



Owner's Manual

FS11W1-EU/FS11W1-UK SERIES





1. Contents	1
2. Control Location	3
3. Before Riding	4
4. Safe Riding	4
5. Riding	5
6. Use Genuine Spare Parts	5
7. Use of Each Component	6
LCD Meter	6
Operation of Ignition Switch	8
Use of Buttons	8
Automatic lighting connections	9
Fuel Tank Cap	10
Safety Helmet Hook	11
Storage Box	11
C.B.S Brake System	11
Important Points and Cautions for Starting Engine	12
The Best Way to Ride off	12
The Control of Throttle Valve Handle	13
Parking Method	13
8. Inspection and Maintenance before Riding	14
Routine Inspection	14
Fuel Inspection	14
Engine Oil Inspection and Change	14
Transmission Oil Inspection and Change	15
Inspection and Adjustment of Brake Free Play	16
Disk Brake Inspection	17
Throttle Valve Handle Clearance Adjustment	18
Tire Inspection	18
Steering Handle Front Shock Absorbers Inspection	19
Inspection and Maintenance of Battery	19
Checking and Changing Fuses	20
Checking the Spark Plug	20
Checking the Front and Rear Lights	20



1. Contents

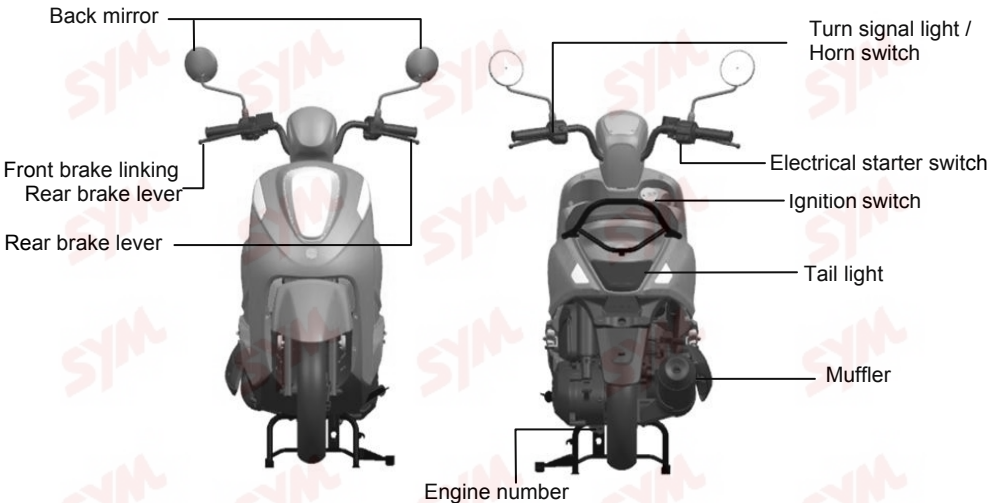
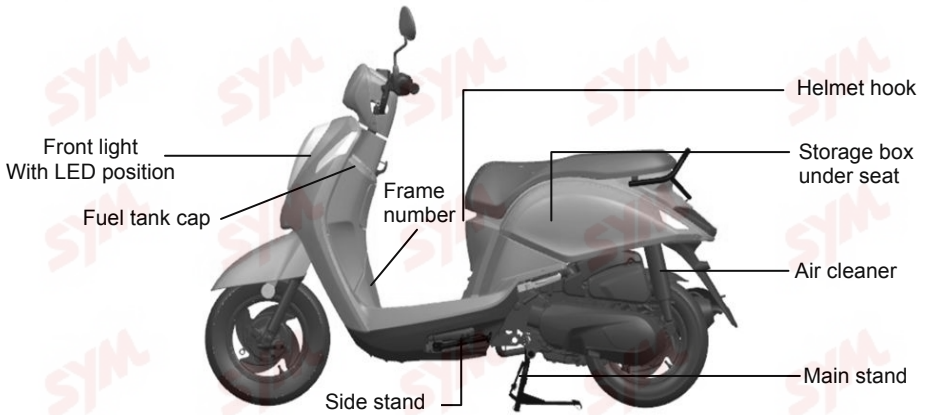
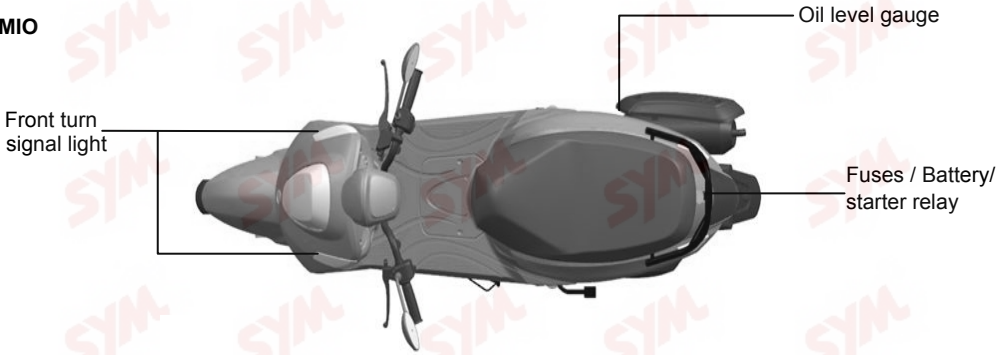
Checking the Brake Light.....	21
Checking the Turn Signal Lights and Horn	21
Checking for Fuel Leakage	21
Checking the Lubrication of Body's Various Mechanisms	21
Checking the Air Cleaner	22
9. When there is an Abnormal Condition or a Trouble	23
Diagnosis when Engine does not Start	23
10. E.C.U Circuit Interface System	24
11. Suggestions on Engine Fuel	24
12. Transmission Oil	24
13. Cautions for Riding Scooter	24
14. Periodical Maintenance Schedule.....	25
15. Specification	26





MIO

2. Control location





3. Before riding

4. Safe riding

This manual describes the correct usage of this scooter including safety riding, simple inspection methods and so on.

For a more comfortable and safety riding, please read this manual carefully.

For your benefit, please ask your SANYANG dealer the operating manual and carefully read the following :

- Correct use of the scooter.
- Pre-delivery inspection and maintenance.

Thank you very much for your patronage

In order to maximize your scooter's performance, a periodical inspection and maintenance should be completely carried out.

We recommend that after riding your new scooter for the first 300 kilometers, you should take your scooter to the original dealer for an initial inspection, and to have your scooter inspected periodically every 1,000 kilometers thereafter.

- In case the scooter's specifications and construction are modified and different from the photos and diagrams on the owner's manual / catalogues, the specifications and construction of the actual scooter shall prevail.

4. SAFE RIDING

It is very important to be relax and clothe properly when riding, observe traffic regulations, do not rush, always ride carefully and relaxed.

Usually, most people would ride their newly bought scooter very carefully, but after they became familiar with their scooters, they tended to become reckless which may result in an accident.

To remind you :

- Please wear a safety helmet, and properly tighten the chin belt when riding a scooter.
- Clothes with open or loose cuffs may be blown by wind and cause the cuffs to get caught on the steering handle and thus affects riding safety.
- So, put on clothes with tight sleeves.
- Hold the steering handle by both hands when riding. Never ride with only one hand.
- Observe the speed limit.
- Wear suitable low-heel shoes.

Perform periodical maintenance and inspection in accordance with the schedule.

⚠ WARNING!!

