

WELCOME

Our scooter presents you with a challenge; a challenge to master a machine, a challenge to experience adventures, a challenge to be free. Unlike an automobile, there is no metal cage around you. There is only you and the road, linked together by a vehicle that responds to your every command like no other. Your reward...FREEDOM.

To answer this challenge, and to enjoy the adventures ahead, you should first become thoroughly familiar with this owner's manual.

As you read this manual, you will find information that is preceded by a NOTICE. This information is intended to help you avoid damages to your scooter, your body, property of others, and the environment.

IMPORTANT INFORMATION

1. Operator and Passenger

This scooter is designed to carry one operator and one passenger. Never exceed the manufacturer's recommended maximum weight capacity as shown on the loading label.

2. On-road Use Only

This scooter is designed to be used only on paved roads.

3. Read This Owner's Manual Carefully

Pay special attention to safety messages that appear throughout this manual. This manual should be considered a permanent part of your scooter, and should remain with the scooter when resold to subsequent owners.

SAFETY INFORMATION

Important Safety Information

Understand the challenges that you will face when operating a scooter will greatly improve your safety on the roads. There are many things that you can do to protect yourself when riding. You will find many helpful recommendations throughout this manual. Following are few that we consider most important.

Always Wear Protective Gears

It is a proven fact: helmets significantly reduce the number and severity of head injuries. Always wear helmets, eye protection, sturdy boots, gloves, and other protective gears when riding.

Make Yourself Visible

Some drivers do not see scooters because they do not look for them. To make yourself more visible:

- Wear bright reflective clothing while riding.
- Position yourself in the traffic lane so other drivers can see you.
- · Signal before turning or changing lanes.
- Use your horn to alert others on the road.
- Always use headlights while riding, even during daytime.

SAFETY INFORMATION

Ride Within Your Limit

Pushing the limits is a common cause of scooter accidents. Never ride beyond your personal abilities or faster than conditions warrant. Remember that alcohol, drugs, fatigue and inattention can significantly reduce your ability to make good judgments and ride safely.

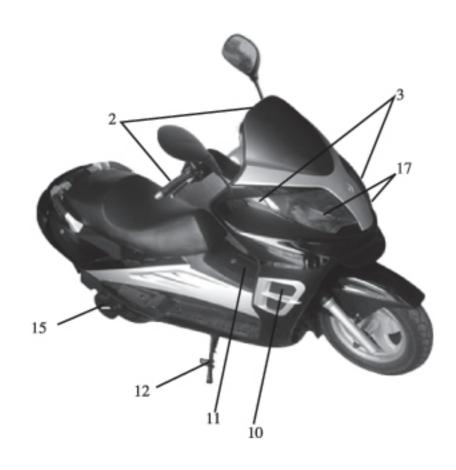
Keep Your Scooter In Safe Condition

For safe riding, it is important to inspect your scooter before every ride, and perform recommended maintenance in a timely manner.

Loading Limit Guidelines

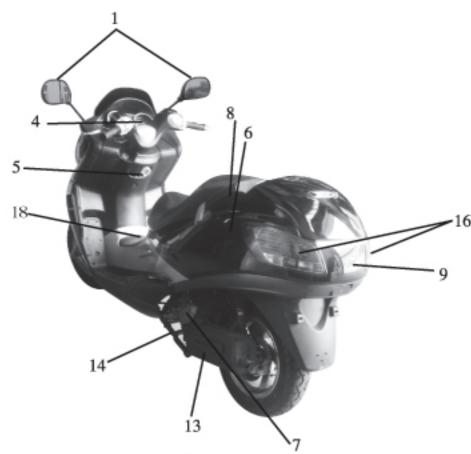
Your scooter has been designed to carry you and one passenger. When you carry a passenger, you may notice some changes in acceleration and braking. However, as long as you keep your scooter well maintained, with good brakes, you can safely carry loads within manufacturer's recommended weight limit. Exceeding the weight limit or carrying an unbalanced load can seriously affect your scooter's handling, braking, and stability. Improper modifications and poor maintenance can also reduce your safety.

DESCRIPTION



- 1. R and L rear mirror
- 2. R and L brake
- 3. L and R turn light
- 4. Speedometer
- 5. Main switch
- 6. Battery
- 7. Air cleaner

- 8. Seat lock
- 9. Rear light assembly
- 10. R and L reflector
- 11. Fuel tank
- 12. Center stand
- 13. Kick starter
- 14. Side stand



- 15. Muffler
- 16. R and L rear turn signal
- 17. Headlights
- 18. Coolent tank

DESCRIPTION

Speedometer

Riding speed is indicated by km/h and mph.

Odometer

The total riding distance is indicated in miles.

The white figures in black background indicate total miles traveled.

Trip meter

The riding coverage from one location to another is indicated by trip meter.

It flashes when turning light is in use.

