduced speed and limit your off-road riding to smooth, level surfaces when carrying a passenger or cargo.

C. **Use the buddy system.**
Share the fun of a good off-road ride. A riding partner can also be a great help if one of you gets stranded or injured. If none of your friends rides off-highway, ask your Suzuki dealer how to go about joining a club. If your friends do ride, you can all join a club or start one of your own !

D. **Obstacles come with the territory.**
Negotiating obstacles is a normal part, and often the most fun and challenging part, of off-highway riding. Scan the areas ahead. You may come upon naturally-occurring obstacles such as ruts, bumps, trees, low branches, blind corners, or sudden dropoffs. You may encounter animals, other recreational vehicles, horseback riders, or hikers. The sooner you notice potential obstacles and trail-sharing needs, the sooner you can plan your actions accordingly.

E. **Practice on level ground.**
Before you begin riding off-highway, you should find a good place to practice the skills you need to ride safely. Review the Motorcycle Safety Foundation's "Tips and Practice Guide for the Off-Highway Motorcyclist" Handbook supplied with this owner's manual (for owners in USA). This special handbook contains a variety of safety tips, helpful hints, enjoyment and safety.

Find a flat, open area with enough space to maneuver. Review local laws to make sure you are not trespassing or violating other ordinances. Check with your Suzuki dealer or call your local park ranger or police department if you do not know where you can ride.

Review the controls on your motorcycle before riding. Learn to find these controls without looking for them. You will not have time to look for them when you are riding, since you will be concentrating on the terrain.

F. **Be environmentally conscious.**

Protect your right to ride. When you ride, remember to keep the terrain in good condition. Tread Lightly ! Resist the urge to blaze new trails - stay on established trail systems. Don't destroy plant life. Leave the area better than you found it. Don't litter - pack out what you pack in. Don't bother wildlife. Don't make your exhaust system noisier - complaints about noise are one of the biggest threats to the future of our sport. With every rider projecting a courteous and responsible attitude, riding areas can remain open for all to use in the future.

You or your riding club may want to volunteer to help your local land manager (usually the U.S. Forest Service, the Bureau of Land Management, or various state agencies) plan, build, and maintain the trail systems you use.

G. **Conclusion.**

In the off-highway environment, visibility and terrain conditions vary. The actions of other users or animals that you encounter on the trail are unpredictable. Your motorcycle's condition can change. These factors can best be dealt with by practicing the appropriate riding techniques and giving every ride your full attention.

FUEL AND OIL RECOMMENDATION

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FUEL AND OIL RECOMMENDATION

FUEL

Your motorcycle requires regular unleaded gasoline with a minimum pump octane rating of 87 ((R+M)/2 method). In some areas, the only fuels that are available are oxygenated fuels.

Oxygenated fuels which meet the minimum octane requirement and the requirements described below may be used in your motorcycle without jeopardizing the New Vehicle Limited Warranty or the Emission Control System Warranty.

NOTE: Oxygenated fuels are fuels which contain oxygen-carrying additives such as MTBE or alcohol.

Gasoline Containing MTBE

Unleaded gasoline containing MTBE (Methyl Tertiary Butyl Ether) may be used in your motorcycle if the MTBE content is not greater than 15%. This oxygenated fuel does not contain alcohol.

Gasoline/Ethanol Blends

Blends of unleaded gasoline and ethanol (grain alcohol), also known as "GASOHOL", may be used in your vehicle if the ethanol content is not greater than 10%.

Gasoline/Methanol Blends

Fuels containing 5% or less methanol (wood alcohol) may be suitable for use in your motorcycle if they contain co-solvents and corrosion inhibitors.

DO NOT USE fuels containing more than 5% methanol under any circumstances. Fuel system damage or motorcycle performance problems resulting from the use of such fuels are not the responsibility of Suzuki and may not be covered under the New Vehicle Limited Warranty or the Emission Control System Warranty.

Fuel Pump Labeling

In some states, pumps that dispense oxygenated fuels are required to be labeled for the type and percentage of oxygenate, and whether important additives are present. Such labels may provide enough information for you to determine if a particular blend of fuel meets the requirements listed above. In other states, pumps may not be clearly labeled as to the content or type of oxygenate and additives. If you are not sure that the fuel you intend to use meets these requirements, check with the service station operator or the fuel supplier.

NOTE:

- *To help minimize air pollution, Suzuki recommends that you use oxygenated fuels.*
- *Be sure that any oxygenated fuel you use has octane ratings of at least 87 pump octane ((R+M)/2 method).*
- *If you are not satisfied with the driveability of your motorcycle when you are using an oxygenated fuel, or if engine pinging is experienced, substitute another brand as there are differences between brands.*

CAUTION

Spilling gasoline containing alcohol can harm your motorcycle. Alcohol can damage painted surfaces.

Be careful not to spill any fuel when filling the fuel tank. Wipe spilled gasoline up immediately.

ENGINE OIL

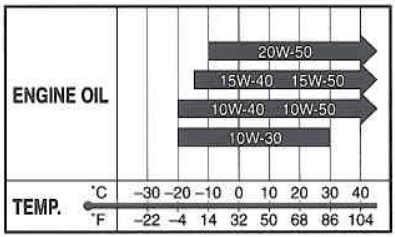
Oil quality is a major contributor to your engine's performance and life. Always select good quality engine oil. Suzuki recommends the use of SUZUKI PERFORMANCE 4 MOTOR OIL or equivalent engine oil. Use oil with an API (American Petroleum Institute) classification of SF/SG or SH/SJ, or with a JASO classification of MA.

SAE	API	JASO
10W-40	SF or SG	–
10W-40	SH or SJ	MA

API: American Petroleum Institute
JASO: Japanese Automobile Standards Organization

SAE Engine Oil Viscosity

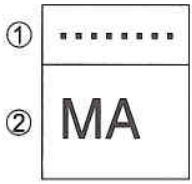
Suzuki recommends the use of SAE 10W-40 engine oil. If SAE 10W-40 engine oil is not available, select an alternative according to the following chart.



JASO T903

The JASO T903 standard is an index to select engine oils for 4-stroke motorcycle and ATV engines. Motorcycle and ATV engines lubricate clutch and transmission gears with engine oil. JASO T903 specifies performance requirements for motorcycle and ATV clutches and transmissions.

There are two classes, MA and MB. The oil container shows the classification as follows.



① Code number of oil sales company
② Oil classification

Energy Conserving

Suzuki does not recommend the use of "ENERGY CONSERVING" oils. Some engine oils which have an API classification of SH or higher have an "ENERGY CONSERVING" indication in the API classification doughnut mark. These oils can affect engine life and clutch performance.

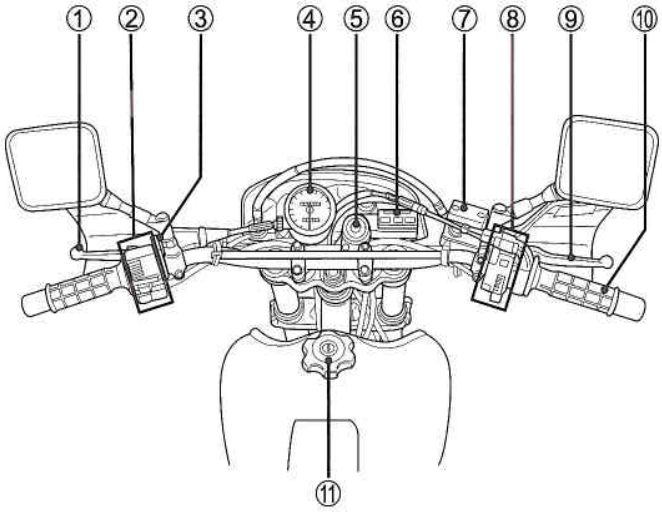
Not recommended

Recommended

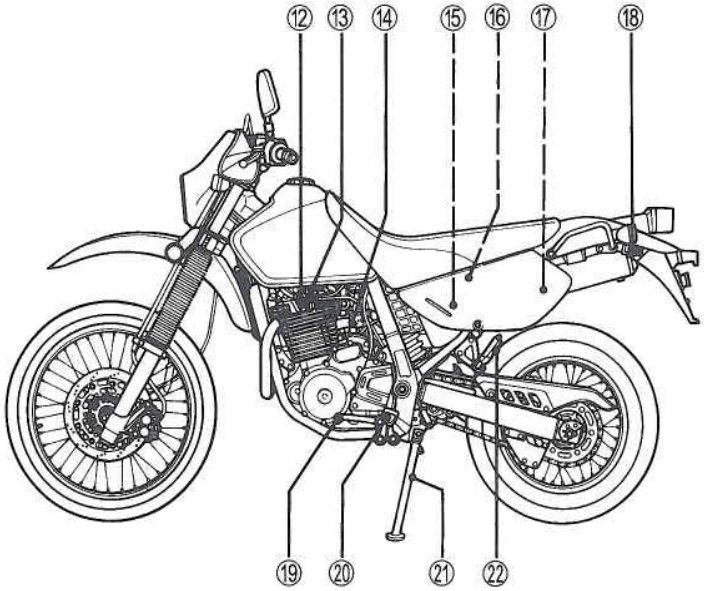
CONTROLS, EQUIPMENT AND ADJUSTMENTS

CONTROLS, EQUIPMENT AND ADJUSTMENTS

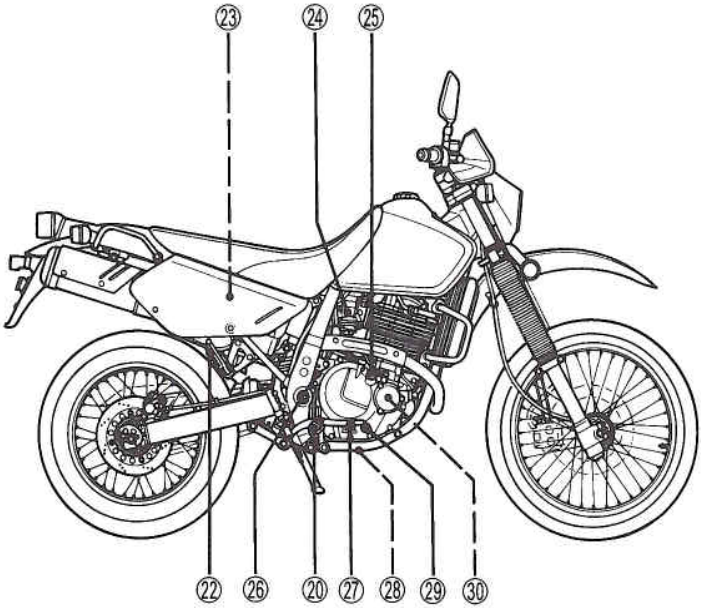
LOCATION OF PARTS



① Clutch lever
② Left handlebar switches
③ Choke lever
④ Speedometer
⑤ Ignition switch
⑥ Indicator lights
⑦ Front brake fluid reservoir
⑧ Right handlebar switches
⑨ Front brake lever
⑩ Throttle grip
⑪ Fuel tank cap

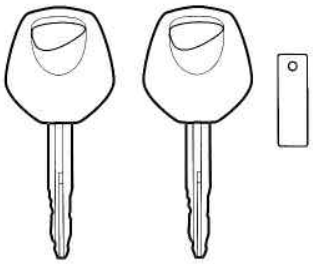


⑫ Spark plug
⑬ Fuel valve
⑭ Throttle stop screw
⑮ Air cleaner
⑯ Battery
⑰ Tools
⑱ Helmet holder
⑲ Gearshift lever
⑳ Footrests
㉑ Side stand
㉒ Passenger footrests



㉓ Fuses
㉔ Rear brake fluid reservoir
㉕ Engine oil filler cap
㉖ Rear brake light switch
㉗ Rear brake pedal
㉘ Engine oil drain plug
㉙ Engine oil inspection window
㉚ Engine oil filter

KEY



Two keys come with this motorcycle. Keep the spare key in a safe place. An identifying number is stamped on the plate. Use this number when making a replacement key.

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

Key No.

IGNITION SWITCH

The ignition switch has 4 positions.

"OFF" position
All electrical circuits are off. The engine will not start. The key can be removed.

"ON" position
The ignition circuit is completed and the engine can run. The headlight and taillight will automatically turn on. The key cannot be removed in this position.

NOTE: 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 when the ignition is turned on and will cause the battery to lose power.

"LOCK" position
All electrical circuits are off. The key can be removed and the steering will be locked. Turn the steering all the way to the left and push down the key and turn it to the "LOCK" position.

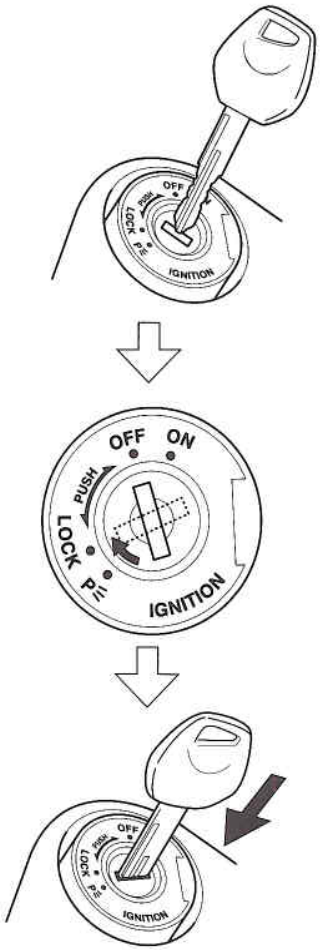
"P" (PARKING) position
Taillight will come on to increase visibility for temporary road side parking at night. The key can be removed and the steering will be locked.

⚠WARNING

Turning the ignition switch to the "P" (PARKING) or "LOCK" position while the motorcycle is moving can be hazardous. Moving the motorcycle while the steering is locked can be hazardous. You could lose your balance and fall, or you could drop the motorcycle.

