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Owner's Manual

TDA16T1-EU



英



This manual describes the correct usage of this scooter including safety riding, simple inspection methods, etc. For a more comfortable and safety riding, please read this manual carefully.

For your benefit, please ask your SYM dealer to read the manual and operate carefully the following:

- Correct use of the scooter.
- Pre-delivery inspection and maintenance.
- Warranty usage, contents, and period.

- 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.

⊙ Safety Notification ⊙

We care about you and your scooter. Hence we provide safety notification of vehicle usage in the manual. Please read and follow the instruction.

The safety notifications illustrate some potential dangers which may cause injury. Every safety notification has specific symbol and description as following.

! CAUTION

Not following instruction will cause serious damage, even death.

! WARNING

Not following instruction may cause serious damage, even death.

! CAREFUL

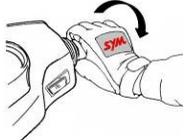
Not following instruction may cause damage.

Every safety notification has description illustrating what danger may occur and how to avoid or reduce it.

Beside the abovementioned 3 symbols, there is also one important symbol [Attention] . Not following may damage your vehicle.

Before your first ride on this scooter, please pay attention to the following operation.

Under Idling Start & Stop mode:

Indicator on meter	Starting method
 Flashing	 Pull throttle or restart
 Off	Restart

Contact your SYM authorized dealer, if you have any question.



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2. Before Riding

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

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

For your benefit, please ask your **SYM** dealer to read the manual and operate carefully 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 1000 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.

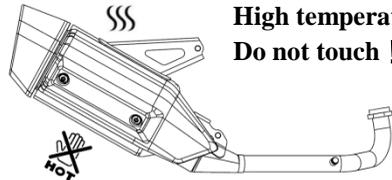
3. Safe Riding

When driving, it is very important to be relaxed, clothe properly, follow traffic regulations, do not rush, and always drive carefully.

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

To remind you:

- Please wear a safety helmet.
- Do not use cellphone during riding.
- Observe the speed limit.
- Perform periodical maintenance and inspection.



⚠ WARNING ! !

- For both rider and passenger, get on the scooter from the left side. Passenger should keep both feet on the footrest to avoid getting burned by exhaust pipe.
- Recover footrest when not in use to secure pedestrian's safety.
- 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.



4. Driving

Rider's posture will greatly affect riding safety. Always keep your body's gravity in the center of the saddle, if your body's gravity is on the rear part of saddle, 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.

Correct



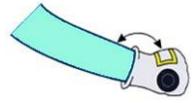
Wrong



One finger width



Wrist angle

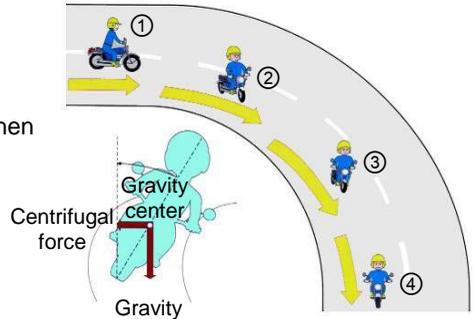


Turning

- 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.

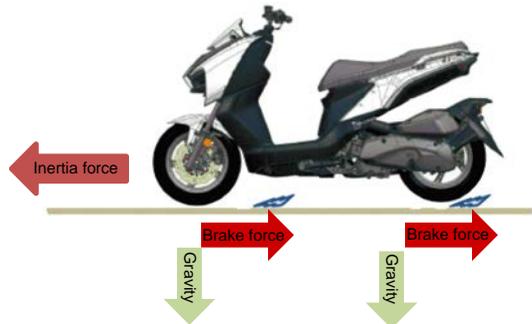
Key point for turning:

- Decelerate before turning.
- Keep steady speed when turning.
- Accelerate properly when exiting turn.
- After exiting turn, make sure road safety then reaccelerate.



Braking

- Apply both front and rear brake when braking. Avoid hard/sudden braking and keep vehicle and brake force steady. Do not lock the brake. On well-paved road, the front brake should be applied a bit more than the rear. The brake force should be adjusted according to the road condition. Apply less front brake force on worse road condition.





- 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.

⚠ 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.
- Overload may affect handlebar operation.
- 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.
- 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. Do not modify your scooter at will.
- Turn off main switch and then turn on to restart the engine, when the vehicle falls down and goes off.

To remind you:

- Wear a helmet when riding.
- Be sure to inspect your scooter before every ride
- Keep safety distance when riding.
- Decelerate when crossing intersection.
- Yield to moving pedestrians and vehicles.
- Do not modify your scooter at will.
- Turn on headlight in morning and at dawn.
- Do not drink and drive.
- Do not use cellphone when riding.

5. Use Genuine Spare Parts

In order to maintain the scooter's best performance, each part's quality, material, and machined precision conform with the design requirements. "SYM Genuine Spare Parts" are 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 lowering the scooter's performance.



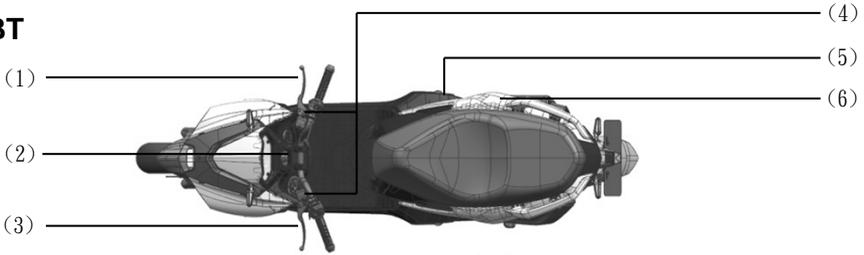
SANYANG
GENUINE PARTS



6. Parts location and operation

Parts Location

DRGBT



- (1) Front brake lever
- (2) Speedometer
- (3) Rear brake lever

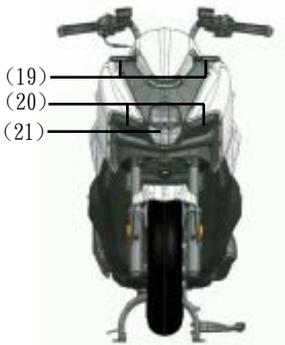
- (4) Brake fluid reservoir
- (5) Oil level gauge
- (6) Fuse box



