

# Owner's Manual

LW12W2-EU / LW25W2-EU / LW30W2-EU





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## 2. Before 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 **SYM** 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 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

It is very important to be relaxed and clothe properly when driving, observe traffic regulations, do not rush, always drive 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.

#### 

- 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.

## **M** 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.

## A 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.



## 4. Driving

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 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.
- 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, unleveled, 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.



- 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.

## A 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.

## 5. 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.





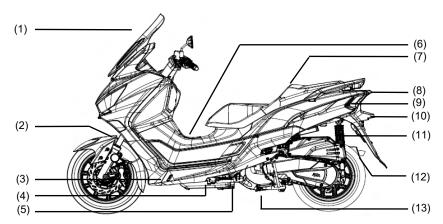






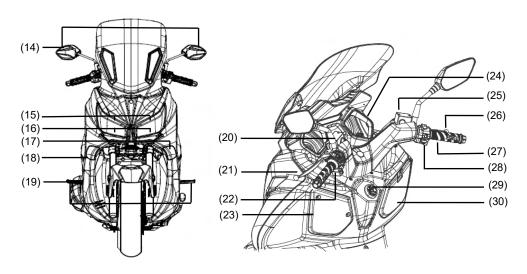
## 6. Parts Location

#### Joymax Z+



- (1). Windscreen
- (2). Front Fork
- (3). Coolant Level Inspection Window
- (4). Side Stand Switch
- (5). Side Stand

- (6). Fuel Lid
- (7). Seat / Luggage Box
- (8). Tail / Brake Light
- (9). Rear Turn Indicator
- (10). License Plate Light
- (11). Rear Shock Absorber
- (12). Muffler
- (13). Main Stand
- (14). Rear View Mirrors
- (15). Position Lights

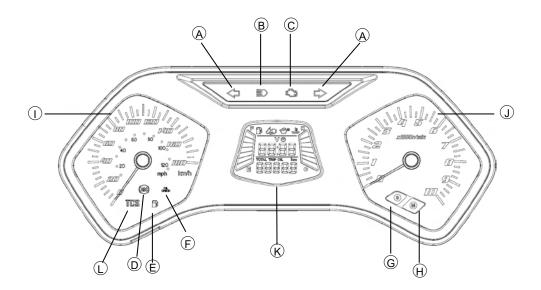


- (16). Headlight
- (17). Left Turn Indicator/Front
- (18). Right Turn Indicator/Front
- (19). Passenger Footrests
- (20). Rear Brake Fluid Reservoir
- (21). Rear Brake Lever
- (22). Left Handlebar Switches
- (23). Battery Compartment
- (24). Combination Instrument
- (25). Front Brake Fluid Reservoir
- (26). Front Brake Lever
- (27). Throttle Grip
- (28). Right Handlebar Switches
- (29). Ignition Switch
- (30). Front Compartment



## **Combination Instrument**

Joymax Z+



#### NOTE:

 Do not wipe plastic components, such as the instrument panel, the headlight, body covers, etc. with solvents, such as gasoline. Wiping plastic components with solvents can damage these components.



Never operate the instrument buttons while riding the scooter.



## 

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

#### B High Beam Indicator Light

This indicator turns on with high beam headlight is turned on.

#### © EFi Warning Indicator Light 🖨

When turn the main switch to "ON", the EFi warning indicator remains on initially. It should be go off immediately 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 remains on all the time or does not come on. Please contact your SYM authorized dealer if this light goes on. This indicator light goes off when the side stand is down

## ABS Indicator Light

The ABS (Anti-lock Brake System) indicator light goes on when the ignition 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.

#### E Low Fuel Indicator Light

The low fuel indicator light comes on when the fuel level goes down to 1 steady sector.

#### F Oil Check Indicator Light

The oil check indicator show 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 in the oil level inspection window or the dipstick. In oil meter mode, quickly press the S button twice to reset the oil check indicator light.

## G S Button ®

Push this button to reset the trip meter, oil mileage meter in the multifunction meter.

Push this button to switch between battery voltage and clock of the multifunction meter.

## ⊕ M Button 🚇

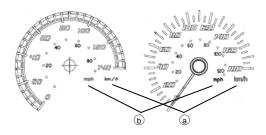
Press this button to switch meter mode of the multifunction meter.

#### Speedometer

The speedometer shows the current vehicle speed.

The outer hemisphere (a) represents km/h.

The inner hemisphere **b** represents mph.



#### NOTE:

- Actual parts mainly.
- Specifications or equipment are subject to change without notice.



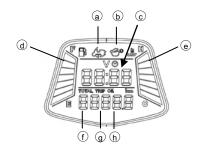
#### (J) Tachometer

This tachometer shows the engine speed in revolutions per minute (rpm). Do not operate the engine in the red zone (a).



#### K Multifunction Meter

- (a) Side stand down indicator
- **b** Luggage box light indicator
- © Multifunction display
  - Clock
  - Battery voltage gauge
- d Fuel gauge
- (e) Coolant temperature gauge
- (f) Odometer
- (g) Trip meter
- (h) Oil distance meter



#### Side Stand Down Indicator

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 Luggage Box Light Indicator ♥



This indicator comes on when the luggage box light is lit up. This indicator goes off when the luggage box light is off.

#### © Multifunction Display

When the ignition switch is turned on, battery voltage will display for approximately 10 seconds.

Then the below display mode can be shifted circularly by pushing the M button.

Clock → Battery voltage → Clock...

Push S button to switch the below display mode:

Odometer → Trip meter → Oil meter → Odometer...

#### (L) TCS Indicator TES (LW30W2-EU only)

This indicator blinks when traction control is intervening. If the traction control system is turned off, this indicator will go on. This indicator goes 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 light 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.