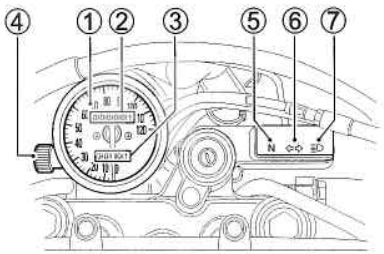
Stop the motorcycle and place it on the side stand before locking the steering. Never attempt to move the motorcycle when the steering is locked.

The key hole can be covered by turning the lid.



Align the lid hole position to the key hole position when inserting the key

INSTRUMENT PANEL



Speedometer ①
The speedometer indicates the road speed in kilometers per hour and miles per hour.

Odometer ②
The odometer registers the total distance that the motorcycle has been ridden.

Trip Meter ③
The trip meter is a resettable odometer located in the speedometer assembly. It can be used to indicate the distance traveled on short trips or between fuel stops. Turning **knob** ④ counterclockwise will return the meter to zero.

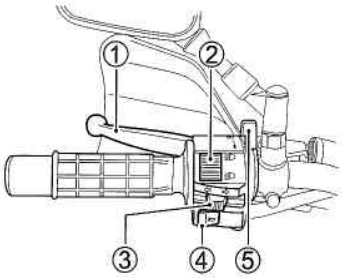
Neutral Indicator Light "N" ⑤
This green indicator light will come on when the transmission is in neutral. The light will go out when you shift into any gear other than neutral.

Turn Signal Indicator Light "⇦⇨" ⑥
When either the right or left turn signals are being operated, the indicator light will flash intermittently.

NOTE: If a turn signal light is not operating properly due to bulb filament or circuit failure, the indicator light flashes more quickly to notify the rider of the existence of a failure.

High Beam Indicator Light "≡D" ⑦
This blue indicator light will be lit when the headlight high beam is turned on.

LEFT HANDLEBAR



Clutch Lever ①
The clutch lever is used for disengaging the drive to the rear wheel when starting the engine or shifting transmission gears. Squeezing the lever disengage the clutch.

Dimmer Switch ②
"≡D" position
The headlight low beam and taillight turn on.

"≡D" position
The headlight high beam and taillight turn on. The high beam indicator light also turns on.

CAUTION

Holding the dimmer switch between "≡D" and "≡D" position will light both "≡D" and "≡D" headlight beam. This operation can damage the motorcycle.

Use the dimmer switch only at "≡D" or "≡D" position.

CAUTION

Sticking some tape or placing objects in front of the headlight can damage the headlight.

Do not stick any tapes to the headlight. Do not place objects in front of the headlight.

Turn Signal Switch "⇦⇨" ③
Moving the switch to the "⇦" position will flash the left turn signals. Moving the switch to the "⇨" position will flash the right turn signals. The indicator light will also flash intermittently. To cancel turn signal operation, push the switch in.

⚠WARNING

Failure to use the turn signals, and failure to turn off the turn signals can be hazardous. Other drivers may misjudge your course and this may result in an accident.

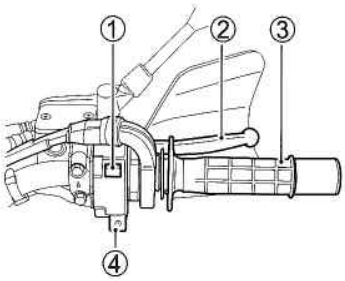
Always use the turn signals when you intend to change lanes or make a turn. Be sure to turn off the turn signals after completing the turn or lane change.

Horn Button "📯" ④
Press the button to operate the horn.

Choke Lever "⌇" ⑤
This motorcycle has a choke system to provide easy starting when the engine is cold. The choke system works by turning the choke lever all the way toward you. The choke system works best when the throttle is in the closed position. When the engine is warm, you do not need to use the choke system for starting.

NOTE: Refer to the STARTING THE ENGINE section of the manual for the engine starting procedure.

RIGHT HANDLEBAR



Engine Stop Switch ①
"⊗" position
The ignition circuit is off. The engine cannot start or run.

"Ω" position
The ignition circuit is on and the engine can run.

Front Brake Lever ②
Apply the front brake by squeezing the front brake lever towards the grip. The brake light will come on when the lever is squeezed.

Throttle Grip ③
Engine speed is controlled by the position of the throttle grip. Turn it toward you to increase engine speed. Turn it away from you to decrease engine speed.

Electric Starter Button "⊛" ④
Use this button to turn the starter motor. With the ignition switch in the "ON" position and the engine stop switch in the "Ω" position, and the transmission in neutral, pull in the clutch lever and push the electric starter button to start the engine.

NOTE: This motorcycle has a starter interlock system for the ignition and starter circuit. The engine can only be started if:

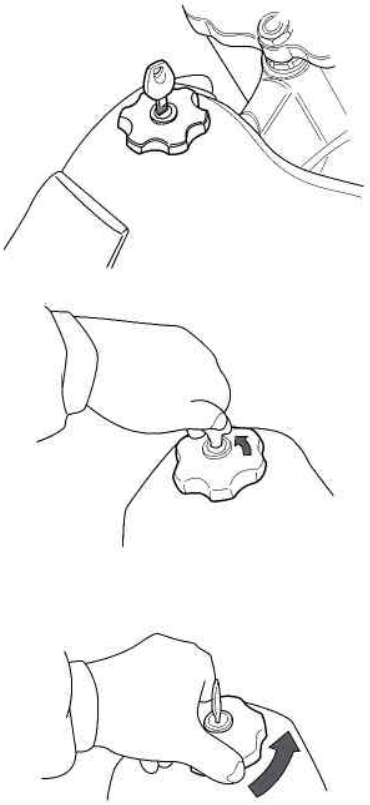
- *The transmission is in neutral and the clutch is disengaged, or*
- *The transmission is in gear, the side stand is fully up, and the clutch is disengaged.*

CAUTION

To prevent electrical system damage, do not operate the starter motor longer than five seconds at a time.

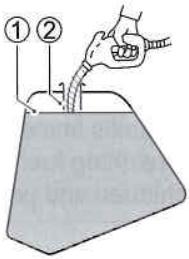
If the engine does not start after several attempts, check the fuel supply and ignition system. Refer to the TROUBLE-SHOOTING section in this manual.

FUEL TANK CAP



Except for California
To open the fuel tank cap, insert the ignition key and turn it counterclockwise. Turn the cap counterclockwise and remove it. To close the fuel tank cap, turn it clockwise. The key must be in the cap lock before installing the cap. Turn the key clockwise and remove it.

Only for California
To open the fuel tank cap, insert the ignition key into the lock and turn it clockwise. With the key still held in position, lift up the cap. To replace the cap, orient the cap and push the cap down firmly with the key in the cap lock.



① Fuel level
② Filler neck

⚠WARNING

Overfilling the fuel tank can cause the fuel to overflow when it expands due to heat from the engine or the sun. Spilled fuel can catch on fire.

Never fill the fuel above the bottom of the filler neck.

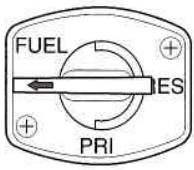
⚠WARNING

Fuel and fuel vapor are highly flammable and toxic. You can be burned or poisoned when refueling.

- **Stop the engine and keep flames, sparks and heat sources away.**
- **Refuel only outdoors or in a well ventilated area.**
- **Do not smoke.**
- **Wipe up spills immediately.**
- **Avoid breathing fuel vapor.**
- **Keep children and pets away.**

FUEL VALVE

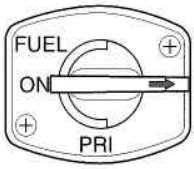
The fuel valve has three positions: "ON," "RES" and "PRI."



ON

"ON" position

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

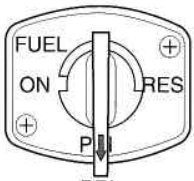


RES

"RES" (RESERVE) position
If the fuel level in the fuel tank becomes too low for the engine to operate with the fuel valve in the "ON" position, turn the lever to the "RES" position to use the reserve fuel supply. In this position, no fuel will flow from the fuel valve to the carburetor unless the engine is running or being started.

RESERVE FUEL SUPPLY: 3.0 L (0.8 US gal)

NOTE: After turning the fuel valve to the "RES" position, it is advisable that the tank be refilled at the closest gas station. After refueling, be sure to turn the fuel valve to the "ON" position.



PRI

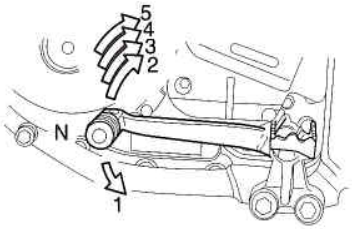
"PRI" (PRIME) position
If the motorcycle has run out of fuel or has been stored for an extended period, there may not be any gasoline in the carburetor. In this instance, the fuel valve should be turned to the "PRI" position. This will allow the fuel to flow directly into the carburetor even though the engine is not operating. Upon starting the engine, be sure to return the fuel valve to the "ON" position.

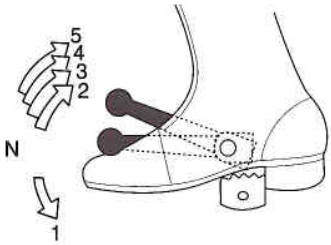
⚠WARNING

Leaving the fuel valve in the "PRI" position when the engine is off can be hazardous. The carburetor may overflow and fuel may run into the engine. This can cause a fire or cause severe damage when you start the engine.

Always leave the fuel valve in the "ON" or "RES" position.

GEARSHIFT LEVER

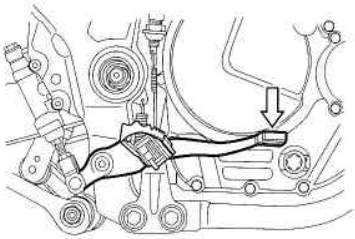




This motorcycle has a 5-speed transmission which operates as shown. To shift properly, pull the clutch lever and close the throttle at the same time you operate the gearshift lever. Lift the gearshift lever to upshift and depress the lever to downshift. Neutral is located between 1st and 2nd gear. When neutral is desired, depress or lift the lever halfway between 1st and 2nd gear.

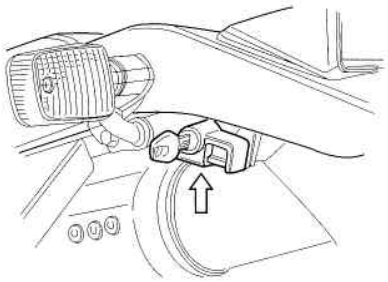
NOTE: When the transmission is in neutral, the green indicator light on the instrument panel will be lit. However, even though the light is illuminated, cautiously and slowly release the clutch lever to make sure that the transmission is positively in neutral.

REAR BRAKE PEDAL



Pressing the rear brake pedal will apply the rear brake. The brake light will come on when the rear brake is operated.

HELMET HOLDER



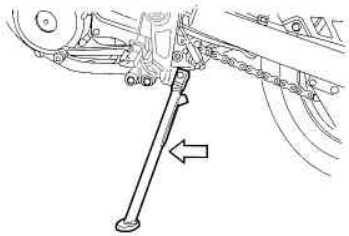
Insert the key into the lock, turn it clockwise and open the latch. Hook your helmet fastener ring to the latch and turn the key back to lock the holder.

⚠WARNING

Riding with a helmet fastened to the helmet holder can interfere with rider control.

Never carry a helmet fastened to a helmet holder. Fix the helmet securely atop the seat if you must carry it.

SIDE STAND



The motorcycle has a side stand. To place the motorcycle on the side stand, place your right foot on the end of the side stand and push down firmly until the stand pivots fully through its arc and comes to rest against its stop.

An interlock system is provided to cut off the ignition circuit when the side stand is down and the transmission is in any gear other than neutral. The side stand/ignition interlock system works as follows:

- If the side stand is down and the transmission is in gear, the engine can not be started.
- If the engine is running and the transmission is shifted into gear with the side stand down, the engine will stop running.
- If the engine is running and the side stand is put down with the transmission in gear, the engine will stop running.

⚠WARNING

Riding with the side stand incompletely retracted can result in an accident when you turn left.

- **Check operation of the side stand/ignition interlock system before riding.**
- **Always retract the side stand completely before starting off.**

CAUTION

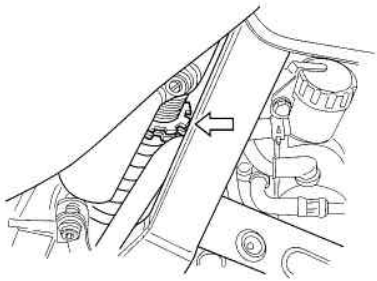
Park the motorcycle on firm, level ground to help prevent it from falling over.

If you must park on an incline, aim the front of the motorcycle uphill and put the transmission into 1st gear to reduce the possibility of rolling off the side stand.

SUSPENSION ADJUSTMENT

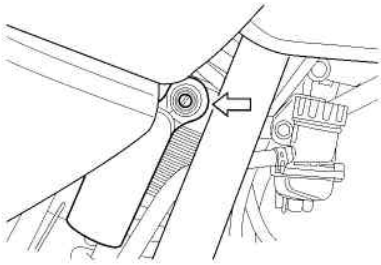
REAR SUSPENSION

Spring Pre-load Adjustment



The adjustment can be performed by changing the adjuster ring position. However, Suzuki recommends that this adjustment be done by your authorized Suzuki dealer, since a special tool is needed for this job.

Damping Force Adjustment



To change the damping force, turn the adjuster. As you turn the adjuster, you will notice the clicks. Count the number of clicks from the fully turned-in position. Turning the adjuster clockwise will increase the damping force and fully turned-in position provides the maximum damping force.

Turning the adjuster counterclockwise will decrease the damping force and fully turned-out position provides the minimum damping force. The damping force is set on 8 clicks position at the factory.

SEAT HEIGHT CHANGE

For rider preference, the seat height can be lowered about 40 mm (1.6 in) from its original seat height.

To change the seat height, the front suspension, the rear suspension and the side stand must be changed, following the specified procedure. This change requires special tools, detailed information and mechanical experience. The side stand must be replaced with the shorter, silver-colored, optional one. Ask your authorized Suzuki dealer to perform this service or to restore a seat height to its original height.