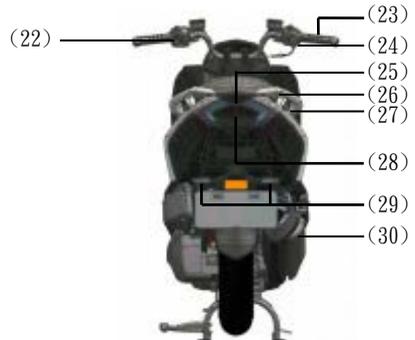
- (7) Fuel cap
- (8) Front fork
- (9) Seat/luggage box
- (10) Frame number

- (11) License light
- (12) Air cleaner
- (13) Rear cushion
- (14) Pillion step bar

- (15) Coolant level inspection window
- (16) Engine number
- (17) Main stand
- (18) Side stand with side stand switch



- (19) Front winker
- (20) Position light
- (21) Headlight
- (22) Left handle switch



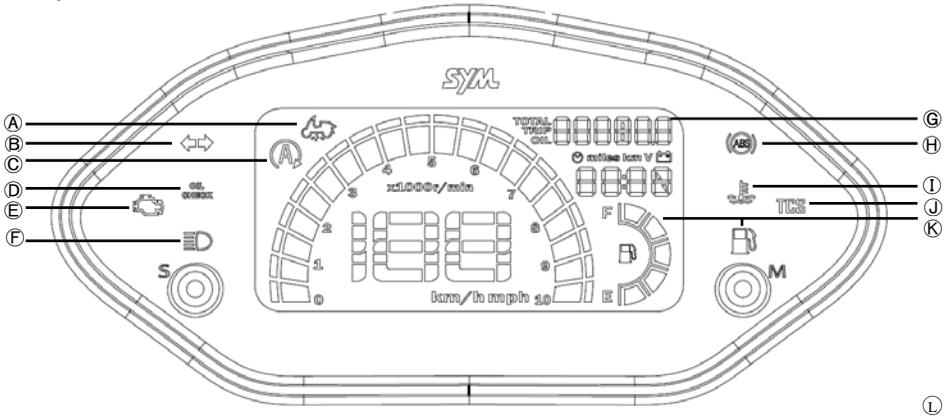
- (23) Throttle grip
- (24) Right handle switch
- (25) OBDI coupler/battery
- (26) Multi-function main switch

- (27) USB charge unit
- (28) Tail/brake light
- (29) Rear winker
- (30) Muffler



Parts Operation

LED speedometer



A Side Stand Down Indicator Light

- This indicator comes on when the side stand is kicked down. The engine cannot be started when the side stand is down. The engine will be stopped if the side stand is kicked down while the engine is running. This indicator goes off when the side stand is up.

B Turn Signal Indicator Light

- The corresponding turn signal indicator light blinks when the turn signal switch is pushed to the right or left.

C Idling Start & Stop Indicator Light

- Turn the Idling Start & Stop switch to “” position to enter Idling Start & Stop mode. Turn the Idling Start & Stop switch to “OFF” position to exit Idling Start & Stop mode.
- When side stand is up and the scooter is ridden and reaches the setting condition, the Idling Start & Stop indicator “” is on, the Idling Start & Stop mode is activated.
- When speed is less than 1km/h or the scooter is idling, the Idling Start & Stop indicator “” will blink 3 times and then engine will go off automatically and the Idling Start & Stop indicator “” will keep blinking. During riding, the Idling Start & Stop indicator “” is on without blinking.
- When the engine is off under the Idling Start & Stop mode, slightly open the throttle or press the electrical start button while applying brake to re-start the engine.
- Waiting time protection: When the engine is off under the Idling Start & Stop mode, the engine cannot be re-started after 4 minutes waiting without starting. To avoid mistakenly touching the throttle and the engine is started, the Idling Start & Stop mode is cancelled automatically. To re-start the engine, please press the electrical start button while applying brake.
- Pushing protection: When the engine is off under the Idling Start & Stop mode, and you are pushing the scooter for more than 5 seconds, the Idling Start & Stop mode is



cancelled automatically to avoid mistakenly touching the throttle and the engine is started. To re-start the engine, please press the electrical start button while applying brake.

- Under the Idling Start & Stop mode, when the engine cannot be re-started by slightly opening the throttle. Please turn off the Idling Start & Stop mode and have your scooter checked by an authorized SYM dealer.

D Oil Check Indicator Light

- The oil check indicator shows how long the engine oil is used. The oil check indicator light turns on at every 1,000km riding distance according to the oil distance meter.
- When this indicator comes on, please check the oil level by oil level gauge. In oil meter mode, quickly press the S button twice to reset the oil check indicator light.

E EFi Warning Indicator Light

- When the main switch is turned on, the EFi warning indicator remains on initially. It should go off immediately after the engine is running. It displays the condition if the EFi system is working correctly. If there is any problem on the EFi system, the warning indicator remains on all the time. Please contact your SYM authorized dealer if this indicator goes on.

F High Beam Indicator Light

- The high beam indicator turns on with high beam headlight is turned on.

G Odometer

- **TOTAL** shows the total distance in kilometers the scooter has been ridden, ranging 0~99999km , and will return to 0 and starts working again.
- **TRIP** shows the distance in kilometers since it was last reset to zero, ranging 0.0~999.9km , and will return to 0 and starts working again.
In trip meter mode, push S button for more than 2 seconds to reset trip meter.
- **OIL** records how long the engine oil is used, ranging 0.0~9999.9km , and will return to 0 and starts working again.
In oil distance mode, quickly push S button twice to reset oil distance meter.
- Switch **TOTAL / TRIP** / **OIL** by pushing M button.

H ABS Indicator Light

- The ABS (Anti-lock Brake System) indicator light goes on when the main switch is turned on and goes off shortly after the scooter starts moving. If the ABS is normal, it stays off. If something is wrong with the ABS, the indicator goes on and stays on. When the indicator light is on, the ABS does not function, but if the ABS fails, the conventional brake system will still work normally.

I Engine Overheat Indicator Light

- When engine overheat indicator light is on during riding, the coolant temperature is overheated. Please check if the coolant is within standard level. Contact your SYM authorized dealer, if there is abnormal situation.

J TCS Indicator

The TCS indicator flashes when traction control has engaged. If the traction control system is turned off, this indicator will go on. This indicator comes on whenever the ignition switch is turned off and turned to "On" position; this indicator will not go off until the engine is started. If the indicator does not go on after turning the ignition switch on, or if the indicator remains on when the engine is started, have the scooter checked by an authorized SYM dealer.



Fuel Gauge / Low fuel Indicator Light

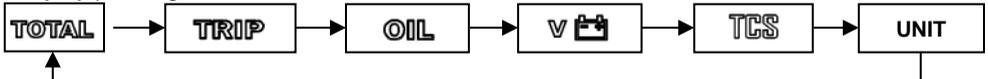
This digital fuel gauge shows the fuel level when the main switch is turned on. There are 5 sectors in the fuel gauge. F means full and E means empty. The low fuel indicator will be on when the fuel level is at E. please refuel the fuel tank immediately.