#### Clock

This clock displays only 24-hour mode.

To set the clock, do the below steps:

Turn the ignition switch on and wait for approximately 10 seconds until the clock displays.



Push the M button for more than 2 seconds, the hour display starts blinking.
 Push the S button to adjust the hours.



• Push the M button. The hour display stops blinking and the minute display starts blinking. Push the S button to adjust the tens place in the minute display.



Push the M button. The tens place stops blinking and the unit display starts blinking. Push the S button to adjust the units place in the minute display.



· Push M button to finish clock setting.

#### NOTE:

- When the battery is disconnected, the clock is reset to 12:00 and starts working again when the battery is reconnected.
- If the clock is idled about 30 seconds while setting, it will exit setting mode automatically and starts working again.
- If the ignition switch is turned off while setting the clock, the clock will exit setting mode when the
  ignition switch is turned on again.
- . The clock works normally by the backup power even the ignition switch is turned off.

#### **Battery Voltage Gauge**

The battery voltage display shows current battery voltage. It is forced display about 10 seconds when the ignition switch is turned on.

Display range: 8.0V~18.0V.



#### A CAUTION:

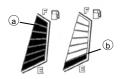
- If the battery voltage is below 10.0V or above 16.0V when the ignition switch is turned on, and
  the engine is hard to start or cannot be started, have your scooter checked by an authorized SYM
  dealer.
- If the battery voltage is below 10.0V or above 16.0V when the engine is running, have your scooter checked by an authorized SYM dealer.

#### d Fuel Gauge

This digital fuel gauge shows the fuel level. There are 7 sectors in the fuel gauge.

If the fuel tank is full, all the 7 sectors come on ⓐ.

The low fuel level indicator light comes on when there's only the first sector ⓑ remains, go refuel the fuel tank immediately..





#### **©** Coolant Temperature Gauge

This digital coolant temperature gauge displays the temperature of engine coolant. The coolant temperature varies with changes in the weather and engine load. If the seventh sector ⓐ comes on, when the scooter is in operation, stop the engine and move the scooter to a safe place, and check the coolant level in the reserve tank and the radiator fan



#### NOTE:

- This scooter is not equipped with a high coolant temperature indicator light.
- The coolant temperature gauge will not blink when the coolant temperature is too high.
  - Please take notice of the coolant temperature gauge when the engine is running.

#### **f** Odometer

This odometer shows the total distance in kilometers the scooter has been ridden.

It cannot be reset



#### NOTE .

- The data is maintained in the combination instrument even when the battery is disconnected.
- When the figures come to 99999, they will return to 0 and the odometer starts working again.
- This odometer only shows in kilometers.

#### g Trip Meter

This trip meter shows the distance in kilometers since it was last reset to zero.



- In trip meter mode, quickly push S button twice to reset trip meter.
- Display range: 0~999.9 km.

#### NOTE:

- · This trip meter only shows in kilometers.
- When the figures come to 99999, they will return to 0 and the trip meter starts working again.

#### h Oil Distance Meter

This meter records how long the engine oil is used. The oil check indicator light goes on at every 1,000km riding distance according to this oil distance meter. When the oil check indicator light goes on, please check the oil level in the oil level inspection window or the dipstick.



- In oil distance mode, quickly push S button twice to reset oil distance meter.
- Display range: 0~9999.9 km.

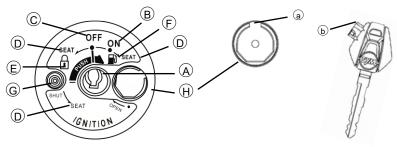


#### NOTE:

- If the oil distance meter is not reset, the oil check indicator light will go on permanently until it is reset.
- If the oil distance meter is not reset, when the oil distance exceed the maximum limit 9999.9 km, the
  meter will return to 0 km and continue adding up values. In this condition, the oil indicator light will not
  go off until it is reset.
- This oil distance meter only shows in kilometers.



## **Ignition Switch**



#### **IGNITION SWITCH**

#### **IGNITION KEY**

#### (A) Ignition Key Slot

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

#### (B) "On" Position ON

Engine can be started in this position. Ignition key cannot be removed. Electrical equipment can be used. Headlight comes on in this position. The USB power outlet can be used in this position.

#### © "Off" Position OFF

Engine can be turned off in this position. Electrical circuits will be turned off.

#### (D) "Seat Open" Position SEAT

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

## (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) "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.
- The ignition key will return to "Off" position automatically.



#### Magnetic Shutter 多州リア

This magnetic shutter button is designed to close the ignition key slot.

- In "Off" position, remove the ignition key and push this button to close the slot.
- In "Lock" position, remove the ignition key and push this button to close the slot.

#### (H) Shutter Opener

This shutter opener is designed to open the magnetic shutter.

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

#### NOTE:

Do not attach too many objects to the ignition key to prevent interfering the workability of the ignition

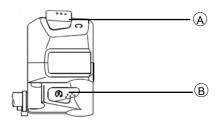


#### A CAUTION:

- Never operate the ignition switch key when the scooter is running. Turning the ignition switch to "Off" position, will shut off the electrical system and that may result in a dangerous accident. The ignition switch can only be turned off after the scooter is completely stopped.
- If the ignition switch remains in the "On" position for a prolonged period after the engine is stopped, the battery voltage will be reduced and this may affect engine's start capability.
- Lock the steering handle and remove the key before leaving the scooter. Do not leave the key in the ignition switch when leaving the scooter.



## Right Handlebar Switches



#### (A) Engine Stop Switch

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

#### NOTE:

Even though the engine stop switch can stop the engine, it does not turn off all the electrical circuits.
 Normally the engine stop switch should be used to stop the engine.