- To avoid getting burned by exhaust pipe when taking a passenger. Make sure your passenger has put his/her feet on the pedals.
- After running, the exhaust pipe is very hot, be careful not to get burned when conducting an inspection or maintenance.
- After running, the exhaust pipe is very hot, select a suitable location to park your scooter to avoid others getting burned by the exhaust pipe.

⚠ CAUTION :

- Modified scooter will affect its structure or performance, and cause poor engine operation or exhaust noise, which will result in shortening the scooter's service life.
Besides, modification is illegal and does not conform to the original design and specifications.
A modified scooter will not be covered by warranty, therefore, do not modify your scooter at will.
- Tire and rim modifications will make it unsafe to ride and may cause severe injury or death.



Keep the related parts of your body such as arms, palms, lumbar, and toes relax and ride with the most comfortable posture in order to be able to react quickly whenever it is necessary.

- Rider's posture will greatly affect riding safety. Always keep your body's gravity in the center of the seat, if your body's gravity is on the rear part of seat, the front wheel load will be reduced, and this will cause the steering handle shaking. It is dangerous to ride a scooter with an unstable handle.
- It will be much easier to make a turn if rider inclines his body inward when turning. On the other hand, the rider will feel unstable if his body and the scooter do not incline.
- The scooter is hard to control on a bumpy, unlevelled, unpaved road, try to know the road conditions in advance, slow down and use your shoulder's force to control the handle.
- Suggestion: Do not load objects on the front pedals unnecessarily, to avoid affecting the riding safety and the operation of steering handle.

⚠ CAUTION :

The rider's feeling on the handle is slightly different with a load or without a load.

Overload may cause the handle to swing and affects the riding safety.

Therefore, do not overload your scooter.

- Overloading the scooter will cause the scooter to become unstable and hard to maneuver, it may cause serious damage to the tires and rims, as well as it may change the center of gravity, which could result in an accident that could cause injury or death. Do not exceed the maximum authorized load.

⚠ CAUTION :

- Do not place flammable materials such as rags between the body side cover and engine to avoid components damaging by fire.

Do not load objects on areas not specified for loading to avoid damage.

SUGGESTION

To maximize the scooter's performance and prolong its service life:

The first month or first 1000km is the wear- in period for the engine and components.

Avoid rapid acceleration, and keep the speed below 60km/hr.

6. USE GENUINE SPARE PARTS

In order to maintain the scooter's best performance, each part's quality, material, and machined precision must conform with the design requirements.

"SYM Genuine Spare Parts" were made from the same high quality materials used for the original scooter.

No parts would be sold to the market until they could meet the designed specifications through sophisticated engineering and stringent quality control.

Therefore, it is necessary to purchase **"SYM Genuine Spare Parts"** from **"SYM Authorized Dealers or Franchised Dealers"** when replacing spare parts.

If you buy cheap, or fake substitute parts from the market, no guarantee can be provided either for the quality or durability.

Also, it may result in unexpected troubles and lower the scooter's performance.

- Always use **SYM Genuine Spare Parts** to keep your scooters pure blood and to ensure its long service life.

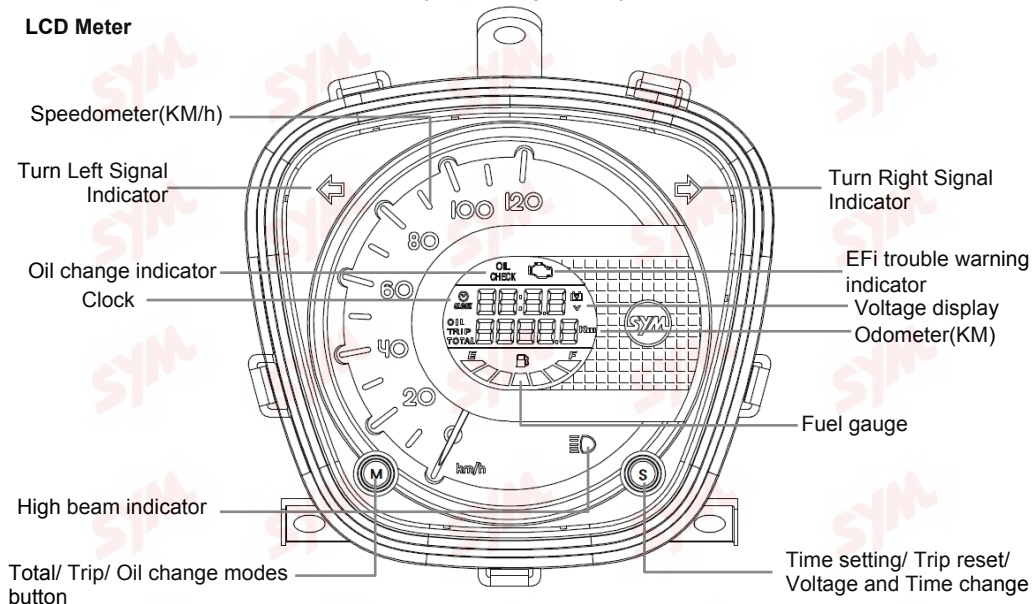


7. Use of Each Component

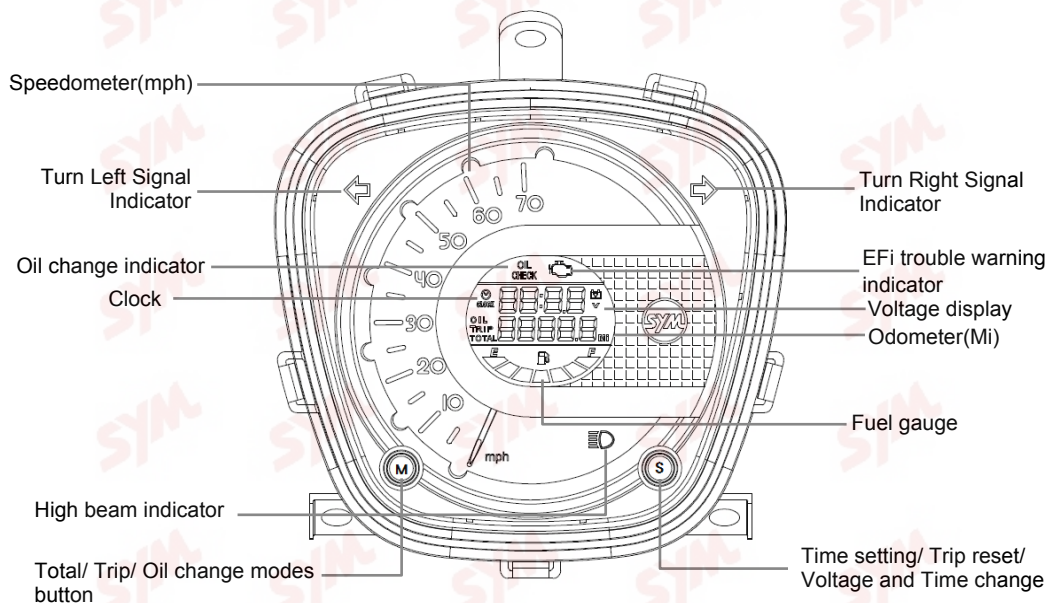
(The following is SYM 4 stroke air cooling Mio scooter's basic operation, and they could vary from different individual models. Please consult the end of this manual.)

