


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**/ **NOTICE**/**NOTE**

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

WARNING

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

CAUTION

Indicates a potential hazard that could result in minor or moderate injury.

NOTICE

Indicates a potential hazard that could result in vehicle or equipment damage.

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

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



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CONSUMER INFORMATION

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CONSUMER INFORMATION

GENERAL CONSIDERATIONS

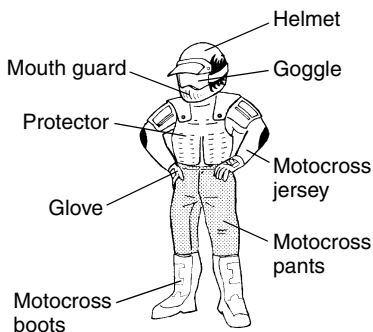
Wear a helmet and goggles

A helmet is the most important piece of gear to wear. 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 help shield your eyes from branches and airborne matter like bugs, dirt, or pebbles kicked up by tires. Wear a helmet and eye protection every time you ride.

Wear protective gear

Wear proper clothing when you ride. 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 jackets. In addition, wearing a kidney belt and chest or back protector is recommended.



Inspect your machine before riding

Before each use, perform an inspection per "INSPECTION BEFORE RIDING" section starting on page 4-3.

No Passengers

Suzuki RM-Zs are designed for the rider only.

Practice before competing

Before you begin competing, you should practice the skills you need to ride safely.

Review the controls on your motorcycle before riding.

Learn and understand about "Motocross"

When a child, or person who do not have knowledge on or experience of motocross, rides this motorcycle, make sure that a person with a good deal of knowledge about motocross accompanies with such child or person to instruct the correct operation procedure in a safe place. Suzuki recommends you to join the team with abundant experience of motocross and receive advice from experienced riders.

Know your limits

Always ride within the boundaries of your own skills. Knowing these limits and staying within them will help you avoid accidents. Ride only in events appropriate for your experience.

Safely competing on a motorcycle requires that your mental and physical skills are fully part of the experience. You should not attempt to operate a motorcycle, 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 loss of good judgement. If you are tired or under the influence of alcohol or other drugs, PLEASE DO NOT RIDE your motorcycle.







Conclusion

The actions of other riders are unpredictable. Your motorcycle's condition can change. These factors can best be dealt with by giving every ride your full attention.

May all of your rides on your new Suzuki be winning rides!

SYMBOL MARKS AND DEFINITION

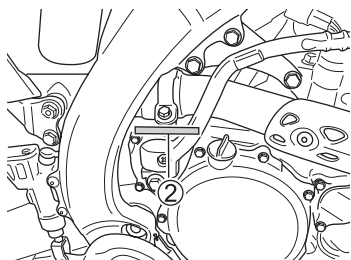
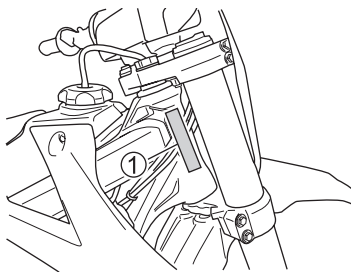
Listed in the table below are the symbols indicating instructions and other information. The meaning of each symbol is also included in the table.

SYMBOL	DEFINITION
	Torque control required. Data beside it indicates specified torque.
	Apply oil. Use engine oil or transmission oil unless otherwise specified.
	Apply or use brake fluid. (DOT 4)
	Apply fork oil.
	Use special tool.
	Indication of service data.

LABELS

Read and follow all the labels on the motorcycle. Make sure you understand all of the labels. Do not remove any labels from the motorcycle.

SERIAL NUMBER LOCATION



The frame and/or engine serial numbers are used to register the motorcycle. They are also used to assist your dealer when ordering parts or referring to special service information. The frame number ① is stamped on the steering head tube. The engine serial number ② is stamped on the crankcase assembly.

Please write down the numbers in the boxes provided below for your future reference.

Frame number:

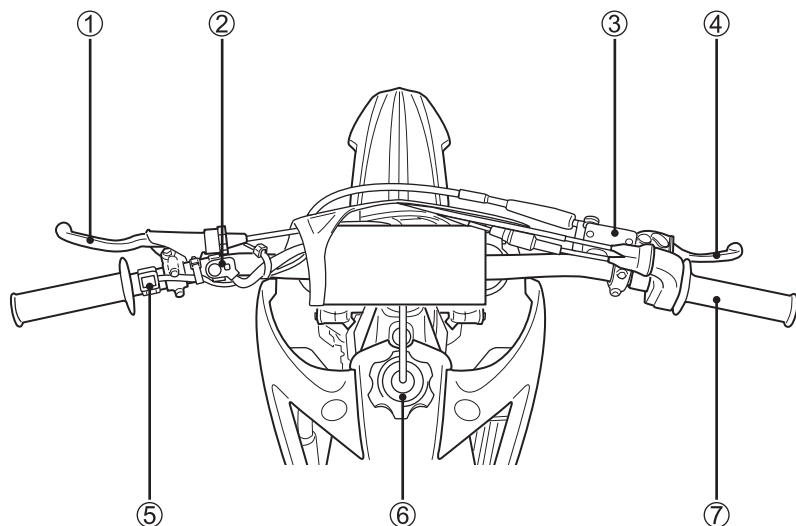
Engine number:

CONTROLS

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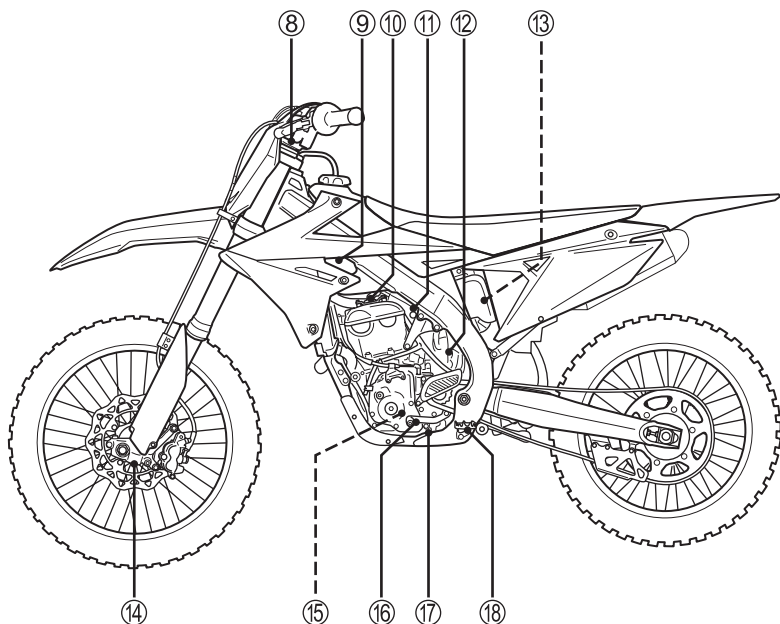
CONTROLS

LOCATION OF PARTS



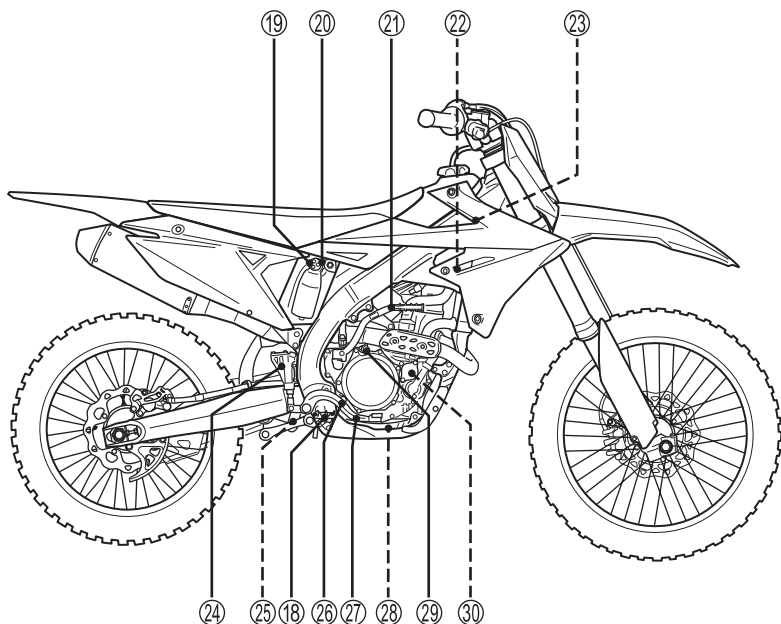
RM-Z250

- ① Clutch lever
- ② S-HAC switch
- ③ Front brake fluid reservoir
- ④ Front brake lever
- ⑤ Engine stop switch
- ⑥ Fuel tank cap
- ⑦ Throttle grip



RM-Z250

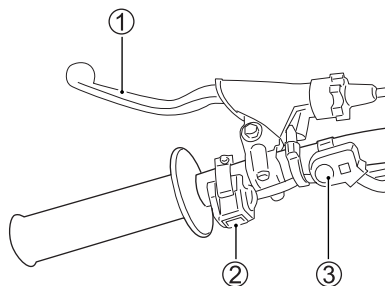
- ⑧ Front fork compression damping force adjuster
- ⑨ Battery coupler
- ⑩ Spark plug
- ⑪ Starter knob
- ⑫ Idle screw
- ⑬ Air cleaner
- ⑭ Front fork rebound damping force adjuster
- ⑮ Oil strainer (No.2)
- ⑯ Gearshift lever
- ⑰ Oil strainer (No.1)
- ⑱ Footrests



RM-Z250

- ①⑨ Rear suspension rebound damping force adjuster (Low speed)
- ②⑩ Rear suspension compression damping adjuster (High speed/Low speed)
- ②⑪ Kick starter lever
- ②⑫ ECM tuning map coupler
- ②⑬ Radiator cap
- ②⑭ Rear brake fluid reservoir
- ②⑮ Rear suspension rebound damping force adjuster (High speed)
- ②⑯ Engine oil level inspection window, Oil check bolt
- ②⑰ Rear brake pedal
- ②⑱ Engine oil drain plug No.1, No.2
- ②⑲ Engine oil filler cap
- ③⑰ Engine oil filter

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 disengages the clutch.

ENGINE STOP SWITCH ②

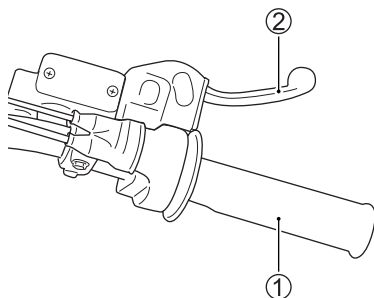
To stop the engine, push the engine stop switch with the transmission in neutral.

S-HAC (SUZUKI HOLESHOT ASSIST CONTROL) SWITCH ③

This is a system that assists operation during the start of races that use a starting gate.

Refer to SELECTION OF S-HAC (SUZUKI HOLESHOT ASSIST CONTROL) MODE for details. (➡ 5-4)

RIGHT HANDLEBAR



THROTTLE GRIP ①

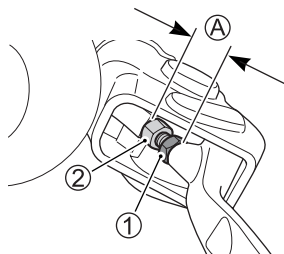
Engine speed is controlled by the position of the throttle grip. Turn it toward you to increase engine speed. Turn it away from you to decrease engine speed.

FRONT BRAKE LEVER ②

Apply the front brake by squeezing the front brake lever towards the grip.

Front Brake Lever Adjustment

Adjust the front brake lever position as follows:



1. Loosen the lock nut ①.
2. Turn the adjuster ② in or out to obtain the proper brake lever position.
3. The standard adjuster length A is from 11 – 15 mm (0.44 – 0.59 in).
4. Tighten the lock nut ① to the specified torque.

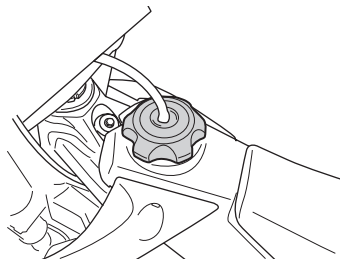


Front brake lever adjuster

lock nut:

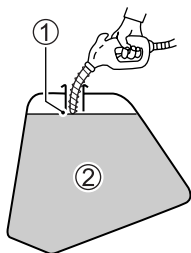
5.0 N·m (0.51 kgf-m, 3.70 lbf-ft)

FUEL TANK CAP



To open the fuel tank cap, remove the end of vent tube from the steering stem head nut and turn the cap counterclockwise. To close the cap, turn it clockwise and tighten it securely. Be sure that the vent tube is connected securely and routed properly.

Use fresh gasoline when filling up the fuel tank. Do not use bad gasoline which is contaminated with dirt, dust, water or other liquid. Be careful that dirt, dust or water do not enter the fuel tank when refueling.



- ① Bottom of the filler neck
- ② Fuel

Fuel tank capacity:
6.3 L (1.66/1.39 US/Imp. gal)

⚠ WARNING

If you overfill the fuel tank, fuel may overflow when it expands due to engine heat or heating by the sun. Fuel that overflows can catch fire.

Stop adding fuel when the fuel level reaches the bottom of the filler neck.

⚠ WARNING

Failure to follow safety precautions when refueling could result in a fire or cause you to breathe toxic fumes.

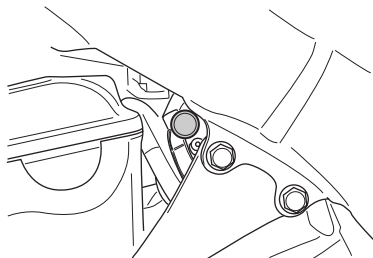
Refuel in a well ventilated area. Make sure the engine is off and avoid spilling fuel on a hot engine. Do not smoke, and make sure there are no open flames or sparks in the area. Avoid breathing gasoline vapors. Keep children and pets away when you refuel the motorcycle.

NOTICE

Filling the fuel tank with more than the specified amount of fuel may cause engine failure or make it difficult to start.

Do not refuel above the bottom of the filler neck.

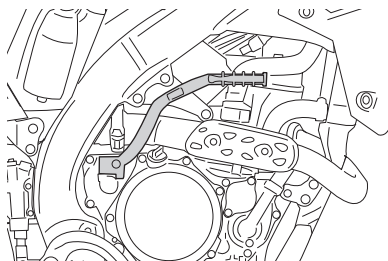
STARTER KNOB



This motorcycle has the starter knob to provide easy starting when the engine is cold. When starting the cold engine, pull the starter knob all the way toward you. The starter works best when the throttle is in the closed position. When the engine is warm, you do not need to use the starter knob for starting.

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

KICK STARTER LEVER



Depressing the kick starter lever with the transmission in neutral will start the engine. If the clutch lever is squeezed, you can also start the engine with the transmission in any gear other than neutral.

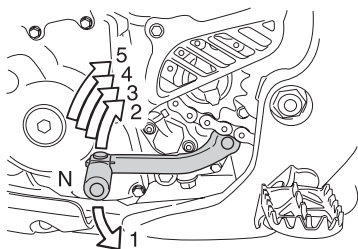
Kick down the kick starter lever slowly from the top position until engine compression resistance is felt, release the kick starter lever from this position and allow it to return to the top. While keeping the throttle closed, depress the kick starter lever strongly through the full stroke.