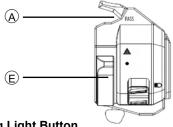
#### (B) Starter Button

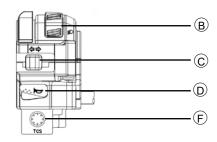
This starter button operates the electric starter when the engine is not running. Turn the ignition switch on; push this button while holding the front or rear brake lever to start the engine.

#### NOTE:

- This scooter is equipped with a permanently lit headlight; the headlight (low beam), position light, tail
  light, and the license plate light will light up once the ignition switch is turned on. The above mentioned
  lights cannot be turned off.
- Do not leave the scooter behind too much time after turning the ignition switch on.

## Left Handlebar Switches





#### A Passing Light Button

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. The passing light is shut off as soon as the button is released.

#### **B** Dimmer Switch

High beam

D I ow beam



#### Turn Signal Switch

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

#### (D) Horn Button

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

#### (E) Hazard Warning Switch(Model with this equipment)

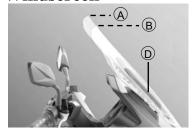
#### NOTE:

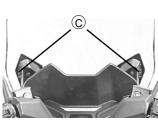
- Do not use the hazard lights for a long period of time, or the battery may become totally discharged.
- If you turn the ignition switch off without deactivating the hazard lights, the hazard lights cannot be deactivated unless you turn the ignition switch on.

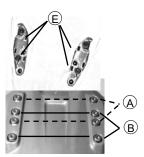
#### F TCS Button(LW30W2-EU only)

This scooter is equipped with traction control system (TCS). The traction control system can be turned off/on by pushing this button for approximately 3 seconds.

#### Windscreen







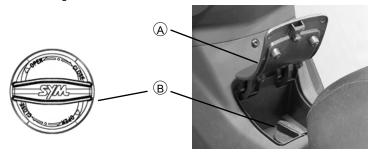
This scooter is equipped with a 2-position adjustable windscreen. Adjust the positions to fit your figure.

High position: (A)
Low position: (B)

- Remove the 2 screws © to remove the 2 windscreen garnishes D.
- Remove the 4 flange bolts; select a position that you prefer and mount the windscreen.
- · Install the 2 garnishes.



## **Fuel Tank Cap**



- Turn the ignition key to "Fuel Lid" position to release the fuel lid (A).
- To open the fuel tank cap B, turn it anti-clockwise.
- Put or hold the fuel tank cap securely.
- · Fill in the fuel.
- · Close the fuel tank cap and turn it clockwise until it is locked.
- · Press the fuel lid to close it.

## A 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.

#### **Fuel Requirement**

- Fuel type: Unleaded gasoline only.
- Octane number: Research Octane Number (RON) 92 or higher.
- Gasoline / alcohol blends: As known as gasohol, up to 5%.
- · Fuel tank capacity: 12 L.

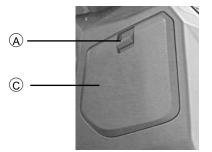


#### **CAUTION:**

- Use only unleaded gasoline to prevent engine damage. Leaded gasoline reduces the capability of the catalytic converter in the exhaust system.
- Use recommended octane number. Using lower octane gasoline will cause engine performance to decrease.
- Never use fuels containing high concentration alcohol.
- Do not use contaminated gasoline.



## Front Compartment





The front compartment is located on the right side of the ignition switch. The USB power outlet (a) is in the front compartment. Press down the button (b) to open the compartment cover (c) to get access to the USB power outlet. This power outlet can charge low power consumption devices when the engine is running.

#### NOTE:

- Do not use the USB power outlet when the engine is not running.
- To prevent the fuse to melt down, do not charge devices exceed 10 W.
- Disconnect devices when leaving the scooter or after riding, and close the USB power outlet cap securely to avoid water infiltration.

## Luggage Box



The luggage box is under the seat. Open the seat to use the luggage box. Helmets (a) can be stored in the luggage box. Some helmets may not fit in the space due to the size or design. This scooter is equipped with a seat support (B) and a luggage box light (C). The luggage box light comes on when the seat is opened and key on the ignition switch.

Maximum load: 10 kg.

#### NOTE:

- Do not exceed the maximum weight limit.
- The luggage box may affected by engine heat. Do not put in valuables, food or objects are flammable
  or susceptible to heat damage.



#### Side Stand



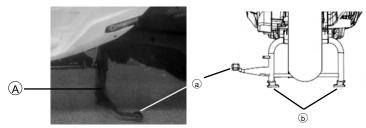
This scooter is equipped with a side stand (a). The side stand is use for park the scooter. Do not sit on the scooter when it is on its side stand. Always kick the side stand fully up before riding.

This scooter is equipped with a side stand switch (a). When the side stand is on, the side stand down indicator comes on. The engine cannot be started when the side stand is on. The engine will be stopped when kicking down the side stand while the engine is running.

#### NOTE:

• Turn the handlebar fully to the left when using the side stand.

#### Main Stand



This scooter is equipped with a main stand (a). Use the main stand to park the scooter up right.

- Stand on the left side of the scooter and let down the main stand.
- Hold the left handle grip and the left side of the rear carrier.
- Press down the tip of the stand ⓐ with your right foot, make sure the 2 contact points ⓑ touch the surface firmly.
- · Pull up and back.
- · Turn the handle bar fully to the left.



## Passenger Footrest



This scooter is equipped with 2 passenger footrests (a). Push (a) the footrests for passenger to use.

#### NOTE:

Fold up the passenger footrests when there is no passenger sit on the scooter.

## 7. How to Start the Engine

## To Start the Engine

- Make sure the engine stop switch is in the  $\ \ \bigcap$  position.
- · Make sure the side stand is up.
- Turn the ignition key to "ON" position.
- Pull the rear or front brake lever and push the starter button with the completely closed throttle to start the engine.