(Kilometer per hour)

LCD Meter



(Mileometer per hour)

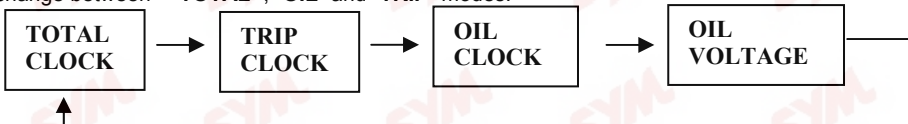




- **Speedometer :**
Indicates riding speed there are two type of unit (Km/h) or (mph).
- **LCD monitor (Including Odometer) :**
Press “**MODE**” to switch showing the total mileage/ short mileage/ oil use.
Press “**SET**” to switch showing the battery voltage/ time.
- **High Beam Indicator :**
This indicator comes on with high beam headlight is turned on.
- **Turn Signal Indicator :**
The left or right Indicator will be flashing according to the operated directions of turn signal light switch when it is turned on.
- **Fuel Gauge :**
The pointer in this gauge shows how much fuel remains in the tank.
If the pointer stays in “E” position when key switch is turned to “ON”, please fill up with gasoline (over 92 Unleaded gasoline)
- **EFi trouble warning indicator :**
When turn the main switch to “ON”, this warning indicator will come on and then go off after the engine is running. It displays the condition of the EFi system is working correctly. If there is any problem on the EFi system, the warning indicator will remain on all the time or does not come on.
Please contact with a SYM dealer to check the self-diagnosis system or electrical connections.
- **Engine Oil Change Indicator :**
This indicator shows when to change engine oil by light. Usually, the scooter has been ride approximately 1,000 km, the indicator will show its light. Then, it means you should change or add the engine oil, and turn the mileage to “0” in the OIL mode. After replacing it, please turn to KEY ON. Press the “SET” 2 times in the “OIL” mode, let the indicator’s light be off, and turn the mileage to “0” in the OIL mode.
Notice: 1. Please change oil when the initial 300 km, then change every 1,000 km.
2. If your motor’s mileage has already been exceeded the kilometers, but the light does not show, please go to the SBC/ dealer store for check.

Display mode switch:

1. When the key switch is turned to “ON” in “TOTAL” mode, Press “MODE” button within 1 second to change between “TOTAL”, “OIL” and “TRIP” modes.



2. The “TOTAL” means the total mileage of the motor, cannot be reset. But in “TRIP” mode, and press the “SET” over 2 seconds, then the mileage can be erased and newly calculated.
3. Under “CLOCK” mode, press “SET” 1 second, will switch to “VOLTAGE” showing.

Time setting

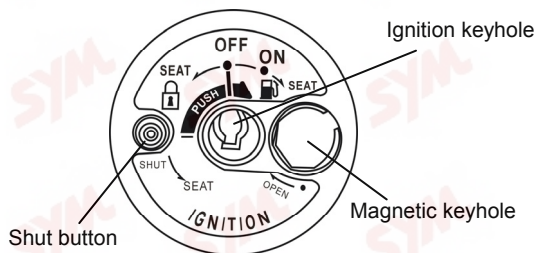
1. Showing the 24 hour mode time (0:00~23:59). Time allows ±2 seconds tolerance.
2. When the key switch is turned to “ON,” the clock will show the 24 hour mode hour/ minute .
3. Under the “CLOCK” mode, press “MODE” button (over 2 seconds) to enter “TIME” setup mode, Then press “MODE” 1 second, then you could switch setup mode (as below):

HOUR → MIN(10min) → MIN(1min)

2. Under time setting mode, press “SET” button shortly to increase the readings. The number will increase 1 at one time, it will automatically leave the setup mode if you do not take action within 30 seconds.

8. Inspection and maintenance before

OPERATION OF IGNITION SWITCH



IGNITION SWITCH



IGNITION SWITCH KEY

ANTI-THIEF MAGNETIC KEY :

- Insert your magnetic key into the magnetic keyhole, and turn it to right ignition keyhole block board can be to open.
- When close ignition keyhole. You just push the shut button, and ignition keyhole can be to close.

IGNITION SWITCH :

“ON” position (engine start) :

- Engine can be started in this position.
- Ignition switch key cannot be removed.

“OFF” position (engine shut off) :

- Engine is shut off and cannot be started in this position.
- Ignition switch key can be removed.



“OPEN” position (fuel tank cap open) :

- How to open : Insert and push your key into the ignition switch, then turn it to the right.
- How to lock : Push the fuel tank cap and it locks automatically.



“LOCK” position (steering handle lock) :

- Turn the steering handle to left and press ignition switch key down and then lightly turn it to left to the “OFF” position.
- The steering handle is locked in this position.
- Ignition switch key can be removed.
- When unlocking, simply turn the key from “OFF” to “ON”

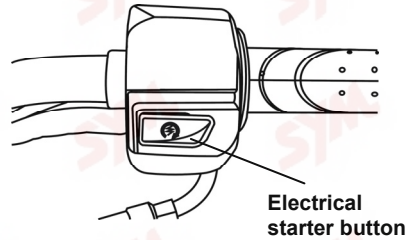
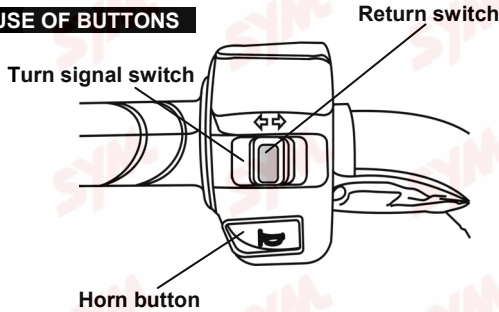
SEAT“OPEN” position :

- Turn ignition switch to “SEAT” position and the seat can be open.
- There are three positions you can use.

CAUTION :

- Never operate the ignition switch key when the scooter is running. To turn the ignition switch to “OFF” will shut off the electrical system and that may result in a dangerous accident. Therefore, the ignition switch can only be turned off after the scooter has been completely stopped.
- Always remove the key and be sure to take the key away with you after locking the steering handle before leaving your scooter.
- If ignition switch remains in the “ON” position for a prolonged period after the engine has been stopped, the battery’s capacity will be reduced and this may affect the engine’s start ability. Make sure to take the key away with you before you lock your seat.

USE OF BUTTONS



• **Electrical starter button :**



This is a starting motor button (switch) for engine starting.

With the main switch "ON" position, press this button while holding the front or rear brake lever will start the engine.

CAUTION:

- Let go this button immediately after engine has been running, and never press the button again to avoid damaging the engine.
- This mechanism is a safety design. The engine can only be started after the front or rear brake lever has been applied.

• **Automatic Lighting Connections**

Turn main switch to "ON" , at the same time, the electrical connections of lights will be connected automatically, including LED daytime running lamps · low beam headlight(s) · rear position lamp and rear-registration plate illuminating cannot be switched ON or OFF otherwise than simultaneously.

CAUTION:

- Automatic Lighting Connections are powered by battery, and therefore be aware of keeping main switch on "ON" will run out of the battery without running the engine.

• **Turn Signal Switch :**

Turn signal lights are used when turning left/right or changing lane.

Turn ignition switch to "ON", and slide the turn signal switch to left or right. Then, the turn signal lights will flash.

To release, simply return the turn signal light button to the original position.



Right-side turn signal light flashing means you intend to make a right turn.



Left-side turn signal light flashing means you intend to make a left turn.

8. Inspection and maintenance before

- **Horn Switch :**



Press this button, when ignition switch is in the "ON" position, the horn will sound.



CAUTION :

Do not press this button when you are in the area where there's no honking.