WARNING

An improperly retracted kick starter lever can interfere with rider control.

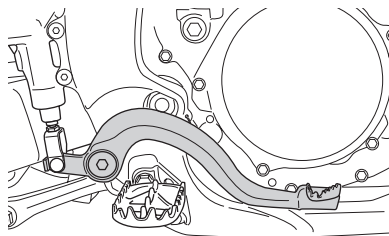
Be sure the kick starter lever is returned to its home position after starting the engine.

GEARSHIFT LEVER



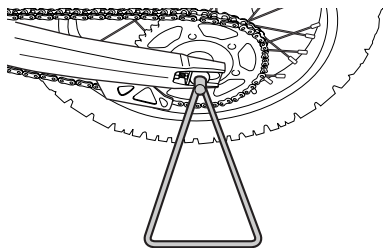
This motorcycle has a 5-speed transmission which operates as shown. To shift properly, squeeze the clutch lever and close the throttle at the same time you operate the gearshift lever. Lift the gearshift lever to upshift and depress the lever to downshift. Neutral is located between 1st and 2nd gear.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

REAR BRAKE PEDAL



Pressing the rear brake pedal will apply the rear brake.

ACCESSORY SIDE STAND



This motorcycle is not equipped with a side stand. To support the motorcycle for a short period of time, use the accessory side stand that comes supplied with the motorcycle. When servicing the motorcycle, use a service stand and support the underneath of the engine securely. When operating the motorcycle, make sure to remove the accessory side stand.

SUSPENSION ADJUSTMENT

NOTICE

Turning adjusters by force can damage the suspensions.

Do not turn adjusters beyond their natural limits.

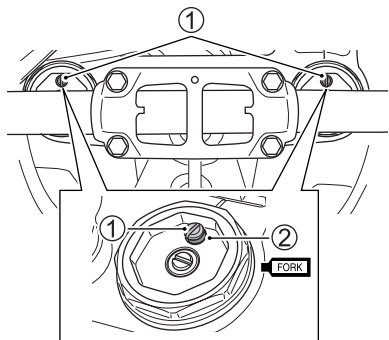
FRONT FORK SETTING

The front fork compression and rebound damping force, and oil capacity are adjustable for rider's preference, rider's weight and course condition.

NOTE:

- Be sure to adjust both right and left front forks equally.
- Inspect the following items before attempting adjustment.
 - Internal pressure release from the front fork (matching to the level same as atmospheric pressure) (↗ 2-11)
 - Front fork damage and oil leakage (↗ 6-42)
 - Tire pressure (↗ 6-39)
 - Tire and wheel damage (↗ 6-39)
 - Spoke nipple tension and bead stopper nut tightness (↗ 6-41)
 - Steering movement (↗ 6-43)

Internal Pressure Release from the Front Fork (matching to the level same as atmospheric pressure)



1. Support the motorcycle using the commercially available support stand, etc., and lift the front wheel off the ground.
2. Remove the left and right air bleeder valves ① and equalize the internal pressure in the front forks to atmospheric pressure.
3. Apply the fork oil to the new O-ring ② and tighten the air bleeder valve ① to the specified torque.

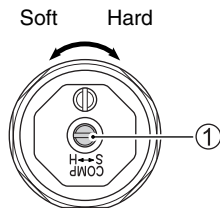
FORK Fork oil 99000-99044-L05
(SUZUKI FORK OIL L-05)

Front fork air bleeder valve:
1.3 N·m (0.13 kgf-m, 0.95 lbf-ft)

NOTE:

- To prevent foreign materials from entering the front fork, or biting into the air bleeder valve, clean the motorcycle before adjustment.
- When installing the air bleeder valve, be careful not to pinch foreign materials.

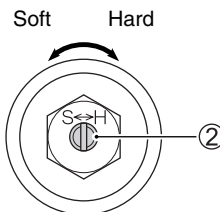
Compression Damping Force Adjustment



To set the adjuster, you must gently turn the adjust screw ① clockwise until it stops, then back it out the recommended number of clicks. Do not force the adjust screw ① past the stopped position, or you may damage the adjuster.

DATA Standard setting:
counterclockwise 11 clicks

Rebound Damping Force Adjustment

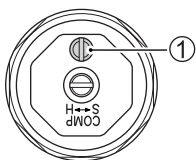


To set the adjuster, you must gently turn the adjust screw ② clockwise until it stops, then back it out the recommended number of clicks. Do not force the adjust screw ② past the stopped position, or you may damage the adjuster.

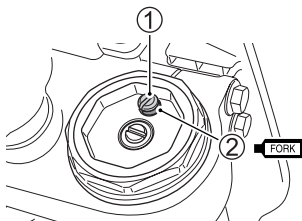
DATA Standard setting:
counterclockwise 13 clicks

OIL QUANTITY MINOR ADJUSTMENT

Adding the fork oil



1. Remove the air bleeder valve ①.
2. Add the fork oil with an injector from the air bleed hole.



3. Apply the fork oil to the new O-ring ② and tighten the air bleeder valve ① to the specified torque.

FORK Fork oil 99000-99044-L05
(SUZUKI FORK OIL L-05)

Front fork air bleeder valve:
1.3 N·m (0.13 kgf·m, 0.95 lbf·ft)

NOTE:

- To prevent foreign materials from entering the front fork, or biting into the air bleeder valve, clean the motorcycle before adjustment.
- When installing the air bleeder valve, be careful not to pinch foreign materials.

Reducing the fork oil



1. Remove the front forks.
(Refer to Service Manual)
2. Remove the air bleeder valve.
3. Leaning the front fork, reduce the fork oil from the air bleed hole.

Front fork setting procedure
(➡ 2-13)

⚠ CAUTION

Operating the motorcycle with the fork oil quantity unevenly adjusted can cause handling instability.

The fork oil quantity must be adjusted equally on both fork legs to provide equal performance.

FRONT FORK SETTING PROCEDURE

Test ride the motorcycle and find out how the front suspension reacts on various types of surface. According to the symptom noticed, adjust the front fork to the best setting for rider and race track conditions. To adjust, attempt changing fork oil capacity and compression and rebound damping force following the instructions below.

NOTE:

- When adjusting the front fork oil capacity, make sure that the oil capacity is within the specified range. Also, the capacity should be increased or decreased by 1 ml (0.034/0.035 US/Imp. oz).
- When adjusting the damping force, attempt turning the adjuster 1 to 2 click stops at a time for each adjustment.

Symptom	Section	Adjustment Procedure
Feels too hard overall	<ul style="list-style-type: none">• Jump• Large bumps• Series of medium bumps	<ol style="list-style-type: none">1. Adjust both compression and rebound damping force to a softer setting.2. Decrease fork oil capacity.3. Change the spring with an optional softer one.
Feels too soft overall and bottoms	<ul style="list-style-type: none">• Jump• Large bump• When braking	<ol style="list-style-type: none">1. Adjust the compression damping force to a stiffer setting.2. Increase fork oil capacity.3. Change the spring with an optional stiffer one.
Feels too hard near end of travel	<ul style="list-style-type: none">• Jump	Decrease fork oil capacity.
Feels too soft near end of travel and bottoms harshly	<ul style="list-style-type: none">• Jump• Large bump	<ol style="list-style-type: none">1. Adjust the compression damping force to a stiffer setting.2. Increase fork oil capacity.
Feels too hard in the beginning of stroke	<ul style="list-style-type: none">• Jump• Large bump• Series of medium bumps• Series of small bumps	Adjust the compression damping force to a softer setting.
Feels too soft and unstable	<ul style="list-style-type: none">• Series of medium bumps• Series of small bumps	Adjust the rebound damping force to a stiffer setting.
Bounces	<ul style="list-style-type: none">• Jump• Large bump	Adjust the rebound damping force to a stiffer setting.
Bounces	<ul style="list-style-type: none">• Series of small bumps	Adjust the rebound damping force to a softer setting.

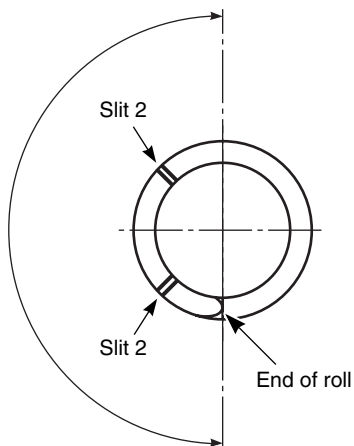
1. Remove the front fork. (Refer to Service Manual)
2. Remove the front fork spring. (Refer to Service Manual)
3. Adjust the front suspension according to the rider's weight and preference by referring to the table below.

Spring	Part No.	Spring rate	Identification (Slit mark on the spring end)	Standard Oil quantity	Oil quantity adjustable range
Soft (Option)	51171-46K10	4.9 N/mm (0.50 kgf/mm)	See Fig.1 below	360 ml (12.17/ 12.67 US/ Imp. oz)	310 – 380 ml (10.49/10.92 – 12.84/13.38 US/Imp. oz)
Standard	51171-46K00	5.0 N/mm (0.51 kgf/mm)	See Fig.2 below	360 ml (12.17/ 12.67 US/ Imp. oz)	310 – 375 ml (10.49/10.92 – 12.68/13.19 US/Imp. oz)
Hard (Option)	51171-46K20	5.1 N/mm (0.52 kgf/mm)	See Fig.3 below	360 ml (12.17/ 12.67 US/ Imp. oz)	310 – 375 ml (10.49/10.92 – 12.68/13.19 US/Imp. oz)

NOTE: Be sure to adjust the fork oil quantity within the above-mentioned range.

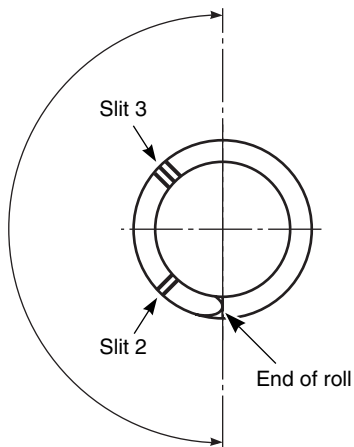
NOTE: Identification slit mark on the spring end is for spare parts only. The spring assembled at the factory does not have identification slit mark.

Fig.1



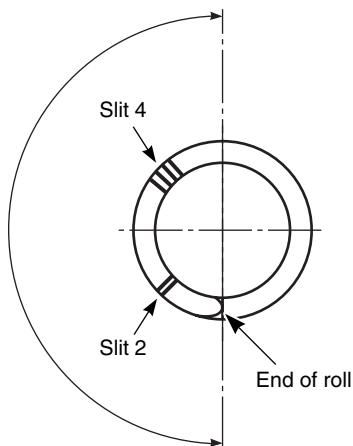
Soft (Part No.51171-46K10)

Fig.2



Standard (Part No.51171-46K00)

Fig.3



Hard (Part No.51171-46K20)

REAR SHOCK ABSORBER SETTING

WARNING



**This unit contains high-pressure nitrogen gas.
Mishandling can cause explosion.**

- **Keep away from fire and heat.**
- **Read owner's manual for more information.**

NOTE: Ask your Suzuki dealer to dispose of the rear shock absorber unit.

With the rear shock absorber of the RM-Z250, compression and rebound damping force can be adjusted in accordance with course conditions and rider preferences. In order to ensure efficient setting work, first check the items below to determine whether there are any suspension abnormalities.

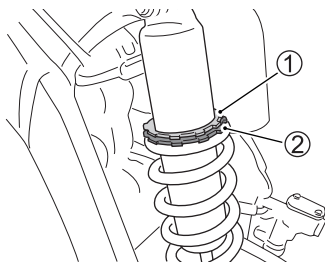
- Rear shock absorber damage and oil leakage (👉 6-42)
- Swingarm and links tightness (👉 6-42)
- Tire pressure (👉 6-39)
- Tire and wheel damages (👉 6-39)
- Spoke nipple tension and bead stopper nut tightness (👉 6-41)

NOTE:

- *Perform settings based on the feeling of running under standard setting.*
- *If you lose a sense of the setting orientation for some reason, return to standard setting and re-start adjustment.*

Spring Pre-load Adjustment

1. Support the motorcycle using the commercially available support stand, etc., and lift the rear wheel off the ground.
2. Remove the muffler and seat rail assembly.
(Refer to Service Manual)



3. Loosen the lock nut ①. Turn the adjuster ② clockwise or counter-clockwise to change the spring initial load. Tighten the lock-nut ①.



09910-60620:

Adjustable hook wrench

DATA

Standard spring set length:
When compressed to 3.0 mm (0.12 in) from spring free length

[Standard]:
242 mm (9.53 in)

DATA

Spring set length adjustable range:
229 – 243 mm (9.02 – 9.56 in)
[at spring free length 245 mm (9.65 in)]



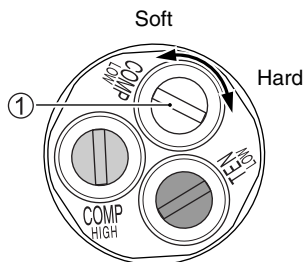
Spring adjuster lock-nut:
30 N·m (3.1 kgf-m, 22.5 lbf-ft)

NOTICE

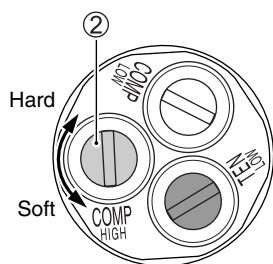
Turning the adjuster ② without loosening the lock-nut ① can damage the rear cushion unit.

Turn the adjuster after loosening the lock-nut.

Compression Damping Force Adjustment



(Low speed)



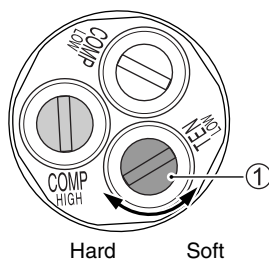
(High speed)

To set the adjuster, you must gently turn the adjust screw ①, ② clockwise until it stops, then back it out the recommended number of clicks. Do not force the adjust screw ①, ② past the stopped position, or you may damage the adjuster.

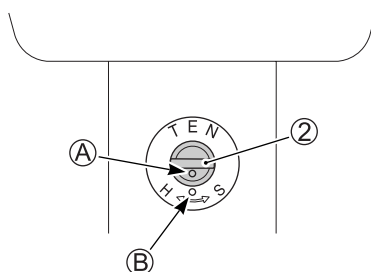
DATA **Standard setting:**
(Low speed)
 Turn the adjust screw ①
 counterclockwise 14 clicks

(High speed)
 Turn the adjust screw ②
 counterclockwise 14 clicks

Rebound Damping Force Adjustment



(Low speed)



(High speed)

To set the adjuster, you must gently turn the adjust screw ①, ② clockwise until it stops, then back it out the recommended number of clicks. Do not force the adjust screw ①, ② past the stopped position, or you may damage the adjuster.