## A CAUTION:

- Check the oil and the fuel volume before starting the engine.
- To prevent unexpected movement, fully pull the clutch lever before starting the engine.
- Release the starter button immediately after starting the engine.
- If the engine cannot be started after activating the starter 3 ~ 5 seconds, please slightly open the throttle grip then push the starter button can help starting the engine.
- Do not push the starter button for more than 10 seconds to prevent damaging the starter.
- If the engine cannot be started after several attempts, please turn the ignition switch off and wait 10 seconds for the next start.
- Do not push the starter button while the engine is running.
- The exhaust gas is toxic; please start the engine in areas with good ventilation.

## To Stop the Engine

- · Completely close the throttle.
- · Turn off the ignition switch.
- Position the scooter on a firm, level surface with side stand / main stand down.



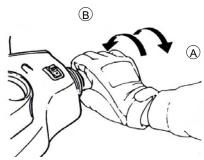
## 8. How to Ride the Scooter

#### Break-In

During the first 1000 km of running, follow the below guidelines to ensure your scooter's reliability and performance.

- · Avoid full throttle starts and rapid acceleration.
- · Avoid hard braking.
- · Ride conservatively.

#### Throttle Control



To accelerate, slowly open the throttle (A).

To decelerate, close the throttle (B).

## Moving Off

- Make sure the side stand / main stand is up.
- · Make sure the surrounding area is clear.
- · Smoothly open the throttle to move off

#### **A** CAUTION:

- Always open the throttle carefully particularly if you are unfamiliar with the scooter.
- New tires are slippery and may cause loss of control, it is necessary to establish normal tire grip in the break-in period.

## **Breaking**

- · Completely close the throttle, the engine will help slowing down the scooter.
- When stopping, always apply both brakes at the same time. Generally speaking, the front brake should be applied a bit more than the rear.
- Never lock the brakes or it will cause the tires to skid. When turning a corner, reduce your speed before
  getting into the corner.
- Even though this scooter is equipped with ABS or CBS, braking during turning a corner may cause
  wheel slip. It is better to limit and do not apply hard braking force when cornering.
- · For emergency braking, focus on applying the brakes as hard as possible.





## Anti-lock Brake System (ABS)

ABS is designed to help prevent the wheel from locking up when hard brakes are applied while running straight. The ABS automatically regulates brake force. Intermittently gaining gripping force and braking force helps prevent wheel lock-up and allows stable steering control while stopping. Brake control function is identical to that of a conventional scooter. The brake lever is used for the front brake and the brake pedal for the rear brake.

Although the ABS provides stability while stopping by preventing wheel lock-up, remember the following characteristics:

- ABS cannot compensate for adverse road conditions, misjudgment or improper application of brakes.
   You must take the same care as with scooters not equipped with ABS.
- ABS is not designed to shorten the braking distance. On loose, uneven or downhill surfaces, the stopping distance of a scooter's with ABS may be longer than that of an equivalent scooter without ABS.
   Use special caution in such areas.
- ABS will help prevent wheel lock-up during straight-up braking, but it cannot control wheel slip which
  may be caused by braking during cornering. When turning a corner, it is better to limit braking to the
  light application of both brakes or not to brake at all. Reduce your speed before you get into the corner.

#### **ABS Indicator Light**

The ABS indicator light in the combination instrument blinks when the ABS is activating.



ABS cannot protect the rider from all possible hazards and is not a substitute for safe riding practices. Be aware of how the ABS system operates and its limitations. It is the rider's responsibility to ride at appropriate speeds and manner for weather, road surface and traffic conditions.

## Traction Control System (TCS) (LW30W2-EU only)

This traction control system lowers the engine power output in case of loss of traction in the rear wheel. This system helps maintain traction when accelerating on slippery surfaces, such as wet, muddy or unpaved roads. If sensors detect that the rear wheel is starting to slip, the traction control system intervenes by regulating engine power until traction is recovered.

#### **TCS Indicator**

When the ignition switch is turned on, the traction control system is automatically turned on. The traction control system can be turned off when the ignition switch is turned to "On" position; push and hold the TCS button for approximately 3 seconds to turn off the traction control system. To turn on the traction control system, push and hold the TCS button for approximately 3 seconds then the TCS indicator will go off. The traction control system can only be turned off and turned back on when the scooter is stationary.

- TCS indicator goes off: with system turned on and scooter in motion, or when system is detecting wheel speeds.
- TCS indicator goes on: with system turned off by rider, or a malfunction occurs. If the system is turned
  off before starting the engine (with ignition switch in "On" position), this indicator will remain on after the
  engine is started.
- · TCS indicator flashes: when system is intervening.



#### NOTE:

- The traction control system is automatically turned on whenever the ignition switch is in "On" position, even though the TCS indicator goes on in this condition, the traction control system is turned on.
- · When traction control is intervening, you may notice changes in engine response or exhaust sound.
- This traction control system cannot detect sideward slide in the rear wheel while cornering.
- · The traction control system does not prevent falls while cornering.
- If the scooter is trapped in mud, sand or other soft surfaces, turn off the traction control system to free the scooter.
- If it is necessary to ride on low grip surfaces, such as gravel pavement, turn off the traction control system and carefully open throttle to allow the scooter to move on.
- Use only standard size tires. The traction control system will not work properly with non-standard size tires.

#### **Traction Control System Reset**

The traction control system may automatically deactivate (TCS indicator goes on) when the below situation occurs:

- · When a wheel speed sensor fault is detected.
- · ABS indicator goes on.
- When the EFi warning indicator goes on.

If the above mentioned happens, stop the scooter at a safe place and turn the ignition switch off, and turn it on, then start the engine to reset, the TCS indicator should go off. If the TCS indicator does not go off after resetting, have your scooter checked by an authorized SYM dealer as soon as possible.