Fuel Gauge

Fuel gauge indicates the remaining fuel in the fuel tank (the gauge does not work when main switch is in the "OFF" position). The gauge needle moves from "F" (full) to "E" (empty) as the fuel decreases in the fuel tank. Fill the tank with 90 octane or higher gasoline when the needle is approaching the "E" position. There is no reserve tank.

Indicating Iamp of high beam $\equiv \bigcirc$

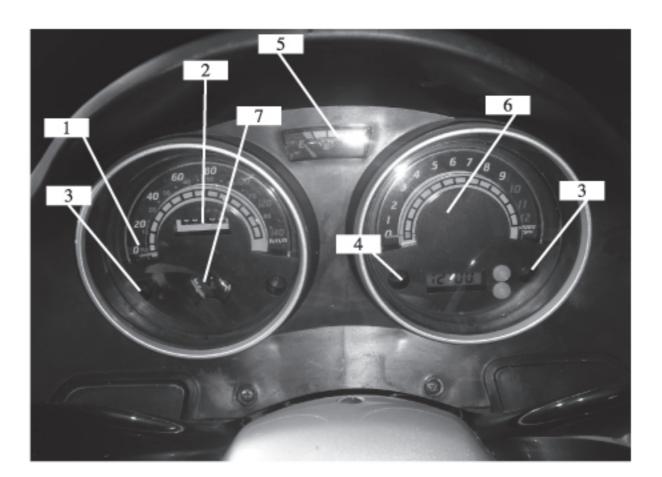
It indicates high beam is in use.

NOTE:

*Apply low beam to avoid obstructing the view of oncoming drivers and drivers ahead.

DESCRIPTION

- 1. Speedometer
- 2. Odometer
- 3. Turn signal indicator
- 4. High beam indicator
- 5. Fuel gauge
- **6.** Trip meter
- 7. Water temperature indicator



Main Switch

"ON" POSITION:

Electrical circuits are switched on. The engine can now be started. The key can not be removed in this position.

"OFF" POSITION:

All electrical circuits are switched off. The engine stops. The key can be removed in this position

"LOCK" POSITION:

The steering is locked when in this position. The key can be removed.



Main Switch







ON

OFF

LOCK

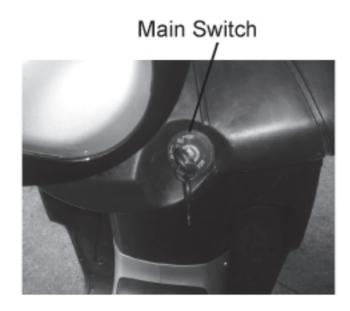
NOTE:

*Do not leave the main switch in "ON" position for an extended period of time when the engine is stopped. The battery may drain itself.

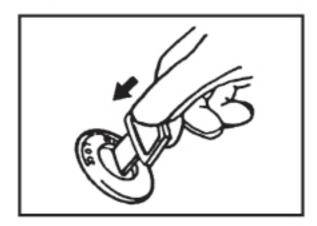
*Lock the steering and remove the key after parking to avoid theft.

Steering Lock

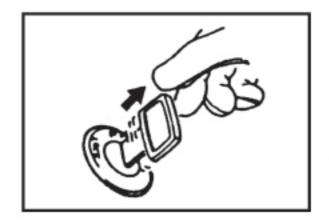
Turn the handlebar fully to the left and lock the steering as show below to prevent theft:



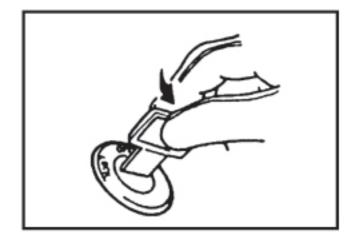
Push the key in when it's in OFF position



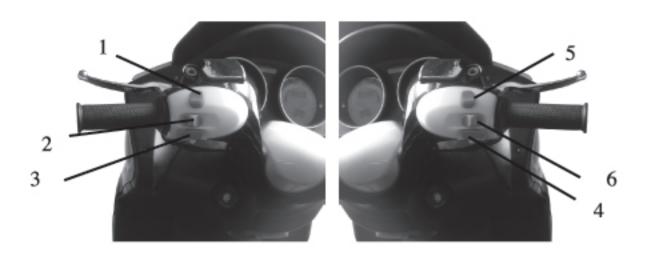
Release the key



Turn to LOCK position



Handlebar Switches



1. Dimmer Switch

When lights switch is in the "ON" position:

- \equiv :Head light high beam is on.

2. Turning Light Switch

To use the turning light while making a turn or change traffic lane, push the switch to

to signal a right turn. Push the switch to

to signal a left rurn. The switch returns to center

position when released it. The turning light does not go off automatically. To cancel the turning signal, push in the switch after it has returned to center position.

3. Horn Button

The horn sounds by pressing the horn button.

4. Starter Switch

Apply this switch when using electric start.

- 5. Enging is on Engine is off
- 6. Lights Switch
- :All lights are off.