⚠WARNING

Attempting to change the seat height yourself can be hazardous. Improperly modified suspension can cause poor riding stability and loss of control which can result in an accident. Failure to replace the side stand with the shorter, silver-colored one can cause the motorcycle to fall over when parking.

Ask your authorized Suzuki dealer to perform this change.

BREAK-IN AND INSPECTION BEFORE RIDING

BREAK-IN AND INSPECTION BEFORE RIDING

BREAK-IN

The first 800 km (500 miles) is the most important in the life of your motorcycle. Proper operation during this break-in period will help assure maximum life and performance from your new motorcycle. The following guidelines explain proper break-in procedures.

Maximum Throttle Opening Recommendation

The table below shows the maximum throttle opening recommendation during the break-in period.

Initial	800 km (500 miles)	Less than 1/2 throttle
Up to	1600 km (1000 miles)	Less than 3/4 throttle

Vary the Engine Speed

Vary the engine speed during the break-in period. This allows the parts to "load" (aiding the mating process) and then "unload" (allowing the parts to cool). Although it is essential to place some stress on the engine components during break-in, you must be careful not to load the engine too much.

Allow the Engine Oil to Circulate before Riding

Allow enough idling time after warm or cold engine start-up before revving the engine or placing the transmission in gear. This allows time for the lubricating oil to reach all critical engine components.

Observe Your Initial and Most Critical Service

The initial service (break-in maintenance) is the most important service your motorcycle will receive. During break-in operation, all of the engine components will have mated together and seated. Maintenance required as part of the initial service includes correction of all adjustments, tightening of all fasteners and replacement of dirty oil. Timely performance of this service will help make sure you get the best service life and performance from the engine.

INSPECTION BEFORE RIDING

⚠WARNING

Failure to inspect and maintain your motorcycle properly increases the chance of an accident or equipment damage.

Always perform a pre-ride inspection before each ride. Refer to the table on page 4-4 for check items. For further details, refer to the INSPECTION AND MAINTENANCE section.

⚠WARNING

Using worn, improperly inflated, or incorrect tires will reduce stability and can cause an accident.

Follow all instructions in the TIRES section in this owner's manual.

Check the condition of the motorcycle to help make sure that you do not have mechanical problems or get stranded somewhere when you ride. Before riding the motorcycle, be sure to check the following items. Be sure your motorcycle is in good condition for the personal safety of the rider, passenger and protection of the motorcycle.

⚠WARNING

Checking maintenance items when the engine is running can be hazardous. You could be injured if your hands or clothing gets caught in moving parts.

Shut the engine off when performing maintenance checks, except when checking the engine stop switch and throttle.

WHAT TO CHECK	CHECK FOR
Steering	• Smoothness • No restriction of movement • No play or looseness
Brakes	• Proper pedal and lever operation • Correct fluid level • No fluid leakage • No "sponginess" • Proper pedal and lever play • Brake pad wear
Tires	• Proper pressure • Enough tread depth • No cracks, rips, or other damage
Fuel tank	Tank cap locked securely
Lighting	Proper operation of all lights – Headlight, Taillight, Brake light, Instrument lights, Turn signals, License plate light
Indicator lights	Proper operation of all lights – High beam, Neutral, Turn signal
Engine stop switch	Proper operation
Horn	Correct function
Engine oil	Correct level
Throttle	• Proper play • Smooth response • Quick return to idle position
Gearshift lever	• No damage • Smooth operation
Drive chain	• Proper tension • Adequate lubrication • No excessive wear or damage
Side stand/ ignition interlock system	Proper operation
General condition	• Bolts and nuts tightness • No rattle from any parts of machine with the engine running • No visible evidence of damage

RIDING TIPS

RIDING TIPS

STARTING THE ENGINE

Before attempting to start the engine, make sure:

- The transmission is in neutral.
- The fuel valve is in the "ON" position.
- The engine stop switch is in the "Ω" position.

NOTE: This motorcycle has interlock switch for the ignition circuit. The engine can only be started if:

- *The transmission is in neutral and the clutch is disengaged, or*
- *The transmission is in gear, the side stand is fully up, and the clutch is disengaged.*

When the Engine Is Cold:

1. Turn the choke lever toward you.
2. **With the throttle grip in the fully closed position,** push the electric starter button.
3. Immediately after the engine starts, keep the engine speed at 1800 – 2000 r/min by varying the choke lever position.
4. Move the choke lever to the "OFF" position approximately 30 seconds after engine starts. It may be necessary to use the choke longer than 30 seconds in extremely cold weather.

NOTE: Opening the throttle grip when starting the engine will make the engine hard to start.

When a cold Engine Is Hard to Start:

1. Turn the choke lever toward you.
2. **With the throttle grip opened 1/8 to 1/4,** push the electric starter button.
3. Immediately after the engine starts, keep the engine speed at 1800 – 2000 r/min by varying the choke lever positions.
4. Move the choke lever to the "OFF" position approximately 30 seconds after engine starts. It may be necessary to use the choke longer than 30 seconds in extremely cold weather.

When the Engine Is Warm:

1. Confirm that the choke lever is in the "OFF" position.
2. **With the throttle grip in the fully closed position,** push the electric starter button.

NOTE: Operation of the choke system is usually not necessary when the engine is warm.

When a Warm Engine Is Hard to Start:

1. Confirm that the choke lever is in the "OFF" position.
2. **With the throttle grip opened 1/8 to 1/4,** push the electric starter button.

⚠WARNING

Running the engine indoors or in a garage can be hazardous. Exhaust gas contains carbon monoxide, a gas that is colorless and odorless and can cause death or severe injury.

Only run the engine outdoors where there is fresh air.

CAUTION

Running the engine too long without riding may cause the engine to overheat. Overheating can result in damage to internal engine components and discoloration of exhaust pipes.

Shut the engine off if you cannot begin your ride promptly.

STARTING OFF AND SHIFTING

⚠WARNING

Riding this motorcycle at excessive speed increases your chances of losing control of the motorcycle. This may result in an accident.

Always ride within the limits of your skills, your motorcycle, and the riding conditions.

⚠WARNING

Removing your hands from the handlebars or feet from the footrests during operation can be hazardous. If you remove even one hand or foot from the motorcycle, you can reduce your ability to control the motorcycle.

Always keep both hands on the handlebars and both feet on the footrests of your motorcycle during operation.

⚠ WARNING

Sudden side winds, which can occur when being passed by larger vehicles, at tunnel exits or in hilly areas, can upset your control.

Reduce your speed and be alert to side winds.

Make sure that the side stand is in the fully up position. Pull the clutch lever in and pause momentarily. Engage first gear by depressing the gearshift lever downward. Turn 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 as you open the throttle again. Select the higher gears in this manner until top gear is reached.

NOTE: This motorcycle has a side stand/ignition interlock switch. If you shift the transmission into gear when the side stand is down, the engine will stop running.

USING THE TRANSMISSION

The transmission is provided to keep the engine operating smoothly in its normal operating speed 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 shifting point for each gear.

Shifting up schedule

Gear position	km/h	miles/h
1st → 2nd	20	12
2nd → 3rd	30	19
3rd → 4th	40	25
4th → 5th	50	31

Shifting down schedule

Gear position	km/h	miles/h
5th → 4th	35	22
4th → 3rd	25	16
3rd → 2nd	20	12

Disengage the clutch when the motorcycle speed drops below 20 km/h (12 miles/h).

⚠ WARNING

Downshifting when engine speed is too high can:

- **cause the rear wheel to skid and lose traction due to increased engine braking, resulting in an accident; or**
- **force the engine to overrev in the lower gear, resulting in engine damage.**

Reduce speed before downshifting.

⚠ WARNING

Downshifting while the motorcycle is leaned over in a corner may cause rear wheel skid and loss of control.

Reduce your speed and downshift before entering a corner.

RIDING ON HILLS

- When climbing steep hills, the motorcycle may begin to slow down and show lack of power. 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 steep hill, the engine may be used for braking by shifting to a lower gear.
- Be careful, however, not to allow the engine to overrev.

STOPPING AND PARKING

1. Turn the throttle grip away from you to close the throttle completely.
2. Apply the front and rear brakes evenly and at the same time.
3. Downshift through the gears as motorcycle speed decreases.
4. Select neutral with the clutch lever squeezed towards the grip (disengaged position) just before the motorcycle stops. The neutral position can be confirmed by observing the neutral indicator light.

⚠ WARNING

Inexperienced riders tend to underutilize the front brake. This can cause excessive stopping distance and lead to a collision. Using only the front or rear brake can cause skidding and loss of control.

Apply both brakes evenly and at the same time.

⚠ WARNING

Hard braking while turning may cause wheel skid and loss of control.

Brake before you begin to turn.

⚠ WARNING

Hard braking on wet, loose, rough, or other slippery surfaces can cause wheel skid and loss of control.

Brake lightly and with care on slippery or irregular surfaces.

⚠ WARNING

Following another vehicle too closely can lead to collision. As vehicle speeds increase, stopping distance increases progressively.

Be sure you have a safe stopping distance between you and the vehicle in front of you.

5. Park the motorcycle on a firm, flat surface where it will not fall over.
6. Turn the ignition switch to the "OFF" position.
7. Turn the handlebars all the way to the left and lock the steering for security.
8. Remove the ignition key.

NOTE: If an optional anti-theft lock such as U-shape lock, brake disk lock and chain is used to avoid theft, be sure to remove anti-theft lock before moving the motorcycle.

⚠WARNING

A hot muffler can burn you. The muffler will be hot enough to burn you for some time after stopping the engine.

Park the motorcycle where pedestrians or children are not likely to touch the muffler.

CARRYING A PASSENGER

Before you invite someone to be a passenger on your motorcycle, you need to be thoroughly familiar with motorcycle operation. Adjust tire pressures and suspension according to the Tire Pressure and Loading section and the Suspension section of this manual.

The passenger should always hold onto your waist or hips, or onto the seat strap or grab bar, as equipped. Ask your passenger not to make any sudden movements. When you lean going around a corner, the passenger should lean with you. The passenger should always keep his or her feet on the footrests, even when you are stopped at a light.

To help prevent burn injuries, warn your passenger not to contact the muffler when mounting or dismounting your motorcycle.

Although your Dual Sport motorcycle is equipped to carry a passenger, carrying a passenger or cargo while riding in rough terrain could be hazardous. Carrying a passenger or strapping cargo to the passenger seat can greatly reduce your ability to balance and steer the motorcycle and deal with quickly changing off-road conditions. Ride at a reduced speed and limit your off-road riding to smooth, level surfaces when carrying a passenger or cargo.

⚠ WARNING

Carrying a passenger or attaching cargo to the seat can greatly reduce your ability to balance and steer this motorcycle on rough terrain. You may need the full length of the seat to change position to maneuver the motorcycle and deal with quickly changing off-road conditions, and a passenger or cargo may interfere with your movement. If you lose control of the motorcycle, both you and the passenger can be severely injured.

Never carry a passenger or cargo on the seat when riding on rough terrain. Reduce your speed and avoid uneven surfaces, hills, narrow trails, and other rough terrain when you carry a passenger or cargo off-road.

ACCESSORY USE AND MOTORCYCLE LOADING

6

ACCESSORY USE AND MOTORCYCLE LOADING

There are a great variety of accessories available to Suzuki owners. Suzuki can not 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.

⚠WARNING

Improper accessories or modifications can make your motorcycle unsafe and can lead to an accident.

Never modify the motorcycle with improper or poorly installed accessories. Follow all instructions in this owner's manual regarding accessories and modifications. Use genuine SUZUKI accessories or equivalent that have been designed and tested for your motorcycle. Consult your SUZUKI dealer if you have any questions.

- Never exceed the GVWR (Gross Vehicle Weight Rating) of this motorcycle. 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 riders 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: 350 kg (770 lbs) at the tire pressure (cold)
Front: 175 kPa (25 psi, 1.75 kgf/cm^2)
Rear: 200 kPa (29 psi, 2.00 kgf/cm^2)

- Any time 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 ensure that they provide for a rigid mount. Weak mounts can allow the shifting of the weight and create a hazardous, unstable condition.
- Inspect for proper ground clearance and bank angle. 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.
- 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 handlebars or front fork of the machine should be as light as possible and kept to a minimum.
- 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 by 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.
- Certain accessories displace the rider from his or her normal riding position. This limits the freedom of movement of the rider and may limit control ability.
- Additional electrical accessories may overload the existing electrical system. Severe overloads may damage the wiring harness or create a hazardous 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 hazardous and makes the motorcycle difficult to handle. The size of the load can also affect the aerodynamics of the motorcycle. Balance the load between the right and left sides of the motorcycle and fasten it securely.

⚠WARNING

Carrying a passenger or attaching cargo to the seat can greatly reduce your ability to balance and steer this motorcycle on rough terrain. You may need the full length of the seat to change position to maneuver the motorcycle and deal with quickly changing off-road conditions, and a passenger or cargo may interfere with your movement. If you lose control of the motorcycle, both you and the passenger can be severely injured.

Never carry passenger or cargo on the seat when riding on rough terrain. Reduce your speed and avoid uneven surfaces, hills, narrow trails, and other rough terrain when you carry a passenger or cargo off-road.

MODIFICATION

Modification of the motorcycle, or removal of original equipment may render the vehicle unsafe or illegal. Obey all applicable equipment regulations in your area.

INSPECTION AND MAINTENANCE

INSPECTION AND MAINTENANCE

NOTICE

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).

MAINTENANCE SCHEDULE

It is very important to inspect and maintain your motorcycle regularly. Follow the guidelines in the chart. The intervals between periodic services in kilometers, miles and months are shown. At the end of each interval, be sure to perform the maintenance listed.

⚠WARNING

Improper maintenance or failure to perform recommended maintenance increases the chance of an accident or motorcycle damage.