#### NOTE:

Do not turn off the traction control system and rev the engine when the scooter is on its main stand. The
traction control system will be disabled and need to be reset.

#### A CAUTION:

- Traction control cannot protect the rider from all possible hazards and is not a substitute for safe
  riding practices. Be aware of how the traction control system operates and its limitations. It is the
  rider's responsibility to ride at appropriate speeds and manner for weather, road surface and traffic
  conditions.
- Traction control cannot prevent loss of traction due to excessive speed when entering turns, accelerating abruptly at a sharp slope, or while braking, and cannot prevent front wheel slipping.

## Park the Scooter

When approaching a parking position:

- Turn on turn indicator in advance, and smoothly close throttle to decrease speed.
- · Fully close the throttle and pull brake levers smoothly.

After reaching the parking position:

- Reset the turn indicator switch, and turn the ignition switch off to stop the engine.
- To park the scooter, please refer to "Side Stand" and "Main Stand".
- Turn the ignition switch off and lock the handlebar.

## A CAUTION:

- Do not turn the ignition key off while riding.
- The side stand is for uneven ground surface and for short time parking use. Turn the handlebar completely to the left to enhance stability.
- To avoid heat damage from the exhaust pipe, park the scooter away from pedestrians and children.



## 9. Maintenance and Adjustment

## Importance of Maintenance

The maintenance and adjustments mentioned in this chapter must be carried out in accordance with "Routine Checks" and "Periodic Maintenance Schedule" to keep the scooter in well condition and to reduce air pollution. Maintenance is the owner's responsibility. Be sure to inspect your scooter before every ride and perform the routine checks. The first maintenance is extremely important and must be performed.

## **⚠** WARNING:

Always follow the inspection, maintenance recommendations, and schedules in this owner's manual.

SYM cannot warn you of every conceivable hazard that can arise in performance. Only you can decide whether or not you should perform a given task. If you lack proper experience or doubt your ability, please contact your authorized SYM dealer for adjustments, maintenance, and repair work.

#### Routine Checks

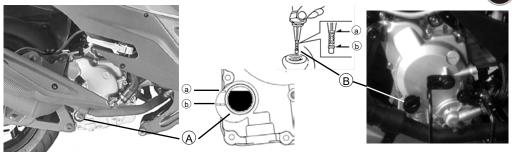
Items	Key points	
Engine Oil	Correct oil level.	
Fuel	Sufficient fuel, no leaking.	
Brakes	Front and rear brakes are effective.	
Tires	Valve caps are fitted. No puncture.	
Steering Handle	Any abnormal vibration or is difficult to turn?	
Coolant	Coolant level is correct.	
Electrical Equipment	Should work effectively.	
Tension of Main Components	Should be tightened correctly.	

## Oil Level Inspection / Oil Change

#### Oil Level Inspection:

- · If the engine is cold, please warm up the engine several minutes at idle speed.
- · Stop the engine and wait for several minutes to allow the oil to settle.
- Set the scooter upright and check the engine oil level through the oil level inspection window (A); or remove the dipstick (B) and wipe it clean, insert the dipstick till it seats but don't screw it in, the oil level should between the upper (a) and lower marks (b).
- Please top up the oil to the upper mark with the same oil when it is at the lower level.
- Please check the oil level every 1,000km.





#### **⚠** WARNING:

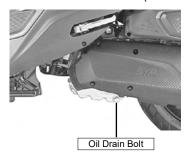
• Revving the engine before the oil reaches every part can cause engine seizure.

#### NOTE:

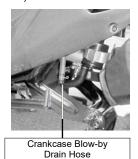
Oil level will not be correct when checking the oil level with the scooter parked on an unleveled ground
or immediately after the engine stopped.

#### Oil Change:

- The oil change should be done by an authorized SYM dealer.
- The genuine "SYMOIL" are designed and recommended for your scooter.
- Please choose oil grade that is equal to (or greater than) SAE 10W-30 or 10W-40, API SL. SYM is not responsible for any damage caused by improper oil.
- The first oil change for the scooter is in the first 1,000km, change oil in every 5,000km afterwards.
- · Check the crank case blow- by drain hose, drain it if needed.
- Total oil capacity: 1.4L (LW25W2-EU & LW30W2-EU), 1.0L (LW12W2-EU).
- Periodic maintenance: 1.2L (LW25W2-EU & LW30W2-EU), 0.8L (LW12W2-EU).







Although SAE 10W30 oil is recommended for most conditions, the oil viscosity may need to be changed to accommodate climate conditions in your riding area.

# Oil Drain Bolt 0 10 20 30 40



#### Cleaning of Oil Filter Screen:

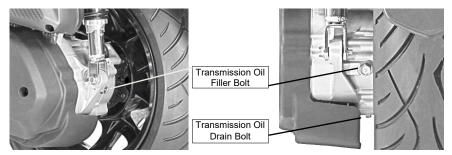
The oil filter screen (A) should be cleaned by an authorized SYM dealer.



## Transmission Oil Change

The transmission oil should be changed by an authorized SYM dealer.

- Grade: SAE10W30/SAE85W90 ≤ 0°C. SYM is not responsible for any damage caused by improper oil.
- Total capacity: 180 cc (LW25W2-EU & LW30W2-EU), 110 cc (LW12W2-EU).
- Periodic maintenance: 160 cc (LW25W2-EU & LW30W2-EU), 100 cc (LW12W2-EU).



## **Fuel Inspection**

Make sure the fuel is enough for the trip.

- Turn the ignition switch on, and check the fuel gauge. When the low fuel indicator light comes on (page 7), it shows the fuel remains approximately 2.5 liter (reserve fuel), please fill up the tank immediately.
- · Do not add too much fuel to the fuel tank.
- · Make sure the fuel tank cap is securely closed.
- · Recommended fuel: Unleaded 92 (RON) gasoline or greater.