:Location light, tail light, license light and meter light are on,

:Head light, tail light, license light, meter light are ON.

NOTE:

*Release the starter switch immediately after the engine has started. Do not apply starter switch again when the engine is running.

*Never exceed 4 seconds when using starter switch each time.

Fuel Tank Cap







Open: 0-2-3

Insert the key,turn clockwise to open the access panel.

Give fuel cap 1/4 of a full turn, in direction counter clockwise to open

Close:

Press the fuel tank cap to close. Turn the key counter clockwise to original position, remove the key.

NOTE:

*The key can not be removed if the fuel tank cap is not locked properly.

Seat Lock

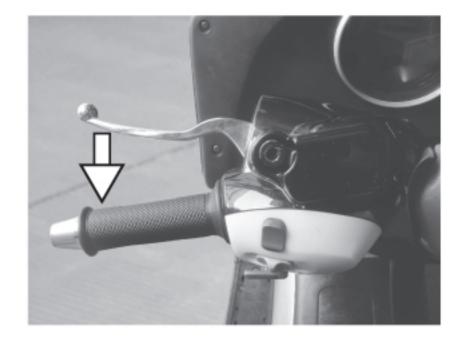
To open the seat, insert the key into the lock and turn as shown below. Return the seat to its original position and press down to lock up. Pull up on the seat slightly to ensure it is fully locked.



Rear Brake Lever

The rear brake lever is located in left handlebar. Pull the lever to apply rear brake.

Rear



Front Brake Lever

The front brake lever is located on the right handlebar. Pull the lever to apply front brake.

Front



Rear Storage Compartment

The compartment is located under the seat. Open the seat to store a helmet in the compartment.



NOTE:

*The maximum loading capacity of rear storage compartment is 5 kg.

Side stand kill switch

Remore the scooter from side stand before starting otherwise scooter will not turn on. while on side stand kill switch will activate and scooter engine will turn off.





Enging is off

Enging is on

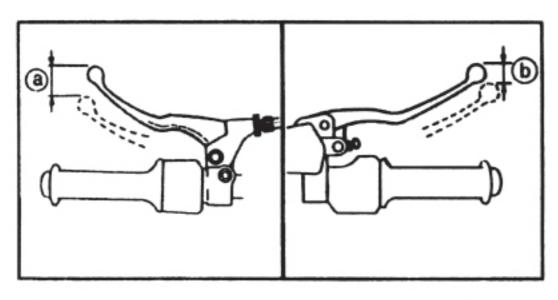
Pre-operation Checks

Pre-operation checks should be made each time the scooter is used. Such an inspection can be accomplished in a very short time. The added safety it insures is more than worth the time involved.

Before using this scooter, check the following points:

NO	ITEM	ROUTINE			
1	Front Brake	Check operation, freeplay, fluid level and fluid leakage. top up with DOT3 brake fluid if necessary.			
2	Rear Brake	Check operation, freeplay, fluid level and fluid leakage. top up with DOT3 brake fluid if necessary.			
3	Throttle	Check for smooth operation. Adjust if necessary	17		
4	Engine Oil	Check engine oil level, top up oil if necessary.			
5	Tires/Wheels	Check tire pressure, wear and damage.			
6	Fittings/Fasteners	Check all chassis fittings and fasteners. Tighten/adjust if necessary.			
7	Lights/Signals/Switches	Check operation.	20		
8	Fuel	Check fuel oil level, top up oil if necessary.	21		

Brakes



a. Free play 10~20 mm

b. Free play 10~20 mm









Brake Levers

Check for correct free play in the brake levers and correct them if necessary. Make sure the brakes are working properly by checking at low speed shortly after starting out.

NOTE:

A soft, spongy feel in the brake lever indicates a failure in the brake system. Do not operate the scooter until the failure in the brake system has been corrected. Ask a dealer for immediate repairs.





1. Minimum level

Brake Fluid
Check the brake fluid level. Add fluid if necessary.

Recommend brake fluid: DOT3

Brake Fluid Leakage

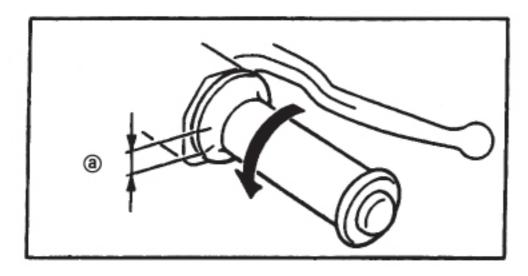
Apply the brake a few times. Check to see if any brake fluid leaks out from the pipe joints or the master cylinder

NOTE:

*Brake fluid may deteriorate painted surfaces or plastic parts. If spilled, clean it up at once.

*If brake fluid leakage is found, ask a dealer for immediate repaires. Such leakage could indicate a hazardous condition.