Always follow the inspection and maintenance recommendations and schedules in this owner's manual. Ask your SUZUKI dealer or a qualified mechanic to do the maintenance items marked with an asterisk (*). You may perform the unmarked maintenance items by referring to the instructions in this section, if you have mechanical experience. If you are not sure how to do any of the jobs, have your SUZUKI dealer or a qualified mechanic do them.

⚠WARNING

Running the engine indoors or in a garage can be hazardous. Exhaust gas contains carbon monoxide, a gas that is colorless and odorless and can cause death or severe injury.

Only run the engine outdoors where there is fresh air.

NOTE: The MAINTENANCE CHART specifies the minimum requirements for maintenance. If you use your motorcycle under severe conditions, perform maintenance more often than shown in the chart. If you have any questions regarding maintenance intervals, consult your SUZUKI dealer or a qualified mechanic.

CAUTION

Using poor quality replacement parts can cause your motorcycle to wear more quickly and may shorten its useful life.

Use only genuine Suzuki replacement parts or their equivalent.

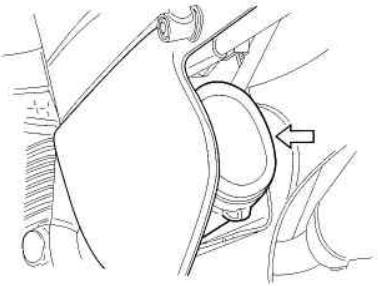
MAINTENANCE CHART

This interval should be judged by odometer reading or number of months, whichever comes first.

Item \ Interval	km	1000	6000	12000	18000	24000
	mile	600	4000	7500	11000	14500
	months	2	12	24	36	48
* Valve clearance		I	–	I	–	I
Spark plugs		–	I	R	I	R
Air cleaner element		Clean every 3000 km (2000 miles)				
Idle speed		I	I	I	I	I
Fuel line		I	I	I	I	I
		*Replace every 4 years				
Clutch		I	I	I	I	I
* Fuel valve strainer		–	–	C	–	C
Engine oil		R	R	R	R	R
Engine oil filter		R	–	R	–	R
Drive chain		I	I	I	I	I
		Clean and lubricate every 1000 km (600 mile)				
* Brakes		I	I	I	I	I
Brake hoses		–	I	I	I	I
		*Replace every 4 year				
Brake fluid		–	I	I	I	I
		*Replace every 2 year				
* Steering		I	–	I	–	I
* Front fork		–	–	I	–	I
* Rear suspension		–	–	I	–	I
Tires		–	I	I	I	I
Spark arrester		Clean every 6000 km (4000 miles)				
* Exhaust pipe bolts and muffler bolts		T	–	T	–	T
* Chassis nuts and bolts		T	T	T	T	T

NOTE: I=Inspect and clean, adjust, replace or lubricate as necessary, R=Replace, T=Tighten, C=Clean

TOOLS



A tool kit is provided with your motorcycle. It is located inside of the left frame cover.

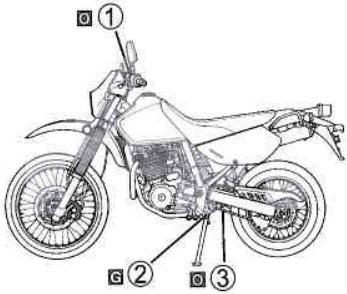
GENERAL LUBRICATION

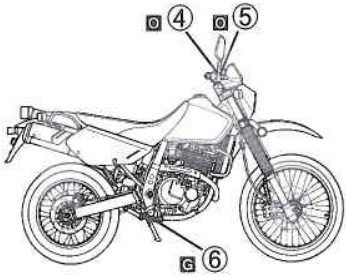
Proper lubrication is important for safe, smooth operation and a long life for your motorcycle. Be sure that all lubrication is performed during periodic maintenance on the motorcycle. Increase frequency when you use your motorcycle in severe conditions.

CAUTION

Lubricating switches can damage the switches.

Do not apply grease and oil to the switches.





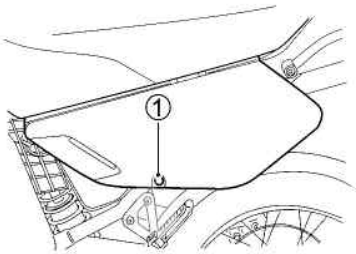
①.... Clutch lever holder and clutch cable
②.... Side stand pivot and spring hook
③.... Drive chain
④.... Throttle cable
⑤.... Brake lever holder
⑥.... Brake pedal pivot

O .... Motor oil
G .... Grease

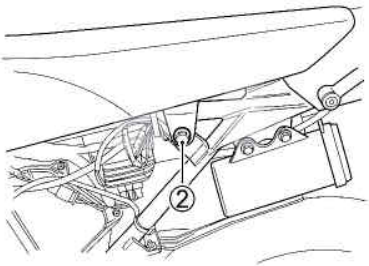
FRAME COVER AND SEAT REMOVAL

The frame covers and the seat can be removed when servicing some parts of your motorcycle. When removing them, follow the procedure below:

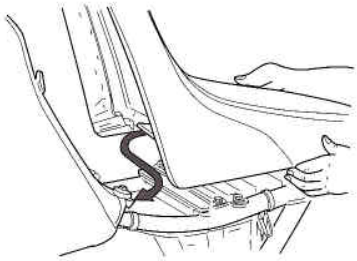
1. Place the motorcycle on the side stand.



2. Loosen screws ① on the right and left frame covers and remove the frame covers.



3. Loosen bolts ② on the right and left sides and remove the seat by sliding rearward.



To reinstall the seat, slide the seat hook into the seat hook retainer on the frame, then tighten the bolts securely.

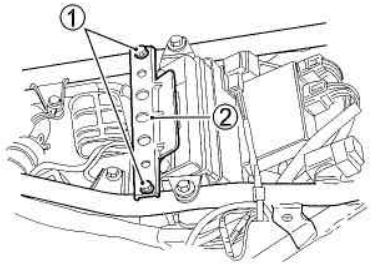
⚠WARNING

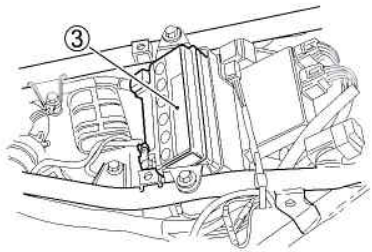
Failure to install the seat properly could allow the seat to move and cause loss of rider control.

Latch the seat securely in its proper position.

BATTERY

The battery is located under the seat. This battery is a sealed type battery and requires no maintenance. The standard charging rate is 0.9A × 5 to 10 hours and the maximum rate is 4.0A × 1 hour.





1. Remove the bolts ①.
2. Remove the seat support ②.
3. Remove the battery terminals and the battery ③.

⚠WARNING

Battery posts terminals, and related accessories contain lead and lead compounds.

Wash hands after handling.

⚠WARNING

Hydrogen gas produced by batteries can explode if exposed to flames or sparks.

Keep flames and sparks away from the battery. Never smoke when working near the battery.

CAUTION

Exceeding the maximum charging rate for the battery can shorten its life.

Never exceed the maximum charging rate.

CAUTION

Reversing the battery lead wires can damage the charging system and the battery.

The red lead must go to the (+) positive terminal and the black (or black with white tracer) lead must go to the (–) negative terminal.

AIR CLEANER

The air cleaner element must be kept clean to provide good engine power and gas mileage. If you use your motorcycle under normal low-stress conditions, you should service the air cleaner at the intervals specified. If you ride in dusty, wet, or muddy conditions, you will need to inspect the air cleaner element much more frequently. Use the following procedure to remove the element and inspect it.

⚠WARNING

Operating the engine without the air cleaner element in place could allow a flame to spit back from the engine to the air cleaner, or could allow dirt to enter the engine. This could cause a fire or severe engine damage.

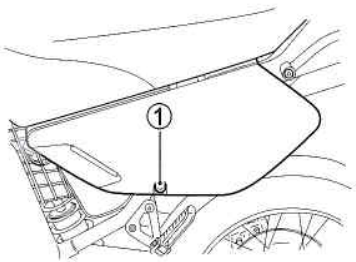
Never run the engine without the air cleaner element properly installed.

CAUTION

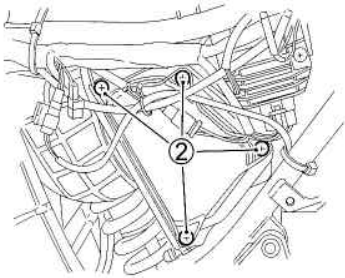
Clean or replace the air cleaner element frequently if the motorcycle is used in dusty, wet or muddy conditions. The air cleaner element will clog under these conditions, and this may cause engine damage, poor performance, and poor fuel economy.

Clean the air cleaner case and element immediately if water gets in the air cleaner box.

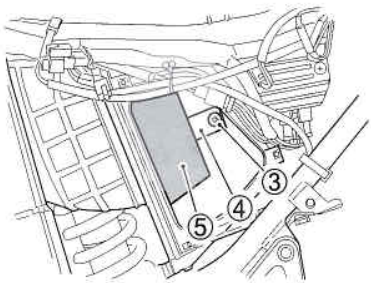
Removing the Element



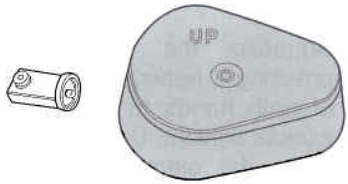
1. Loosen the screw ① and remove the left side frame cover.



2. Loosen the screws ② and remove the cleaner case cover.



3. Loosen the screw ③ and remove the element support ④. Take out the element assembly ⑤.



4. Separate the polyurethane foam element from the frame.

Washing the Element
Wash the element as follows:

1. Fill a wash pan larger than the element with a non-flammable cleaning solvent Ⓐ. Dip the element in the solvent and wash it.
2. Squeeze the element by pressing it between the palms of both hands to remove the excess solvent. Do not twist or wring the element, or it will develop cracks.
3. Dry the element.
4. Put the element in a plastic bag. Pour in some motor oil Ⓑ and work the oil into the element.
5. Squeeze the element to remove excess oil.

⚠WARNING

New and used oil and solvent can be hazardous. Children and pets may be harmed by swallowing new or used oil or solvent. Repeated, prolonged contact with used engine oil may cause skin cancer. Brief contact with used oil or solvent may irritate skin.

- **Keep new and used oil and solvent away from children and pets.**
- **Wear a long-sleeve shirt and waterproof gloves.**
- **Wash with soap if oil or solvent contacts your skin.**

NOTE: Recycle or properly dispose of used oil and solvent.

CAUTION

A torn air cleaner element will allow dirt to enter the engine and can damage the engine.

Carefully examine the air cleaner element for tears during cleaning. Replace it with a new one if it is torn.

6. Clean any dirt or debris from inside the air cleaner case. Be sure no dirt enters the carburetor.

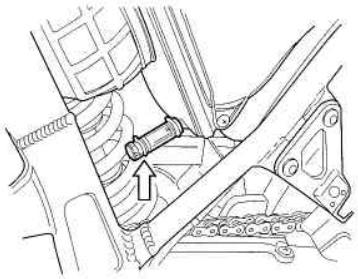
Replacing the Element
Reinstall the cleaner element in reverse order of removal. Be sure that the element is securely in position and is properly sealed.

CAUTION

Failure to position the air cleaner element properly can allow dirt to bypass the air cleaner element. This will cause engine damage.

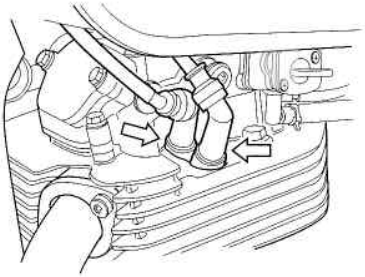
Be sure to properly install the air cleaner element.

AIR CLEANER DRAIN CAP



Remove the cap and drain water and oil when cleaning the air cleaner element.

SPARK PLUGS



Your motorcycle comes equipped with DENSO U31ESR-N or NGK CR10E spark plugs. To determine if the standard spark plug is right for your usage, check the color of the plug's porcelain center electrode insulator after motorcycle operation. A light brown color indicates that the plug is correct. A white or dark insulator indicates that the engine may need adjustment, or another plug type may be needed. Consult your Suzuki dealer or a qualified mechanic if your plug insulator is not a light brown color.

NOTE: This motorcycle uses resistor-type spark plug to avoid jamming electronic parts. Improper spark plug selection may cause electronic interference with your motorcycle's ignition system, resulting in motorcycle performance problems. Use only the recommended spark plugs.

CAUTION

An improper spark plug may have an incorrect fit or heat range for your engine. This may cause severe engine damage which will not be covered under warranty.

Use one of the spark plugs listed below or equivalent. Consult your Suzuki dealer or a qualified mechanic if you are not sure which spark plug is correct for your type of usage.

NGK	DENSO	REMARKS
CR9E	U27ESR-N	If the standard plug tends to run cold.
CR10E	U31ESR-N	Standard

NOTE: If the above-named plugs are not available, consult your Suzuki dealer.

CAUTION

A crossthreaded or overtightened spark plug will damage the aluminum threads of the cylinder head.

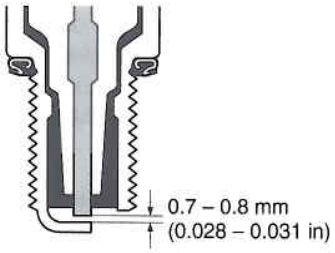
Follow the procedure below to tighten the spark plug properly.

Carefully turn the spark plug by hand into the threads until it is finger tight. If the spark plug is new, tighten it with a wrench about 1/2 turn past finger tight. If you are reusing the old spark plug, tighten it with a wrench about 1/8 turn past finger tight.

CAUTION

Dirt can damage your engine if it enters an open spark plug hole.

Cover the spark plug hole whenever spark plug is removed.



To maintain a hot, strong spark, keep the plug free from carbon. Remove carbon deposits from the plug, and adjust the gap to 0.7 – 0.8 mm (0.028 – 0.031 in) for good ignition. Use a thickness (feeler) gauge to check the gap.