CAUTION ! !

- Turn main switch to “” position, press the start button and pull the brake lever for the first engine start.
- Turn the Idling Start & Stop switch to “” position, the Idling Start & Stop mode is activated only when the scooter is ridden and reaches the setting condition (engine heated).
- For safety start, it is recommended pull the brake lever while pulling throttle for starting.
- When engine temperature is low or the previous engine stop is not controlled by EFi system, the Idling Start & Stop mode will not be activated.
- When Idling Start & Stop switch is turned on, the engine will stop while idling, so the EFi system is not able to timely adjust the idle learning and O2 sensor learning. It is suggested to turn off the Idling Start & Stop switch and carry out the idle speed learning every 5,000km.
- When the idle learning step is not proper, the engine start can possibly be difficult. When the starting RPM is low, the EFi system will automatically cancel the Idling Start & Stop mechanism, hence there will be no Idling Start & Stop function for EFi compulsory idling learning.
- Idling start & stop mechanism can be recovered when main switch is turned off and turned on.
- Vehicle speed is very important for Idling Start & Stop mechanism. For driving safety, if the speed is abnormal, please Contact your SYM authorized dealer for repair.

Display Shift

When the main switch is turned on, under “TOTAL” mode, the below display mode can be shifted circularly by pushing the M button once.



- **TOTAL** shows the total distance in kilometers the scooter has been ridden and cannot be reset.
- Under **TRIP** mode, push S button for more than 2 seconds to reset.
- Under “**UNIT**” mode, push S button for more than 2 seconds , metric/imperial can be interchangeable.(Including speed/TOTAL/TRIP/OIL)

Time Setting

- This clock displays 24-hour mode.
- When the main switch is turned on, this clock will display 24-hour mode.
- Under  mode, push the “M” button for more than 2 seconds to enter time setting mode. Quickly push “M” button (0.5 second) to select setting mode (hour→tens digit in minute→units digit in minute→exit), quickly push “S” button (0.5 second) once the digit will increase 1 each time. If the clock is idled about 30 seconds while setting, it will exit setting mode automatically and starts working again.



Battery Voltage Gauge

- The battery voltage display shows current battery voltage. Under “OIL” mode, quick push “M” button to switch to battery voltage mode “”. It is forced to display about 10 seconds when the ignition switch is turned on.

CAUTION ! !

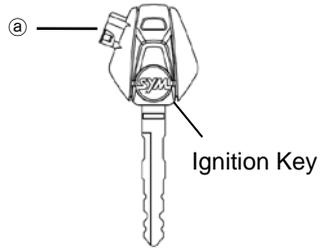
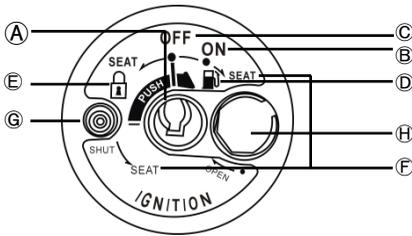
- If the battery voltage is below 11.5V when the main switch is turned on have your scooter checked by an authorized SYM dealer.
- If the battery voltage is below 10.0V or above 15.0V when the engine is running, have your scooter checked by an authorized SYM dealer.

CAUTION ! !

- Do not clean the speedometer, headlight, and other plastic parts by using organic solvents.
- When the scooter is used under high moisture environment, there could possibly be vapor condensed in speedometer and lights. It is considered as a normal situation, if the vapor evaporates gradually.
- Remove the protection film sticker on the speedometer before using the scooter. Or the speedometer display can possibly be unclear, when the stick deteriorates under sun light and rain.
- Check/replace engine oil at the first 300 km; and check every 1,000 afterwards
- If the oil check indicator does not light on when the scooter reaches oil replacement mileage, have your scooter checked by an authorized SYM dealer.



Main Switch Operation



Ignition Key

A Ignition Key Slot

The ignition key into the ignition key hole to operate the ignition switch.

B “On” Position

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

C “Off” Position

Engine can be turned off in this position. Ignition key can be removed.

D “Fuel Lid” Position

The fuel lid can be opened in this position. Turn the ignition key to “OFF ” position, push the ignition key and turn clockwise to open the fuel lid.

E “Lock” Position

The handlebar can be locked in this position. Turn the ignition key to “OFF ” position to stop the engine. Turn the handlebar fully to the left. Push the ignition key anti-clockwise to lock the handlebar. The ignition key can be removed in this position. To unlock the handlebar, turn the ignition key clockwise to “OFF ” position.

F “Seat Open” Position

The seat can be opened in these positions.

In “ON” position, turn the ignition key clockwise, the ignition key will return to “ON” position automatically.

In “OFF” position, turn the ignition key anti-clockwise, the ignition key will return to “OFF” position automatically.

In “Lock” position, turn the ignition key anti-clockwise, the ignition key will return to “Lock” position automatically.

G Magnetic Shutter

Push the “PUSH SHUT” button to close the ignition key slot.

H Shutter Opener

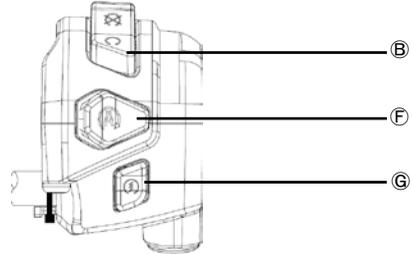
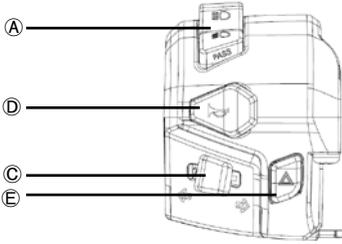
Align the projection  a of the shutter key with the shutter slot, and turn the shutter key clockwise to open.

CAUTION:

- Remove protection film sticker on the main switch to avoid it stuck into the main switch and cause malfunction.
- Do not attach too many objects to the ignition key to prevent interfering the workability of the ignition switch.



Handlebar Switches



- Ⓐ Passing Light Button/ Dimmer Switch
- Ⓑ Engine Stop Switch
- Ⓒ Turn Signal Switch
- Ⓓ Horn Button

- Ⓔ Hazard Switch
- Ⓕ Idling Start & Stop Switch
- Ⓖ Starter Button

Daytime Running Lights System

Turn the main switch to “ON” position, the position light, tail light, and license light will be on at the same time.