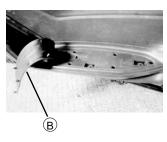
## Coolant Level Inspection / Filling

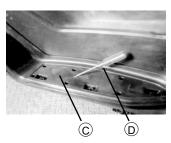
• Position the scooter on level ground and in an upright position. The coolant inspection window (a) can be seen on the left side of the floor panel.

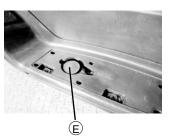
- The coolant level must be between the "FULL" 

   and "LOW" 

   marks
- Top up the coolant when the level is at the "LOW" mark.
- Remove the left floor panel mat B.
- Remove the maintenance cap © with a flathead screw driver ©.
- · Open the reserve tank cap to fill in coolant.
- Reverse the above 3 steps to restore.







This scooter is filled with high quality coolant that is designed for the cooling system in the factory. It contains a 50% solution of ethylene glycol based antifreeze.

## Coolant Change

Contact an authorized SYM dealer to have the coolant changed.

It is highly recommended to use "SYM Long Life Coolant" or equivalent products when filling or changing coolant. "SYM Long Life Coolant" is premixed and contains a 50% solution of ethylene glycol based antifreeze, and does not need to be diluted before topping up or changing. "SYM Long Life Coolant" is also contains corrosion inhibitor to protect the cooling system.

· Radiator coolant capacity: 1.4 liters.

Please refer to the below list of antifreeze concentration.

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

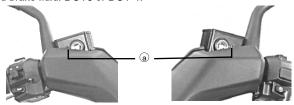


## **Brake System Inspection**

This scooter is equipped with a dual disk brake system on the front wheel and the rear wheel. If there is something wrong when applying the brakes, have the brake system checked by an authorized SYM dealer.

#### Front / Rear Brake Fluid Level Inspection:

- · Set the handlebar to the front.
- Check the brake fluid level in the front / rear brake fluid reservoir.
- With the front brake reservoir held horizontal, the brake fluid level in the inspection window must be above the "LOWER" line (a).
- If the brake fluid level is below the lower level, contact your SYM authorized dealer to adjust the fluid level.
- · Recommended brake fluid: DOT3 or DOT 4.

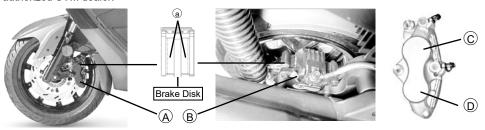


#### **M** WARNING:

- Use only DOT3 or DOT 4 brake fluid.
- Brake fluid is easy to absorb moisture from the air, any absorbed moisture will reduce the braking efficiency greatly.
- Contact an authorized SYM dealer immediately if any brake fluid leakage is found.

#### Front / Rear Brake Pad Inspection:

- Inspect the brake pad wear of both front (A) and rear (B) disk brake calipers.
- If any pad lining thickness reaches the minimum thickness line (a), have the brake pads replaced by an authorized SYM dealer.



This scooter is equipped with a dual- diameter opposed four piston front caliper 
 (A), the wear of upper brake pads 
 (D) may differ from the lower pads 
 (D).

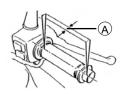
#### NOTE:

- · Brake pads must be always replaced as a set.
- New brake pads require a break-in period.



## Throttle Free Play Inspection

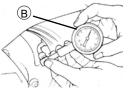
- Check that the throttle grip moves smoothly from full open to close.
- Have the throttle free play checked by an authorized SYM dealer.



## Tire / Tire Pressure Inspection

- Remove the air valve cap (A).
- Visually inspect the tire for cracks and cuts ©, replace the tires when necessary.
- Measure the depth of the tread with a depth gauge ①, replace the tire that has worn down to the minimum allowable tread depth.
- Recommended tire pressure for standard tires: MAXXIS MA-PRO. Front: 2.0 kgf/cm<sup>2</sup>, 28 psi (120/70-14 55P)
   Rear: 2.5 kgf/cm<sup>2</sup>, 35 psi (140/60-13 63P)









## ⚠ WARNING:

- Insufficient tire tread depth can make the scooter difficult to control.
- Please refer to the local regulations about tire tread depth.
- New tires are slippery and may cause loss of control.

## Steering / Front Fork Inspection

- Visual inspect that the front forks (A) are damaged or have oil leakage.
- Compress the front forks by pushing down the steering handle to check that the forks can be operated smoothly.
- Check that the steering axle locknut is tightened.
- If any irregularity is found on the handlebar / front fork, contact your authorized SYM dealer.





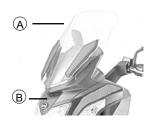


## **Fuse Inspection**

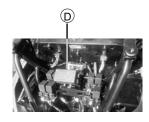
Fuses are arranged in the fuse box located behind the combination instrument visor (B).

To remove the combination instrument visor, follow the below steps.

- Remove the windscreen (A) (page 15).
- Remove the 3 screws © and pry the combination instrument visor carefully.
- Open the fuse box (a) to check the fuses.







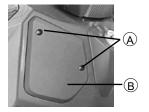
If a fuse fails, replace it with a new fuse of proper amperage. Do not replace it with any material other than the specified fuse. Have the scooter checked by an authorized SYM dealer if the fuse fails repeatedly.

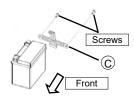
## **Battery Inspection**

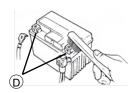
This scooter is equipped with a sealed type battery. There is no need to check the electrolyte level or add distilled water. The battery is located in the battery compartment <sup>®</sup>.

To take out the battery, do as the following instructions.