DATA **Standard setting:**
(Low speed)
 Turn the adjust screw ①
 counterclockwise 14 clicks

(High speed)
 Turn the adjust screw ②
 counterclockwise 16 clicks
 until the two punch marks (A,
 B) align

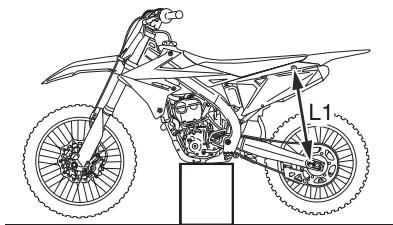
REAR SHOCK ABSORBER SPRING REPLACEMENT PROCEDURE

1. Remove the rear shock absorber. (Refer to Service Manual)
2. Remove the rear shock absorber spring. (Refer to Service Manual)
3. Select the rear shock absorber spring according to the rider's weight and preference by referring to the table below.

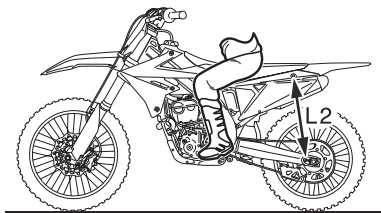
Part No.	Spring rate	Marking paint	Set-length adjustable range
(Soft) 62211-46K10 (Option)	50 N/mm (5.1 kgf/mm)	Blue	229 – 243 mm (9.02 – 9.56 in) [at spring free length 245 mm (9.65 in)]
(Standard) 62211-46K00	52 N/mm (5.3 kgf/mm)	Yellow	
(Hard) 62211-46K20 (Option)	54 N/mm (5.5 kgf/mm)	Pink	

SPRING PRE-SET LENGTH ADJUSTMENT

1. Support the motorcycle using the commercially available support stand, etc., and lift the rear wheel off the ground.



2. Measure the distance L1 from the seat bolt to the chain adjuster lock-nut.



3. Remove the support stand, etc., and ride onto the stopped motorcycle. Then, move the front and rear suspensions up and down several times.
4. Measure the distance L2 from the seat bolt to the chain adjuster lock-nut with riding the motorcycle normally in full riding gear.
5. Find the sag by subtracting L2 from L1.

NOTE:

- *The tank should be filled up with fuel and the rider should wear the racing outfit to match the weight at the competing time.*
- *Support the motorcycle vertically as much as possible when the measurement is performed.*
- *Two or more persons are required for the measurement.*

DATA Standard sag: 110 mm (4.33 in)

When the sag measured is:	Adjustment procedure
Less than 110 mm (4.33 in)	Reduce spring pre-set length by turning the spring adjuster nut.
More than 110 mm (4.33 in)	Increase spring pre-set length by turning the spring adjuster nut.

After the sag measurement has been set 110 mm (4.33 in), test ride the motorcycle and adjust the suspension for the rider and track conditions referring to the guide below.

NOTE: When adjusting the damping force setting, attempt turning the adjuster 1/4 to 1/2 turn stops at a time for each adjustment.

Symptom	Section	Adjustment Procedure
Feels too hard overall	<ul style="list-style-type: none"> • Jump • Series of bumps 	<ol style="list-style-type: none"> 1. Adjust the compression damping force to a softer setting. 2. Adjust the rebound damping force to a softer setting. 3. Change the spring with an optional softer one. (C/F 2-19)
Kicks up	<ul style="list-style-type: none"> • Medium to large bumps 	<ol style="list-style-type: none"> 1. Adjust the rebound damping force to harder settings. 2. Adjust the compression damping force to a harder setting.
Bottom feeling or feels too soft and unstable	<ul style="list-style-type: none"> • Jump • Large bump • Series of bumps 	<ol style="list-style-type: none"> 1. Adjust the compression damping force to harder settings. 2. Adjust the rebound damping force to a harder setting. 3. When the spring has been changed with an optional softer one than the standard, change it with a stiffer one. (C/F 2-19)
Feels harsh and hits bumps too harshly	<ul style="list-style-type: none"> • Jump • Large bump • Series of bumps 	<ol style="list-style-type: none"> 1. Adjust the compression damping force to a softer setting. 2. Adjust the rebound damping force to a softer setting. 3. When the spring has been changed with an optional softer one than the standard, the suspension might be felt bottom even with the above adjustment. In such cases, change the spring with an optional stiffer one. (C/F 2-19)
Provides poor traction	<ul style="list-style-type: none"> • Accelerating • Series of small bumps 	<ol style="list-style-type: none"> 1. Adjust the compression damping force to a softer setting. 2. If traction feeling does not improve after adjusting above mention, adjust the rebound damping force to a softer setting. 3. When the spring has been changed with an optional softer one than the standard, the suspension might be felt bottom even with the above adjustment. In such cases, change the spring with an optional stiffer one. (C/F 2-19)
Tends to sink front than rear	<ul style="list-style-type: none"> • Decelerating or braking 	<ol style="list-style-type: none"> 1. Adjust the compression damping force to a softer setting. 2. Adjust the rebound damping force to a harder setting.

FRONT AND REAR BALANCES OF THE SUSPENSIONS

Balancing the front to rear suspension properly is the most critical adjustment for suspension performance. If the front forks are adjusted harder than the rear suspension, such as changing to heavier front fork oil, stiffer compression and rebound setting and so on, the front forks will collapse less on bumps. This transfers more of the motorcycle and rider weight rearward, possibly causing the rear suspension to bottom, where as it felt fine before the front fork adjustment was made.

BALANCE TEST

Stand next to the motorcycle on level ground. Place one foot on the foot rest closest to you. Sharply push down. The front and rear suspensions should both collapse equally.

BALANCING TIPS

- Check the internal pressure in the front forks. Because the internal pressure varies depending on the outside air temperature or altitude, adjust it so that the air pressure reaches the same level as the atmospheric pressure using the air bleeder valve.
- When the rear shock absorber spring set length is adjusted using the spring adjuster nut, adjust it so that the sag amount reaches 110 mm (4.33 in). If it cannot reach 110 mm (4.33 in), the spring should be replaced to one with much higher or lower spring stiffness.
- The rear shock compression damping can be used to fine tune suspension balance and is easy to access.

FUEL, ENGINE OIL AND COOLANT RECOMMENDATIONS

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OXYGENATED FUEL RECOMMENDATION	3-2
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ENGINE COOLANT SOLUTION	3-5

FUEL, ENGINE OIL AND COOLANT RECOMMENDATIONS

FUEL OCTANE RATING

Use premium unleaded gasoline with an octane rating of 95 or higher (Research method).

(Canada)

Your motorcycle requires premium unleaded gasoline whenever possible, with a minimum pump octane rating of 90 ((R+M)/2 method). In some areas, the only fuels that are available are oxygenated fuels.

NOTE: The RM-Z250 engine is designed to use premium unleaded gasoline only. Use premium unleaded gasoline under all riding conditions.

OXYGENATED FUEL RECOMMENDATION

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.

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

Gasoline/Ethanol Blends

Blends of unleaded gasoline and ethanol (grain alcohol), also known as "GASOHOL", are commercially available in some areas. Blends of this type may be used in your motorcycle if they are no more than 10% ethanol. Make sure this gasoline-ethanol blend has octane ratings no lower than those recommended for gasoline.

Use the recommended gasoline which conforms to the following labels. (EU)



NOTE:

- To help minimize air pollution, Suzuki recommends that you use oxygenated fuels.
- Be sure that any oxygenated fuel you use has recommended octane ratings.
- If you are not satisfied with the drivability of fuel economy of your motorcycle when you are using an oxygenated fuel, or if engine ping-ing is experienced, substitute another brand as there are differences between brands.

NOTICE

Spilled gasoline containing alcohol can damage the painted surfaces of your motorcycle.

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

ENGINE OIL

DESCRIPTION

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.

NOTE: Before adding, draining, or replacing engine oil, read cautions on the engine oil container and instructions in this section.

SELECTING THE ENGINE OIL

Suzuki recommends the use of SUZUKI Recommend Oil or Equivalent Engine Oil.

< SUZUKI Recommend Oil >

Standard Oil	SAE	JASO
MOTUL 300V	10W-40	MA
ECSTAR R9000	10W-40	MA
ECSTAR R7000	10W-40	MA
ECSTAR R5000	10W-40	MA

< Equivalent Engine Oil >

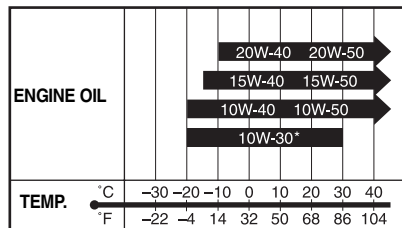
Equivalent Engine Oil means engine oil that meets the following standards.

SAE	API	JASO
10W-40	SJ, SL, SM or SN	MA (MA1, MA2)

API: American Petroleum Institute
JASO: Japanese Automobile Standards Organization

SAE Engine Oil Viscosity

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

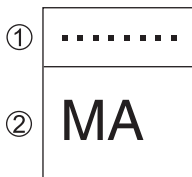


* USE ONLY SJ or SL.

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 (MA1, MA2) and MB. For example, the oil container shows the classification as follows.



- ① Code number of oil sales company
- ② Oil classification

Energy Conserving

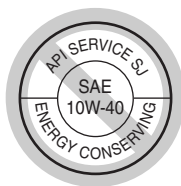
Suzuki does not recommend the use of "ENERGY CONSERVING" or "RESOURCE CONSERVING" oils. Some engine oils which have an API classification of SJ, SL, SM or SN have an "ENERGY CONSERVING" or "RESOURCE CONSERVING" indication in the API classification donut mark. These oils can affect engine life and clutch performance.

API SJ, SL, SM or SN



Recommended

API SJ, SL or SM



API SN



Not recommended

ENGINE COOLANT SOLUTION

Use "SUZUKI SUPER LONG LIFE COOLANT" or "SUZUKI LONG LIFE COOLANT". If "SUZUKI SUPER LONG LIFE COOLANT" and "SUZUKI LONG LIFE COOLANT" are not available, use a glycol-based anti-freeze compatible with an aluminum radiator mixed with distilled water only at the ratio of 50:50.

WARNING

Engine coolant is harmful or fatal if swallowed or inhaled. Solution can be poisonous to animals.

Do not drink antifreeze or coolant solution. If swallowed, do not induce vomiting. Immediately contact a poison control center or a physician. Avoid inhaling mist or hot vapors; if inhaled, remove to fresh air. If coolant gets in eyes, flush eyes with water and seek medical attention. Wash thoroughly after handling. Keep out of the reach of children and animals.

NOTICE

Spilled engine coolant can damage the painted surfaces of your motorcycle.

Be careful not to spill any fluid when filling the radiator. Wipe spilled engine coolant up immediately.

ENGINE COOLANT

Engine coolant performs as a rust inhibitor and water pump lubricant as well as an anti-freeze solution. Therefore engine coolant should be used at all times even though the atmospheric temperature in your area does not go down to the freezing point.

SUZUKI SUPER LONG LIFE COOLANT (Blue)

"SUZUKI SUPER LONG LIFE COOLANT" is pre-mixed to the proper ratio. Add only "SUZUKI SUPER LONG LIFE COOLANT" if coolant level drops. It is not necessary to dilute "SUZUKI SUPER LONG LIFE COOLANT" when replacing coolant.

SUZUKI LONG LIFE COOLANT (Green)

Water for mixing

Use distilled water only. Water other than distilled water can corrode and clog the aluminium radiator.

Required amount of water/coolant

Solution capacity (total):

1100 ml (1.16/0.97 US/Imp. qt)

50%	Water	550 ml (0.58/0.49 US/Imp. qt)
	Coolant	550 ml (0.58/0.49 US/Imp. qt)

NOTE: This 50% mixture will protect the cooling system from freezing at temperatures above -31°C (-24°F). If the motorcycle is to be exposed to temperature below -31°C (-24°F), this mixing ratio should be increased up to 55% ($-40^{\circ}\text{C}/-40^{\circ}\text{F}$) or 60% ($-55^{\circ}\text{C}/-67^{\circ}\text{F}$) coolant. The mixing ratio should not exceed 60% coolant.



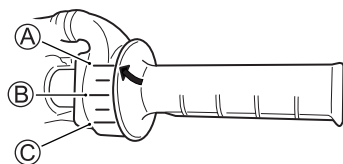
BREAK-IN (RUNNING-IN) AND INSPECTION BEFORE RIDING

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BREAK-IN (RUNNING-IN) AND INSPECTION BEFORE RIDING

BREAK-IN (RUNNING-IN)

When the motorcycle is new



- Ⓐ.....Closed
Ⓑ.....1/2
Ⓒ.....Full open

1. Warm up the engine before starting off.
2. Ride for 60 minutes using less than 1/2 throttle opening.
3. Ride for 60 minutes using less than 3/4 throttle opening.

NOTE: When the motorcycle is new, the bolts and nuts can loosen quickly. Be sure to retighten the bolts and nuts including engine mounting nut after riding.

When the following parts are replaced

Follow the same procedure when any of the following parts are replaced:

- Piston
- Piston ring
- Cylinder
- Crankshaft
- Crankshaft bearing

INSPECTION BEFORE RIDING

WARNING

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

Always inspect your motorcycle each time you use it to make sure it is in safe operating condition. Refer to the **INSPECTION AND MAINTENANCE** section in this owner's manual.

Before riding the motorcycle, you need to check the following items to make sure that your motorcycle is in good condition for the personal safety of the rider and protection of the motorcycle.

WARNING

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

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

WHAT TO CHECK	BEFORE RACE OR EACH TIME AFTER 2 HOURS RIDING	REMARKS
Spark plug	○	<ul style="list-style-type: none"> Heat range, fouled electrode, tightness Loose spark plug cap
Air cleaner element	○	<ul style="list-style-type: none"> Dust
Air cleaner	○	<ul style="list-style-type: none"> Damage Loose outlet tube
Engine oil	○	Oil level
Coolant	○	Coolant level
Cooling-system	○	<ul style="list-style-type: none"> Radiator hose damage Engine coolant leak
Clutch	○	<ul style="list-style-type: none"> Play Smooth operation
	○	Clutch plates wear and distortion
Throttle	○	<ul style="list-style-type: none"> Play Smooth operation
Crankcase breather hose	○	Breather hose clogging and bend
Engine idle speed	○	Revolution speed
Brake fluid	○	Fluid level
Brakes	○	<ul style="list-style-type: none"> Brake lever position Brake pedal height Operation
	○	Wear (pads)
Drive chain and engine sprocket	○	<ul style="list-style-type: none"> Lubrication Wear
Drive chain guide, buffer and rollers	○	<ul style="list-style-type: none"> Wear Damage
Sprockets	○	<ul style="list-style-type: none"> Wear Crack
Suspension	○	<ul style="list-style-type: none"> Smooth operation Internal pressure release from the front fork
Wheels	○	<ul style="list-style-type: none"> Spoke tension Bead stopper nut tightness or damage
Tires	○	Tire pressure
Steering	○	Smoothness, play
Cylinder head	○	Combustion chamber carbon deposit

WHAT TO CHECK	BEFORE RACE OR EACH TIME AFTER 2 HOURS RIDING	REMARKS
Piston and Cylinder	○	<ul style="list-style-type: none"> • Piston head carbon deposit • Piston and cylinder wear
Fuel hose	○	<ul style="list-style-type: none"> • Damage • Hose connection
Fuel tank	○	Leakage
Exhaust pipe and muffler	○	<ul style="list-style-type: none"> • Exhaust gas leakage • Tightening torque
	○	Damage
Bolts and nuts including engine mounting nut	○	Tightening torque



RIDING TIPS

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RIDING TIPS

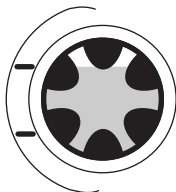
INSTRUCTIONS

NOTICE

Leaving the engine at idling speed after riding will cause engine overheat as this competition motorcycle does not have the radiator cooling fan and coolant reservoir. Riding the motorcycle under severe conditions such as muddy or sandy terrain with high ambient temperature can be overheated.