After the engine is started, the headlight will be on. Until the main switch is turned to “OFF” position, all lights will be off.

This is to increase the visibility at daytime and to secure road safety.

⚠️WARNING ! !

When the main switch is turned to “ON” position, Daytime Running Lights System is activated. If the engine is not started for a long time to recharge the battery, the battery will be dried out of power.

Ⓐ **Passing Light Button / Dimmer Switch**

When pushing the passing light button **PASS**, the high beam indicator light goes on to signal the driver of the vehicle ahead that you are about to pass. Release to recover its original position. High and low beam can be selected with this switch. When the headlight is on high beam , the high beam indicator light goes on.

 High beam

 Low beam

Ⓑ **Engine Stop Switch**

This switch should normally remain in the  position for the scooter to operate. In an emergency, switch to the  position to stop the engine.

Ⓒ **Turn Signal Switch**

When the turn signal switch is turned to the left  or right , the corresponding turn signals blink on and off. To stop blinking, push the switch in.

Ⓓ **Horn Button**

When the horn button is pushed when the ignition switch is turned on; the horn sounds.



E Hazard Switch

Turn on the hazard switch, all the turn signal lights and turn signal indicators will blink. At this time, turning main switch to OFF position cannot cancel the hazard function, and it will keep consuming battery power. Please do not use for a long period, or the engine probably cannot be started. To turn off the hazard function, the main switch has to be turned to “ON” position.

⚠ WARNING ! !

It is suggest not to use the hazard function under Idling Start & Stop mode. If hazard function and Idling Start & Stop are activated at the same time, it is possible to dry out battery power.

F Idling Start & Stop Switch

Turn the Idling Start & Stop Switch to “” position to activate the Idling Start & Stop mode. Turn the switch to “OFF” position to exit.

G Starter Button

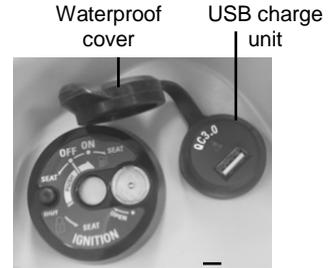
For electrical starting the engine, please push the starter button. Turn the ignition switch on; push this button while holding the front or rear brake lever to start the engine.

⚠ WARNING

- To avoid engine damage, do not push the starter button after the engine is started.
- For safety reason, the brake has to be applied for electrical starting.

USB Charge Unit (with blue LED)

- Rated voltage: Main switch “ON”, DC 12V input
- Voltage usage range: 10.5V~16V
- Output voltage: DC3.6V~12V±10%V , blue LED on
- Output ampere: 3.0±10%A , 2.0A±10% A, 1.5A±10% A, auto shift
- Fast charge support BC1.2, QC2.0/3.0, auto shift
- Overload protection: Over 3.3A, blue LED off
- Overheat protection: Output cut off when temperature is above 135°C; output recover when temperature at 100°C.
- USB waterproof cover: USB socket has to be kept clean and dry. The USB waterproof cover can help prevent dust from getting in and reduce oxidization of the socket.

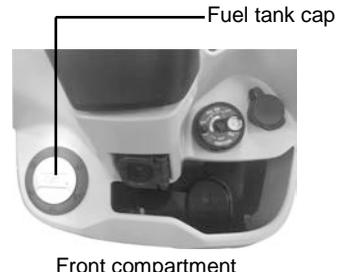


Front Compartment

- Do not overload the front compartment to avoid affecting handlebar operation.
- When washing your scooter, remove your valuables from front compartment to avoid damage.

Fuel Tank Cap

Insert ignition key to main switch and turn counterclockwise to open the fuel tank cap. After refilling fuel, press close the cap until “click” sounds.



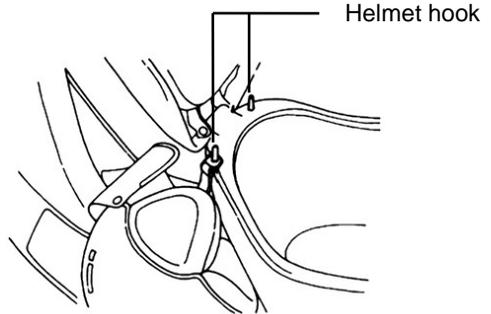


⚠ CAUTION

- Gasoline is extremely flammable and can be explosive under certain conditions. Do not smoke and turn the ignition switch off when fueling. Make sure the area is well ventilated and free of any flammable source.
- Never fill the fuel tank to the top. If the tank is filled to the top, heat may cause the fuel to overflow.
- Make sure the fuel tank cap is closed securely after refueling.
- Wipe off the gasoline immediately if it is spilled out on the scooter.

Helmet Hook

- Open the seat and hang helmet on the helmet hook, then lock the seat.



⚠ WARNING

- Do not hang helmet on the helmet hook while riding.

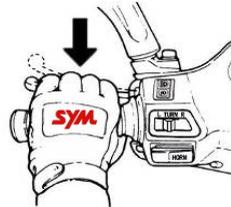
Luggage Box

- The luggage box is under the seat.
- Maximum load: 10 kg.
- Please check if the seat is locked properly.
- Do not put things, such as electrical products, fresh produce, and high evaporation products, which are easily affected by heat in the luggage box due to the high temperature transmitted from engine.
- Take away your valuables before leaving the scooter.
- Remove things from luggage box before washing the scooter.

Brake

- Avoid unnecessary sudden brakes.
- Slow down in rain ride and apply early brake.
- Long time and continuous brake will make the brake overheated and reduce brake force.
- Apply both front and rear brakes.

For rear brake



A

For front brake



B



Passenger Footrest

- Flip down the footrest for passenger usage. A
- Fold up the footrest when not in use. B

⚠ CAUTION ! !

- Fold up footrest when not in use to secure pedestrian's safety.

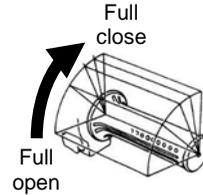
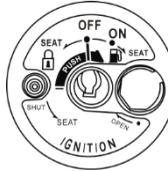


7. How to Start the Engine

CAUTION

- Check engine oil and fuel before starting the engine.
- To avoid sudden dash, start the engine while rear brake is applied
- Check if the Idling Start & Stop switch is turned on and the indicator is on for Idling Start & Stop standby.

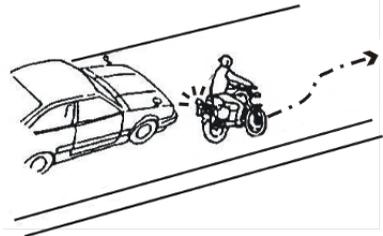
Turn the main switch to “ ON ” position.
Do not pull throttle; under brake condition,
push starter button.