- · Turn the ignition switch off.
- Remove the 2 screws (A) to remove the battery compartment cover (B).
- First disconnect the (-) terminal cable then the (+) terminal.
- Unscrew the battery band © and take out the battery.
- To install the battery, do in the reverse order of the above instructions.





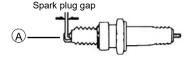




## Spark Plug Inspection

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 with a wire type feeler gauge. The gap should be within  $0.6 \sim 0.7$  or  $0.8 \sim 0.9$  mm. If adjustment is needed, bend the side electrode A carefully.

Recommended spark plug: NGK CR8E (Joymax 250/300), gap: 0.6 ~ 0.7 mm
 NGK CR8EA-9 (Joymax+125), gap: 0.8 ~0.9 mm



#### 

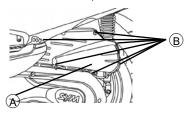
· Beware of the engine heat when inspecting the spark plug.

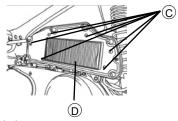
## Air Cleaner / V-belt Air Cleaner Inspection

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

Inspect the air cleaner by following the below instructions.

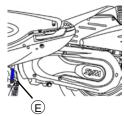
- Remove the screws (B) and remove the air box cover (A).
- Remove the screws © to take out the air cleaner element.
- To install the element, do in the reverse order of the above instructions.

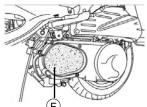




- Remove the air box drain hose ©, drain the hose if needed.
- Remove the 5 bolts and take out the left crankcase cover.
- If the V-belt air cleaner element 

   is damaged or too dirty, have it changed by a SYM authorized dealer.





#### NOTE:

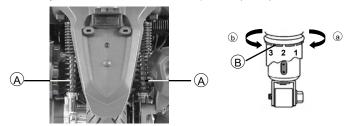
- Joymax Z+125 does not equip with v- belt air cleaner.
- Make sure to keep the dust from entering the inlet pipe during inspection.
- Use SYM genuine air filter element to ensure the engine performance.



## Rear Shock Absorber Adjustment

This scooter is equipped with 2 rear shock absorbers (a). Each shock absorber has 4 positions for spring preload adjustment. The standard position is 2.

- Turn the adjuster (B) anti-clockwise (a) to increase preload (harder).
- Turn the adjuster clockwise b to decrease preload (softer).



Contact your SYM dealer for adjustment.

#### NOTE:

Do not exceed the adjuster's limit.

## General Lubrication

Lubricate the below parts with either engine oil or general grease in accordance with the "Periodic Maintenance Table" 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
- · Front / rear brake lever
- Throttle cables

## Vehicle Data Recorder

This scooter is equipped with an ECU that can record or collect vehicle data for trouble diagnosis and research. The data must be received by a special diagnostic tool when carrying out maintenance or check-up. SYM will not transfer the data to any third party except:

- · The owner or user agrees.
- · Stipulated by laws.
- · In need of lawsuit.
- · For research and development, and the data is irrelevant to an individual unit or the owner.

## 10. 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.
- 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.
- Specially take care of the matt color plastic parts if they are equipped. Never wax matt color parts.

## 11. Trouble Shooting

## Diagnosis When Engine Does Not Start

(1).Has the ignition switch key been turned to "ON" position?		(3).Is the rear or front wheel brakes applied when pressing start button?
	n. G	
(4).Check that the engine stop switch is in the " ( )" position or not?	` '	1

## **Overheating**

The engine is overheating when the below symptom occur:

- The seventh sector (H) of the coolant temperature gauge comes on.
- · Sluggish acceleration.

Pull safely to the road side and perform the below procedure.

- Turn the ignition switch off to stop the engine then turn the ignition switch on.
- Check the operation of the radiator fan then turn off the ignition switch.

If the fan is not operating, do not start the engine and transport your scooter to an authorized SYM dealer. If the fan is operating, cool down the engine, inspect the cooling system hose and check if there is a leak. If there is a leak, do not start the engine and transport your scooter to an authorized SYM dealer.

#### EFi Warning Indicator Light On

If this indicator light comes on while riding, you may have a serious EFi system problem. Contact your authorized SYM dealer as soon as possible.

### ABS Indicator Light On

If this indicator light comes on in the below conditions, you may have a serious brake system problem.

- · The indicator light comes on while riding.
- The indicator light does not come on when the ignition switch is turned on.
- The indicator does not go off above 10 km/h.

Although the brake system will continue to work without anti-lock function, SYM suggest you to have your scooter checked by an authorized SYM dealer if any of the above symptoms occurs.



## 12. Periodic Maintenance

	Maintenance Interval	Every 1,000km	Every 5,000km	Every 10,000km	Every 15,000km
	Items	1 Month	3 Months	6 Months	1 Year
1	Air cleaner element*		С	R	
2	Oil filter (mesh filter)		Clean every 10,000km		
3	Engine oil			cond at 6,000kr 5,000km therea	
4	Tire, pressure	I	1		
5	Battery	!	1		
6	Spark plug		I		R
7	Carbon Deposit cleaning on Throttle valve	1		I	
8	Steering bearing and handles	I	ı		
9	Check Transmission for leakage	1	I		
10	Check crankcase for leakage	!	I		
11	Transmission Oil	(initial replace at 1,000km, and then replace every 10,000km thereafter)			
12	Brake Fluid	I	Rep	lace every 30,0	00km
13	Drive Belt/roller/Drive Pulley			С	R
14	Fuel tank tubes and Fuel filter I I				
15	Throttle valve operation and cable	1	I		
16	Bolts and nuts	I	1		
17	Cam Chain	I		I	
18	Valve clearance	I		I	
19	Shock absorbers	I		I	
20	Front/rear suspension			1	
21	Main/side stand	I/L		I/L	
22	Crankcase Blow-by system (PCV)		С		
23	Coolant		ı		R
24	Cooling fan, tubes	ı	I		
25	Clutch, Clutch outer, Driven pulley			С	
26	Brake mechanism/brake lining (pads) **	1	I		
27	Light, Switches and Electrical system	1	I		

Code: I ~ Inspection, cleaning, and adjustment C ~ Cleaning (replaced if necessary) L ~ Lubrication

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

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

<sup>\*</sup> Replace the filter every 5000km under dusty environment. Never use compressed air to clean the filter. Replace if necessary.