Do not leave the engine at idling after riding the motorcycle. Inspect the radiator for proper coolant level before riding for practice and race.

INSPECTION BEFORE ENGINE OIL LEVEL CHECK



“INSPECTION BEFORE ENGINE OIL LEVEL CHECK” is a simple inspection to make sure that the engine is filled with oil. Check that the engine oil is in the engine by watching through the engine oil level inspection window.

Before riding, it is required to confirm the specified engine oil level. For this inspection procedure, refer to “ENGINE OIL LEVEL CHECK” in page 6-19.


NOTICE

If the engine is started with insufficient or no oil, the engine components will possibly be damaged.

Always keep the engine oil at the specified level.

NOTE: The oil level measurement may become inaccurate unless the motorcycle is held upright as the motorcycle inclination affects the oil level.

STARTING THE ENGINE

- Inspect the engine oil level, coolant level and air cleaner condition before starting the engine.
( 6-19, 6-33, 6-14)
- Check that the fuel tank has enough fuel for practice or race before starting the engine.
- Shift the transmission into neutral.

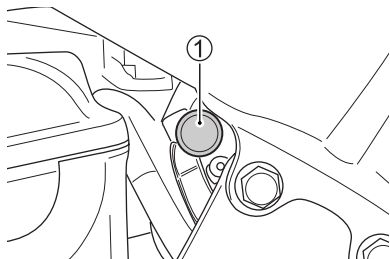
NOTE: When the clutch lever is squeezed, the motorcycle can be started with the transmission in any gear.

NOTICE

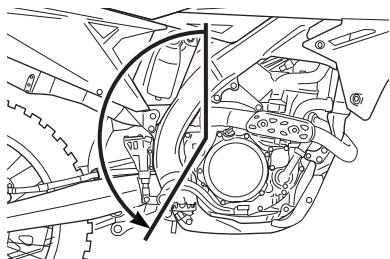
When the engine is racing with the gear put into the neutral, the life of the engine components might be shortened.

Avoid racing the engine at high speed to prevent shortening the life of engine components.

When the Engine is Cold:



1. Pull out the starter knob ①.



2. Kick down the kick starter lever slowly from the top position until engine compression resistance is felt, release the kick starter lever from this position and allow it to return to the top. While keeping the throttle closed, depress the kick starter lever strongly through the full stroke. Never open the throttle during the kick start operation.

NOTE: When kick-starting the engine, make sure to remove the accessory side stand.

3. Return the starter knob ① when the engine revs at steady speed.

When the Engine is already Warm or Restarts:

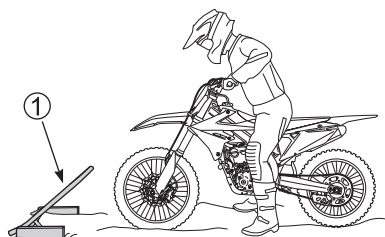
Kick down the kick starter lever slowly from the top position until engine compression resistance is felt, release the kick starter lever from this position and allow it to return to the top. While keeping the throttle closed, depress the kick starter lever strongly through the full stroke. Never open the throttle during the kick start operation.

NOTE: If the engine fails starting, open the throttle fully and depress the kick starter lever slowly about 4 – 5 times to clear too rich fuel mixtures in the engine. Close the throttle completely, and then start the engine.

Conditions when the starter knob is used	
Engine condition	Starter knob
Warm engine	Push back (OFF)*
Cold engine	Pull out (ON)

* If the engine is not started even after taking the above procedure, pull out the starter knob for starting the engine. When the engine is started, push back immediately the starter knob.

SELECTION OF S-HAC (SUZUKI HOLESHOT ASSIST CONTROL) MODE



S-HAC is a function that controls engine characteristics when starting a race using a starting gate ①. One of three different modes can be selected for engine control.

NOTE:

- S-HAC performs control intended specifically for starts that use a starting gate. Do not use S-HAC for a start that does not use a starting gate.
- The “start off” state of the motorcycle is defined as being from the point that the clutch is engaged.
- Starting off without opening the throttle (throttle opening of 1/8 or less) or after lowering the engine speed by frequent half-clutching may make determination of start off impossible. Do not use S-HAC when running under such conditions.

S-HAC MODE

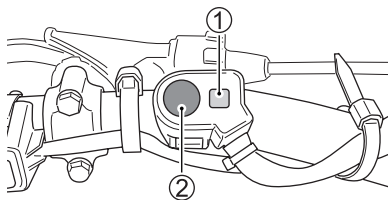
Mode (Indicator light)	Use for
Normal mode (Unlit)	—
Mode-A (slow flashing)	Hard & dry dirt, or concrete base
Mode-B (fast flashing)	Normal dirt

ENGINE CONTROL RELEASE CONDITIONS

Selected mode	Engine control release conditions
Mode-A or Mode-B	Control released 6 seconds after starting begins.
	Control released when throttle is closed after starting begins.
	Control released upon shift to 5th gear.
	Control released if starting off is not performed within 180 seconds after mode-A or mode-B is selected.
	Released when the S-HAC switch is pressed again and held down until indicator light turn off.

When any of the above conditions are met, the active mode is released and the normal mode is selected.

SELECTING A S-HAC MODE



Start the engine and shift the gear to neutral, 1st, or 2nd. Next, adjust the engine speed so it is no greater than 3500 rpm.

NOTE: The S-HAC mode setting cannot be change (to mode-A or mode-B) while a DTC (Diagnostic Trouble Code) is displayed.

Mode-A

- The indicator light ① will light for a lamp check (2 seconds) and then become an engine run time indicator light. Note, however, that even while the indicator light is lit to indicate the engine run time, holding down the S-HAC switch ② for more than 0.7 seconds will cause the indicator light ① to switch to slow flashing (mode-A).
- To select mode-A, release the S-HAC switch ② while the indicator light ① is flashing slowly (for about 1.8 seconds).
- Selecting mode-A will cause the slow flash pattern to continue.

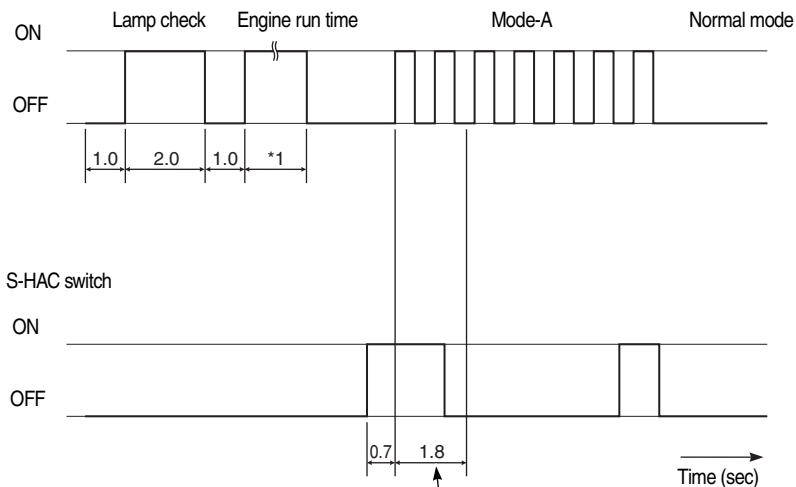
NOTE:

- *To switch to the normal mode from mode-A, hold down the S-HAC switch until the indicator light ① goes out.*
- *To switch from mode-A to mode-B, first switch to the normal mode and then switch to mode-B.*

Mode-A

*1 Indicator light will be lit for 0.2 sec. per 1 hour of engine run time.

Indicator light



Releasing the S-HAC switch during this interval will cause mode-A to be selected.

Mode-B

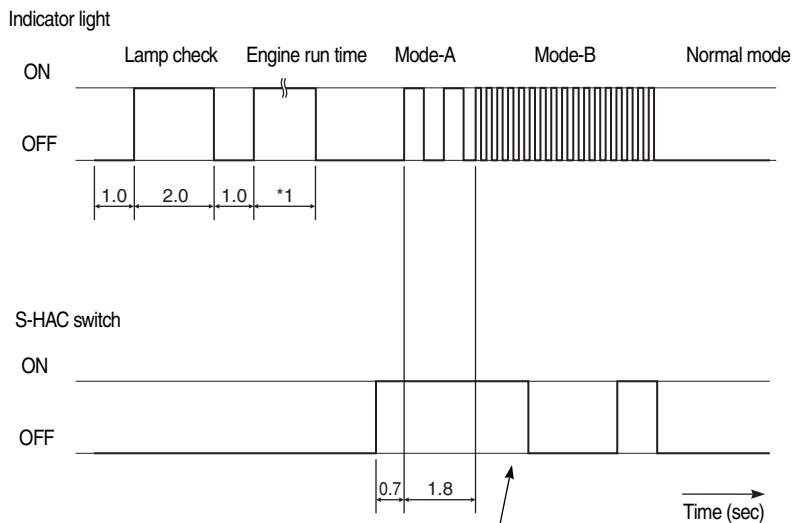
- The indicator light ① will light for a lamp check (2 seconds) and then become an engine run time indicator light. Note, however, that even while the indicator light is lit to indicate the engine run time, holding down the S-HAC switch ② for more than 0.7 seconds will cause the indicator light ① to switch to slow flashing (mode-A). Holding down the S-HAC switch ② for more than 1.8 seconds will cause the indicator light ① to switch to fast flashing (mode-B).
- Releasing the S-HAC switch ② to select mode-B will cause the fast flash pattern to continue.

NOTE:

- *After holding down the S-HAC switch to switch from mode-A (slow flashing) to mode-B (fast flashing), holding down the S-HAC switch again will only select normal mode.*
- *To switch from mode-B to mode-A, first switch to the normal mode and then switch to mode-A.*
- *To switch to the normal mode from mode-B, hold down the S-HAC switch until the indicator light ① goes out.*

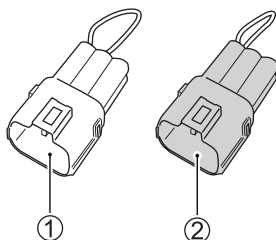
Mode-B

*1 Indicator light will be lit for 0.2 sec. per 1 hour of engine run time.



After the indicator light starts fast flashing, releasing the S-HAC switch will select mode-B.

SELECTION OF TUNING MAP



In the ECM of this model, there are three different maps provided, a standard map and two modified maps (Lean mixture injection map and Rich mixture injection map).

Select the appropriate short wire coupler among those that come supplied in the motorcycle shipping crate and connect it to the mode select coupler. This can change the ECM setting to the modified map (Lean mixture injection map or Rich mixture injection map).

	Short wire coupler color	Injection map
①	White	Lean
②	Gray	Rich
	White (with black tape)	Standard

NOTE: The changeover is executed immediately after the engine has been started.

- Select White short wire coupler (Lean mixture injection map) when:
 1. Raining
 2. In highly humidity
- Select Gray short wire coupler (Rich mixture injection map) when:
 1. In low humidity
 2. At continuous high speed

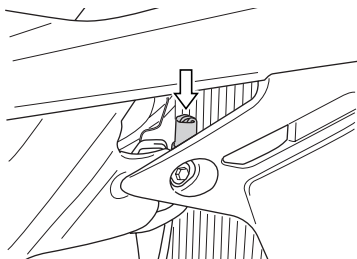
NOTE: The above information is provided only as a guide. To determine the setting, make sure to check also for drivability and spark plug firing end condition.

SHORT WIRE COUPLER CONNECTING PROCEDURE

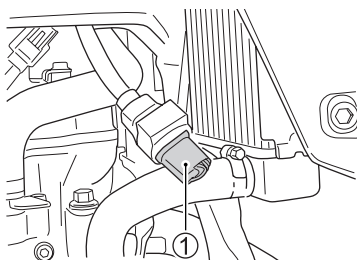
NOTICE

Improper mode select coupler can damage system.

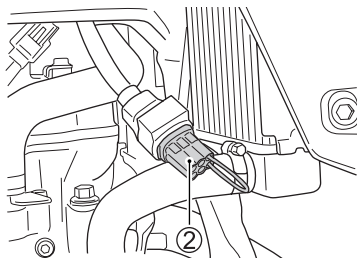
Keep dry when connecting the short wire coupler.



1. Remove the mode select coupler from the bracket.



2. Disconnect the standard short wire coupler ①.



3. Connect the short wire coupler ② to the mode select coupler.
4. Install the mode select coupler to the bracket.
5. Start the engine.



INSPECTION AND MAINTENANCE

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INSPECTION AND MAINTENANCE

REPLACEMENT PARTS

NOTICE

Use of replacement parts which are not equivalent in quality to genuine SUZUKI parts can lead to performance problems and damage.

Use only genuine SUZUKI replacement parts or their equivalent.

Genuine SUZUKI parts are high quality parts which are designed and built specially for SUZUKI motorcycle.

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 hours are shown. At the end of each interval, be sure to perform the maintenance listed.

WARNING

Exhaust gas contains carbon monoxide, a dangerous gas that is difficult to detect because it is colorless and odorless. Breathing carbon monoxide can cause death or severe injury.

Never start the engine or let it run indoors or where there is little or no ventilation.

NOTICE

Using poorly-made parts can cause negative impact on the motorcycle performance or damage to the motorcycle.

When replacing parts on your vehicle, use only genuine Suzuki replacement parts or their equivalent.



MAINTENANCE CHART

It is very important to inspect and maintain the machine regularly. Follow the guideline in the chart. The life of parts varies depending on the riding conditions. Perform more often than shown in the chart if you use the motorcycle under severe conditions.