8. How to Ride the Scooter

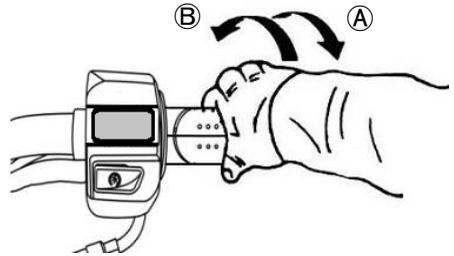
Moving Off

- Turn on your turn light before moving off and make sure surrounding area is clear and safe.
- Make sure your main / side stand is up before moving off.



Throttle Control

- To accelerate, slowly open the throttle (A).
- To decelerate, close the throttle (B).



Parking and Turning off Engine

Closing to parking position

- Turn on your turn light to notice other vehicles, decelerate, and pull over.
- While closing throttle, apply your front and rear brakes at the same time

Fully stop

- Recover your turn light and turn main switch to “ OFF ” position to stop the engine.

After stopping the scooter, step down from the left side of the scooter and park with main stand on a level ground.

Lock the scooter and remove the ignition key after parking the scooter properly.



⚠ CAUTION

- Do not turn your main switch with ignition key during riding.
- After running, the exhaust pipe is very hot, park the scooter away from pedestrian and children. Keep combustibles away from exhaust pipe.
- On the occasion of long term not using the scooter, it is suggested to start the engine for around 10 minutes every week to maintain the best engine starting condition.

Transmission

This scooter is equipped with CVT mechanism. CVT can timely and smoothly transfer engine power to wheel according to road condition, loading, speed, and other factors. There is no need to change between gears.



9. Specification

※ 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.

Model	MMBCU (TDA6T1-EU)
Length/Width/Height (mm)	1,990 / 740 / 1,120
Curb weight / Maximum load	136kg / 286kg
Wheel base / Seat height	1,380mm / 803 mm
Min. turning radius	2.0 m
LED headlight (High / Low beam)	LED / LED
Position light	LED
Tail / brake light	LED
Front / rear turn light	LED
Turn light indicator	LED
High beam indicator	LED
Fuse	20A*1 15A*1 10A*2 5A*3
Battery	GT7B-BS / YT7B-BS 12V 6.5Ah
Spark plug	CPR8EA-9
Front brake	Disk (Ø 260mm)
Rear brake	Disk (Ø 230mm)
Tire (Front / rear)	120/70-13 130/70-13
Tire pressure (Front / rear)	1.8 kgf/cm ² / 2.3 kgf/cm ²
Max. horse power	15.6 PS / 8,000 rpm
Max. torque	15.0 Nm / 6,000 rpm
Climbing Ability	28°
Cylinder bore x stroke	Ø59.0 mm×57.8 mm
Compression ratio / displacement	11.2 : 1 / 158 cc
Idle speed	1,750 ±150 rpm
Ignition system / starting system	Full transistor ignition / electrical starter
Fuel tank capacity	7.4 L
Engine oil capacity	1.05 L (total), 1.0 L (change)
Transmission oil capacity	110 c.c. (total), 100 c.c. (change)



10. Maintenance and Adjustment

Routine Checks

Item		Check point
Engine oil		Sufficient engine oil?
Fuel		Sufficient fuel?
Brake	Front	Brake lever free play 1~2cm
	Rear	Brake lever free play 1~2cm
Tire	Front	Tire pressure 1.8kgf/cm ²
	Rear	Tire pressure 2.3kgf/cm ²
Handle bar		Abnormal vibration or difficult operation?
Speedometer/lights/back mirror		Functioning well? Lights illuminates? Can see the rearview clearly?
Major tightening parts		Loose screw, nut, or bolt?
Battery		Battery voltage lower than 11.5V? (20°C)

Caution

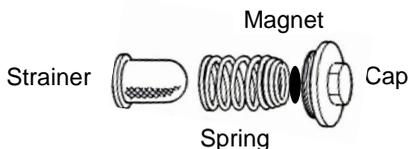
- If there is abnormal in routine check, please contact your SYM authorized dealer for repair.

Engine Oil Check and Change

- Park the scooter at level ground with main stand. Turn off the engine and wait for 2~3 minutes. Remove the oil level gauge, clean it and insert (not tighten) to check the oil level.
- Check if the oil level is between upper and lower limit.
- If the oil level is at the lower limit, refill oil to upper limit.
- Please choose oil grade that is equal to (or greater than) SAE 5W-40 ~ SAE 20W-50 API SL. SYM is not responsible for any damage caused by improper oil.
- The genuine “**SYMOIL**” are designed and recommended for your vehicle.

Engine Oil Strainer Clean

- Remove cap and strainer. Clean the strainer with gasoline or compressed air.



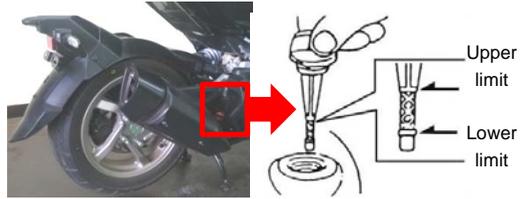
CAUTION

- After the cap is removed, strainer, magnet, and spring will fall out. Do not lose these parts.



⚠ CAUTION

- Oil level cannot be correct when scooter is just parked, or parked on the unlevelled ground.
- Check strainer while changing oil. Replace it if necessary.
- Engine oil will deteriorate more easily under frequent short distance usage. Please change in advance.



Fuel Inspection

- It is recommended to refill with unleaded 92 (RON) gasoline or greater. Turn the ignition switch on, and check the fuel gauge's needle.
- Park with main stand while refilling fuel. Make sure the engine is turned off.
- Do not refill too much fuel into the fuel tank.

Transmission Oil Change and Inspection

Inspection:

- Park the scooter on level ground with main stand.
- Drain out transmission oil, after the engine is turned off for 3~5 minutes.
- Total capacity: 110cc. / Periodic maintenance: 100cc.

Change:

- Refill in the recommended oil, after the drain bolt is tightened properly.
- Install the filler bolt and check if there is any leakage. Have your scooter checked by an authorized SYM dealer, if leakage is noticed.

※Recommended transmission oil: "SYMOIL" series **10W/30**, or equivalence.