<sup>\*\*</sup> Clean and replace the internal component of brake caliper, master cylinder every 10,000km if necessary. Replace brake fluid every 2 years / 30,000km.

<sup>☆</sup> The above maintenance schedule has to be done if either mileage or duration had reached its designated maintenance criteria



# 13. Specification

		Joymax Z+ (LW12W2-EU)	Joymax Z+ (LW25W2-EU)	Joymax Z+ (LW30W2-EU)		
	Length	2,190 mm				
	Width	750 mm				
	Height	1,440 mm				
	Wheel base	1,530 mm 1,550 mm				
	Ground clearance	130 mm 133 mm				
	Caster	28				
Frame	Trail	140 mm				
	Min. turning radius	2.5 m	2.6	3 m		
	Maximum load *	352 kg	365 kg			
	Curb weight	172 kg	185	5 kg		
	Luggage box capacity	48L				
	Seat height	770 mm	747 mm			
	Fuel tank capacity		12 L			
	Туре	4T, SOH	IC, 4V, 1 cylinder, liquid cooled			
	Compression ratio	11.3:1	10.5:1			
	Displacement	124.9 cm <sup>3</sup>	249.4 cm <sup>3</sup>	278.3 cm <sup>3</sup>		
	Bore x stroke	53 mm × 56.6 mm	71 mm × 63 mm	75 mm × 63 mm		
	Max. horse power	14.3PS @ 9000 rpm	21.5PS @ 7500 rpm	26.0PS @ 7500 rpm		
	Max. torque	1.15kg-m@ 7000 rpm	2.28kg-m@ 5500 rpm	2.67kg-m@ 6750 rpm		
Engine	Idle speed	1,800 rpm	1,800 rpm 1,550 rpm			
	Starting system	Electric starter				
	Fuel system	EFi (fuel injection)				
	Fuel	Unleaded 92 (RON) gasoline or greater				
	Ignition system	Battery and coil				
	Spark plug	NGK CPR8EA-9	NGK CR8E			
	Coolant capacity	1.4 L				
Transmission	Clutch / transmission	Centrifugal, CVT				
Transmission	Final reduction ratio	9.7	7.5	7.03		
	Engine oil	SAE 10W30 or 10W40, API SL or greater	or greater SAE 10W30 or 10W40, API SL or greater			
	Gear oil	SAE10W30/SAE85W90				
Lubrication	Lubrication system	Forced, wet sump				
System	Engine oil capacity (total)	1.0 L	. 1.4 L			
- Cystein	Engine oil capacity (change)	0.8 L	1.2 L			
	Gear oil capacity (total)	110 cc	180 cc			
	Gear oil capacity (change)	100 cc	160 cc			

<sup>\*</sup>Maximum load= curb weight+ passengers weight(140kg)+ load weight(40kg)

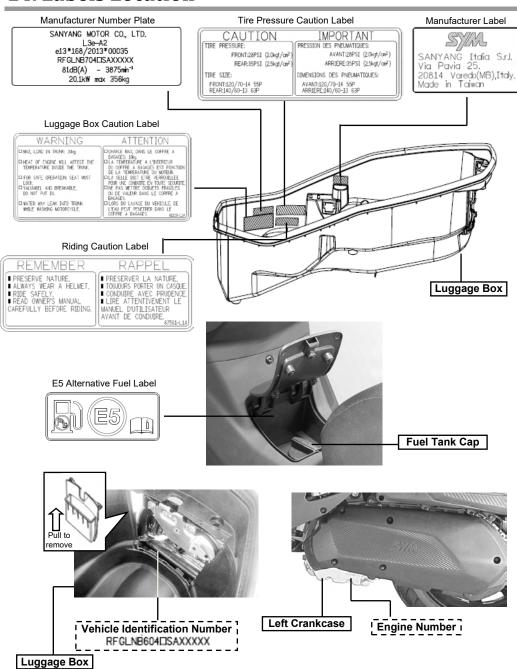


		Joymax Z+ (LW12W2-EU)	Joymax Z+ (LW25W2-EU)	Joymax Z+ (LW30W2-EU)
	Front / rear tire	120/70-14 55P, 140/60-13 63P		
	Front / rear tire pressure	2.0 kgf/cm <sup>2</sup> (28 psi), 2.5 kgf/cm <sup>2</sup> (35 psi)		<sup>2</sup> (35 psi)
	Front / rear rim	14 × MT3.0, 13 × MT4.0		
	Rim material	Aluminum alloy		
Brake System	Front brake disk	260 mm		
System	Rear brake disk	240 mm		
	Front brake caliper	4-piston (ABS)		
	Rear brake caliper	2-piston (ABS)		
	Brake fluid	DOT 3 or DOT 4		
Suspension	Front	Telescopic fork		
System	Rear	Dual shock absorber		
	Head light	LED		
Electrical	Rear / brake light	LED		_
Equipment	Turn indicator	12V 10W×2		
	Battery	MF, GTX9-BS, 12V 8Ah	8Ah MFN, GT12A-BS, 12V 10Ah	

 $<sup>\*</sup>$  Specifications or equipment are subject to change without notice.

# SYM

## 14. Labels Location



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