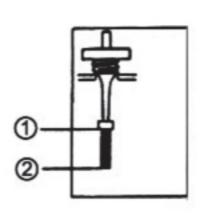
Throttle Grip



a. Free play 3~5 mm

Turn the throttle grip and check the free play to see if it operates properly. Make sure the grip returns to the original position by spring force when released. Ask your local dealer to make any necessary adjustments.

Engine Oil





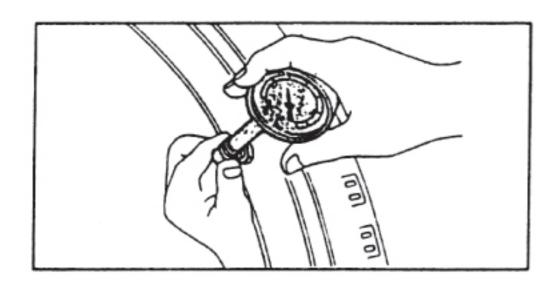


Make sure the engine oil is at the specified level. Fill with oil if necessary. (See page 26, 27 for details).

Recommended Engine Oil:

Four stroke engine oil SAE 10W 40

Tires



To ensure maximum performance, longer durability, and safe operation, always check and adjust the tire pressure before operating your scooter.



NOTE:

*Tire pressure should be checked and adjusted when tire temperature equals the ambient air temperature. Tire pressure must be adjusted according to the total weight of cargo, rider, passenger, accessories, and vehicle speed. Refer to tire walls for proper inflation pressure.

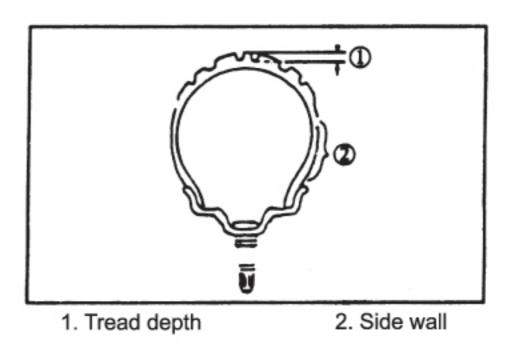
Make sure the total weight of the cargo, rider, passenger, and accessories do not exceed the maximum loading limit of your scooter. Operating overloaded scooter could cause tire rupture, an accidents, and injuries.

NOTE:

Proper loading affects several characteristics of your scooter, such as handling, braking, acceleration, and safety. Do not carry loosely packed items that can shift during travel. Securely pack your heaviest items close to the center of your scooter and distribute the weight evenly from side to side. Properly adjust the suspension to your load, and check the condition and pressure of your tires.

Tire Inspection

Always check the tires before operating your scooter. Contact a dealer if center tread depth reaches the limit as show, if the tire has a nail or glass fragments in it, or if the sidewall is cracked, and have the tire immediately replaced.



Minimum Tire Tread Depth:

Front:1.5mm

Rear: 2.0mm

Fittings and Fasteners

Always check the tightness of chassis fittings and fasteners before a ride. Take your scooter to a dealer to correct all fittings and fasteners to proper torque.

Lights, Signals, and Switches

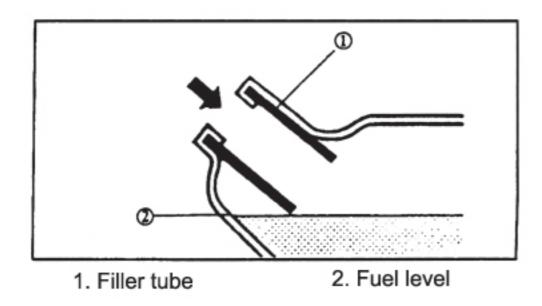
Check all the lights. Make sure they are in working condition. Check the operation of the handlebar switches and the main switch.

Mirror

Adjust mirrors as shown in illustrations below to ensure maxium visibility,

Adjust the rear view mirrors so that when you are seat comfortablely on the scooter, you have the best view rear traffic.

Fuel



Recommended Fuel:

90 octanes or higher unleaded gasoline

Fuel Tank Capacity:

Total 10.5 Liter

NOTE:

- *Do not fill the fuel tank above the bottom of the filler tube as shown in the illustration. Fuel tank may overflow when the fuel heats up and expands.
- *Always wipe off spilt fuel immediately with a dry and clean soft cloth. Fuel may deteriorate painted surfaces or plastic parts.

Start An Engine

- *Park before starting.
- *Return the side stand to its original position.
- *Check if there is sufficient fuel and engine oil.
- 1. Turn the main switch to ON.





1

2

- 2.Check to see that engine kill switch is in " () " posltion.
- 3. Completely release the throttle grip, apply rear brake lever.
- 4.Push the starter switch. Do not touch the starter switch again once the engine has started.





3

NOTE:

*If the engine fails to start, release the start switch, wait a few seconds, then try again. Each attempt should not be over 4 seconds to preserve the battery. If the engine has not started after 4-5 attempts, turn the throttle grip 1/8-1/4 turn, then push the starter switch again.