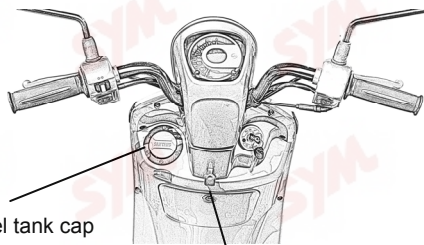


CAUTION :

- Be sure to remove the key after the seat has been locked.
- Do not put the key inside the storage box after unlocking to avoid the key being locked inside the storage box when the seat is pressed down automatically.

FUEL TANK CAP

1. Insert ignition switch key into the ignition switch, and turn the key to the right, then the cap can be opened automatically.
2. Do not fill above the fuel upper limit when refueling.
3. Simply push the fuel tank cap. Fuel tank cap can be locked.



Inner box with key

⚠ CAUTION :

- Main stand should be put down on the ground, engine should be shut off and flames should be strictly prohibited to ensure safety when refueling.
- Do not fill above fuel upper limit when refueling. Otherwise, fuel will flow out through a hole on the cap that may damage the body's painting, in serious cases, it may cause a fire to burn down the scooter.
- Make sure the cap has been tighten properly.
- This model has a reserve tank device. The fuel indicator will not move before the fuel in the reserve tank running out. After the fuel in the reserve tank running out, it is normal that the indicator drops down a little faster.

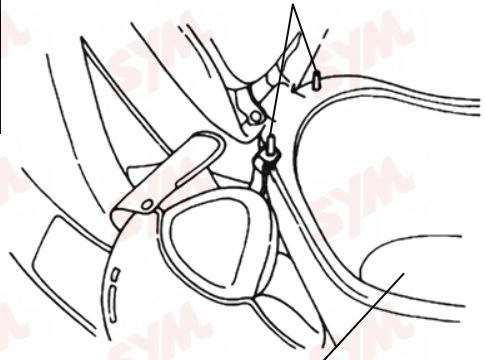
SAFETY HELMET HOOK

Open the seat, and hook the safety helmet chin belt onto the hook, and then lock the seat.

⚠ CAUTION :

- Do not hang the safety helmet onto this hook when riding to avoid damaging scooter and losing safety helmet's function.

Safety helmet hook



Storage box

STORAGE BOX

- This box is located under the seat.
- Maximum load capacity: 10kg.
- Do not store valuables in the box.
- Make sure that the seat has been locked completely after it was pressed down.
- Take out valuables before washing to avoid wetting these objects.

Do not place thermal sensitive objects in the box because of engine's heat and high temperature.

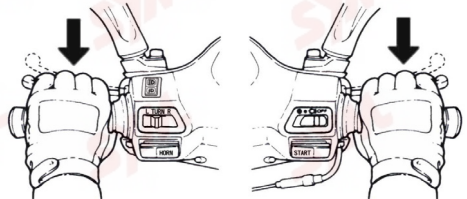
COMBINED BRAKING SYTEM

- Avoid unnecessary sudden braking.
- It is a system for linking front and rear brakes.
- Avoid brake continuously for a long period of time because that may overheat the brakes and reduce its braking efficiency.
- Slow down and brake early when riding in rainy days on slippery roads. Never apply the brakes suddenly to prevent skidding and falling.
- Using only the front brake or the rear brake increases the risk of falling because the scooter is tend to pulled to one side.

CBS system model

For Rear Wheel Linking with Front Wheel

For Front Wheel



⚡ Engine Brake

Return the throttle valve handle back to its original position, and apply engine brake. It is necessary to apply both brake and engine brake intermittently when riding on a long or stiff slope.

7. Use of Each Component

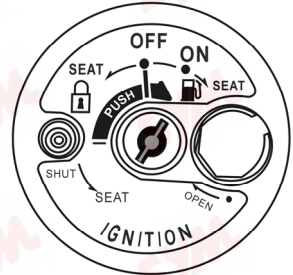
IMPORTANT POINTS AND CAUTIONS FOR STARTING ENGINE

CAUTION :

- Please check the engine oil and fuel volume are adequate or not before starting engine.
To start engine the main parking stand must be firmly on the ground and the brake is applied on the rear wheel to prevent the scooter from moving forward suddenly.

Turn ignition switch key to the "ON" position.

1. Apply rear wheel brake.
2. Do not accelerate, press starter button when the brake is applied.



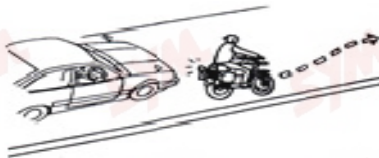
CAUTION :

- If engine cannot be started after starter motor running for 3~5 seconds, in order to avoid damaging the starter motor, please do not press the starter button continuously over 15 seconds.
- If engine still cannot be started after pressing starter button over 15 seconds, stop and wait for 10 seconds before start it again.
- It is harder to get the engine started after the scooter has been left idle for a long time or after refueling only after the fuel has been depleted. Then, it is necessary to press starting lever or starter button several times, and keep the throttle valve handle at the close position to start the engine.
- It may need several minutes to warm up engine if it is a cold start.

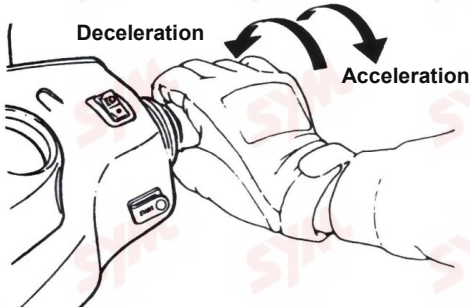
Exhaust contains harmful gases (CO), therefore please start the engine at a well ventilated place.

THE BEST WAY TO RIDE OFF

- Turn on the turn signal light before moving, and make sure no vehicle is coming from behind. Then, ride off.



THE CONTROL OF THROTTLE VALVE HANDLE



Acceleration : To increase speed.

When riding on an inclined road, turn the throttle valve handle slowly to allow the engine to output its power.

Deceleration : To decrease speed.

PARKING METHOD

- When approaching the parking lot :
 1. Turn on the turn signal light early, and pay attention to the vehicles in front, from rear, left and right, then take the inner lane and approach slowly.
 2. Return the throttle valve handle back to its original position, and apply brakes in advance. (Brake light comes on when braking to warn riders of vehicles behind.)
- When stop completely :
 3. Press the turn signal switch back to its original position, and turn the ignition switch key to “⊗” position to shut off the engine.
 4. Get off the scooter from left side after the engine has been stopped, and select a parking place where the scooter will not interfere with traffic and the ground is level, then put down scooter’s main parking stand.
 5. Hold the steering handle with your left hand, and hold down the front end of seat or hold the parking handle on the lower-left side of seat with your right hand.
 6. Press the main parking stand with your right foot, put down the main parking stand firmly on the ground.

To remind you : Lock the steering handle and remove the key after parking to prevent the scooter from being stolen.

⚠ CAUTION :

- Park your scooter at a safe place where it will not interfere with traffic.
- Should so as to ensure the flame-out engine the security of parking first while parking .
- Please cut off the engine for safety parking.