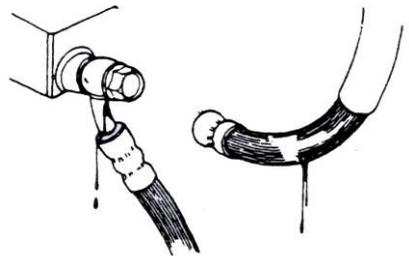
Brake System Inspection

Leakage Inspection:

- Visually check if there is leakage on the brake system.
- Check if the connection bolt is loosened.
- Check if there is any interference between brake hoses and others parts.
- **Have your scooter checked by an authorized SYM dealer, if any damage or leakage is noticed.**

Brake Pad Inspection:

- Check the brake pad wear of front and rear disk brake from the rear side of caliper. If pad lining reaches its minimum thickness line. Have the brake pad replaced by an authorized SYM dealer.



Brake Fluid Level Inspection:

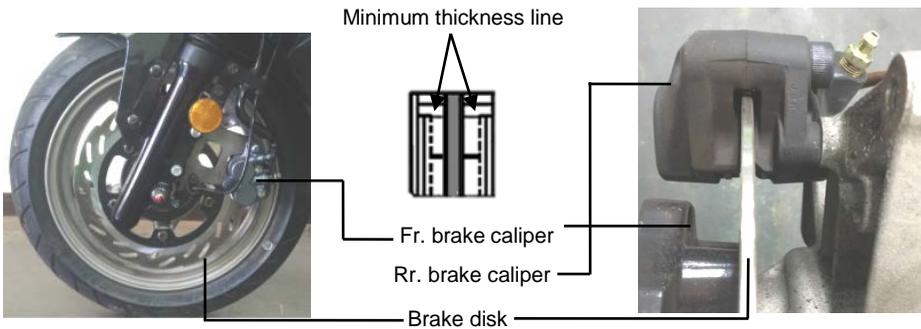


- Check the brake fluid level from inspection window, while the handle bar is set to front, and the scooter is parked at level ground with main stand.
- The brake fluid level must be above the “MIN” mark on the inspection window.

Recommended brake fluid: “**SYMOIL**” series **DOT 3**, **DOT 4**, or equivalence.

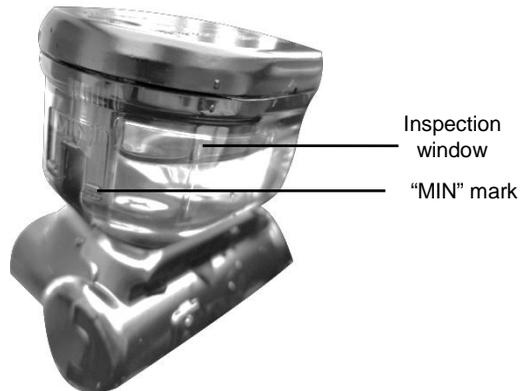
⚠ CAUTION

- The brake fluid level cannot be correct if the scooter is parked at unlevelled ground.
- Use only DOT 3 or DOT 4 brake fluid.
- Do not overfill the brake fluid to prevent the further damage on plastic covers.
- Keep external substance out from brake reservoir and fluid, while refilling.



⚠ CAUTION

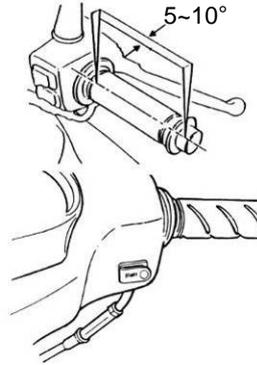
- While refilling brake fluid, the engine must be turned off.
- During periodic maintenance, clean dust and dirt from the brake mechanism to reduce brake noise and increase brake force.





Throttle Free Play Inspection

- Check if there is 5°~10° free play on the throttle grip.
- Have the throttle free play checked and adjusted by an authorized SYM dealer.

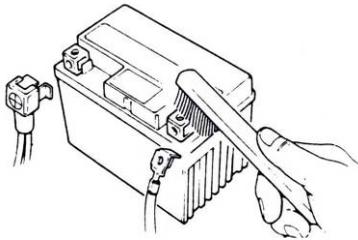


⚠ CAUTION

- Make sure the throttle can operate smoothly.

Battery Inspection

- This motorcycle is equipped with a sealed type battery. No need to add distilled water. Have your battery checked by an authorized SYM dealer, if necessary.
- Clean if the electrode is dirty or rusty. Procedures as following:
Turn off the main switch.
Remove negative terminal (-) first, then the positive terminal (+).



⚠ CAUTION

- Clean with warm water, if there is white substance on the terminal.
- Remove the terminal and clean with steel brush or sandpaper, if there is rust.
- Apply grease on the terminal after cleaning.
- Install the battery in the reverse order of removal.

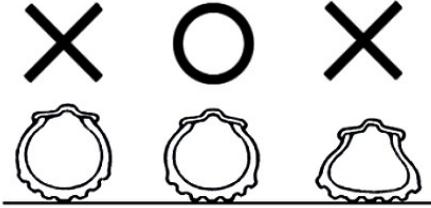
⚠ CAUTION

- Never open the cap of the battery.
- When long time not is use, remove the battery from the scooter, charge fully, and store at well ventilation area. If the battery has to be kept on the scooter, remove the negative terminal.
- Be sure to turn off main switch before replacing the battery.
- Never remove positive or negative terminal from battery while engine is still running.



Tire Inspection

- Be sure to check and inflate the tire when engine is turned off.
- Measure the tire pressure by tire pressure gauge and inflate to recommended tire pressure.



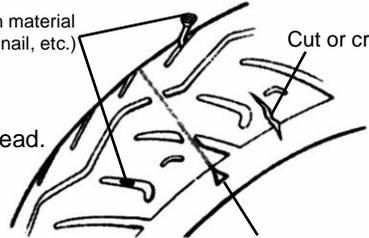
Front tire: 1.8 kgf/cm²

Rear tire: 2.3 kgf/cm²

- Visually check if the tire is cracked or cut.
- Visually check if small stone or nail is stuck in the thread.
- Check the tire wear by the thread wear indicator.
- Replace the tire if worn out.

Foreign material
(stone, nail, etc.)