4

*For an engine which can not be cranked by electric start, or a vehicle which has not been used for a long time, turn on the main switch and throttle grip and apply kick starter to crank the engine.

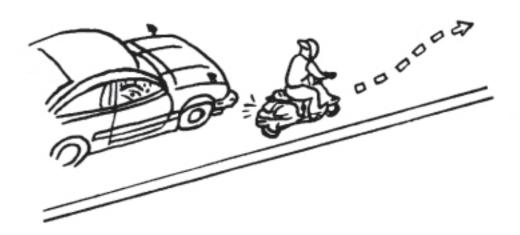
5. For a cold vehicle, preheat the engine for 1-3 minutes before riding.

NOTE:

- *For maximum engine life, never accelerate hard with a cold engine.
- *Always return the kick starter to the original position after starting.
- *The exhaust fumes are poisonous and can cause loss of consciousness and even death within a short time. You must operate your scooter in an area with adequate ventilation.

Starting Off

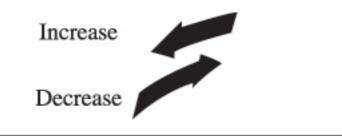
- Apply the rear brake lever with your left hand and hold the rear grip with your right hand. Push the scooter off the main stand.
- Sit astride the seat, with left foot touching the ground to avoid inclination.
- 3. Release the rear brake lever.
- 4. Check for oncomiong traffic and use your turn signal.
- Turn the throttle grip slowly and you are off. Remember to turn off the signal after use.



Acceleration

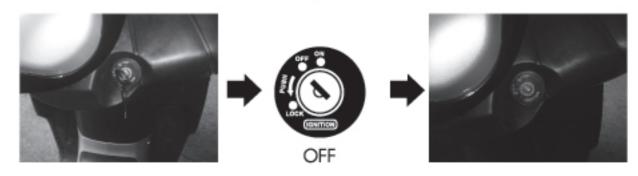
The speed can be adjusted by opening and closing the throttle grip. Turning it toward you increases the speed, while turning it away from you decreases the speed.





Parking

When parking the scooter, stop the engine and turn off the main switch. Remove the key!



NOTE:

*The muffler is hot after operation. Park the scooter in a place where pedestrians or children are not likely to touch the scooter.

*Do not park the scooter on a slope or soft ground, the scooter may overturn.

Engine Break-in Period

There is never a more important period in the life of your scooter than the period between zero and 1500 kms. For this reason we ask that you carefully read the following material You should not place an excessive load on the engine for the first 1500 kms. The various parts in a new engine wear and polish themselves to the correct operating clearances during this period. Prolonged full throttle operating or any condition that might result in excessive heating of the engine should be avoided.

Keep the riding speed below 85 kmph within the first 1500 kms.

See the following for details:

1.500 kms:

Keep the speed below 55 kms per hour.

2.500-800 kms:

Keep the speed below 70 kms per hour.

3.800-1500 kms:

Keep the speed below 85 kms per hour.

NOTE:

*After 1500 kms of operation, be sure to replace the engine oil and clean the oil filter. If engine trouble occurs during the break-in period, consult your dealer immediately.

Periodic Maintenance and Minor Repair

Periodic inspection, adjustments, and lubrication will keep your scooter in the safest and most efficient condition possible. You must take into consideration that weather, terrain, geographical locations, and a variety of causes all tend to demand that each owner alter the time schedule for regular maintenance to shorter intervals.

The most important points of scooter maintenance: inspection, adjustments, and lubrication are explained in the following pages.

NOTE:

*If you are not familiar with servicing your scooter, consult your local dealer. Your scooter is designed for use on paved road surfaces only. If you operate the scooter in abnormally dusty, muddy, or wet conditions, the air filter should be cleaned or replaced more frequently. Consult your local dealer for proper maintenance intervals.

PERIODIC MAINTENANCE CHART

Daily Checks							
) Checks							
1							
\							
1							
1							
1							
oncentration of Waste Gas Reguarly check and adjust.							
*Follow on the analogy of the distance intervals listed above if exceeds the listed number.							
*Flush out coolant, once every two years. If often ride in dusty area, element of air cleaner should be cleaned or eraplaced more frequently.							

I: Check, clean, lubricate, adjust, top up or replace if necessary A: Adjust C: Clean R: Replace T: Tighten

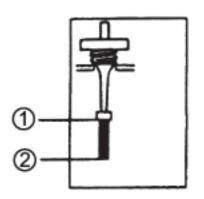
Engine Oil

1. Oil Level Measurement

- a. Place the scooter on the center stand. Warm up the engine for several minutes.
- **b.** Stop the engine and wait a few minutes until the oil levels before removing the dipstick.
- c. The oil level should be between the minimum and maximum mark on the dipstick. If the level is low, add oil to raise it to the specified level.