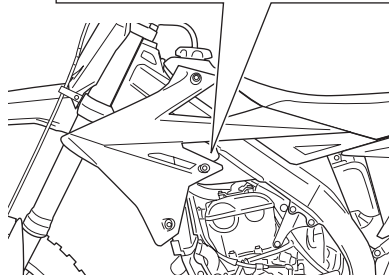
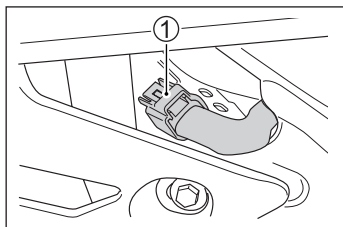
Service Item	Interval	Every race	Every 3 races	Every 6 races	Remarks
	hours	Every 2 hours	Every 6 hours	Every 12 hours	
Spark plug (🔧 6-17)		I	—	—	
Air cleaner (🔧 6-14)		C	—	—	Replace air cleaner element as necessary.
Engine oil (🔧 6-19)		—	R	—	Change after 1st initial break-in.
Engine oil filter (🔧 6-20)		—	—	R	
Oil strainers (🔧 6-22)		—	I & C	—	Inspect and clean after 1st initial break-in.
Cooling-system		I	—	—	<ul style="list-style-type: none"> • Replace radiator hose and engine coolant every year. • Flushing for overhaul or storage.
Clutch		I	—	—	Replace clutch plates as necessary.
Throttle cable and clutch cable (🔧 6-28, 6-30)		I & L	—	—	
Throttle body		I	—	—	
Throttle position sensor		I	—	—	
Crankcase breather hose		I	—	—	
Fuel hose (🔧 6-29)		I	—	—	Replace every 4 years. (Except for Canada) Replace every 5 years. (Canada)
Valve clearance		—	—	I	
Piston		—	—	R	
Piston ring		—	—	R	
Cylinder head, cylinder		—	—	I	
Muffler		I	—	—	
Silencer		I	—	R	Replace after race in sand.
Kick starter lever		I & L	—	—	
Drive chain (🔧 6-31)		I & L	R	—	Adjust slack every 30 minutes.
Crankcase driveshaft oil seal		I	—	—	<ul style="list-style-type: none"> • Inspect the oil seal frequently for abnormality (dust, stone or foreign materials). • If necessary, replace it with a new one.

Interval Service Item	racetracks	Every race	Every 3 races	Every 6 races	Remarks
	hours	Every 2 hours	Every 6 hours	Every 12 hours	
Engine sprocket		I	—	—	Check sprocket bolt for looseness at each race thereafter.
Rear sprocket		I	—	—	Check and retighten sprocket bolts at initial and subsequent 10 minutes of riding and each race thereafter.
Drive chain buffer and guide		—	R	—	
Brakes (🔧 6-35)		I	—	—	Replace brake hose and fluid every year.
Front brake caliper axle bolt		—	T	—	
Front fork oil		—	R	—	Change after 1st initial break-in.
Front fork		I	—	—	<ul style="list-style-type: none"> • Check front fork inner tube frequently for abnormality. • Internal pressure release from the front fork
Rear suspension		I	—	—	Check rear suspension system frequently and apply the grease to the pivoting portion as necessary.
Tire (🔧 6-39)		I	—	—	
Spoke nipple (🔧 6-41)		I	—	—	Inspect every 20 min. up to initial 2 hours then check before each ride.
Steering		I	—	—	
Frame		I	—	—	
Swingarm		I	—	—	
Fuel tank		I	—	—	
Bolts and nuts		T	—	—	Retighten every 1 hour.
Lubrication (🔧 6-10)		I	I	I	According to the schedule of "Lubrication Points".

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

* For each inspection or maintenance work, refer to the service manual on the attached DVD. For each work procedure, refer to the corresponding page in the list in the Chapter "0B" in the service manual.

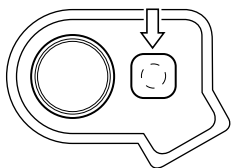
ENGINE RUN TIME INDICATION PROCEDURE



1. Disconnect the battery coupler ① from the cap.
2. Connect a 12 volt battery to the battery coupler using the battery wire.



36890-28H00:
Battery wire (option)

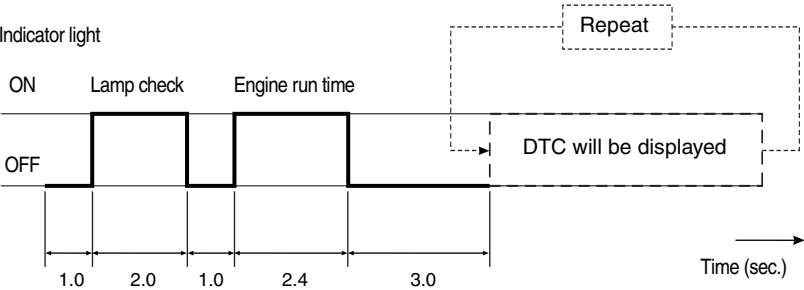


3. After indicator light will be lit for 2 seconds (lamp check), engine run time will be displayed by indicator light lighting time.

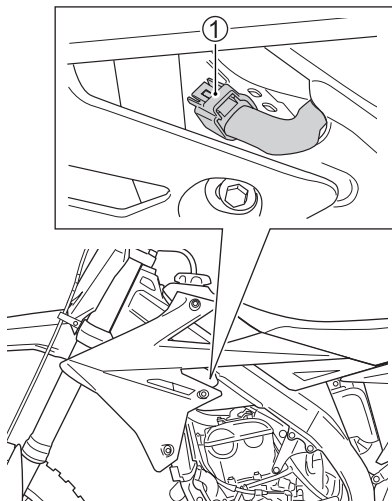
NOTE:

- Lighting of lamp check and engine run time is made only at the first time, and when there is DTC available, this DTC will be displayed repeatedly.
- Indicator light will be lit for 0.2 sec. per 1 hour of engine run time.
- However, the display of engine run time is limited to 100 hours (lit for 20 sec.).
- Perform the same operation when starting the engine.

EXAMPLE: In the case that the engine run time is 12 hours.



ENGINE RUN TIME RESET PROCEDURE

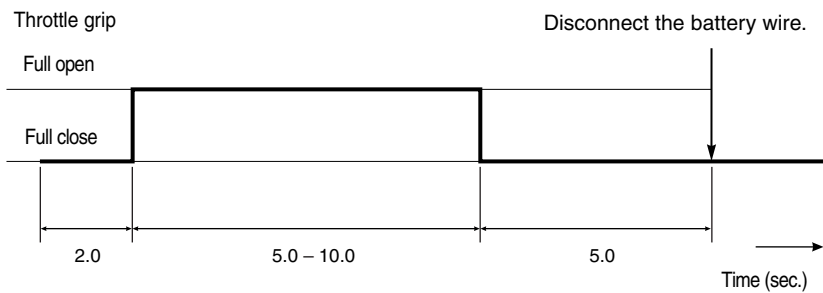


1. Disconnect the battery coupler ① from the cap.
2. Connect a 12 volt battery to the battery coupler using the battery wire.
3. After connecting the battery wire, turn the throttle grip to full open within 2 seconds, then maintain this state for 5 to 10 seconds.
4. Fully close the throttle grip for more than 5 seconds.
5. Disconnect the battery wire.



36890-28H00: Battery wire (option)

NOTE: In case of TP sensor failure, no engine run time reset operation is possible.



GENERAL LUBRICATION

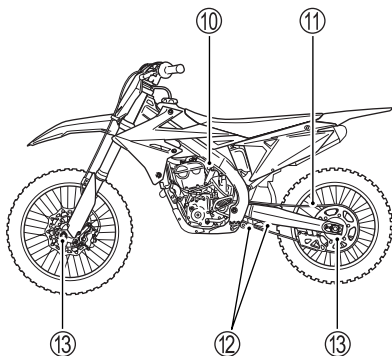
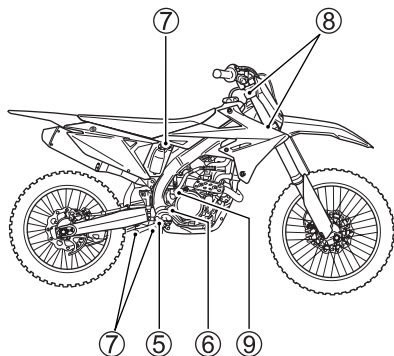
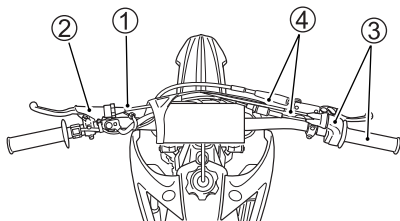
Apply grease or oil to the moving parts to increase durability and prevent wear.














NOTICE

Lubricating electrical switches can damage the switches.

Do not apply grease or oil to electrical switches.

Follow the maintenance schedule closely. The disassembly necessary to lubricate many components is in itself valuable preventative maintenance. It allows you to inspect for wear, fatigue and adjustment and it allows you to clean out the grit which otherwise cannot be gotten out.



No.	ITEM	LUBRICANT	FREQUENCY	COMMENTS
①	Clutch cable		Pre-race and between every race	Run oil through cables until it exits the lower end. Lube the cable ends where they pivot.
②	Clutch lever pivot			
③	Throttle grip and throttle case		Pre-race	Lightly grease the inside of throttle cable spool. Keep free from dirt.
④	Throttle cables			
⑤	Brake pedal pivot		Every 1 race/ More often according to conditions	Grease the brake pedal pivot.
⑥	Swingarm pivot		Every 3 races/ More often according to conditions	Clean and pack the bearings. Keep seals fresh. Grease the seals.
⑦	Rear suspension pivots		Every 1 race/ More often according to conditions	Clean and pack the bearings. Keep seals fresh. Grease the seals.
⑧	Steering stem bearings		Every 5 races/ More often according to conditions	Clean and pack the bearings. Keep seals fresh.
⑨	Kick starter lever pivot		Pre-race	Grease the kick starter lever pivot.
⑩	Choke shaft		Pre-race	Lightly oil the choke shaft.
⑪	Drive chain		Pre-race and between every race	Keep chain thoroughly lubed at all times. Always check wear and alignment.
⑫	Cushion lever dust seals		Every 1 race/ More often according to conditions	Grease the seals.
⑬	Front and rear wheels		Every 1 race/ More often according to conditions	Grease the bearing and seals.



.... Apply oil.



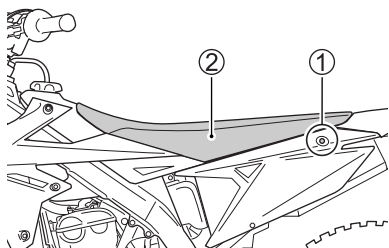
.... Apply grease.



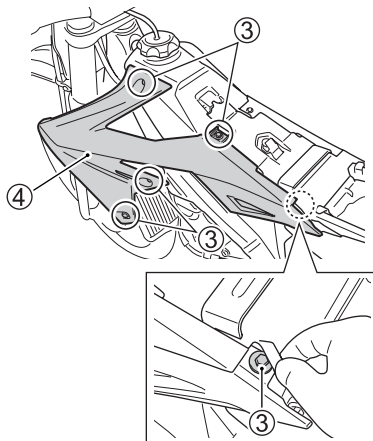
.... Apply water resistant grease EP2 or equivalent grease.

FUEL TANK

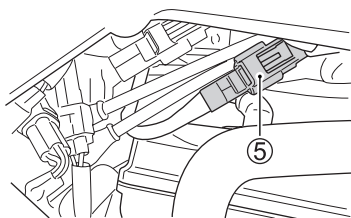
FUEL TANK REMOVAL



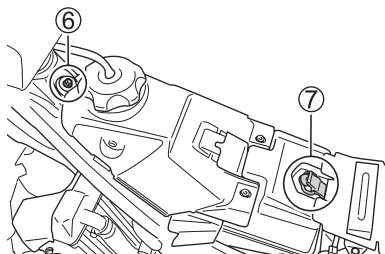
1. Remove the bolts ① and the seat ②.



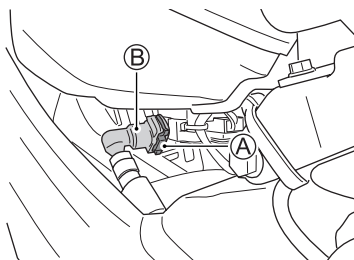
2. Remove the bolts ③ and the right and left radiator covers ④.



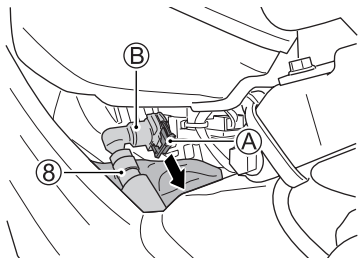
3. Disconnect the fuel pump coupler ⑤.



4. Remove the fuel tank bolt ⑥ and rubber band ⑦.



5. Lift and hold the fuel tank. Clean the retainer ① and fuel hose connector ②.



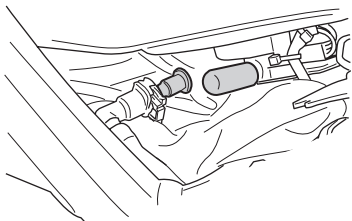
6. Place a rag under the fuel hose (8) and unlock the fuel hose connector (B) by pulling the retainer (A).
7. Remove the fuel hose connector (B) from fuel pipe.

⚠ WARNING

Fuel spilled from the fuel hose can catch on fire.

Stop the engine before disconnecting the fuel hose, and keep flames, sparks and heat sources away from the motorcycle. Do not smoke. Catch fuel in a container and dispose of drained fuel properly.

NOTE: When removing the fuel tank, do not leave the fuel hose (8) on the fuel tank side.



8. Put the cleaned plug and cap to the fuel hose and fuel pump.

NOTICE

Dirt and dust in the fuel supply line can damage the motorcycle.

- Put the plug and cap to the fuel hose and fuel pump when the fuel hose connector is disconnected.
- Be sure to keep the parts clean when disconnecting and connecting the connector.

9. Remove the fuel tank assembly.

AIR CLEANER

The air cleaner element must be kept clean to provide good engine performance. Use the following procedure to remove the element and inspect it.

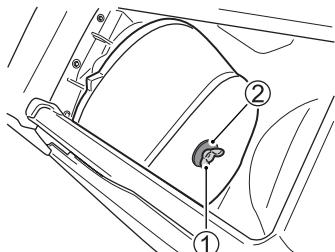
WARNING

Starting the engine with the air cleaner element removed, can be hazardous, because the combustion gas could spit back from the engine to the air intake box. In addition, without the air cleaner element, dirt could enter the engine, which might cause severe engine damage.

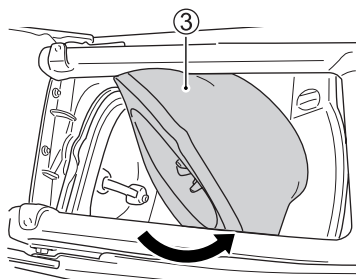
Never run the engine without the air cleaner element in place.

REMOVING THE ELEMENT

1. Remove the bolts and seat.



2. Remove the wing bolt ① and washer ②.



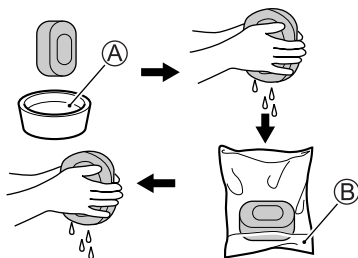
3. Remove the element ③.

NOTICE

Inappropriate air cleaner element handling may cause a tear of the element.

When the element is to be removed from or attached to the motorcycle, do it according to the arrow mark direction instruction in the above illustration.

WASHING THE ELEMENT



Wash the element as follows:

1. Fill a wash pan larger than the element with a non-flammable cleaning solvent (A). Dip the element in the solvent and wash it.

(A): MOTUL AIR FILTER CLEAN or equivalent cleaning solvent

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 air filter oil (B) and work the oil into the element.