8. Inspection and maintenance before riding

ROUTINE INSPECTION

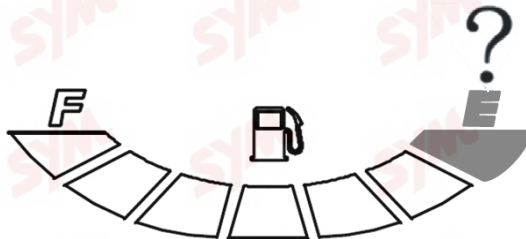
Check Items		Check Key Points
Engine Oil		Is there enough engine oil?
Fuel		Is it enough? Is it Octane 90 or above
Brake	Front	Braking condition? (Drum type brake lever free play: 10~20mm)
	Rear	Braking condition? (Drum type brake lever free play: 10~20mm)
Tires	Front	Is tire pressure normal? (Standard: 1.5kgf/cm ²)
	Rear	Is tire pressure normal? (Standard: 2.3kgf/cm ²)
Steering Handle		Does the handle vibrate abnormally or is difficult to turn?
Speedometer, lights, and rearview mirror		Is it operated properly? Do lights come on? Can it be seen clearly from behind?
Tightness of Main Components		Are screws, nuts loosen?
Abnormal Points		Do the previous troubles still exist?

CAUTION :

If any problem founded during routine inspection, correct the problem before using the scooter again, have your scooter checked and repaired by the **“SYM dealer or authorized service personnel”** if necessary.

FUEL INSPECTION

- Turn ignition switch key to "ON" position, and check fuel gauge's needle range to make sure there is enough amount of fuel in the fuel tank.
- This scooter's engine is designed for using the unleaded fuel of octane 92 or above.
- Firmly secure the main stand on the ground, shut off the engine and keep flames away from the scooter when refueling.
- Do not fill above fuel upper limit level when refueling.
- Make sure the fuel tank cap had been tighten properly.





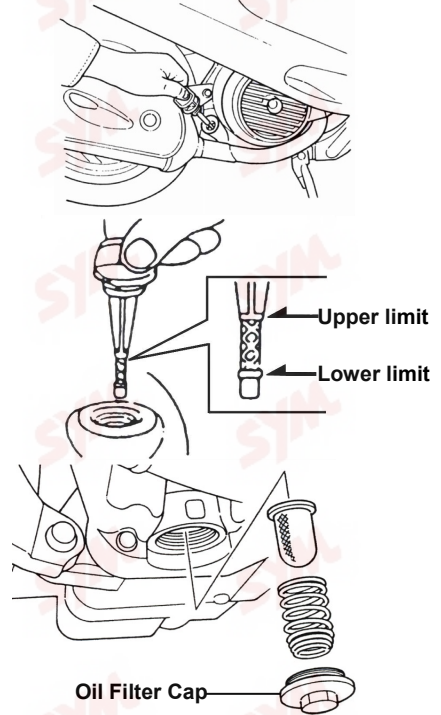
ENGINE OIL INSPECTION AND CHANGE

INSPECTION :

1. Use the main parking stand to support the scooter on a level ground, remove the dipstick after engine stopped for 3~5 minutes. Wipe oil off the dipstick and then insert it into the guide tube again (Do not rotate it.)
2. Remove the dipstick and check whether oil level is in between the upper and lower marks.
 - Add oil to upper limit if oil is under the lower limit. (Check cylinder, crankcase...etc for leakage.)

OIL CHANGE :

- Change engine oil after the first 300km, and change the engine oil every 3,000km thereafter. Cleaning oil filter's every 6,000km.
 - In order to maintain the engine's maximum performance, check whether the engine oil is enough every 500km. Add oil to upper limit if the engine oil has been found to be inadequate.
 - Engine Oil : Use API SJ, SAE 10W-40 grade or better engine oil. Otherwise, damage will not be covered by warranty.
- ※ Recommended Oil : **SYM Genuine "SYMOIL"** engine oil .
Oil Capacity :
MIO115c.c. —1.0Liter (0.8 liters for routine change).



TRANSMISSION OIL INSPECTION AND CHANGE

INSPECTION :

- Use the main stand to support the scooter on a level ground, after the engine stops, wait for 3~5 minutes. Remove the transmission oil infusion bolt, put a measuring glass under the drain bolt, and remove the drain bolt. Let the oil flows into measuring glass and check for decreased or not. (at disassembly : 110 c.c. / at change : 100 c.c.).

OIL REPLACEMENT :

- Stop the engine and use the main stand to support your scooter on a level ground. Remove the infusion bolt and drain bolt, drain out the oil.
- Install the drain bolt and tighten it. Fill new transmission oil (90~100 c.c.), and install the infusion bolt and tighten it. (make sure that bolts are tightened and check that there's no leakage.)

- ※ **Recommend Oil : SYM Genuine "SYMOIL" GEAR OIL (SAE 85W-140).**

Use SAE85-90 when outside temperature is below 0°C.

8. Inspection and maintenance before riding

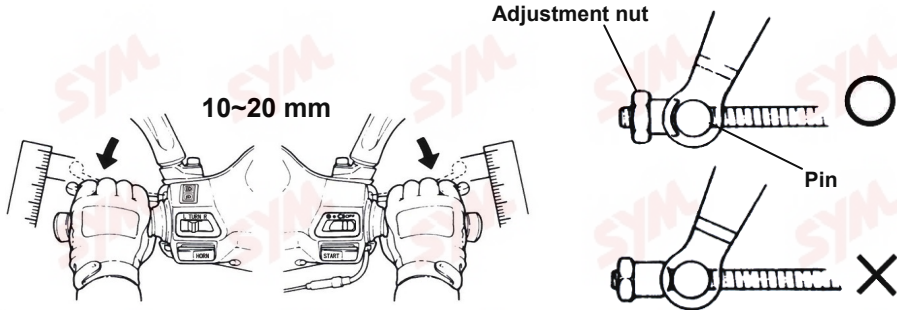
INSPECTION AND ADJUSTMENT OF BRAKE FREE PLAY

INSPECTION : (Brake lever free play must be checked with the engine shut off.)

- Brake lever free play for front and rear wheels.
When checking the hand-braking lever for front and rear wheels, its free play (the stroke of hand-braking lever from no braking to initial braking) should be 10~20mm. It is abnormal if the feel is spongy when holding the hand-braking lever forcefully.

Adjustment : (**Drum type**)

The indentation of brake adjustment nut must be aligned with the pin. (see below figure)

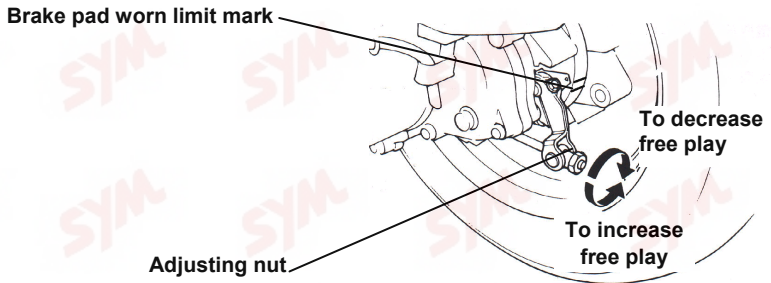


CAUTION :

When free play is between 10~20 mm, check brake indicators of front and rear wheels. If the arrow on the brake arm aligned with the “△” marked on the brake disk, that means the brake lining has been excessively worn, and must be replaced immediately.

Turn the adjusting nut on brake arm of rear wheels to adjust the free play of hand-brake lever.

- Hold the hand-brake levers after adjusting with both hands until there is effective brake feeling.
- Measure the free play with a rule.