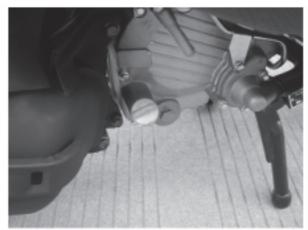
NOTE:

*Be sure your scooter is positioned straight up when checking oil level. A slight tilt toward the side can result in false reading.



1.Maximum level

2.Minimum level





2. Engine oil replacement

Replace engine oil after the initial 500 kms. Thereafter, replace engine oil every 1600 kms. Check the oil level after every 800 kms. Add oil to specified level if necessary.

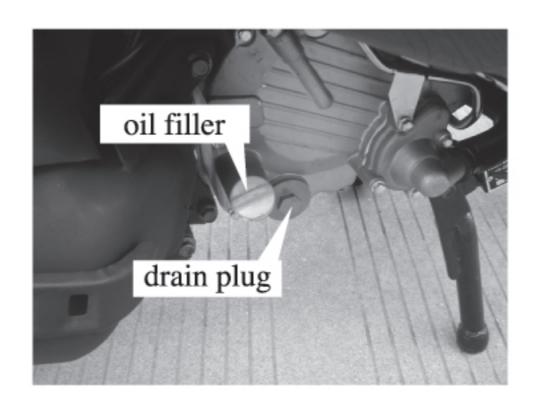
nd warm up for a few minutes. While warming up, check for oil leakage is found, stop the engine immediately and check for the cause.

Follow the steps outined below to change engine oil:

- a. Warm up the engine for a few minutes.
- **b.** Stop the engine. Place an oil pan under the engine and remove the dipstick.
- c. Remove the drain plug and drain the oil.
- d. Clean the oil filter with solvent.
- e. Reinstall the oil filter and drain plug.
- f. Fill the engine with oil and install the dipstick.

NOTE:

*If your scooter is often ridden on bumpy roads, in cold weather, or for short distances, engine oil should be replaced sooner than prescribed by this manual. Consult your local dealer for recommendations.



Coolent level checking

- 1. place scooter on the main stand
- 2. Check coolant level.
- The coolant level should not the be beyond the maximum level and below the minimum level (marked on the tank)
- If the coolant in the tank is below the minimum level mark, top up the tank with distilled water.



NOTE:

- Do not top up the tank with coolant. Only distilled water to be used.
- 2. Flush out coolant once every two years.
- While replacing coolant ensure to mix coolant and distilled water in the ratio of 1:1
- Ensure that your scooter is positioned upright, while checking the level
- 5. Use coolant, with the propylene glycol base.

Gear Oil Replacement

Replace the gear oil after the initial 500 kms.

Thereafter, replace oil again every six months or 5000 kms, whichever occurs first.

Do As Below Described For Replacement:

- 1. Put the scooter on the center stand.
- 2. Place an oil pan under the gear case.
- Remove the oil filler bolt and the drain plug to drain the oil.
- 4. Reinstall and tighten the drain plug.
- 5. Fill the gear case with oil.
- 6. Reinstall the oil filler bolt.
- After replacing the gear oil, be sure to check for oil leakage.

Recommended oil: SAE 10W 40

NOTE:

*Do not let foreign materials enter the gear case. Be sure oil does not get on the back tire or wheel.

Cleaning of Air Filter

The air filter should be cleaned at the specified intervals. It should be cleaned more frequently if you often ride in wet or dusty areas.

- 1. Place the scooter on the center stand.
- Remove the left side panel by removing the screws on it.
- 3. Remove the air filter cover by removing screws on it.
- 4. Take out the air filter and remove the screws on it.
- 5. Remove the air filter element and wash gently, but thoroughly in solvent. Replace air filter if it is damaged.
- 6. Squeeze out excess solvent, and dry it.
- Apply oil to the entire surface of the air cleaner and squeeze out the excess oil. It should be damp, but not dripping.
- 8. Reinstall the air filter and the air filter cover.

Recommend oil: Same as engine oil.

NOTE:

*Drain the oil accumulated in the clear tube after every 1,000 miles.



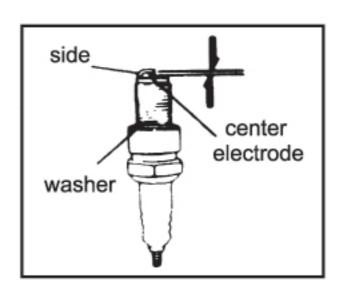
Spark Plug Inspection

The spark plug is an important engine component. The condition of the spark plug can indicate the condition of the engine. Therefore, you should periodically inspect it for signs of deterioration. The ideal color on the white insulator around the center electrode is a medium to light tan color for a scooter that is being ridden normally.

Deposits will cause the spark plug to slowly break down and erode. You should replace the spark plug if electrode erosion becomes excessive, or if carbon and other deposits become excessive. Before installing the spark plug, measure the electrode gap with a wire thickness gauge. Adjust the gap to the specification.