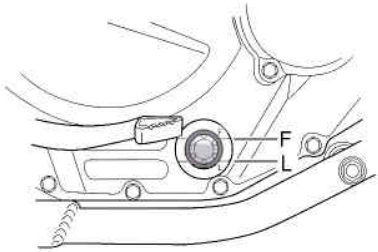
ENGINE OIL

Engine life depends on oil amount and quality. Daily oil level checks and periodic changes are two of the most important maintenance items to be performed.

Engine Oil Level Check

Check the engine oil level as follows:

1. Start the engine and allow it to idle for a few minutes.
2. Stop the engine and wait approximately three minutes.



3. Hold the motorcycle vertically and check the oil level through the oil level inspection window. The engine oil level should be between "L" (low) and "F" (full) lines.

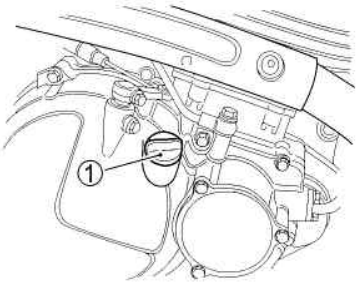
CAUTION

The engine oil level must be between the "L" (Low) line and "F" (Full) line, or engine damage may occur.

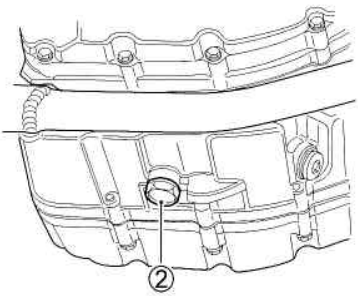
Check the oil level, through the inspection window, with the motorcycle held vertically on level ground before each use of the motorcycle.

Engine Oil and Filter Change
Change the engine oil and oil filter at the scheduled times. The engine should always be warm when the oil is changed so the oil will drain easily. The procedure is as follows:

1. Place the motorcycle on the side stand.



2. Remove the oil filler cap ①.



3. Remove the drain plug ② from the bottom of the engine and drain the engine oil into a drain pan.

⚠WARNING

Engine oil and exhaust pipes can be hot enough to burn you.

Wait until the oil drain plug and exhaust pipes are cool enough to touch with bare hands before draining oil.

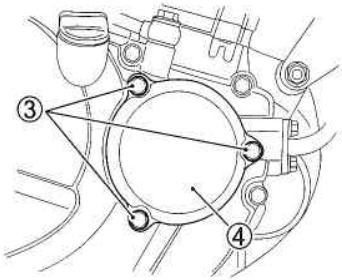
⚠ WARNING

New and used oil can be hazardous. Children and pets may be harmed by swallowing new or used oil. Repeated, prolonged contact with used engine oil may cause skin cancer. Brief contact with used oil may irritate skin.

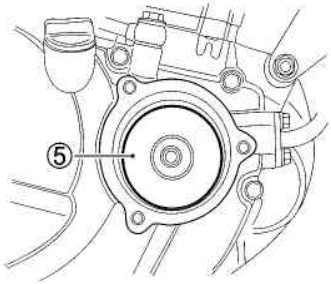
- **Keep new and used oil away from children and pets.**
- **Wear a long-sleeve shirt and waterproof gloves.**
- **Wash with soap if oil contacts your skin.**

NOTE: Recycle or properly dispose of used oil.

NOTE: Hold the motorcycle vertically while draining the engine oil to drain all oil.



4. Remove the three bolts ③ holding the filter cover ④ in place.



5. Remove the filter cover ④ and pull out the old filter element ⑤. Insert the new filter in the same position.

CAUTION

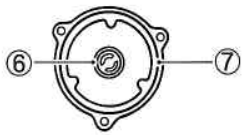
Using an oil filter with the wrong design can cause engine damage.

Use a genuine SUZUKI oil filter or an equivalent filter designed for your motorcycle.

CAUTION

Failure to insert the new element correctly can damage the engine. No oil flow will result if the element is inserted backwards.

Insert the open end of the new oil filter element into the engine.



6. Check to be sure that the filter spring ⑥ and the cap "O" ring ⑦ are installed correctly.

NOTE: Install a new "O" ring each time the filter element is replaced.

7. Reinstall the oil filter cover and tighten the bolts securely.
8. Reinstall the drain plug and tighten it securely. Pour about 2400 ml (2.5 US qt) of the specified oil in the filler hole. (See FUEL AND OIL RECOMMENDATION section.)

NOTE: About 2300 ml (2.4 US qt) of oil will be required when changing oil only.

9. Reinstall the oil filler cap.

CAUTION

Engine damage may occur if you use oil that does not meet Suzuki's specifications.

Use the oil specified in the FUEL AND OIL RECOMMENDATION section.

10. Start the engine (while the motorcycle is outside on level ground) and allow it to idle for a few minutes.
11. Turn the engine off and wait approximately three minutes. Recheck the oil level on engine oil inspection window while holding the motorcycle vertically. The oil level should be at the "F" (full) mark. If it is lower than the "L" mark, add oil until it reaches the "F" mark. Inspect the area around the drain plug and oil filter cover for leaks.

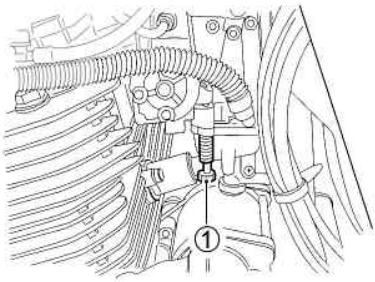
CARBURETOR

The carburetor is factory set for the best performance. Do not attempt to alter its setting. There are two items of adjustment, however, under your care: idle speed and throttle cable play.

Idle Speed Adjustment

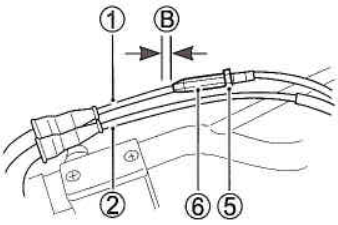
To adjust the idle speed properly, you need a tachometer. If you do not have one, ask your Suzuki dealer or a qualified mechanic to perform this adjustment.

1. Start up the engine and let the engine run until it warms up fully.

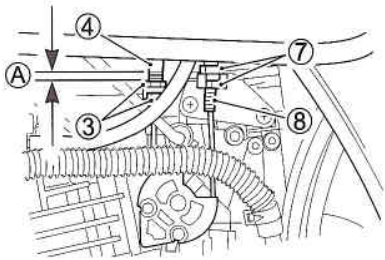


2. Turn the throttle stop screw ① in or out so that the engine idles at 1400 – 1600 r/min.

Throttle Cable Adjustment



A twin throttle cable system is used in this motorcycle. Cable ① is for pulling and cable ② is for returning. To adjust the cable play, adjust the returning cable first and then adjust the pulling cable.



Returning cable play

The returning cable should be adjusted to have a thread length Ⓐ of 3.0 – 4.0 mm (0.12 – 0.16 in) as shown in the figure above. If the adjustment is necessary, adjust the thread length in the following way:

1. Loosen the lock nut ③.
2. Move the adjuster ④ to obtain the thread length Ⓐ of 3.0 – 4.0 mm (0.12 – 0.16 in).
3. Tighten the lock nut ③ securely.

Pulling cable play

The pulling cable should be adjusted to have a cable play Ⓑ of 0.5 – 1.0 mm (0.02 – 0.04 in) as shown in the figure. If the adjustment is necessary, adjust the cable play in the following way:

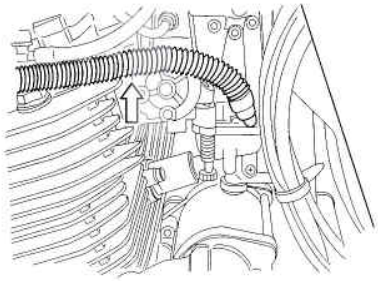
1. Turn the handlebar all the way to the left.
2. Loosen the lock nuts ⑤.
3. Turn the adjuster ⑥ to obtain the cable play Ⓑ of 0.5 – 1.0 mm (0.02 – 0.04 in). If necessary, loosen the lock nut ⑦. Turn the adjuster ⑧ to obtain the same cable play Ⓑ.
4. Tighten the lock nuts (⑤, ⑦) securely.

⚠WARNING

Inadequate throttle cable play can cause engine speed to rise suddenly when you turn the handlebars. This can lead to loss of rider control.

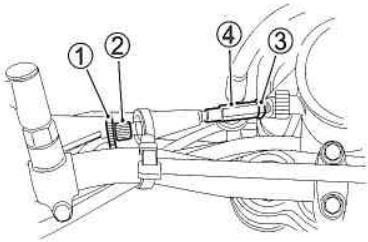
Adjust the throttle cable play so that engine idle speed does not rise due to handlebar movement.

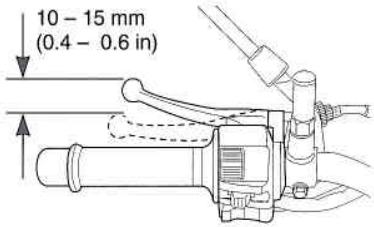
FUEL HOSE



Inspect the fuel hose for damage and fuel leakage. If any defects are found, the fuel hose must be replaced.

CLUTCH ADJUSTMENT





The play of the clutch lever should be 10 – 15 mm (0.4 – 0.6 in) as measured at the clutch lever end. If you find the play of the clutch incorrect, adjust it in the following way.

1. Loosen the lock nut ① and turn in the adjuster ② as far as it will go.
2. Loosen the lock nut ③ and relocate the adjuster ④ to obtain the correct play.
3. Minor adjustment can be made with the clutch lever side adjuster ②.
4. Tighten the lock nuts ① and ③.

DRIVE CHAIN

This motorcycle has a continuous drive chain constructed from special materials. It does not use a master link. The drive chain has special "O" rings that permanently seal grease inside. We recommend that you take your motorcycle to an authorized Suzuki dealer if the drive chain needs to be replaced.

⚠WARNING

Riding with the chain in poor condition or improperly adjusted can lead to an accident.

Inspect, adjust, and maintain the chain properly before each ride, according to this section.

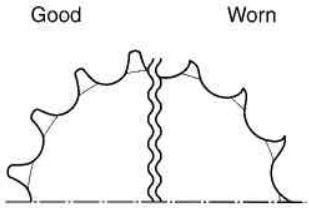
The condition and adjustment of the drive chain should be checked before each use of the motorcycle. Always follow the guidelines below for inspecting and servicing the chain.

Inspecting the Drive Chain

When inspecting the chain, look for the following:

- Loose pins
- Damaged rollers
- Dry or rusted links
- Kinked or binding links
- Excessive wear
- Improper chain adjustment

If you find anything wrong with the drive chain condition or adjustment, correct the problem if you know how. If necessary, consult your authorized Suzuki dealer. Damage to the drive chain means that the sprockets may also be damaged. Inspect the sprockets for the following:



- Excessively worn teeth
- Broken or damaged teeth
- Loose sprocket mounting nuts

If you find any of these problems with your sprocket, consult your Suzuki dealer.

NOTE: The two sprockets should be inspected for wear when a new chain is installed and replace them if necessary.

NOTE: The chain is an endless type chain (no master link) for maximum strength. Chain replacement requires that the swingarm be removed. Trust this work only to a qualified technician. Do not install a master link type chain.

Drive Chain Cleaning and Oiling

Clean and oil the chain as follows:

1. Wash the chain with kerosene. Kerosene will lubricate and clean the chain.

⚠WARNING

Kerosene can be hazardous. Kerosene is flammable. Children or pets may be harmed from contact with kerosene.

Keep flames and smoking materials away from kerosene. Keep children and pets away from kerosene. If swallowed, do not induce vomiting. Call a physician immediately. Dispose of used kerosene properly.

CAUTION

Cleaning the chain with gasoline or commercial cleaning solvents can damage O-rings and ruin the chain.

Clean the drive chain with kerosene only.

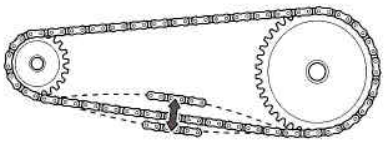
2. Allow the chain to dry, then lubricate the links with Suzuki chain lube or an equivalent lubricant.

CAUTION

Some drive chain lubricants contain solvents and additives which could damage the O-rings in your chain.

Use Suzuki chain lube or an equivalent lubricant that is specifically intended for use with O-ring chains.

Drive Chain Adjustment



30 – 45 mm
(1.2 – 1.8 in)

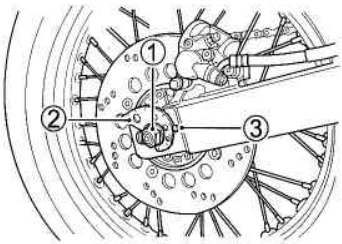
Inspect the drive chain slack before each use of the motorcycle. The drive chain should be adjusted for 30 – 45 mm (1.2 – 1.8 in) of slack, as shown.

⚠WARNING

Too much chain slack can cause the chain to come off the sprockets, resulting in an accident or serious damage to the motorcycle.

Inspect and adjust the drive chain slack before each use.

To adjust the drive chain, follow the procedure below:



1. Loosen the axle nut ①.
2. Turn the right and left adjusters ② until the chain has 30 – 45 mm (1.2 – 1.8 in) of slack halfway between the engine sprocket and rear sprocket.
3. At the same time that the chain is being adjusted, the rear sprocket must be kept in perfect alignment with the front sprocket. To assist you in performing this procedure, there are reference marks ③ on the adjusters and each chain adjuster which are to be aligned with each other and to be used as a reference from one side to the other.
4. Tighten the axle nut ① securely. Replace the cotter pin with a new one.
5. Recheck the chain slack after tightening and readjust if necessary.

Rear axle nut tightening torque:
110 N·m (11.0 kgf-m, 79.5 lbf-ft)

BRAKES

This motorcycle has front and rear disk brakes.