Rear wheel drum type

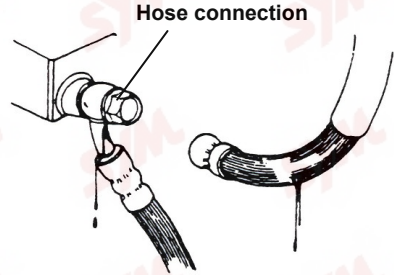


8. Inspection and maintenance before riding

FRONT DISK BRAKE INSPECTION

(Leak, damaged, looseness of brake line)

Visual check brake lines for leakage, or damage, check brake lines connections for looseness using a wrench or similar tool, and check whether steering handle vibration in riding, or any parts' interference may have damage the brake lines. If so, bring your scooter to your SANYANG dealer for repairing or service.

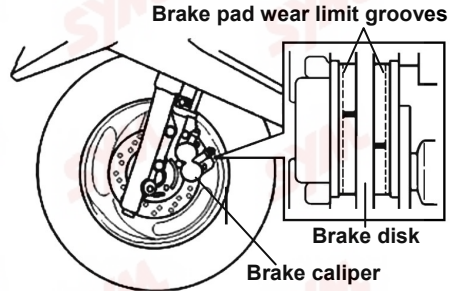


CAUTION :

Please ride your scooter on a dry road surface slowly and operate front and rear brakes in order to find out if there is any malfunction so as to ensure the scooter is at its optimum condition and safe to ride.

(Checking front brake lining)

Check the brake from behind the brake caliper. The brake pad must be replaced with new lining when the brake pad wear limit reaches the brake disk.

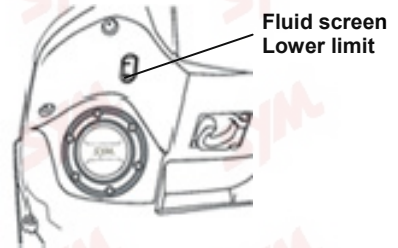


(Checking oil quantity in brake oil reservoir)

Park the scooter on a level ground, and check if fluid level is under the "LOWER" mark.

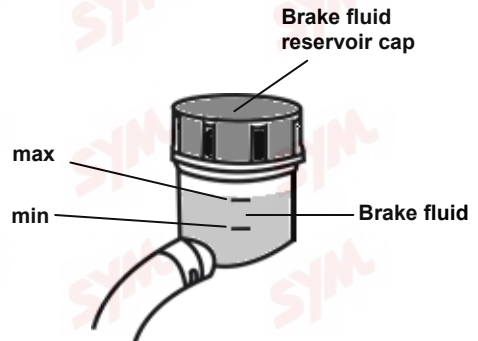
Recommended

Brake Fluid : BRAKE OIL (DOT 3 or DOT4).



(Replenishment of front wheel brake fluid)

1. Loosen the screws and remove the master cylinder cover.
 2. Wipe clean foreign materials , dirt around the reservoir, being careful not to let foreign materials fall into the reservoir.
 3. Remove the diaphragm plate and the diaphragm.
 4. Add brake fluid to upper level.
 5. Install the diaphragm plate and the diaphragm, and install the master cylinder cover.
 6. Please note the diaphragm direction, and do not let foreign materials fall into the reservoir.
- And tighten the master cylinder cover securely.



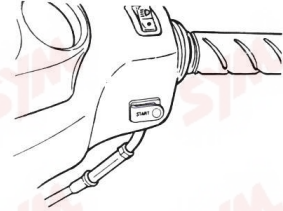
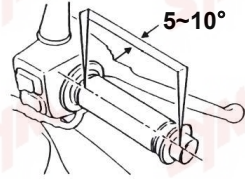
CAUTION :

- To prevent chemical reaction, please do not use brake fluids other than those recommended.
- Do not fill above the upper limit when adding brake fluid and avoid dropping on painting or plastic components to prevent damage.

8. Inspection and maintenance before riding

THROTTLE VALVE HANDLE CLEARANCE ADJUSTMENT

- Correct clearance allows throttle valve handle to rotate 5~10°.
- Loosen the lock nut first, then turn the adjust nut to adjust. Tighten the lock nut securely when finished.

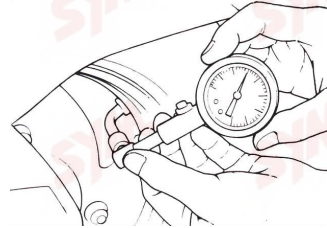
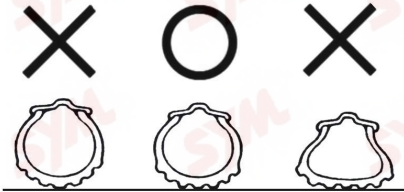


Check Items:

1. Check throttle valve cable to see if it can be moved smoothly from a closed position to a wide open position.
2. Rotate steering handle from side to side to check if the throttle valve cable is interfered.
3. Check to see if the throttle valve cable is obstructed by other cables preventing it from being operated smoothly.

TIRE INSPECTION

- Tires should be checked and inflated with the engine shut off.
- If a tire's ground contacting curve is abnormal, check it with an air pressure gauge and inflate it to the specified pressure.
- Tires pressure must be checked with an air pressure gauge when cold.

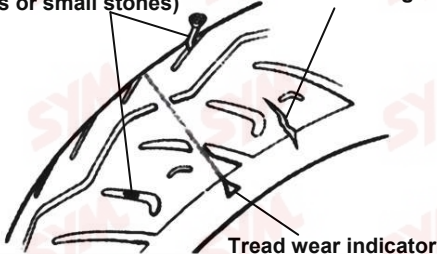


PLEASE REFER TO SPECIFICATIONS FOR STANDARD TIRE PRESSURE

Foreign materials

(Nails or small stones)

Crack and damage



- Visual check tires for frontal and lateral side walls for crack or damage.
- Visual check tires for any nails or small stones wedged in the tread.
- Check the "tread wear indicator" condition to see if tread groove depth is insufficient.
- A tire with a wear bar showing is worn out and should be replaced immediately.



CAUTION :

Abnormal tire pressure, wear, or crack is the most important cause that results in the loss control of the steering handle and a punctured tire(s).



8. Inspection and maintenance before riding

STEERING HANDLE FRONT SHOCK ABSORBERS INSPECTION

- Perform this check with engine shut off and ignition switch key removed.
- Visual check front shock absorbers for damage.
- Operate steering handle up and down, and check front shock absorbers for noises due to bends.
- Check the bolts and nuts of front shock absorbers with wrenches for tightness.
- Shake steering handle up & down, left & right, and front & rear to check if it is loosen, has too much resistance and pulls to one side.
- Check steering handle if it is being pulled too tight by the brake cables.
- Take your scooter to SYM Authorized Dealer or Franchised Dealer for a check or adjustment if any abnormal conditions are found.



INSPECTION AND MAINTENANCE OF BATTERY

- This scooter is equipped with a maintenance-free type battery, so it is unnecessary to check and add electrolyte. have your scooter checked by SYM Authorized Dealer or Franchised Dealer should any abnormality is found.

(Cleaning of battery terminals)

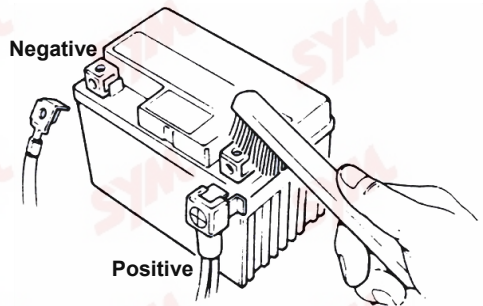
Remove the battery terminals and clean if there are dirt and corrosion on them.