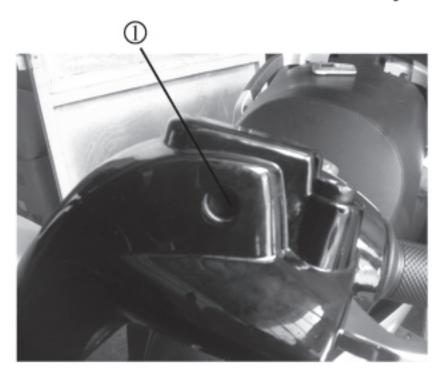
Spark Plug Gap: 0.8mm

When installing the plug, always clean the gasket surface. Wipe off any grime from the threads. Tighten the spark plug with your fingers first, then finish tightening with a wrench.



Inspection of Brake Fluid Level

Insufficient brake fluid may allow air to enter the brake system, possibly causing the brakes to become ineffective. Before riding, check that the brake fluid is above the minimum level and fill when necessary.



Observe These Precautions:

- When checking the brake fluid level, make sure the top of the master cylinder is leveled.
- 2. Use only the designated brake fluid. Otherwise, the rubber seals may deteriorate, causing leakage and poor brake performance. Recommended Brake Fluid: DOT3
- 3. Refill with the same type of brake fluid. Mixing fluid may result in a harmful chemical reaction and lead to poor brake performance.
- 4. Be careful that water does not enter, which may result in vapor lock.
- Brake fluid may deteriorate painted surfaces and plastic parts. Always clean up the spilled fluid immediately.
- 6. Have a dealer check the cause if brake fluid level goes down.

Brake Fluid Replacement

- Complete fluid replacement should be done only by trained personnel.
- 2. Have a dealer replace the following components during periodic maintenance or when they are damaged of leaking.
 - a. Replace all rubber seals every two years.
 - b. Replace all hoses every four years.

Brake Lever Lubrication

Lubricate the pivoting parts of both brake levers.

Recommended lubricant:

SAE 10W 40 motor oil

Cable Inspection and Lubrication

Inspect the inner cable and the cable end. If it does not operate smoothly, ask a dealer to replace them.

NOTE:

*Damage to the outer housing of cables may allow internal rusting and cause interference with cable movement. Replace damaged cables as soon as possible to prevent unsafe conditions.

Recommended lubricant:

SAE 10W 40 motor oil

Center and Side Stand Lubrication

Lubricate the pivoting and mating joints. Check to see that the center and side stand move up and down smoothly.





Side stand

Center stand

Recommended lubricant:

SAE 10W 40 motor oil

NOTE:

*If the center or side stand does not move smoothly, consult a dealer.

Front Fork Inspection

Securely support the scooter so there is no danger of it falling over.

1. Visual Check:

Check for scratches or damage on the inner tube and excessive oil leakage from the front fork.

2. Operation Check:

Place the scooter on a level place.

- **a.** Hold the scooter in upright position and apply the front brake.
- b. Push down hard on the handlebars several times and check if the fork rebounds smoothly.

NOTE:

*If any damage or jerky movement is found with the front fork, consult your local dealer.



Steering Inspection

Periodically inspect the condition of the steering. Worn out or loose steering bearings may be dangerous. Place a stand under the engine to raise the front wheel off the ground. Hold the lower end of the front forks and try to move them forward and backward. If any free play can be felt, ask a dealer to inspect and adjust the steering. Inspection is easier if the front wheel is removed.

NOTE:

*Securely support the scooter so there is no danger of it falling over.

Wheel Bearings

If there is play in the front or rear wheel hub or if the wheel does not turn smoothly, have a dealer inspect the wheel bearings.

Fuse Replacement

If the fuse is blown, turn off the main switch and the switch of the circuit in question. Remove the screws on battery case cover. The fuse is at the side of the case. Install a new fuse of specified amperage. Make sure the new fuse is fitted securely. Turn on the switches and see if the electrical device operates.



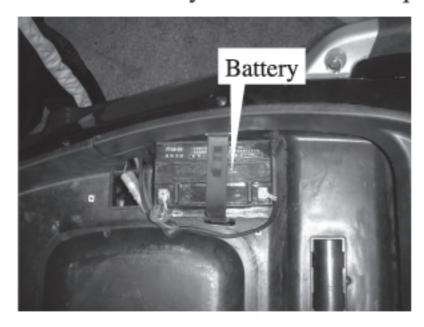
Specified Fuse: 15A

NOTE:

*Do not use fuses of higher amperage rating than those specified. Substitution of fuse of improper rating can cause extensive electrical system damage and possibly a fire.

Battery

This scooter uses sealed and non-replenishable type battery. It is not necessary to check and add liquid.