⚠WARNING

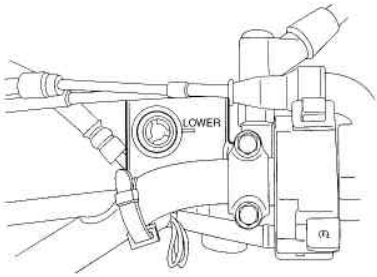
Failure to inspect and properly maintain the brakes increases your chance of having an accident.

Inspect the brake system before each use according to the INSPECTION BEFORE RIDING section. Follow the MAINTENANCE SCHEDULE section to maintain your brake system.

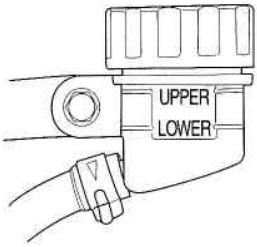
NOTE: Operating in mud, water, sand or other extreme conditions can cause accelerated brake wear. If you operate your motorcycle under these conditions, the brakes must be inspected more often than recommended in the MAINTENANCE SCHEDULE.

Brake Fluid

FRONT



REAR



Check the brake fluid level in both the front and rear brake fluid reservoirs. If the level in either reservoir is below the lower mark, inspect for brake pad wear and leaks.

⚠WARNING

Brake fluid is harmful or fatal if swallowed, and harmful if it comes in contact with skin or eyes.

If swallowed, do not induce vomiting. Immediately contact a poison control center or a physician. If brake fluid gets in eyes, flush eyes with water and seek medical attention. Wash thoroughly after handling. Solution can be poisonous to animals. Keep out of the reach of children and animals.

⚠WARNING

Failure to keep the brake fluid reservoir full with proper brake fluid can be hazardous. The brakes may not work correctly without the proper amount and type of brake fluid. This could lead to an accident.

Inspect the brake fluid level before each use. Use only DOT4 brake fluid from a sealed container. Never use or mix different types of brake fluid. If there is frequent loss of fluid, take your motorcycle to a SUZUKI dealer or a qualified mechanic for inspection.

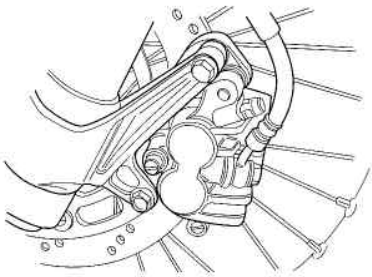
CAUTION

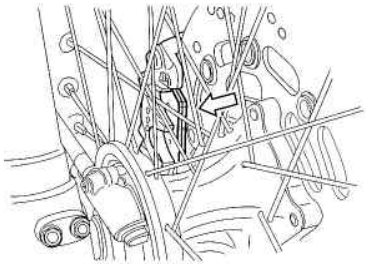
Spilled brake fluid can damage painted surfaces and plastic parts.

Avoid spilling any fluid when filling the reservoir. Wipe up spills immediately.

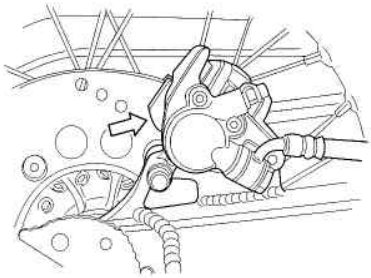
Brake Pads

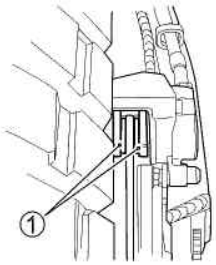
FRONT





REAR





① Grooved wear limit line

Inspect the front and rear brake pads to see if they are worn down to the grooved wear limit line. If a front or rear pad is worn to the grooved limit line, both front or both rear pads must be replaced with new ones. After replacing either the front or rear brake pads, the brake lever or pedal must be pumped several times. This will extend the pads to their proper position.

⚠WARNING

Riding with worn brake pads will reduce braking performance and will increase your chance of having an accident.

Inspect brake pad wear before each use. Ask your SUZUKI dealer or a qualified mechanic to replace brake pads if any pad is worn to the limit.

⚠WARNING

Failure to extend brake pads after repair or replacement can cause poor braking performance and may result in an accident.

Before riding, "pump" the brake lever/pedal repeatedly until the brake pads are pressed against the brake disks and proper lever/pedal stroke and firm feel are restored.

NOTE: Do not squeeze/depress the brake lever/pedal when the pads are not in their positions. It is difficult to push the pistons back into position.

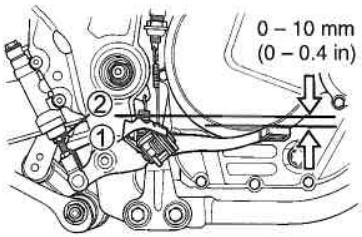
⚠ WARNING

Replacing only one or the two brake pads can result in uneven braking action.

Replace both pads together.

Rear Brake Adjustment

The rear brake pedal must be adjusted to set the clearance between the pedal and the footrest. Adjust the brake pedal as follows:



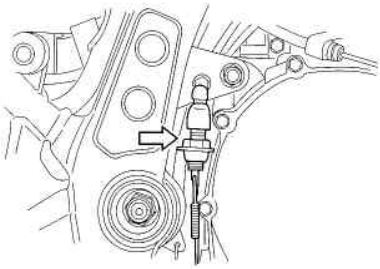
1. Loosen the lock nut ①, and turn the push rod ② to locate the pedal 0 – 10 mm (0 – 0.4 in) below the top face of the foot rest.
2. Retighten the lock nut ① to lock the push rod ② in the proper position.

CAUTION

An incorrectly adjusted brake pedal may force brake pads to rub against the disk at all times, causing damage to the pads and disk.

Follow the steps in this section to adjust the brake pedal properly.

Rear Brake Light Switch



The rear brake light switch is located under the right frame cover. To adjust the brake light switch, hold the switch body and turn the adjuster so that the brake light will come on just before a pressure rise is felt when the brake pedal is depressed.

TIRES

⚠WARNING

Failure to follow these warnings may result in an accident due to tire failure. The tires on your motorcycle form the crucial link between your motorcycle and the road.

Follow these instructions:

- **Check tire condition and pressure, and adjust pressure before each ride.**
- **Avoid overloading your motorcycle.**
- **Replace a tire when worn to the specified limit, or if you find damage such as cuts or cracks.**
- **Always use the size and type of tires specified in this owner's manual.**
- **Balance the wheel after tire installation.**
- **Read this section of the owner's manual carefully.**

Tire Pressure and Loading

Proper tire pressure and proper tire loading are important factors. Overloading your tires can lead to tire failure and loss of motorcycle control.

Check tire pressure each time before you ride, and adjust tire pressure according to the table below. Tire pressure should only be checked and adjusted before riding since riding will heat up the tires and lead to higher inflation pressure readings.

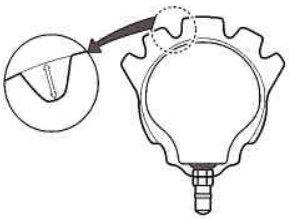
Under-inflated tires make smooth cornering difficult and can result in rapid wear. Over-inflated tires cause a smaller amount of tire to be in contact with the road, which can contribute to skidding and loss of control.

Cold inflation tire pressure

	SOLO RIDING	DUAL RIDING
FRONT	150 kPa 1.50 kgf/cm² 22 psi	175 kPa 1.75 kgf/cm² 25 psi
REAR	175 kPa 1.75 kgf/cm² 25 psi	200 kPa 2.00 kgf/cm² 29 psi

Tire Condition and Type

Tire condition and tire type affect motorcycle performance. Cuts or cracks in the tires can lead to tire failure and loss of motorcycle control. Worn tires are susceptible to puncture failures and subsequent loss of motorcycle control. Tire wear also affects the tire profile, changing motorcycle handling characteristics.



Check the condition of your tires each time before you ride. Replace tires if tires show visual evidence of damage such as cracks or cuts, or if tread depth is less than 4.0 mm (0.16 in).

NOTE: These wear limits will be reached before the wear bars molded into the tire make contact with the road.

When you replace a tire, be sure to replace it with a tire of the size listed below. If you use a different size of tire, motorcycle handling may be adversely affected, possibly resulting in loss of motorcycle control.

	Front	Rear
Size	90/90-21 M/C 54S	120/90-17 M/C 64S
Type	BRIDGESTONE TRAIL WING 41	BRIDGESTONE TRAIL WING 42

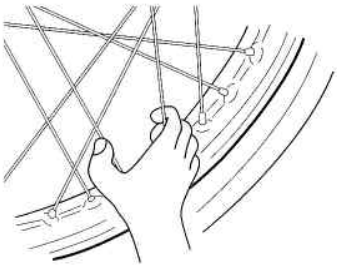
Be sure to balance the wheel after repairing a puncture or replacing the tire. Proper wheel balance is important to avoid variable wheel-to-road contact and to avoid uneven tire wear.

⚠WARNING

An improperly repaired, installed, or balanced tire can cause loss of control or shorten tire life.

- **Ask your SUZUKI dealer or a qualified mechanic to perform tire repair, replacement, and balancing because proper tools and experience are required.**
- **Install tires according to the rotation direction shown by arrows on the sidewall of each tire.**

SPOKE NIPPLE TIGHTNESS



Check the tension to verify the tightness of the spoke nipples. The tension of the spokes can be checked by squeezing the spokes with your fingers. If a spoke nipple is loose, the spoke will bend more than the others. The tension can also be checked by hitting the spokes with a small metal bar. If the spoke nipple is loose, its sound will be dull.

To tighten the spoke nipples properly, tighten them equally to the specified torque. Loose and overtightened spoke nipples may cause unequal spoke tension and may result in wheel rim distortion. Contact your Suzuki dealer for this service.

SPARK ARRESTER

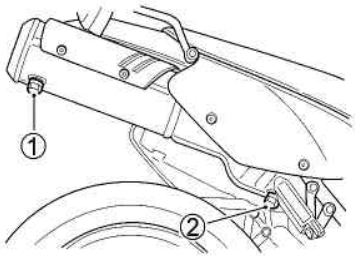
The muffler has a spark arrester which must be periodically cleaned to maintain good efficiency. Clean the spark arrester as follows:

⚠WARNING

A hot muffler can burn you. The muffler will be hot enough to burn you for some time after stopping the engine.

Wait until the muffler cools to avoid burns.

1. Shift into neutral.



2. Remove the drain bolts, ① and ②.
3. Start the engine and rev it to 4000 rpm for a minute to blow out the accumulated carbon particles.

⚠WARNING

Running the engine indoors or in a garage can be hazardous. Exhaust gas contains carbon monoxide, a gas that is colorless and odorless and can cause death or severe injury.

Only run the engine outdoors where there is fresh air.

⚠WARNING

Blowing out the accumulated hot carbon particles where there is flammable material can cause a fire.

Clean the spark arrester in an open area away from flammable materials.

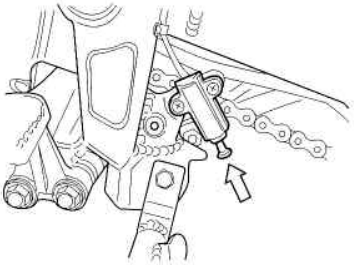
4. Stop the engine. Wait until the muffler cools, then replace the drain bolts and tighten them securely.

⚠WARNING

Running the engine with loose drain bolts or without drain bolts will allow hot carbon particles to escape. This can cause a fire.

Tighten the drain bolts securely.

SIDE STAND/IGNITION INTERLOCK SYSTEM



Check the side stand/ignition interlock system for proper operation as follows:

1. Sit on the motorcycle in the normal riding position, with the side stand up.
2. Shift into first gear, hold the clutch in, and start the engine.
3. While continuing to hold the clutch in, move the side stand to the down position.

If the engine stops running when the side stand is moved to the down position, then the side stand/ignition interlock system is working properly. If the engine continues to run with the side stand down and the transmission in gear, then the side stand/ignition interlock system is not working properly. Have your motorcycle inspected by an authorized Suzuki dealer or some other qualified service mechanic.

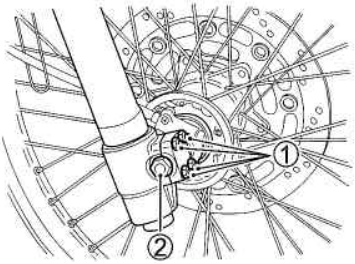
⚠WARNING

If the side stand/ignition interlock system is not working properly, it is possible to ride the motorcycle with the side stand in the down position. This may interfere with rider control during a left turn.

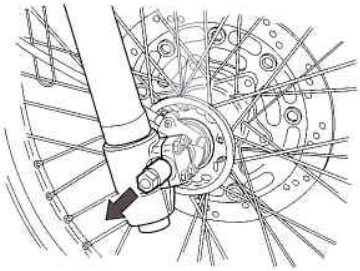
Check the side stand/ignition interlock system for proper operation before riding. Check that the side stand is returned to its full up position before starting off.

FRONT WHEEL REMOVAL

1. Place the motorcycle on the side stand.

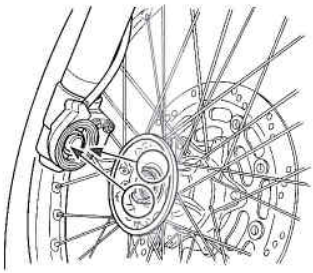


2. Loosen the axle holder nuts ①.
3. Loosen the axle shaft ②.
4. Place an accessory service stand or equivalent under the swingarm to help stabilize the rear end. Carefully position a jack under the engine and raise until the front wheel is slightly off the ground.



5. Draw out the axle shaft.
6. Slide the front wheel forward.

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



7. To reinstall the wheel assembly, reverse the sequence described above. Fit the slots of speedometer gear box to the projections of the wheel hub.
8. After installing the wheel, apply the brake several times to restore the proper lever stroke.

⚠WARNING

Failure to extend brake pads after installing the wheel can cause poor braking performance and may result in an accident.