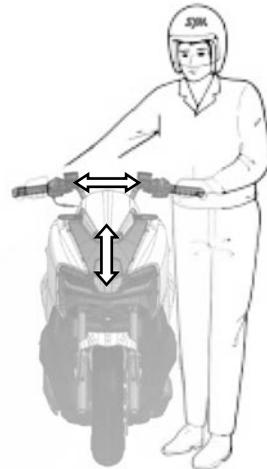
Cut or crack



Thread wear indicator

Steering and Front Fork Inspection

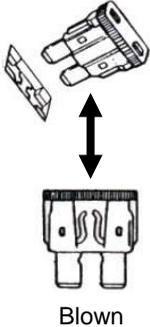
- Check while engine is turned off.
- Visual check if the front forks are damaged or leaking.
- Compress the front forks by pushing down the steering handle to check if the forks operate smoothly without noise.
- Check if the steering axle locknut is tightened properly.
- Turn the handlebar at all directions to check if the handlebar operates smoothly.
- Check if the handlebar is pulled by the brake hose.
- Have your scooter checked by an authorized SYM dealer for your safety.





Fuse Inspection

- Turn off the main switch.
- Fuses are installed in the fuse box near the battery.
- Open the fuse box and remove the fuses.
- For replacement, please use fuses with same spec. It is strictly prohibited to use fuses out of spec or wire for replacement.
- Have your scooter checked by an authorized SYM dealer, if the fuse fails repeatedly.



Headlight and Tail Light Inspection

- Check if the headlight and tail light are on after engine started.
- Check the brightness and the angle of the headlight.
- Check if the lens of headlight and tail light is dirty, broken, or loose.

Brake Light Inspection

- Turn the main switch to "ON" position.
- Pull front and rear brake lever separately to check if the brake light is on.
- Check if the lens of brake light is dirty, broken, or loose.

Turn Light and Horn Inspection

- Turn the main switch to "ON" position.
- Turn on the turn light switch to check if all turn lights function well.
- Check if the lens of turn lights is dirty, broken, or loose.
- Push the horn button to check if the horn sounds.

Fuel Leakage Inspection

- Check if there is leakage in the fuel system.



General Lubrication

- Lubricate the following parts with either engine oil or general grease in accordance with the Periodic Maintenance Schedule or whenever the vehicle has been operated under wet or rainy conditions. Clean off rusty spots and wipe off any oil or grease.

Side stand pivot

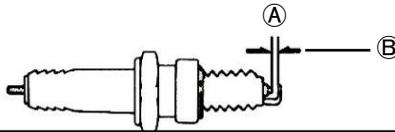
Main stand pivot

Front / rear brake lever pivot

Throttle cable

Spark Plug Inspection

- Have the spark plug checked by an authorized SYM dealer. If the electrodes are contaminated with heavy deposits or the insulator is damaged, replace with a new one. Measure the spark plug gap **A** with a wire type feeler gauge. The gap should be within 0.8 ~ 0.9 mm. If adjustment is needed, bend the side electrode **B** carefully.



⚠ WARNING:

- Beware of the engine heat when inspecting the spark plug.

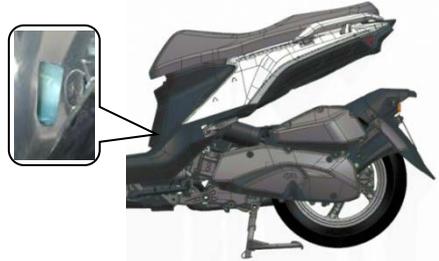
Cooling System Inspection

《Coolant level inspection》

- Position the scooter on level ground and in an upright position.
- Check the coolant level to see if it is between upper and lower level from the coolant inspection window.
- Add the coolant to the upper limit if it reaches the lower level.

《Coolant leakage inspection》

- Check if there is leakage at radiator and hose.



Coolant Refilling

If the coolant is slightly insufficient, refill the coolant to reservoir.

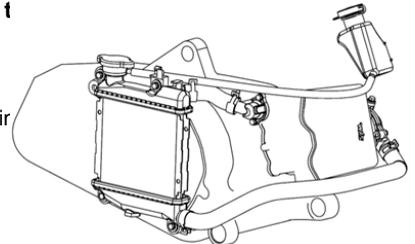
- Position the scooter on level ground and in an upright position.
- Remove the coolant reservoir cover.
- Open the coolant reservoir cap and add the coolant to the upper limit.
- If the coolant level drops too excessively, inspection is needed.
- Contact an authorized SYM dealer to have the coolant changed.

Recommended: "SYM Long Life Coolant"

Solution: 50%

Coolant capacity: Radiator: **500 cc.**

Reservoir: **170 cc.**





⚠ CAUTION:

- Please use soft water when mixing coolant and antifreeze.
- Improper coolant would damage the radiator. Be cautious of choosing correct coolant.
- Coolant should be replaced every year in normal condition.

Reference Table for Anti-freeze Concentration

- Radiator anti-freeze specification for this scooter is H68. “SYM Long Life Coolant” recommended.

Antifreeze concentration	Temperature	Remarks
20%	-8	To ensure antifreeze performance, the original equipped coolant has 50% of antifreeze.
30%	-15	
40%	-24	
50%	-36	

- It is highly recommended to use “**SYM Long Life Coolant**” or equivalent products when filling or changing coolant.
- Pay extra attention to radiator maintenance in extremely cold weather and temperature.

Air Cleaner Inspection

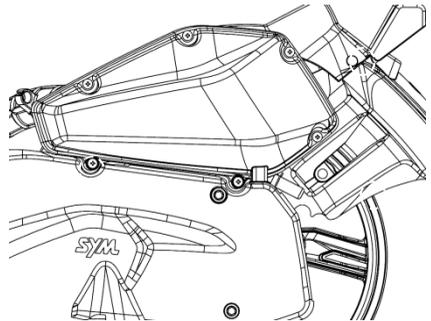
A dirty air cleaner element can reduce the engine performance and increase fuel consumption.

<Removal>

- Remove the air cleaner cover screws.
- Remove air cleaner cover.
- Remove air cleaner element screws.
- Remove and replace air cleaner element.
- Reset EFi system with diagnostic tool after replacing air cleaner element.

<Installation>

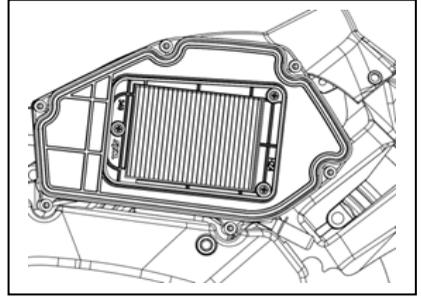
- Install in the reverse order of removal.





⚠ CAUTION

- If the air cleaner is installed improperly, dust will be absorbed into cylinders, which may cause a premature wear and reduce output power and engine life.
- Do not soak the air cleaner when washing the scooter. Otherwise, it could be difficult to start the engine.
- Drain out deposit from the PCV system every 1,000km.
- When Idling Start & Stop switch is turned on, the engine will stop while idling, so the EFI system is not able to timely adjust the idle learning and O2 sensor learning. It is suggested to turn off the Idling Start & Stop switch and carry out the idle speed learning every 5,000km.