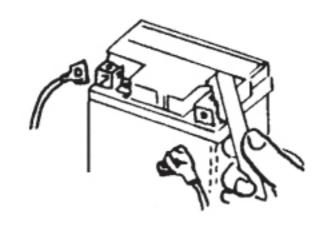


NOTE:

*The battery will lose its charge if the scooter is not operated for an extended period of time. Remove the battery from the scooter and charge it fully when not in use. Store it in a place with adequate ventilation.

Battery Joint:

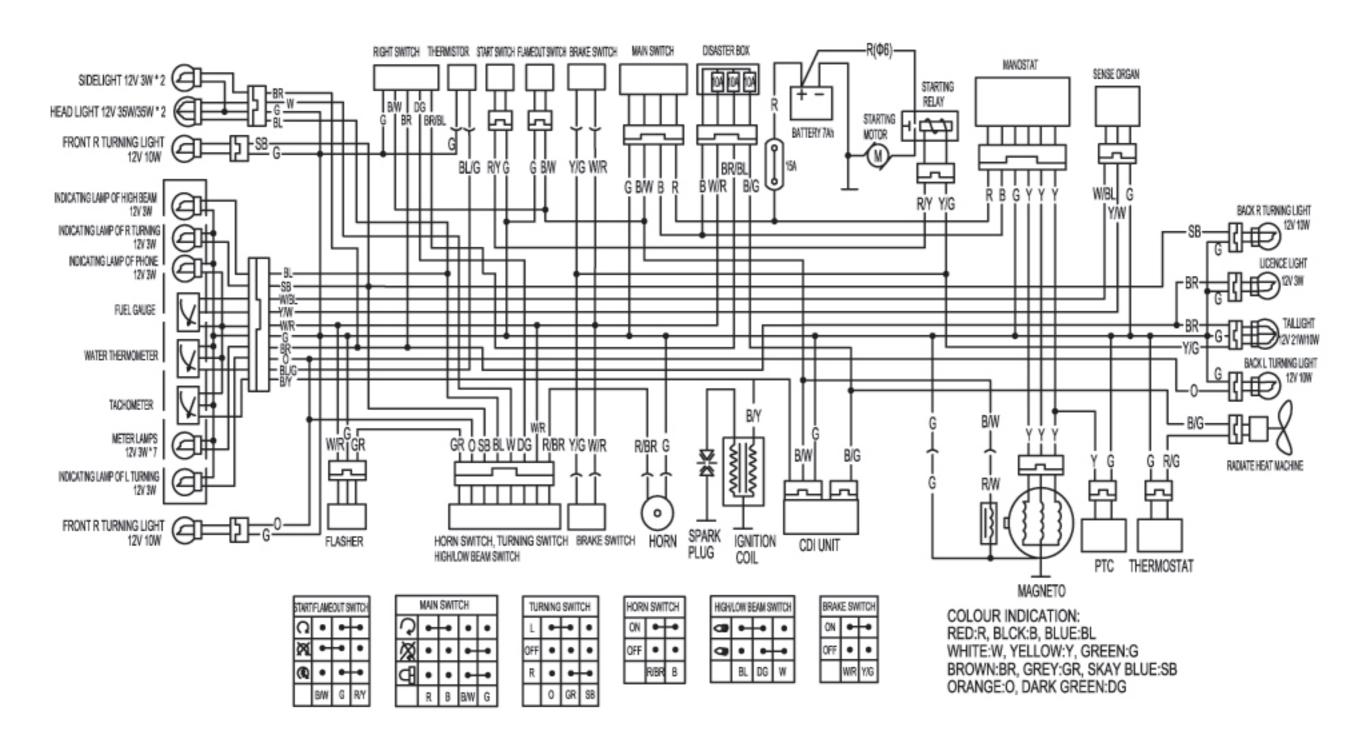
- 1. Remove the battery before cleaning the joint of it.
- Clean the joint first, then apply a thin coat of petroleum jelly on it . Reinstall the battery.



NOTE:

- *Avoid near by live fire when removing or installing the battery.
- *When removing the battery, turn off the main switch, remove the negative pole wire first, then the positive pole wire. Change the order when reinstalling (positive wire first, then negative wire).

ELECTRIC CIRCUIT DIAGRAM



MAJOR TECHNICAL PARAMETERS

Engine displacement	250CC	Engine type	4 Stroke single cylinder
			liquid cooled
L×W×H	2108X756X1199mm	BorexStroke	72x60mm
Wheel base	1565mm	Compression ratio	10:1
Min. ground clearance	140mm	Idling RPM	1600±100
Dry weight	156mm	Maximum power	11.0kw/6500rpm
Max payload	150kg	Net maximum torque	18.0kw/5500rpm
Max speed	95km/h	Puel tank capacity	10.5L
Front tire	110/90-12	Brand of fuel oil	90#
Rear tire	110/90-12	Recommended motor oil	SAE 10W 40
Ignition mode	CDI	Volume of lubricating oil	0.9L
Spark plug	DR8EA/D8RTC	Fuse	15A
Battery	12V/9Ah		