(B): MOTUL AIR FILTER OIL or equivalent filter oil

5. Squeeze the element to remove excess oil.

NOTICE

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

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

6. Clean any dirt or debris from inside the air cleaner case.

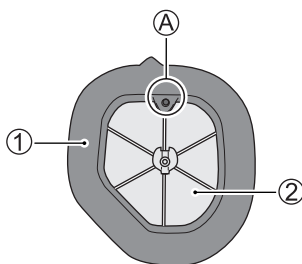
⚠ WARNING

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.

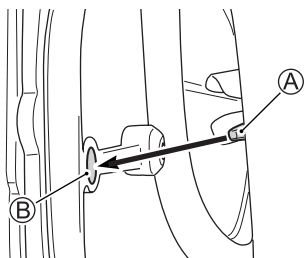
NOTE: Recycle or properly dispose of used oil and solvent.

INSTALLING THE ELEMENT



1. Fit the element ① onto the element holder ②.

NOTE: Fit the projection ① of the element holder to the hole of the element ①.



2. Install them in the air cleaner box by engaging the projection ① of the element holder with the hole ② of the air cleaner box.

NOTICE

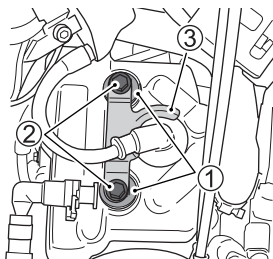
Failure to position the air cleaner element properly can allow dirt to bypass the air cleaner element. This will cause engine damage.

Be sure to properly install the air cleaner element.

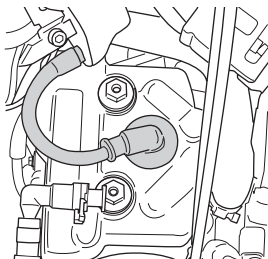
SPARK PLUG

To remove the spark plug, follow the procedure below.

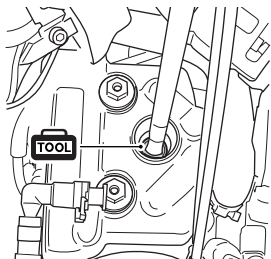
1. Remove the seat.
2. Remove the radiator covers and fuel tank.



3. While holding the cylinder head cover bolt ① securely with the wrench, remove the spark plug retainer bolt ②, and then remove the spark plug cap retainer ③.



4. Disconnect the spark plug cap.
5. Clean the spark plug cap and spark plug hole.



6. Remove the spark plug with the special tool.

 **09930-10121:**
Spark plug socket set

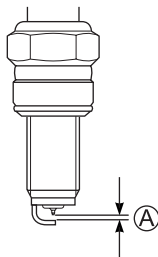
NOTE: Remove the dirt around the spark plug before removing the spark plug to prevent dirt from entering the combustion chamber.

NOTICE

Dirt can damage the moving engine parts of your motorcycle if it enters an open spark plug hole.

Cover the spark plug hole while the spark plug is out of the hole.

SPARK PLUG INSPECTION



Measure the spark plug gap **A** with a wire type feeler gauge. The standard spark plug gap is 0.9 – 1.0 mm (0.036 – 0.039 in). If the measured spark plug gap is out of standard range, replace the spark plug with a new one.

Whenever removing the carbon deposits, be sure to observe the operational color of each spark plug's porcelain tip. This color tells you whether or not the standard spark plug is suitable for your type of usage. A normally-operating spark plug should be very light brown in color. If the spark plug is very white or glazed appearing, it has been operating much too hot. Replace the spark plug with one with higher heat value (cold type).

On the other hand, when the spark plug color turns to black, it means that the motorcycle is running at the lower temperature condition. In such cases, it is required to replace the spark plug to one with lower heat value (hot type).

Standard Plug

NGK	CR8EIB-10
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INSTALLATION

Tighten the spark plug with specified tightening torque after tightening the spark plug temporarily with fingers.



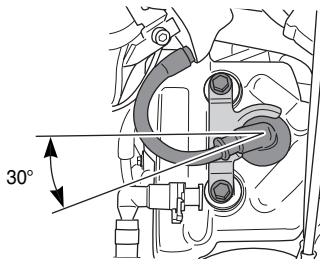
09930-10121:

Spark plug socket set



Spark plug:

11 N·m (1.1 kgf-m, 8.5 lbf-ft)



1. Connect the spark plug cap securely as shown.
2. Install the spark plug cap retainer. Tighten the spark plug cap retainer bolts to the specified torque.



Spark plug cap retainer bolt:

11 N·m (1.1 kgf-m, 8.5 lbf-ft)

ENGINE OIL

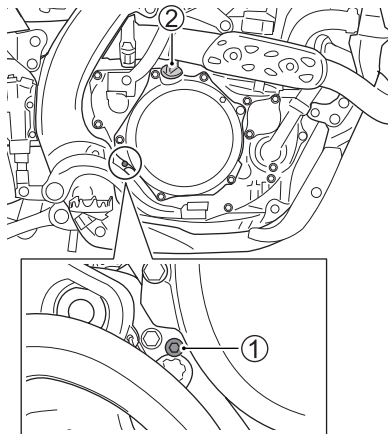
ENGINE OIL LEVEL CHECK

Check the engine oil level according to the following procedure, after the "INSPECTION BEFORE ENGINE OIL LEVER CHECK" is performed.

1. Place the motorcycle on level ground on the accessory side stand.
2. Start the engine and run it for three minutes.
3. Stop the engine and wait two minutes.
4. Hold the motorcycle vertically.

NOTE: The oil level measurement may become inaccurate unless the motorcycle is held upright as the motorcycle inclination affects the oil level.

NOTE: Do not run the engine at a speed higher than idling, otherwise the oil level to be inspected may be affected.



5. Thereafter if oil flows out when the oil check bolt ① is removed, the oil level is appropriate.

6. If oil is excessive, let oil flows out of the oil level hole.
7. If oil still does not come out, tighten the oil check bolt ①, remove the filler cap ② and pour an adequate amount of recommended oil.

CAUTION

Hot engine oil and exhaust pipes can burn you.

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

8. Repeat the above-mentioned procedure.
9. Tighten the oil check bolt ①.



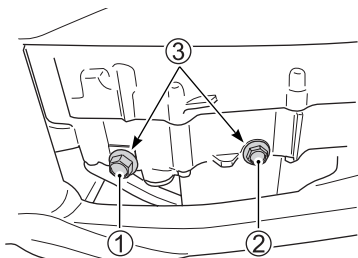
Oil check bolt:

5.5 N·m (0.56 kgf-m, 4.05 lbf-ft)

ENGINE OIL AND FILTER CHANGE

Change the engine oil and oil filter at the scheduled times. The oil should be changed when the engine is warm so that the oil will drain thoroughly from the engine. The procedure is as follows:

1. Place the motorcycle on the accessory side stand.
2. Warm up the engine. Start and run the engine at idle for 3 minutes.



3. Place a drain pan under the drain plug No.1 ① and No.2 ②.
4. Remove the oil filler cap, drain plug No.1 ① and drain plug No.2 ②. Drain the engine oil.
5. Depress the kick starter lever ten times or more. Swing the motorcycle to the right and left two times or more.
6. Drain engine oil thoroughly. Replace the gasket washers ③ with new ones and tighten the drain plug No.1 ① and drain plug No.2 ② to the specified torque.

 **Oil drain plug No.1:**
21 N·m (2.1 kgf-m, 15.5 lbf-ft)

 **Oil drain plug No.2:**
12 N·m (1.2 kgf-m, 9.0 lbf-ft)

NOTE: To avoid turning on the engine, push along the engine stop switch while depressing the kick starter lever.

CAUTION

Hot engine oil and exhaust pipes can burn you.

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

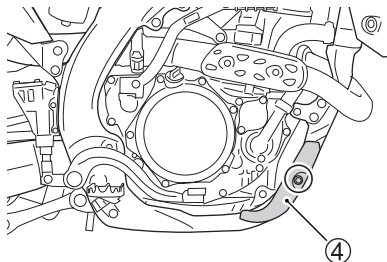
WARNING

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 oil may irritate skin.

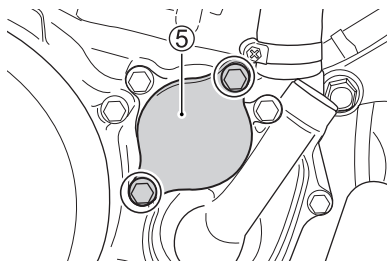
Keep new and used oil and used oil filters away from children and pets. To minimize your exposure to used oil, wear a long-sleeve shirt and moisture-proof gloves (such as dishwashing gloves) when changing oil. If oil contacts your skin, wash thoroughly with soap and water. Wash any clothes or rags if wet with oil. Recycle or properly dispose of used oil and filters.

NOTE:

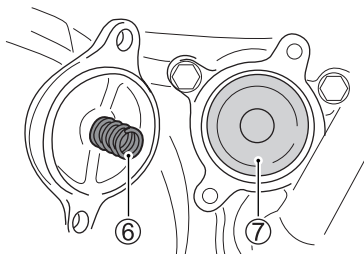
- Recycle or properly dispose of used oil.
- Before starting the work, check that there is not any dust, mud, or foreign object inside the oil jug or on the oil filter mounting surface.



7. Remove the bolt and right side protector (4).

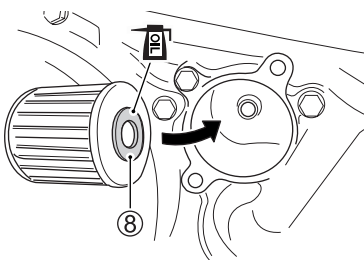


8. Remove the bolts and holding the oil filter cap (5) in place.

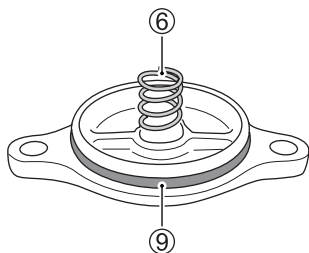


9. Remove the spring (6) and oil filter (7).

INSTALLATION



10. Apply engine oil lightly to the gasket (8) of new oil filter before installation.
11. Install the new oil filter.




12. Fix the spring ⑥ to the oil filter cap.
13. Replace the O-ring ⑨ with a new one and apply engine oil to it.
14. Install the oil filter cap and tighten the engine oil filter cap bolts to the specified torque.

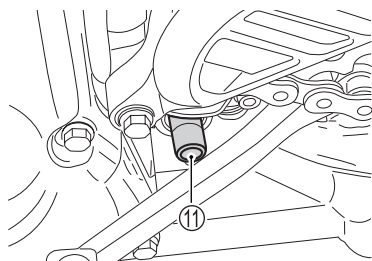
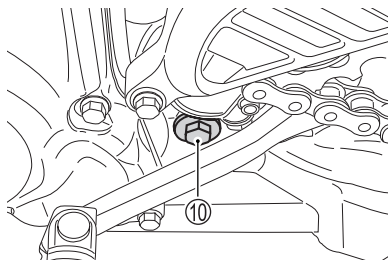
NOTICE

Failure to use an oil filter with the correct design can damage your motorcycle's engine.

Be sure to use a genuine Suzuki oil filter or an equivalent.

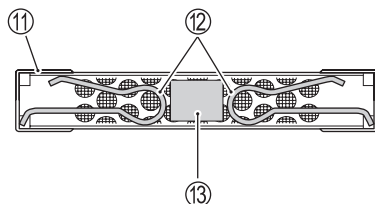
 Oil filter cap bolt:
11 N·m (1.1 kgf-m, 8.5 lbf-ft)

Oil Strainer (No.1) Cleaning



15. Remove the oil strainer cap ⑩.
Pull out the oil strainer No.1 ⑪.

NOTE: Inspect the oil strainer (No.1) when the engine oil is replaced.

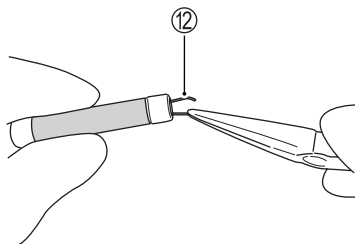


- ⑫ Clip
⑬ Magnet



16. Check the oil strainer for any damage or clogging. If the oil strainer is damaged, replace the oil strainer. If the oil strainer is clogging, clean the oil strainer in the following procedures.

NOTE: Clean the oil strainer thoroughly up to first 2 to 3 times because steel particles will be caught when the engine is new.

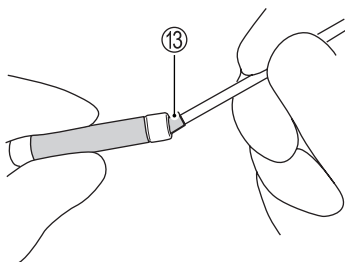


17. Remove the clip ⑫.

⚠ CAUTION

Sharp edge steel particles around the oil strainer magnet can harm your fingers.

Wear protective gloves when removing steel particles from the oil strainer.



18. Remove the magnet ⑬ using the suitable steel rod.

⚠ WARNING

The strainer has a strong magnet. Magnetic force may affect pacemaker operation.

Do not perform the maintenance if you wear a pacemaker.

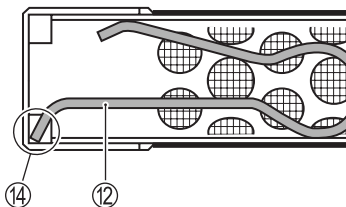
⚠ WARNING

Magnet is harmful if swallowed.

If removed magnet is swallowed, immediately contact a physician.

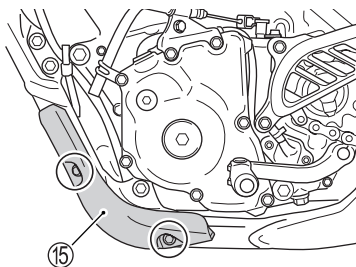
NOTE: Do not bring the magnet close to a magnetic card, a cellular phone, a watch and so on because this magnet has strong magnetic force.

19. Clean the magnet and oil strainer.

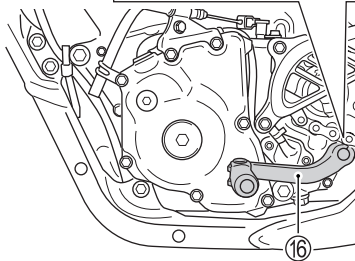
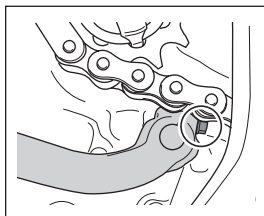


20. Insert the magnet and clip into the oil strainer. Hook the clip ⑫ to the groove ⑭.

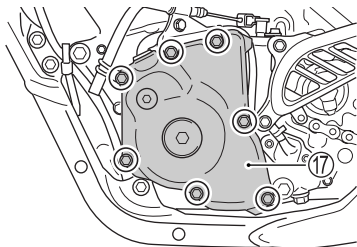
Oil Strainer (No.2) Cleaning



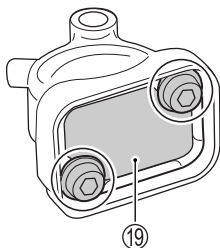
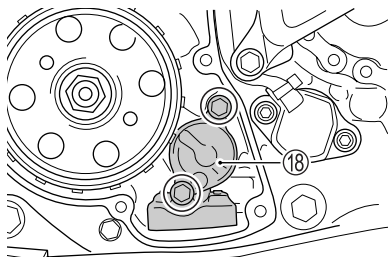
21. Remove the bolts and left side protector ⑮.