Battery removal procedures are as follows:

Turn ignition switch "OFF", then open the battery cabinet door, and remove negative cable screw firstly and disconnect the negative cable. Then, remove positive cable screw and positive cable.

⚠ CAUTION :

- Clean the battery posts with warm water if the posts are eroded and have some white powders on them.
- If there is an obvious erosion on the terminals, disconnect the cables, then clean the erosion off with a steel brush or a piece of sandpaper.
- Install battery cable after cleaning and apply a thin coat of grease on the terminals.
Install battery in reverse order of removal.



- This scooter is equipped with a maintenance-free type battery, so it is unnecessary to check and add electrolyte. Have your scooter checked by SYM Authorized Dealer or Franchised Dealer should any abnormality is found.

⚠ CAUTION :

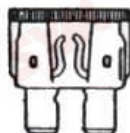
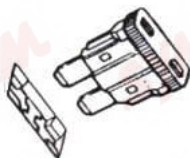
- This is a closed type battery. Never remove the caps.
- In order to prevent electric leakage and self-discharge when the battery sits idle for long periods. Remove battery from scooter, store it in a well-ventilated and dimly lighted place after the battery has been fully charged. Disconnect battery's negative cable if the battery is still kept on the scooter.
If the battery needs to be replaced, replace with a same closed-type battery (Maintenance-Free).

8. Inspection and maintenance before riding

CHECKING AND CHANGING FUSES

Turn off ignition switch, and check fuses if they are intact. Replace the blown fuse with a new one having the same specified amperage rating. Using a fuse of more than 10~20 amperes, a brass or iron wire to replace a blown fuse is strictly prohibited to avoid damaging the electrical system and the circuit.

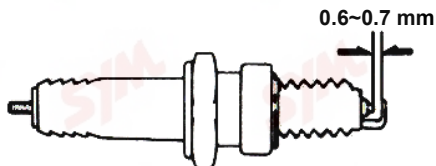
- Remove the storage box, and you'll find the fuse box near light.
- Open the fuse box cover, and pull out the fuse. Check it for damage or broken.
- Fuses must be firmly secured with wire connectors when replacing. Loose connections will result in overhead and damage.
- Use only parts having the specified specification to replace electrical components such as light bulbs. Using parts not having the specified specifications for replacement may cause the fuse to blow and over-discharge the battery.
- Avoid spraying water directly on or around fuse box when washing the scooter.
- Take your scooter to your dealer for an inspection if a fuse is blown by unknown causes.



Burned fuse

CHECKING THE SPARK PLUG

- Remove the cap of spark plug cable (remove the spark plug using the spark plug **Fuse connectors** the tool kit).
- Check the electrode if it is dirty or fouled by carbon deposits.
- Remove the carbon deposits on the electrode with steel wire, and clean the spark plug with gasoline, then, wipe dry with a rag.
- Check the electrode, and adjust its gap to 0.6~0.7 mm. (Check it with a feeler gauge)
- Hand tight the spark plug as far as it can go and then tighten it another 1/2~3/4 turns with a wrench.



WARNING :

The engine is very hot after running. Pay attention not to get burned.

Use only spark plugs suitable for the engine specifications of this scooter recommended by the manufacturer. (Refer to specifications.)

CHECKING THE FRONT AND REAR LIGHTS

- Start engine and turn on the head lamp switch. Check if head lamp and rear lamp come on.
- Check the brightness and direction of front light by wall to see if it is correct.
- Check the head lamp cover if it is dirty, crack, or loosen.



8. Inspection and maintenance before riding

CHECKING THE BRAKE LIGHT

- Turn the ignition switch key to "ON" position, hold the hand-braking levers for front and rear wheels.
- Check if the brake lights come on.
- Check the brake light cover if it is dirty, crack, or loosen.

CAUTION :

- Use only specified specification bulbs, do not use bulbs with different specifications to avoid damaging electrical system, burning out bulbs, and discharging the battery.
- Do not modify or add other electrical components to prevent over load or short circuit which may result in a fire and burn down the scooter in serious cases.

CHECKING THE TURN SIGNAL LIGHTS AND HORN

- Turn the ignition switch key to "ON" position.
- Turn on the turn signal light switch, and make sure that the front & rear and left & right signal lights flashes and also check if the warning buzzer sounds.
- Check turn signal light covers if they are dirty, crack, or loosen.
- Press horn button to check if it works.

CAUTION :

- Specified specification bulbs should be used for turn signal lights. Otherwise, the normal operation of turn signal lights will be affected.
- Turn on the turn signal light before turning or switching lane to warn rider of vehicles behind.
- Turn off the turn signal light immediately by pressing its button down after using. Otherwise, the flashing of twin signal lights may confuse the riders of vehicles behind.

CHECKING FOR FUEL LEAKAGE

- Check fuel tank, fuel cup, fuel hoses, carburetor for leakage.

CHECING THE LUBRICATION OF BODY'S VARIOUS MECHANISMS

- Check the body's pivot points if they have enough lubrication.
(For example, the pivot points on the main stand, the side stand, and the brake lever etc.)

8. Inspection and maintenance before riding

CHECKING THE AIR CLEANER

⟨DISASSEMBLE PRCEUDURE⟩

1. Remove mounting screws from air cleaner cover.
2. Remove the air cleaner cover, then remove filter element.
3. Take the element out and clean it. (Refer to maintenance schedule.)

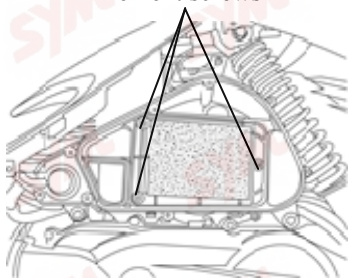
⟨ASSEMBLE PRCEUDURE⟩

- Assemble the air cleaner in reverse order of disassemble.

Air cleaner cover



Element screws



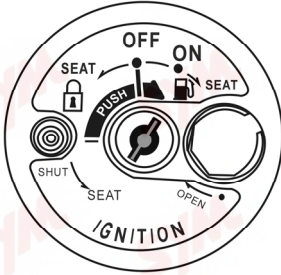
CAUTION :

- Dust deposit is one of the major causes of reducing output horsepower and increasing fuel consumption.
- Change the air cleaner element more frequently to prolong the engine's service life if the scooter is ride on dusty roads very often.
- If air cleaner is installed improperly, dust will be absorbed into cylinders, which may cause a premature wear and reducing output power and engine life.
- Be careful not to soak the air cleaner when washing the scooter. Otherwise, it will cause engine hard to start.

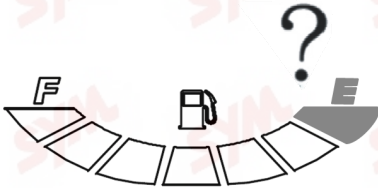


9. When there is an abnormal condition or a trouble

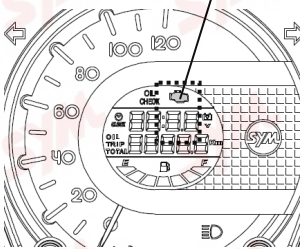
DIAGNOSIS WHEN ENGINE DOES NOT START




1. Has the ignition switch key been turned to "ON" position?

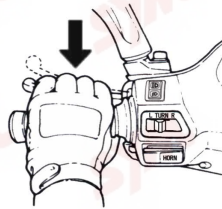


2. Is there enough fuel in the fuel tank?
EFi trouble warning indicator

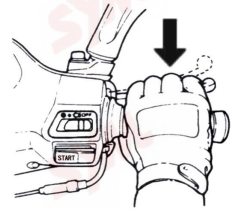


4. Is EFi trouble warning Indicator "  " stay illuminated? If this occurs, have a SYM dealer check the self-diagnosis system.?