Before riding, "pump" the brake repeatedly until brake pads are pressed against the brake disks and proper lever stroke and firm feel are restored. Also check that the wheel rotates freely.

⚠WARNING

Failure to torque bolts and nuts properly could lead to an accident.

Torque bolts and nuts to the proper specifications. If you are not sure of the proper procedure, have your authorized SUZUKI dealer or a qualified mechanic do this.

Front axle shaft tightening torque:
65 N·m (6.5 kgf-m, 47.0 lbf-ft)

Axle holder bolt tightening torque:
10 N·m (1.0 kgf-m, 7.0 lbf-ft)

NOTE: Be careful not to damage the oil seal when installing the front wheel.

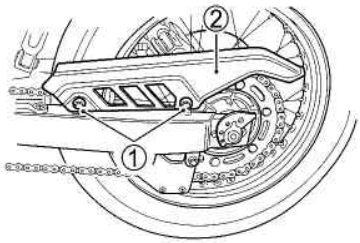
REAR WHEEL REMOVAL

⚠WARNING

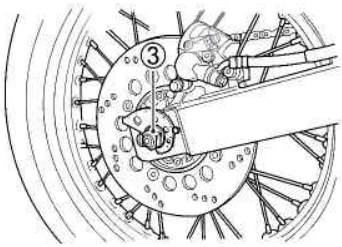
A hot muffler can burn you. The muffler will be hot enough to burn you for some time after stopping the engine.

Wait until the muffler cools to avoid burns.

1. Place the motorcycle on the side stand.

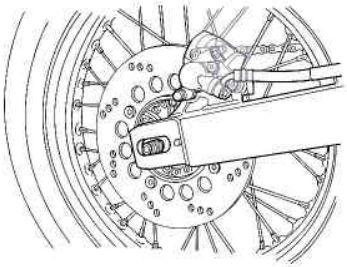


2. Remove the two bolts ① and the chain guard ②.

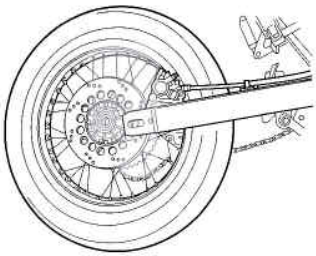


3. Remove the axle nut ③.

4. Place an accessory service stand or equivalent under the swingarm to lift the rear wheel slightly off the ground.



5. Draw out the axle.



6. With the wheel moved forward, remove the chain from the sprocket.
7. Pull the rear wheel assembly rearward.

NOTE: Never depress the rear brake pedal with the rear wheel removed. It is very difficult to force the pads back into the caliper assembly.

8. To replace the wheel, reverse the complete sequence listed. Replace the cotter pin with a new one.
9. After installing the wheel, apply the brake several times and then check that the wheel rotates freely.

⚠WARNING

Failure to adjust the drive chain and failure to torque bolts and nuts properly could lead to an accident.

- **Adjust the drive chain as described in DRIVE CHAIN ADJUSTMENT section after installing the rear wheel.**
- **Torque bolts and nuts to the proper specifications. If you are not sure of the proper procedure, have your authorized SUZUKI dealer or a qualified mechanic do this.**

Rear axle nut tightening torque:
110 N·m (11.0 kgf-m, 79.5 lbf-ft)

⚠ WARNING

Failure to extend brake pads after installing the wheel can cause poor braking performance and may result in an accident.

Before riding, "pump" the brake pedal repeatedly until the brake pads are pressed against the brake disks and proper pedal stroke and firm feel are restored. Also check that the wheel rotates freely.

LIGHT BULB REPLACEMENT

The wattage rating of each bulb is shown in the following chart. When replacing a burned out bulb, always use the same wattage rating.

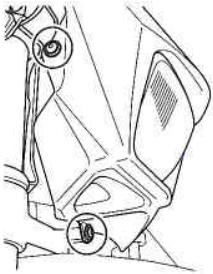
CAUTION

Using a light bulb with the wrong wattage rating can cause electrical system damage or shorten bulb life.

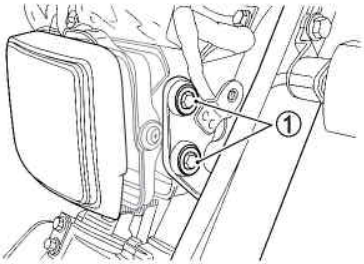
Always use the specified light bulb.

Headlight	12V 60/55W
Turn signal light	12V 21W
Brake light/Taillight	12V 21/5W
License plate light	12V 5W

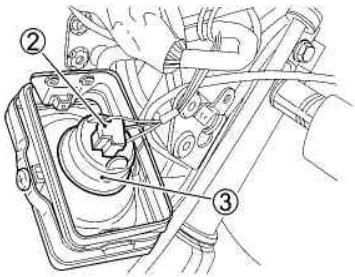
Headlight



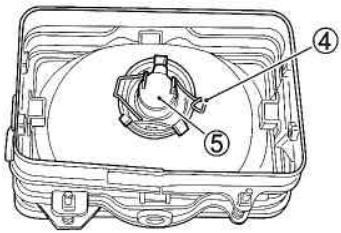
1. Remove the screws (right and left), and take off the headlight cover.



2. Remove the four bolts ①.



3. Disconnect the socket ② from the headlight.
4. Remove rubber cap ③.



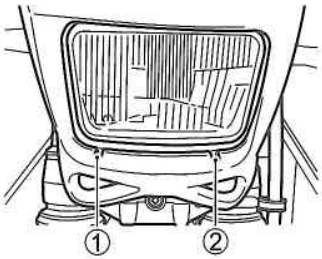
5. Unhook the spring ④.
6. Remove the bulb ⑤.
7. To install the headlight, reverse the procedure described above.

CAUTION

Oil from your skin may damage the headlight bulb or shorten its life.

Grasp the new bulb with a clean cloth.

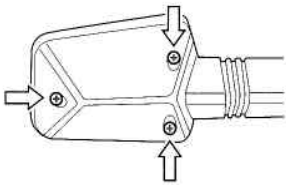
Headlight Beam Adjustment
The headlight beam can be adjusted both horizontally and vertically if necessary.



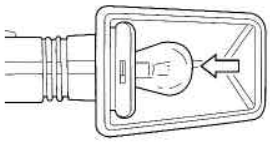
To adjust the beam vertically:
Turn the adjuster ① clockwise or counterclockwise.

To adjust the beam horizontally:
Turn the adjuster ② clockwise or counterclockwise.

Turn Signal Light



1. Remove the screws and the lens.



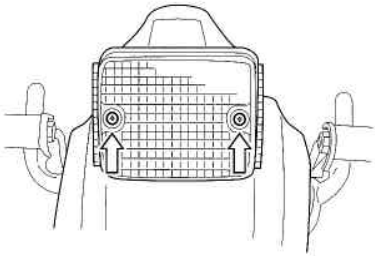
2. Push in on the bulb, turn it counterclockwise, and pull it out.
3. To fit the replacement bulb, push it in and turn it to the right while pushing.

CAUTION

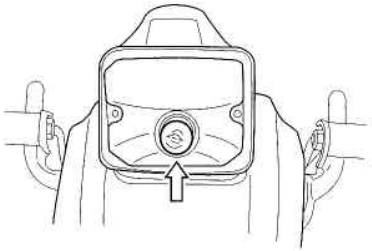
Overtightening the screws when reinstalling the lens may cause the lens to crack.

Tighten the lens screws only until they are snug.

Brake Light/Taillight



1. Loosen the screws and remove the lens.



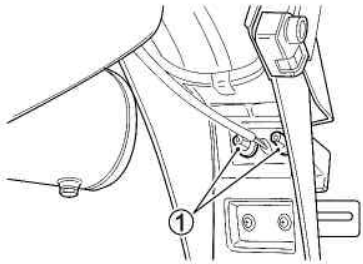
2. Push in on the bulb, turn it counterclockwise, and pull it out.
3. To fit the replacement bulb, push it in and turn it to the right while pushing.

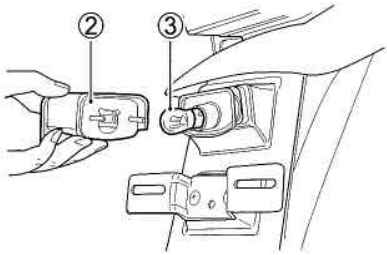
CAUTION

Overtightening the screws when reinstalling the lens may cause the lens to crack.

Tighten the screws only until they are snug.

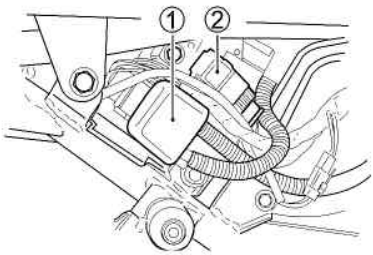
License Plate Light

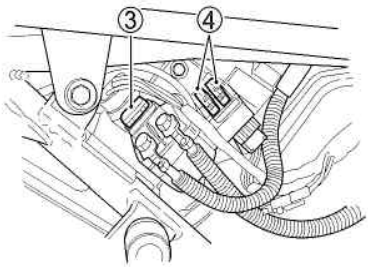




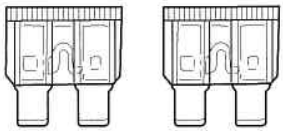
1. Remove the two nuts ① and the license plate lens assembly ②.
2. Push in on the bulb ③, turn it counterclockwise, and pull it out.
3. To fit the replacement bulb, push it in and turn it to the right while pushing.

FUSE





The fuses are located behind the right frame cover. The 30A main fuse and two 10A headlight fuses are equipped. If there is any electrical system failure, the fuse must be checked. It indicates a short-circuit or an overload in the electrical system. To check the fuse ③ or ④, remove the frame cover and remove the starter relay cover ① or the fuse box lid ②. 30A and a 10A spare fuse are provided.



CAUTION

Installing a fuse of incorrect rating or using aluminum foil or wire instead of a fuse may seriously damage the electrical system.

Always replace a blown fuse with a fuse of the same type and rating. If the new fuse blows in a short time, consult your Suzuki dealer or a qualified mechanic immediately.

Fuse List

- 30A MAIN fuse protects all electrical circuits.
- 10A HEAD-HI fuse protects the headlight high beam and high beam indicator light.
- 10A HEAD-LO fuse protects the headlight low beam.

TROUBLESHOOTING

TROUBLESHOOTING

This troubleshooting guide is provided to help you find the cause of some common complaints.

CAUTION

Failure to troubleshoot a problem correctly can damage your motorcycle. Improper repairs or adjustments may damage the motorcycle instead of fixing it. Such damage may not be covered under warranty.

If you are not sure about the proper action, consult your Suzuki dealer about the problem.

COMPLAINT: Engine is hard to start or does not start at all.

Something is probably wrong with the fuel system or ignition system.

FUEL SYSTEM CHECK

1. Make sure there is enough fuel in the fuel tank.
2. Check that the fuel valve is in the "ON" position.
3. Make sure there is enough fuel reaching the carburetor from the fuel valve.
   a. Place a container under the carburetor. Loosen the drain screw located under the carburetor. Drain the fuel from the carburetor into a container.

⚠WARNING

Fuel and fuel vapor are highly flammable and toxic. You can be burned or poisoned when handling fuel.

When draining the carburetor:
- **Stop the engine and keep flames, sparks, and heat sources away.**
- **Drain fuel only outdoors or in a well-ventilated area.**
- **Do not smoke.**
- **Wipe up spills immediately.**
- **Avoid breathing fuel vapor.**
- **Keep children and pets away.**
- **Dispose of drained fuel properly.**

   b. Place the empty container under the carburetor. Turn the fuel valve lever to the "PRI" position and see if the fuel flows from the drain hole.
   c. Turn the fuel valve lever to the "ON" position.
   d. Drain the fuel and tighten the drain screw.
   e. Push the electric starter button for several seconds to crank the engine referring to the STARTING THE ENGINE section.
   f. Loosen the drain screw and check that the carburetor is filled back up with fuel.
   g. Tighten the drain screw.

4. If fuel is reaching the carburetor, ignition system should be checked next.

IGNITION SYSTEM CHECK

1. Remove the two spark plugs and reattach them to the spark plug leads.
2. Prepare the motorcycle to start the engine by referring to the STARTING THE ENGINE section. While placing a spark plug with its base firmly on the engine, push the electric starter button. If the ignition system is operating properly, a blue spark should jump across the spark plug gap. If there is no spark, take your machine to your authorized Suzuki dealer.

⚠WARNING

Performing the spark test improperly can cause a high voltage electrical shock or an explosion.

Avoid performing this check if you are not familiar with this procedure, or if you have a heart condition or wear a pacemaker. Keep the spark plug away from the spark plug hole during this test.

COMPLAINT: Engine Stalls

1. Make sure there is enough fuel in the fuel tank.
2. Check to see that the spark plugs are not fouled. Remove the plugs and clean them. Replace them, if necessary.
3. Make sure the fuel valve is not clogged.
4. Check the idle speed. If necessary, adjust it using a tachometer. The correct idle speed is 1400 – 1600 r/min.

STORAGE PROCEDURE AND MOTORCYCLE CLEANING

STORAGE PROCEDURE AND MOTORCYCLE CLEANING

STORAGE PROCEDURE

If your motorcycle is to be left unused for an extended period of time, it needs special servicing requiring appropriate materials, equipment and skill. For this reason, Suzuki recommends that you trust this maintenance work to your Suzuki dealer. If you wish to service the machine for storage yourself, follow the general guidelines below:

MOTORCYCLE

Clean the entire motorcycle. Place the motorcycle on the side stand on a firm, flat surface where it will not fall over. Turn the handlebars all the way to the left and lock the steering, and remove the ignition key.

FUEL

1. Fill the fuel tank to the top with fuel mixed with the amount of gasoline stabilizer recommended by the stabilizer manufacturer.
2. Drain the carburetor or run the engine for a few minutes until the stabilized gasoline fills the carburetor.