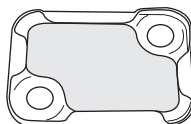
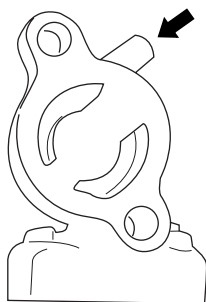
22. Remove the bolt and remove the gearshift lever ⑯.



23. Remove the bolts and remove the magneto cover ⑰.



24. Remove the bolts and remove the oil pump No.2 cover ⑱. Remove the bolts. Remove the oil strainer No.2 ⑲.



25. Check the oil strainers for any damage or clogging. If the oil strainer is damaged, replace the oil strainer. If the oil strainer is clogging, clean the oil strainer with a compressed air.

INSTALLATION

26. Install the oil strainer No.1 ⑪ and tighten the oil strainer cap ⑩ to the specified torque.

NOTE: Replace the gasket with a new one.



Engine oil strainer cap:
21 N·m (2.1 kgf-m, 15.5 lbf-ft)

27. Install the oil strainer No.2 ⑲ and tighten the oil strainer No.2 bolts to the specified torque.



Oil strainer No.2 bolt:
5.5 N·m (0.56 kgf-m, 4.05 lbf-ft)

28. Install the oil pump No.2 cover ⑱ and tighten the oil pump No.2 bolts to the specified torque.



Oil pump No.2 bolt:
11 N·m (1.1 kgf-m, 8.5 lbf-ft)

29. Install the magneto cover ⑰ and tighten the magneto cover bolts to the specified torque.



Magneto cover bolt:
11 N·m (1.1 kgf-m, 8.5 lbf-ft)

30. Install the gear shift lever and protector.
31. Pour fresh oil through the filler hole. Approximately 1000 ml (1.06/0.88 US/Imp. qt) will be required.

NOTE: About 950 ml (1.00/0.84 US/Imp. qt) of oil will be required when changing oil only.

NOTICE

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

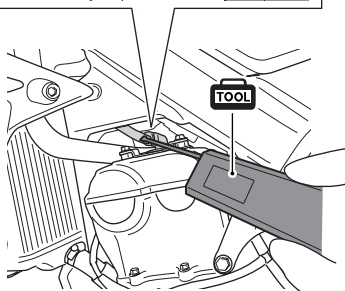
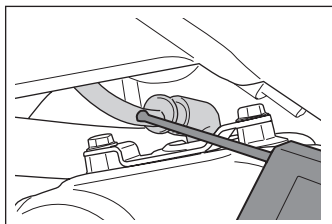
Be sure to use the oil specified in the FUEL, OIL AND ENGINE COOLANT RECOMMENDATIONS section.

32. Tighten the oil filler cap.
33. Start the engine and allow it to idle for three minutes. Check to see that no oil is leaking from the oil filter cap.
34. Check the oil level according to **ENGINE OIL LEVEL CHECK** procedure.

IDLE SPEED ADJUSTMENT

1. Adjust the throttle cable play.
(☞ 6-28)
2. Start the engine and warm it up.

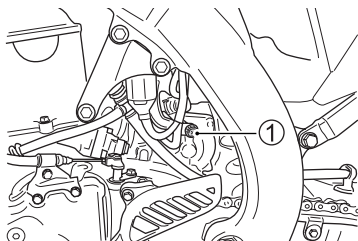
NOTE: Make this adjustment when the engine is hot.



3. Connect the special tool to the high-tension cord.



09900-26010:
Digital tachometer



4. Turn the idling adjust screw ① and set the engine idle speed as follows.

DATA Engine idle speed:
2200 ± 50 r/min

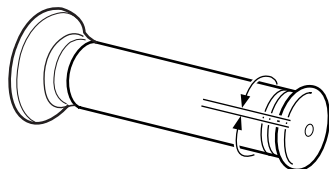
Turn	Engine idle speed
Clockwise	Increase
Counterclockwise	Decrease

THROTTLE CABLE ADJUSTMENT

WARNING

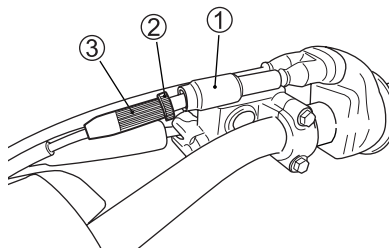
Inadequate throttle cable play can cause engine speed to rise suddenly when you turn the handlebars. This can lead to loss of control and an accident.

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



2.0 – 4.0 mm
(0.079 – 0.16 in)

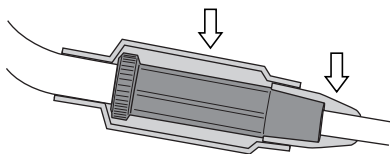
Measure the throttle cable play by turning the throttle grip. The throttle grip should have 2.0 – 4.0 mm (0.079 – 0.16 in) play.



1. Remove the boot ①.
2. Loosen the lock nut ②.
3. Turn the adjuster ③ in or out to obtain the correct play.
4. Tighten the lock nut ②.
5. Recheck the throttle cable play. Readjust it if it is not within the correct limits.
6. Replace the boot ①.

DATA Throttle cable play:
2.0 – 4.0 mm (0.079 – 0.16 in)

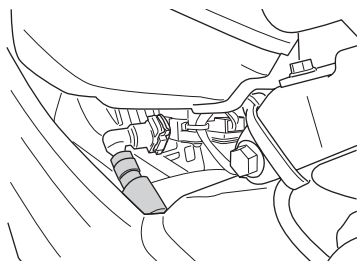
THROTTLE CABLE BOOTS



The throttle cable has boots. Check that the boots are fit securely. Do not apply water directly to the boots when washing. Wipe off dirt from the boots with a wet cloth when the boots are dirty.

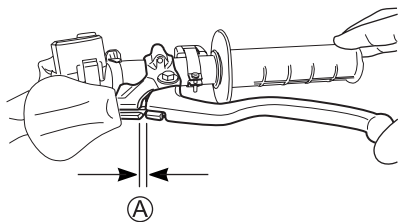
FUEL HOSE

Lift the fuel tank by referring to the FUEL TANK section.



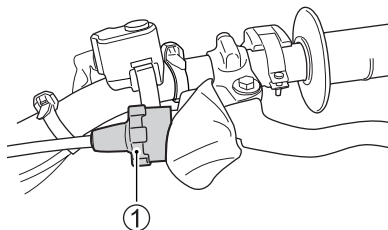
Inspect the fuel hose for damage and fuel leakage. If any defects are found, the fuel hose must be replaced. Replace the fuel hose every four years.

CLUTCH ADJUSTMENT



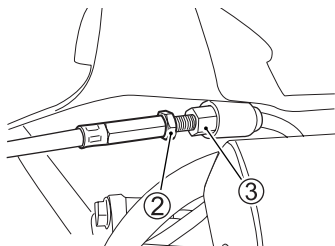
Adjust the clutch cable play as follows:

MINOR ADJUSTMENT (QUICK ADJUSTER)



Turn adjuster ① so the clutch lever clearance ① measured at the lever holder obtains 2 – 3 mm (0.08 – 0.11 in) when squeezing the lever until pressure is felt.

MAJOR ADJUSTMENT



1. Loosen the lock nut ②. Turn adjuster bolt ③ so the clutch lever clearance ① measured at the lever holder obtains 2 – 3 mm (0.08 – 0.11 in) when squeezing the lever until pressure is felt.
2. Tighten the lock nut ② to the specified torque.



Clutch cable adjuster lock nut:
2.1 N·m (0.21 kgf·m, 1.55 lbf·ft)

DRIVE CHAIN

When the drive chain needs to be replaced, and when you cannot do it yourself, consult with your Suzuki dealer. 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.

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 the instructions in this section.

WARNING

Servicing the machine with engine running can be hazardous. You can be caught in the moving parts such as the drive chain, sprockets etc.

Be sure to stop the engine when servicing the machine.

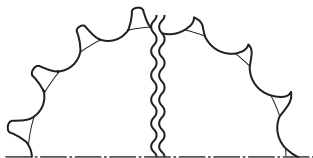
Inspecting the Drive Chain

When inspecting the chain, look for the following:

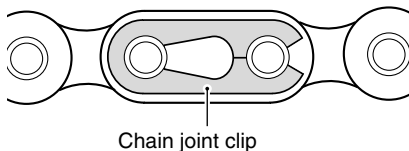
- Loose pins
- Damaged rollers
- Dry or rusted links
- Kinked or binding links
- Excessive wear
- Improper chain adjustment

If you find anything wrong with the drive chain condition or adjustment, consult your authorized Suzuki dealer or a qualified mechanic.

Good Worn



↔ Turning direction



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

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

DRIVE CHAIN CLEANING AND OILING

Clean and oil the chain as follows:

1. Remove dirt and dust from the drive chain.
2. Clean the drive chain with a drive chain cleaner, or water and neutral detergent.

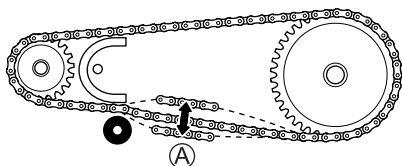
NOTICE

Cleaning the drive chain improperly can damage ruin the drive chain.

- Do not use a volatile solvent such as paint thinner, kerosene and gasoline.
- Do not use a high pressure cleaner to clean the drive chain.
- Do not use a wire brush to clean the drive chain.

3. Use a soft brush to clean the drive chain.
4. Wipe off water and neutral detergent.
5. Lubricate with a motorcycle drive chain lubricant or high viscosity oil (#80 – 90).
6. Lubricate both front and back plates of the drive chain.
7. Wipe off excess lubricant after lubricating all around the drive chain.

DRIVE CHAIN ADJUSTMENT



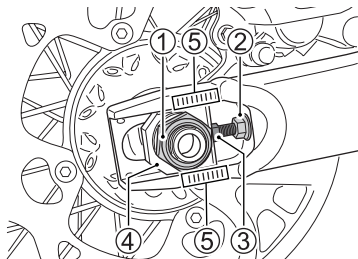
Measure the drive chain slack at the center between the chain buffer and the rear sprocket with the body supported with the support stand from underneath, and the rear wheel lifted off the ground. In the case that the measured value is not within the following value range, adjust it.

DATA Drive chain slack (A):
35 – 45 mm (1.4 – 1.7 in)

⚠ 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.



1. Loosen the axle nut ①.
2. Loosen the lock-nuts ② and adjust the drive chain slack to the specification by turning the adjusters ③. Make sure that the right and left adjuster washers ④ are at the same position on scales ⑤.
3. With the adjusters ③ held in position, tighten the lock-nuts ②.
4. Push the adjuster washers ④ to the adjusters ③ and tighten the axle nut ①.
5. Recheck the chain slack after tightening and readjust if necessary.

 **Rear axle nut:**
100 N·m (10.2 kgf-m, 74.0 lbf-ft)

ENGINE COOLANT

COOLANT LEVEL

WARNING

Engine coolant is harmful or fatal if swallowed or inhaled. Solution can be poisonous to animals.

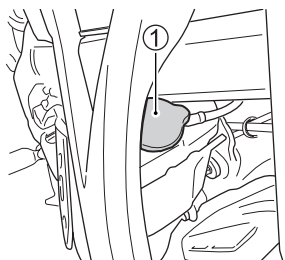
Store the coolant in the place always kept away from the reach of children or pets. If swallowed, do not force to vomit it, but get medical attention. When the coolant attaches onto your skin or enters you eye, wash it thoroughly away with water and receive medical treatment.

WARNING

You can be injured by scalding fluid or steam if you open the radiator cap when the engine is hot.

Do not open the radiator cap when the engine is hot. Wait until engine cools.

1. Check that the engine coolant level is at the bottom of the inlet hole. If not, replenish the radiator with specified engine coolant.



2. Tighten the radiator cap ① securely.

CAUTION

Improperly tightening the radiator cap will prevent the cooling system from reaching the specified operating pressure and will cause overheating.

Tighten the radiator cap until it locks firmly.

NOTE:

- Adding only water will dilute the engine coolant and reduce its effectiveness. Add specified engine coolant.
- This motorcycle does not have an overflow tank at the end of breather hose. Therefore, engine coolant level may decrease while riding. Check the engine coolant level every time before riding.

RADIATOR HOSE INSPECTION

Inspect the radiator hose to make sure that there is no crack, damage or leakage of coolant. If any defect is found, replace the radiator hose with a new one. If you cannot replace it yourself, ask your Suzuki dealer to replace the radiator hose with a new one.

BRAKES

This motorcycle has front and rear disc brakes.

WARNING

Failure to properly inspect and maintain your motorcycle's brake systems can increase your chance of having an accident.

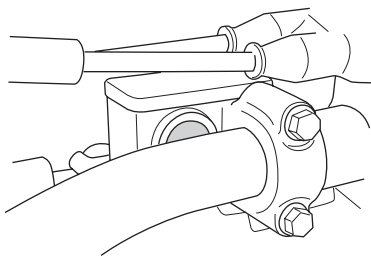
Be sure to inspect the brakes before each use according to the **INSPECTION BEFORE RIDING** section. Always maintain your brakes according to the **MAINTENANCE SCHEDULE**.

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.

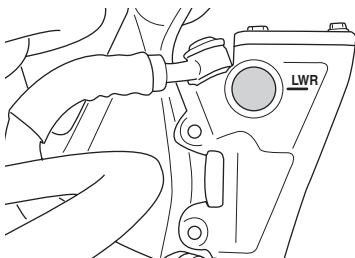
BRAKE HOSE INSPECTION

Inspect the brake hose and hose joint to make sure that there is no crack, damage or leakage of brake fluid. If any defect is found, replace the brake hose with a new one. If you cannot replace it yourself, ask your Suzuki dealer to replace the brake hose with a new one.

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 will gradually absorb moisture through the brake hoses. Brake fluid with high water content lowers the boiling point and can cause brake system malfunction due to corrosion of brake components. Boiling brake fluid or brake system malfunction could result in an accident.

Replace the brake fluid every two years to maintain braking performance.

WARNING

The use of any fluid except DOT4 brake fluid from a sealed container can damage the brake system and lead to an accident.

Clean filler cap before removing. Use only DOT4 brake fluid from a sealed container. Never use or mix with different types of brake fluid.

WARNING

Brake fluid is harmful or fatal if swallowed, and harmful if it comes in contact with skin or eyes. Solution can be poisonous to animals.

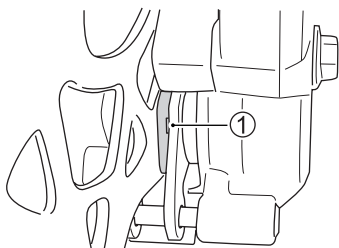
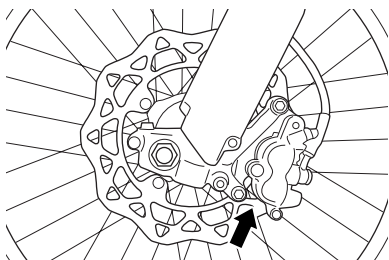
If brake fluid is swallowed, do not induce vomiting. Immediately contact a poison control center or a physician. If brake fluid gets in eyes, flush eyes with water and seek medical attention. Wash thoroughly after handling. Keep out of the reach of children and animals.