11. Taking Care of Your Scooter

Washing

Fully cool down the engine, muffler, brakes and other high-temperature parts before washing. We suggest you to cover the muffler's exhaust vent and shut the ignition switch slot.

- Rinse your scooter with cold water from a water hose to remove dirt.
- Mix a neutral detergent that is designed for scooters or automobiles and water in a bucket. Use a sponge to wash your scooter.
- Use low pressure water stream to clean the radiator.
- After washing, rinse your scooter thoroughly with clean water to remove the residue.
- Use an air gun to blow off the water and use a clean soft cloth to dry your scooter.
- Carefully ride your scooter at a slow speed and apply the brakes several times to help drying the brakes.

NOTE :

- Do not rinse the radiator with high water pressure.
- After riding in an area where the roads are salted, wash the scooter as soon as possible.
- Specially take care of the matt color plastic parts if they are equipped. Never wax matt color parts.

Clean the windscreen with a solution of mild detergent and cold water. Rinse well after cleaning and then dry with a clean soft cloth. If the transparency of the windscreen is reduced by scratches or contamination that cannot be removed, have the windscreen replaced by an authorized SYM dealer.



⚠ WARNING:

- Never try to clean the windscreen while the scooter is in motion to prevent accidents from happening.
- Operation of the motorcycle with a damaged or scratched windscreen will reduce riders' forward view. Any such reduction in forward view is dangerous and can cause severe accidents.

⚠ CAUTION:

- Corrosive chemicals such as battery acid can damage the windscreen.

Storage

If you plan to store the scooter for a long period, perform the following steps.

- Have the scooter cleaned thoroughly.
- Run the engine for several minutes and shut it off, then drain out the engine oil.
- Add new engine oil.
- Fill up the fuel tank with fuel, add fuel stabilizer if available to prevent the fuel tank from rusting and the fuel from deteriorating.
- Reduce about 20% tire pressure. Have the scooter's two wheels raised off the ground.
- Carefully apply thin oil on all unpainted metal surfaces to prevent rusting.
- Lubricate all cables and the drive chain.
- Remove the battery and have it fully charged. Store it in a cool, dry place and charge it once a month. Make sure the battery is well charged during cold weather.
- Cover plastic bag over the muffler to avoid moisture to get in.
- Cover the whole scooter to protect it from dust and dirt.

NOTE :

- Make all necessary repairs before storing the scooter.

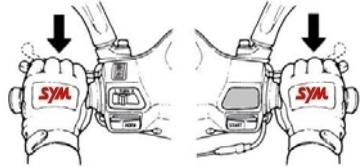
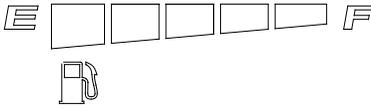


12. Troubleshooting

Engine Does Not Start

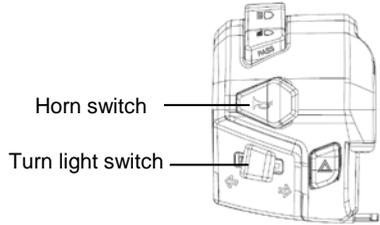
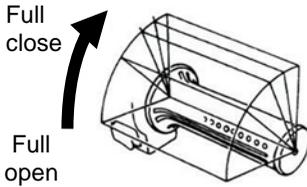


1. Has the ignition switch key been turned to "ON" position?



2. Is there enough fuel in the fuel tank or the fuel gauge needle is at "E" position?

3. Is the front or rear brake applied when pressing starter button?

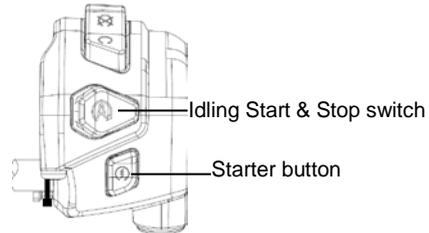


4. Do not pull throttle when pressing starter button. Keep throttle full close.

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



EFi warning indicator



6. If the EFi warning indicator is on? Contact your SYM authorized dealer for inspection.

7. The ignition switch is turned on, but the engine cannot be started? Contact your SYM authorized dealer for inspection.



13. Periodic Maintenance Schedule

No	Item	Maintenance kilometer	Every 1,000km	Every 6,000km	Every 12,000km	Every 18,000km
		Maintenance interval	1 month	3 months	6 months	1 year
1	Air cleaner element*		I	C	R	
2	Oil filter (mesh filter)		I	Clean every 12,000km		
3	Engine oil	(initial at 1,000km, second at 6,000km and then replace every 5,000km thereafter)				
4	Tire, pressure		I			
5	Battery		I			
6	Spark plug		I			R
7	Carbon Deposit cleaning on Throttle valve		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	(initial replace at 1,000km, and then replace every 12,000km thereafter)				
12	Brake Fluid		I	Replace every 30,000km		
13	Drive Belt/roller/Drive Pulley				C	R
14	Fuel tank tubes and Fuel filter		I	I		
15	Throttle valve operation and cable		I	I		
16	Bolts and nuts		I	I		
17	Cam Chain		I		I	
18	Valve clearance		I		I	
19	Shock absorbers		I		I	
20	Front/rear suspension		I		I	
21	Main/side stand		I/L		I/L	
22	Crankcase Blow-by system (PCV)		I	C		
23	Coolant		I	I		R
24	Cooling fan, tubes		I	I		
25	Clutch, Clutch outer, Driven pulley				C	
26	Brake mechanism/brake lining (pads) **		I	I		
27	Light, Switches and Electrical system		I	I		

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

C ~ Cleaning (replaced if necessary) L ~ Lubrication

* Replace the filter every 5000km under dusty environment. Never use compressed air to clean the filter. Replace if necessary.

** Clean and replace the internal component of brake caliper, master cylinder every 10,000km if necessary.

Replace brake fluid every 2 years / 30,000km.

Replace brake hose every 4 years / 60,000km.

☆ The above maintenance schedule has to be done if either mileage or duration had reached its designated maintenance criteria.

If any problem or question raised about your scooter, please contact your SYM authorized dealer regardless the service schedule.

☆ Have your scooter checked and maintained periodically by your SYM Authorized Dealer or Franchised Dealer to keep the scooter at the optimum condition.

☆ Check and maintain your scooter more frequently if necessary, such as frequently high speed / long distance driving, dusty environment, etc.