⚠WARNING

Fuel and fuel vapor are highly flammable and toxic. You can be burned or poisoned when handling fuel.

When draining the carburetor:

- **Stop the engine and keep flames, sparks, and heat sources away.**
- **Drain fuel only outdoors or in a well-ventilated area.**
- **Do not smoke.**
- **Wipe up spills immediately.**
- **Avoid breathing fuel vapor.**
- **Keep children and pets away.**
- **Dispose of drained fuel properly.**

ENGINE

1. Pour one tablespoon of motor oil into the spark plug hole. Reinstall the spark plug and crank the engine a few times.
2. Drain the engine oil thoroughly and refill the crankcase with fresh engine oil all the way up to the filler hole.
3. Cover the air cleaner intake and the muffler outlet with oily rags to prevent humidity from entering.

BATTERY

1. Remove the battery from the motorcycle.
2. Clean the outside of the battery with mild soap and remove corrosion from the terminals and wiring harness.
3. Store the battery in a room above freezing.

TIRES

Inflate tires to the normal pressure.

EXTERNAL

- Spray all vinyl and rubber parts with rubber protectant.
- Spray unpainted surfaces with rust preventative.
- Coat painted surfaces with car wax.

MAINTENANCE DURING STORAGE

Once a month, recharge the battery. The standard charging rate is 0.9A × 5 to 10 hours and the maximum rate is 4.0A × 1 hour. Never exceed the maximum charging rate.

PROCEDURE FOR RETURNING TO SERVICE

1. Clean the entire motorcycle.
2. Remove the oily rags from the air cleaner intake and muffler outlet.
3. Drain all the engine oil. Install a new oil filter and fill the engine with fresh oil as outlined in this manual.
4. Reinstall the battery.
5. Remove the spark plugs. Turn the engine a few times. Reinstall the spark plugs
6. Make sure that the motorcycle is properly lubricated.
7. Perform the INSPECTION BEFORE RIDING as listed in this manual.
8. Start the motorcycle as outlined in this manual.

CORROSION PREVENTION

It is important to take good care of your motorcycle to protect it from corrosion and keep it looking new for years to come.

Important Information About Corrosion

Common causes of corrosion

1. Accumulation of road salt, dirt, moisture, or chemicals in hard-to-reach areas.
2. Chipping, scratches, and any damage to treated or painted metal surfaces resulting from minor accidents or impacts from stones and gravel.

Road salt, sea air, industrial pollution, and high humidity will all contribute to corrosion.

How to Help Prevent Corrosion
Wash your motorcycle frequently, at least once a month. Keep your motorcycle as clean and dry as possible.

Remove foreign material deposits. Foreign material such as road salt, chemicals, road oil or tar, tree sap, bird droppings and industrial fallout may damage your motorcycle's finish. Remove these types of deposits as quickly as possible. If these deposits are difficult to wash off, an additional cleaner may be required. Follow the manufacturer's directions when using these special cleaners.

Repair finish damage as soon as possible. Carefully examine your motorcycle for damage to the painted surfaces. Should you find any chips or scratches in the paint, touch them up immediately to prevent corrosion from starting. If the chips or scratches have gone through to the bare metal, have a Suzuki dealer make the repair.

Store your motorcycle in a dry, well-ventilated area. If you often wash your motorcycle in the garage or if you frequently park it inside when wet, your garage may be damp. The high humidity may cause or accelerate corrosion. A wet motorcycle may corrode even in a heated garage if the ventilation is poor.

Cover your motorcycle. Exposure to mid-day sun can cause the colors in paint, plastic parts, and instrument faces to fade. Covering your motorcycle with a high-quality, "breathable" motorcycle cover can help protect the finish from the harmful UV rays in sunlight, and can reduce the amount of dust and air pollution reaching the surface. Your Suzuki dealer can help you select the right cover for your motorcycle.

MOTORCYCLE CLEANING

Washing the Motorcycle

When washing the motorcycle, follow the instructions below:

1. Remove dirt and mud from the motorcycle with running water. You may use a soft sponge or brush. Do not use hard materials which can scratch the paint.
2. Wash the entire motorcycle with mild detergent or car wash soap using a sponge or soft cloth. The sponge or cloth should be frequently soaked in the soap solution.

CAUTION

Radiator and oil cooler fins can be damaged by spraying high pressure water on them.

Do not spray high pressure water on the radiator and oil cooler fins.

NOTE: Avoid spraying or allowing water to flow over the following places:

- *Ignition switch*
- *Spark plugs*
- *Fuel tank cap*
- *Carburetor*
- *Brake master cylinders*

3. Once the dirt has been completely removed, rinse off the detergent with running water.
4. After rinsing, wipe off the motorcycle with a wet chamois or cloth and allow it to dry in the shade.
5. Check carefully for damage to painted surfaces. If there is any damage, obtain "touch-up" paint and "touch-up" the damage.

CAUTION

Cleaning with any alkaline or strong acid cleaner gasoline, brake fluid, or any other solvent will damage the motorcycle parts.

Clean only with soft cloth and warm water with mild detergent.

Waxing the Motorcycle

After washing the motorcycle, waxing is recommended to further protect and beautify the paint. Observe the precautions specified by the wax manufacturer.

INSPECTION AFTER CLEANING

For extended life of your motorcycle, lubricate according to "GENERAL LUBRICATION" section.

⚠ WARNING

Wet brakes can cause poor braking performance and may lead to an accident.

Avoid a possible accident by expecting longer stopping distances after washing your motorcycle. Apply brakes several times to let heat dry the brake pads or shoes.

Follow the procedures in the "INSPECTION BEFORE RIDING" section to check your motorcycle for any problems that may have arisen during your last ride.

CUSTOMER INFORMATION

CUSTOMER INFORMATION

EMISSION CONTROL WARRANTY

Suzuki Motor Corporation warrants to the ultimate purchaser and each subsequent purchaser that this vehicle 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 its useful life. Useful life is defined for each class of motorcycle as 5 years or the corresponding number of kilometers (miles) shown in the chart below, whichever occurs first.

Vehicle class	Engine displacement	Useful Life Distance
Class I	50 to 169 cc	12000 km (7456 miles)
Class II	170 to 279 cc	18000 km (11185 miles)
Class III	280 cc and over	30000 km (18641 miles)

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.

TAMPERING WITH NOISE CONTROL SYSTEM PROHIBITED

Federal law prohibits the following acts or the causing thereof;

1. the removal or rendering inoperative by any person other than for purposes of maintenance, repair, or replacement, of any device or element of design incorporated into any new vehicle for the purpose of noise control prior to its sale or delivery to the ultimate purchaser or while it is in use, or
2. the use of the vehicle after such device or element of design has been removed or rendered inoperative by any person.

Among those acts presumed to constitute tampering are the acts listed below:

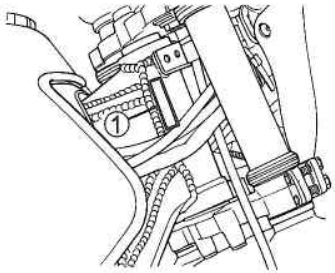
- Removing or puncturing the muffler, baffles, header pipes, screen type spark arrester (if equipped) or any other component which conducts exhaust gases
- Replacing the exhaust system or muffler with a system or muffler not marked with the same model specific code as the code listed on the Motorcycle Noise Emission Control Information label, and certified to appropriate EPA noise standards

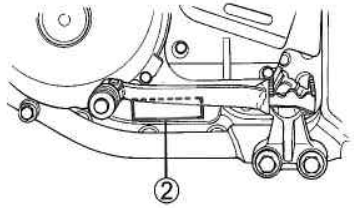
- Removing or puncturing the air cleaner case, air cleaner cover, baffles, or any other component which conducts intake air.

Whenever replacing parts on your motorcycle, Suzuki recommends that you use genuine Suzuki replacement parts or their equivalent.

SERIAL NUMBER LOCATION

You need to know the frame and engine serial numbers to get title documents for your motorcycle. You also need these numbers to help your dealer when you order parts.





The frame number ① is stamped on the steering head tube as shown in the illustration. The engine serial number ② is stamped on the crankcase assembly.

Write down the serial numbers here for your future reference.

Frame No.:

Engine No.

REPORTING SAFETY DEFECTS

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying American Suzuki Motor Corp.

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer, or American Suzuki Motor Corp.

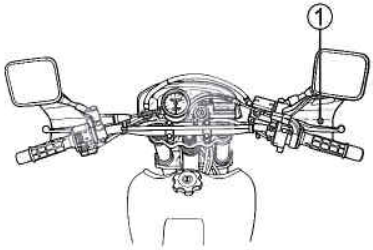
To contact NHTSA, you may either call the Vehicle Safety Hot Line toll-free 1-888-327-4236 (TTY: 1-800-424-9153); go to http://www.safercar.gov; or write to: Administrator, NHTSA, 400 Seventh Street, SW., Washington DC 20590. You can also obtain other information about motor vehicle safety from http://www.NHTSA.gov.

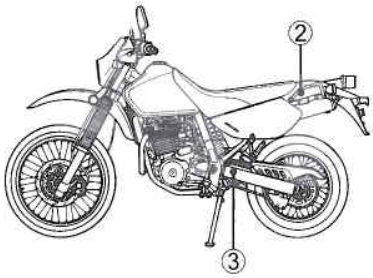
To contact American Suzuki, owners in the continental United States can call toll-free 1-800-444-5077, or write to: American Suzuki Motor Corporation Motorcycle Customer Service P.O. Box 1100, Brea, CA 92822-1100.

For owners outside the continental United States, please refer to the distributor's address listed on your Warranty Information brochure.

LOCATION OF LABELS

Read and follow all of the warnings labeled on your motorcycle. Make sure you understand all of the labels. Keep the labels on your motorcycle. Do not remove them for any reason.





①

⚠ WARNING

Failure to follow these safety precautions may increase your risk of injury:

- Wear a helmet, eye protection, and bright protective clothing.
- Don't ride after consuming alcohol or other drugs.
- Slow down on slippery surfaces, unfamiliar terrain, or when visibility is reduced.
- Read owner's manual carefully.

②

The owner's manual contains important safety information and instructions which should be read carefully before operating the vehicle. If the vehicle has been resold, obtain the owner's manual from the previous owner or contact your local SUZUKI dealer for assistance.

③

⚠ WARNING

- Check tire condition, wear, and cold tire pressure before each ride.
- Replace only with tires of listed size and type.
- Read Owner's manual for more information.

COLD TIRE PRESSURE	SOLO RIDING			DUAL RIDING		
	kPa	kgf/cm²	psi	kPa	kgf/cm²	psi
FRONT	150	1.50	22	175	1.75	25
REAR	175	1.75	25	200	2.00	29

		FRONT	REAR
TIRE SIZE		90/90-21 M/C 54S	120/90-17 M/C 64S
TYPE	BRIDGESTONE	TRAIL WING-41	TRAIL WING-42

SPECIFICATIONS

DIMENSIONS AND CURB MASS

Overall length	2255 mm (88.8 in)
	2235 mm (88.0 in) ... Low seat conversion
Overall width	865 mm (34.1 in)
Overall height	1195 mm (47.0 in)
	1155 mm (45.5 in) ... Low seat conversion
Wheelbase	1490 mm (58.7 in)
	1475 mm (58.1 in) ... Low seat conversion
Ground clearance	265 mm (10.4 in)
	225 mm (8.9 in) ... Low seat conversion
Seat height	885 mm (34.8 in)
	845 mm (33.0 in) ... Low seat conversion
Curb mass	166 kg (365 lbs)

ENGINE

Type	Four-stroke, air-cooled, OHC
Number of cylinders	1
Bore	100 mm (3.937 in)
Stroke	82.0 mm (3.228 in)
Displacement	644 cm^2 (39.3 cu. in)
Compression ratio	9.5 : 1
Carburetor	MIKUNI BST40, single
Air cleaner	Polyurethane foam element
Starter system	Electric
Lubrication system	Wet sump

DRIVE TRAIN

Clutch	Wet multi-plate type
Transmission	5-speed constant mesh
Gearshift pattern	1-down, 4-up
Primary reduction ratio	2.178 (61/28)
Gear ratios, Low	2.416 (29/12)
2nd	1.625 (26/16)
3rd	1.238 (26/21)
4th	1.000 (21/21)
Top	0.826 (19/23)
Final reduction ratio	2.800 (42/15)
Drive chain	D.I.D.525V9, 110 links

CHASSIS

Front suspension	Telescopic, coil spring, oil damped
Rear suspension	Link type, coil spring, oil damped
Front fork stroke	260 mm (10.2 in)
	220 mm (8.7 in) ... Low seat conversion
Rear wheel travel	260 mm (10.2 in)
	220 mm (8.7 in) ... Low seat conversion
Caster	28° 30'
Trail	111 mm (4.37 in)
Steering angle	43° (right & left)
Turning radius	2.5 m (8.2 ft)
Front brake	Disk brake
Rear brake	Disk brake
Front tire size	90/90-21 M/C 54S, tube type
Rear tire size	120/90-17 M/C 64S, tube type

ELECTRICAL

Ignition type	Electronic ignition (CDI)
Spark plug	NGK CR10E or DENSO U31ESR-N
Battery	12V 28.8 kC(8 Ah)/10 HR
Generator	Three-phase A.C. generator
Fuse	30/10/10A
Headlight	12V 60/55W
Turn signal light	12V 21W
Brake light/Taillight	12V 21/5W
Speedometer light	12V 1.7W
Neutral indicator light	12V 2W
High beam indicator light	12V 2W
Turn signal indicator light	12V 2W
License plate light	12V 5W

CAPACITIES

Fuel tank, including reserve	13 L (3.4 US gal)
	12 L (3.2 US gal) ... California model
Reserve	3.0 L (0.8 US gal)
Engine oil, oil change	2300 ml (2.4 US qt)
With filter change	2400 ml (2.5 US qt)

INDEX

⚠WARNING

Failure to follow these safety precautions may increase your risk of injury:

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- Read owner's manual carefully.

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