For Rear Wheel Linking with Front Wheel

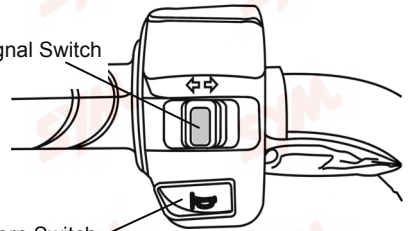


For Front Wheel



3. Is the rear or front wheel brakes applied when pressing starting button?

Turn signal Switch



Horn Switch

5. Turn the ignition switch key "ON", and press horn button down, if the horn does not sound, the fuse may have been blown.

【 Have your scooter checked by SYM authorized dealer or franchised dealer immediately if there are no problems with the above items and engine still cannot be started. 】

- 10. E.C.U. Circuit Interface System
- 11. Suggestions On Engine Fuel
- 12. Transmission Oil
- 13. Cautions For Riding Scooter



10.E.C.U. CIRCUIT INTERFACE SYSTEM

- This hardware component consists of a 16-bit microcomputer that is its control center. It contains the functional circuit interface of engine condition sensing and the driving actuator for the fuel injector, fuel pump, as well as ignition coil.

11. SUGGESTIONS ON ENGINE FUEL

- This scooter is designed to use UNLEADED gasoline of Octane No. 92 or higher.
- If the scooter is operated in high attitude (where the atmosphere pressure is lower), it is suggested that the air/fuel ratio should be readjusted to maximize the engine performance.

12. TRANSMISSION OIL

- Recommended Oil : Genuine "SYMOIL" GEAR OIL (SAE 85W-140 GL-5)

13. CAUTIONS FOR RIDING SCOOTER

1. Raise the scooter with the main stand, and sit on the seat.
Push the scooter forwarding to raise the main parking stand.



CAUTION :

Never rotate the throttle valve handle at will to increase the engine RPM before riding off.

2. Get on the scooter from the left side, and sit on the seat properly, keep your feet firmly on the ground to prevent the scooter from falling.



CAUTION :

Apply brake on the rear wheel before riding off.

3. Rotate the throttle valve handle slowly, and then the scooter will begin to move.



CAUTION :

- Rapidly rotate the throttle valve handle may cause the scooter moving forward suddenly and it is very dangerous.
- Make sure the side parking stand is spring back completely before riding off.

[DO NOT USE THE BRAKE SUDDENLY AND MAKE A SHARP TURN]

- Rapid braking and sharp turning will cause slip and fall.
- Rapid braking or sharp turning will cause slipping, lateral slipping, or fall especially in rainy days when the road is wet and slippery.

[RIDE WITH EXTREME CAUTION DURING RAINY DAYS]

- The brake distance in rain day or on wet road will longer than that on a dry road. Therefore, slow down and prepare to apply the brake earlier.
- The throttle valve handle should be released, and the brakes should be properly applied as it is needed while reducing the speed when going down a slope.



14. Periodical maintenance schedule

Item	Check Items	Maintenance Mileage	200mi	600mi	2,000mi	4,000mi	8,000mi	Remarks
		Maintenance kilometer	300KM	Every 1,000KM	Every 3,000KM	Every 6,000KM	Every 12,000KM	
		Maintenance Interval	NEW	1 Month	3 Months	6 Months	1 Year	
1	Air cleaner element (Remark)		I	C		R		Paper type
2	Oil filter (Screen)		C			C		
3	Engine oil		R	I	Replacement for every 3000KM			
4	Tire, pressure		I	I				
5	Battery		I	I				
6	Spark plug		I		I		R	
7	Carburetor (idle speed)		I			I		
8	Steering bearing and handles		I		I			
9	Check Transmission for leakage		I	I				
10	Check crankcase for leakage		I	I				
11	Transmission Oil		R	Replacement for every 5000KM(5 Months)				
12	Ride Belt / roller					I	R	
13	Fuel tank switch and lines		I		I			
14	Throttle valve operation and cable		I	I				
15	Engine bolts and nuts		I		I			
16	Cylinder head, cylinder, and piston					I		
17	Exhaust system/cleaning carbon					I		
18	Cam Chain / ignition time		I		I			
19	Valve clearance		I			I		
20	Shock absorbers		I			I		
21	Front/rear suspension		I			I		
22	Main/side stands		I			I/L		
23	Crankcase Blow-by system (PCV)		I		I			
24	Clutch weight					I		
25	Brake mechanism/brake pad		I	I				
26	Bolts/nuts for each components		I	I				

☆ The above maintenance schedule is established by taking the monthly 1,000 kilometers as a reference which ever comes first.

※ Have your scooter checked and adjusted periodically by your SYM Authorized Dealer or Franchised Dealer to maintain the scooter at the optimum condition.

Code : I ~ Inspection, cleaning, and adjustment R ~ Replacement

C ~ Cleaning (replaced if necessary) L ~ Lubrication

Remark : 1. Clean or replace the air cleaner element more often when the scooter is operated on dusty roads or in the Heavily- polluted environment.

2. Maintenance should be performed more often if the scooter is frequently operated in high speed and after the scooter has accumulated a higher mileage.

【Notes in the remarks are used to indicate the applicable models.】



15. Specification

Item	Model	Mio	
	Specification	FS11W1-EU	FS11W1-UK
Length		1,779 mm	
Width		696 mm	
Height		1,047 mm	
Wheel base		1,249 mm	
Net Weight		99kg	
maximum load (with cargo)		259Kg (570.9 lb)	
Type		4- stroke single cylinder engine	
Fuel		UNLEADED (OCTANE 92 OR HIGHER)	
Cooling type		Air - cooled	
Displacement		115.6 cm ³	
Compression ratio		10.8 : 1	
Max. HP		9.5PS(7KW) / 7,000 rpm	
Max. torque		1.0kgf-m(9.8Nm) / 6,500 rpm	
Starting methods		Electrical starter	
Front shock absorber		TELESCOPE	
Rear shock absorber		UNIT SWING	
IDLE		1,800±150rpm	
Transmission		CVT	
Front rim / Rear rim		MT 2.15×10 / MT 2.15×10	
Front tire		90/90-10 – 50J	
Rear tire		90/90-10 – 50J	
Wheel		Steel	
Tire pressure		Front: STD 1.5kgf/cm ²	
		Rear: STD 2.3kgf/cm ²	
Front brake		Disk type (Ø 160 mm)	
Rear brake		Drum type (Ø 110 mm)	
Front light bulb (high, low)		12V 35W / 35W ×1 (H17)	
Brake light bulb (tail light)		LED	
Turn signal light bulb		LED	
Speedometer light bulb		LED	
Engine oil capacity		1.0 L (0.8 L for change)	
Transmission oil capacity		110 cc. (100 cc. for change)	
Fuel tank capacity		5.2 L	
Fuse / Spark plug		LR7D (NGK) (gap 0.6~0.7mm)	
Battery capacity		YTX7A/GTX7A-BS 12V 6.3Ah (closed type, maintenance-free battery)	
Air cleaner		Paper type	
Fuel tank cap		Switch control auto-open type	
Front light		General type (single)	
Rear grab frame		Can not load cargo	

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