NOTICE

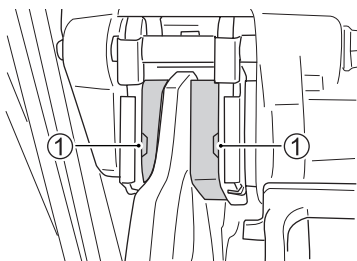
Spilled brake fluid can damage painted surfaces and plastic parts.

Be careful not to spill any fluid when filling the brake fluid reservoir. Wipe spilled fluid up immediately.

BRAKE PADS



FRONT



REAR

Inspect the front and rear brake pads to see if they are worn down to the grooved wear limit line ①. 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

Failure to inspect and maintain the brake pads and replace them when recommended can increase your chance of having an accident.

When the brake pad needs to be replaced, and when you cannot replace it yourself, ask your Suzuki dealer to replace it with a new one. Inspect and maintain the brake pad as recommended.

WARNING

If you ride this motorcycle after brake system repair or brake pad replacement without pumping the brake lever/pedal, you may get poor braking performance which could result in an accident.

After brake system repair or brake pad replacement, pump the brake lever/pedal several times until brake pads are pressed against the brake discs and proper lever/pedal stroke and firm feel are restored.

WARNING

Replacing only one of the two brake pads can result in uneven braking action and can increase your chance of having an accident.

Always replace both pads together.

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 and brake fluid leakage may result.

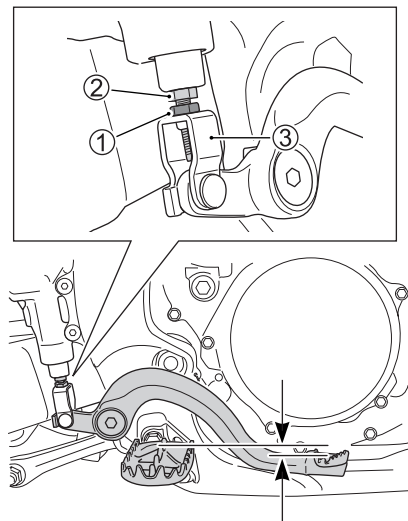
REAR BRAKE PEDAL ADJUSTMENT

NOTICE

An incorrectly adjusted brake pedal may force brake pads to continuously rub against the disc, causing damage to the pads and disc.

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

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.
2. Adjust the brake pedal height by turning adjuster ② to locate the pedal 0 – 10 mm (0 – 0.39 in) below the top face of the footrest.
3. While holding the yoke ③, tighten the lock nut to the specified torque.

 **Rear brake master cylinder rod lock nut:**
6.0 N·m (0.61 kgf·m, 4.45 lbf·ft)

TIRES

WARNING

The tires on your motorcycle form the crucial link between your motorcycle and the road. Failure to take the precautions below may result in an accident due to tire failure.

- Check tire condition and pressure before each ride, and adjust pressure if necessary.
- Replace a tire when worn significantly, or if you find damage such as cuts or cracks.
- Read this section of the owner's manual carefully.

TIRE PRESSURE AND LOADING

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.

Cold tire inflation pressure

FRONT	70 – 110 kPa 0.7 – 1.1 kgf/cm ² 10 – 16 psi
REAR	70 – 110 kPa 0.7 – 1.1 kgf/cm ² 10 – 16 psi

TIRE CONDITION AND TYPE

Tire condition and tire type affect motorcycle performance. Cuts, cracks in the tires or tire wear negatively affect the motorcycle handling which might lead the loss of motorcycle control.

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.

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

	FRONT	REAR
SIZE	80/100-21 51M	100/90-19 57M
TYPE	DUNLOP GEOMAX MX33F	DUNLOP GEOMAX MX33

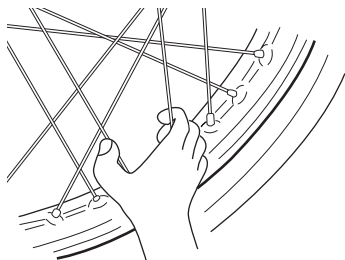


WARNING

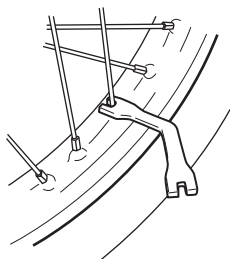
An improperly repaired or installed tire can cause loss of control and an accident.

When the tire needs to be repaired or replaced, and when you cannot do it yourself, ask your Suzuki dealer or a qualified mechanic to perform tire repair or replacement because they have proper tools and experience.

SPOKE NIPPLE AND BEAD STOPPER NUT




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.



Retighten the spoke nipples with a spoke nipple wrench so as all spokes have same tension.

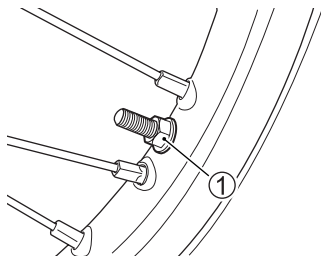
 **Spoke nipple (front wheel):**
5.5 N·m (0.56 kgf-m, 4.05 lbf-ft)

 **Spoke nipple (rear wheel):**
6.0 N·m (0.61 kgf-m, 4.45 lbf-ft)

NOTICE

Improperly tightening the spoke nipples can damage the wheel.

Tighten the spoke nipples less than 1/2 turn at a time. Inspect the spoke tension and then retighten the spoke nipple.

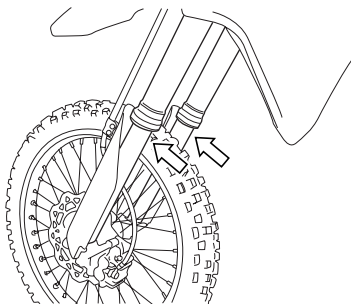


Inspect the bead stopper nut ① for tightness.

 **Bead stopper nut (front wheel):**
14 N·m (1.4 kgf-m, 10.5 lbf-ft)

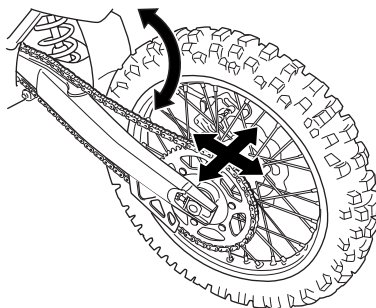
 **Bead stopper nut (rear wheel):**
17 N·m (1.7 kgf-m, 12.5 lbf-ft)

FRONT FORK



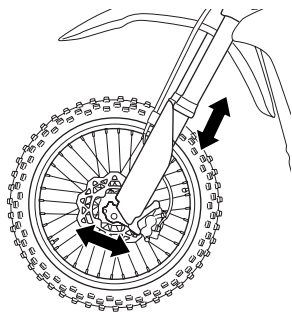
- Move the front fork up and down several times and inspect for smooth movement.
- Inspect for damage and oil leaks.
- Inspect the bolts and nuts for tightness.
- If any defects are found, replace the front fork with a new one.

REAR SUSPENSION



- Move the rear suspension up and down several times and inspect for smooth movement.
- Inspect for damage and oil leaks.
- Inspect the bolts and nuts for tightness.
- Inspect that the rear suspension has play or binds by moving the swingarm up and down, and right and left.
- If necessary, replace the defective parts with a new one.

STEERING



Inspect the steering by moving the front forks up and down, and back and forward. If the steering has play or binds, inspect steering stem head nut tightness and steering bearings.



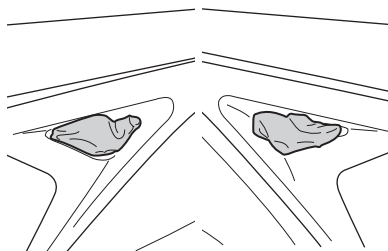


MOTORCYCLE CLEANING AND STORAGE PROCEDURE

MOTORCYCLE CLEANING	7-2
INSPECTION AFTER CLEANING	7-4
STORAGE PROCEDURE	7-4
PROCEDURE FOR RETURNING TO SERVICE	7-5
CORROSION PREVENTION	7-6

MOTORCYCLE CLEANING AND STORAGE PROCEDURE

MOTORCYCLE CLEANING



Follow the instructions below to prevent water from entering the engine through the air cleaner element when cleaning the motorcycle.

- Cover the element with a plastic bag.
- Install the seat.
- Cover the inlet holes on the frame covers in order to prevent water from entering the air cleaner box.

Do not spray high pressure water to the air cleaner box.

WASHING THE MOTORCYCLE

When washing the motorcycle, follow the instruction below:

1. Remove dirt and mud from the motorcycle with cool 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 a neutral detergent using a sponge or soft cloth. The sponge or cloth should be frequently soaked in the soap solution.

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

- Spark plug
- Fuel tank cap
- Fuel injection system
- Brake master cylinders
- Throttle cable boots
- Front fork dust seal

NOTICE

High pressure washers such as those found at coin-operated car washes have enough pressure to damage the parts of your motorcycle. It may cause rust, corrosion and increase wear. Parts cleaner can also damage motorcycle parts.

Do not use high pressure washers to clean your motorcycle. Do not use parts cleaner on throttle body and fuel injection sensors.

3. Once the dirt has been completely removed, rinse off the detergent with plenty of water.

NOTE: The detergent used to wash the motorcycle can negatively affect plastic parts if the detergent is not fully rinsed off. Make sure to fully rinse off all detergent with plenty of water after washing the motorcycle.

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 following the procedure below:
 - a. Clean all damaged spots and allow them to dry.
 - b. Stir the paint and "touch-up" the damaged spots lightly with a small brush.
 - c. Allow the paint to dry completely.

NOTE: Be sure to dry the motorcycle after washing the motorcycle. Blow off water from parts by applying air blow if it is necessary to remove parts just after washing the motorcycle.

NOTICE

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

Make sure to fully rinse off all detergent with plenty of water after washing the motorcycle.

WAXING THE MOTORCYCLE

After washing the motorcycle, waxing and polishing are recommended to further protect and beautify the paint.

- Only use waxes and polishes of good quality.
- When using waxes and polishes, observe the precautions specified by the manufacturers.

INSPECTION AFTER CLEANING

For extended life of your motorcycle, lubricate it according to the "LUBRICATION POINTS" section.

WARNING

Operating the motorcycle with wet brakes can be hazardous. Wet brakes may not provide as much stopping power as dry brakes. This could lead to an accident.

Test your brakes after washing the motorcycle, while riding at slow speed. If necessary, apply the brakes several times to let friction dry out the linings.

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

STORAGE PROCEDURE

Because this motorcycle is a competition motorcycle, it is not equipped with the ignition switch and handle-locking mechanism as in a general commercial motorcycle. In order to prevent theft or riding by a child without permission, take the greatest care to store the motorcycle in an appropriate place. Storing the motorcycle indoors is recommended to prevent rust formation, etc.

If the motorcycle is to be left unused for a long time, the machine needs special servicing requiring appropriate materials, equipment and skills. If you cannot do it yourself, Suzuki recommends you to ask your Suzuki dealer. If you do it yourself, follow the general guidelines below.

MOTORCYCLE

Clean the entire motorcycle. Place the motorcycle on the accessory side stand on a firm, flat surface where it will not fall over.

FUEL

Drain the fuel from the fuel tank to make it empty.

ENGINE

1. Pour about 5 ml (0.17/0.18 US/ Imp. oz) of engine 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 to the specified level.
3. Cover the air cleaner intake and the muffler outlet with oily rags to prevent humidity from entering.

TIRES

Inflate the tires to the normal specifications.

EXTERNAL

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

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. Remove the spark plug. Turn the engine a few times. Reinstall the spark plug.
5. Make sure that the motorcycle is properly lubricated.
6. Perform the **INSPECTION BEFORE RIDING** as listed in this manual.
7. Start the motorcycle as outlined in this manual.

If the engine is hard to start, follow the procedure below:

Due to deterioration of fuel remaining in the fuel line for long period, engine will be difficult to start until the deteriorated (stale) fuel is discharged from the fuel line. Repeated kick operation is required for flushing the fuel line with fresh fuel.

1. Fill the fuel tank more than half full.
2. Shift the transmission into neutral.
3. While keeping the throttle approximately 1/4 open, repeat kick start operation 30 to 40 times.

NOTE: Fuel injection volume is controlled to increase in throttle open condition. However, do not open throttle more than 1/2 as fuel injection is shut off in wide open throttle in engine start mode.

4. Start the engine by following cold engine start procedure.

NOTE: If the engine fails to start after several attempts, spark plug will be get wet. In this case, repeat kick start operation 4 to 5 times with throttle fully opened to dry the spark plug. No fuel is injected with full throttle opening in engine start mode.

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

- Accumulation of road salt, dirt, moisture, or chemicals in hard-to-reach areas.
- 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 fall-out 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 and plastic parts to fade.



SPECIFICATIONS

DIMENSIONS AND CURB MASS

Overall length	2185 mm (86.0 in)
Overall width	835 mm (32.9 in)
Overall height	1255 mm (49.4 in)
Wheelbase	1485 mm (58.5 in)
Ground clearance	330 mm (13.0 in)
Seat height	955 mm (37.6 in)
Curb mass (weight)	106 kg (234 lbs)

ENGINE

Type	Four-stroke, liquid-cooled, DOHC
Number of cylinders	1
Bore	77.0 mm (3.03 in)
Stroke	53.6 mm (2.11 in)
Displacement	249 cm ³ (15.195 cu. in)
Compression ratio	13.75 : 1
Fuel system	Fuel injection
Air cleaner	Polyurethane foam element
Starter system	Primary kick
Lubrication system	Semi-Dry sump

DRIVE TRAIN

Clutch	Wet multi-plate type
Transmission	5-speed constant mesh
Gearshift pattern	1-down, 4-up
Primary reduction ratio	3.315 (63/19)
Gear ratios, Low	2.153 (28/13)
2nd	1.705 (29/17)
3rd	1.470 (25/17)
4th	1.238 (26/21)
Top	1.090 (24/22)
Final reduction ratio	3.846 (50/13)
Drive chain	DID 520DMA4K, 114 links

CHASSIS

Front suspension	Inverted telescopic, coil spring, oil damped
Rear suspension	Link type, coil spring, oil damped
Front suspension stroke	310 mm (12.2 in)
Rear wheel travel	299 mm (11.8 in)
Caster	28° 40'
Trail	125 mm (4.92 in)
Front brake	Disc
Rear brake	Disc
Front tire size	80/100-21 51M, tube type
Rear tire size	100/90-19 57M, tube type

ELECTRICAL

Ignition type	Electronic ignition (CDI)
Spark plug	NGK CR8EIB-10
Generator	Single-phase A.C. generator

CAPACITIES

Fuel tank.....	6.3 L (1.66/1.39 US/Imp. gal)
Engine oil, oil change	950 ml (1.00/0.84 US/Imp. qt)
With filter change.....	1000 ml (1.06/0.88 US/Imp. qt)
Overhaul	1100 ml (1.16/0.97 US /Imp. qt)
Coolant	1100 ml (1.16/0.97 US/Imp. qt)

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