





## INTRODUCTION

Thank you very much for choosing this vehicle. This model is designed to be safe, durable and ideal for daily use on the road. The unique vehicle design represents your outstanding personal taste.

This manual explains the correct and safe use of the vehicle and simple inspections.

If you have any questions about the operation or maintenance of the vehicle, please contact your authorised dealer.

Please read the operating instructions carefully.

## IMPORTANT MANUAL INFORMATION

In this manual are some important information which are differentiated by the following notations:

#### WARNING

Is a WARNING which must be followed. Refusing to follow can lead to severe injury or death of the operator.

#### CAUTION

A CAUTION indicates an important information to avoid damage to the vehicle.

#### CAUTION

- Please always carry this manual with the vehicle for maintenance/dealer tracking of service records even if vehicle is being sold.
- This manual contains the most of the vehicle information, however, the maker will continually improve its product design and quality that lead to difference between the manual and vehicle.\* If you have any questions concerning this manual, please consult your dealer.

#### WARNING

FOR YOUR OWN SAFETY, PLEASE READ THIS MANUAL CAREFULLY BEFORE OPERATING THIS VEHICLE. DO NOT OPERATE THE VEHICLE UNTIL YOU HAVE COMPLETELY AWARE OF ADEQUATE KNOWLEDGE OF CONTROLS AND YOU HAVE BEEN TRAINED IN SAFE AND PROPER RIDING TECHNIQUES. PERIODIC INSPECTIONS, WELL MAINTENANCE AND GOOD RIDING SKILLS, WILL ENSURE YOUR SAFETY RIDING AND INCREASE THE PRODUCT RELIA-BILITY OF THIS VEHICLE.

\*Product and specifications are subject to change without notice.

DEALER LABEL HERE

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## SAFETY INFORMATION

With single-tracked vehicles, driving safety depends largely on the driving skills of the user.

The following requirements should be met before the start of the journey.

The driver should...

...be familiar with all the functions of the vehicle before starting the journey and be adequately trained on the vehicle.

...have read and understood all inspection and maintenance instructions in this book.

...have sufficient driving skills with regard to driving single-track vehicles and be in possession of an officially valid driving licence.

...visit a workshop with basic knowledge and accurate knowledge of this vehicle to ensure adequate and accurate inspection and maintenance of the vehicle.

#### SAFE RIDE

Always check your vehicle for various defects before starting your journey.

 Do not exceed the maximum permissible total weight.

Accidents often occur because motorists do not see motorcyclists and scooters. Therefore, riders should do everything possible to be noticed by motorists.

For example:

- Wear conspicuous clothing and drive carefully.
- Signal when changing lanes and adjust your speed.
- Keep your distance from other road users and draw attention to yourself.
- Respect your limits.
- Do not lend the vehicle to unqualified riders.
- Always comply with speed limits and traffic regulations.
- Correct posture is important for balance.

- Sit upright and hold the handlebars with both hands.
- Keep your feet on the footrests.
- The passenger must hold on tightly and stand with both feet on the footrests.
- Riding under the influence of alcohol and/or drugs is prohibited.
- The vehicle is designed for on-road use, it is not suitable for off-road riding.

#### Protective clothing

Proper clothing will keep you safe from potential accidents:

- Always wear an approved helmet with face shield to protect your eyes from dust and rain drops.
- The wear of a proper jacket, shoes, gloves etc. provides better protection and are reducing the degree of injuries from unexpected accidents.
- Never wear loose clothes, otherwise they could catch on the control levers or wheels and cause injury or an accident.
- Never touch the engine or exhaust system during or after operation. They became very hot during the operation and can cause burns. Always wear protective clothing that cover your legs, ankles and feet.

#### **Modifications**

Modifications made for this vehicle which are not approved by the maker or the removal of original equipment may make the vehicle unsafe for use and can cause severe personal injury. Modifications may also make your vehicle illegal to use.

#### Payload and accessories

The attachment of accessories or carrying of loads can lead to a change in weight distribution and affect steering and balance. This can easily lead to an accident.

#### Payload

The total weight of the rider, passengers (if permitted), accessories and load must not exceed the maximum load.

When loading within the restriction, please remember the following:

- The centre of gravity should be kept as low as possible.
- Distribute the weight as evenly as possible to maintain balance.
- The load must be securely attached.
- Do not hang heavy or bulky loads on the handlebars, fork or mudguard. This can lead to imbalance and slower steering response.

#### Accessories

Only use genuine accessories for your vehicle from the manufacturer. Please contact your authorised dealer. The manufacturer declines all responsibility for non-approved accessories from other manufacturers. The responsibility for this lies solely with you.

When fitting accessories, please remember the following:

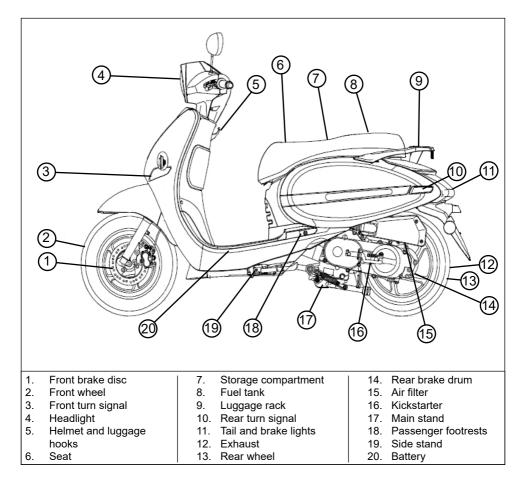
- Do not install any accessories and do not transport any loads that obstruct or restrict ground clearance, suspension travel, steering, lighting, indicators or reflectors.
- Accessories on the handlebars or the front wheel suspension impair the steering behaviour. Keep mounted accessories as light as possible.
- Do not mount luggage racks which affect the stability of the vehicle in cross winds.
- Have electrical accessories fitted by an authorised dealer to match the capacity of the electrical system. Improper installation can lead to malfunction of the lighting, low engine power and damage to the vehicle.

#### Further safety instructions

- Always signal when turning and changing lanes.
- Drive slowly and brake carefully on wet roads or slippery surfaces.
- Drive carefully past cars to avoid being hit by doors that open suddenly.

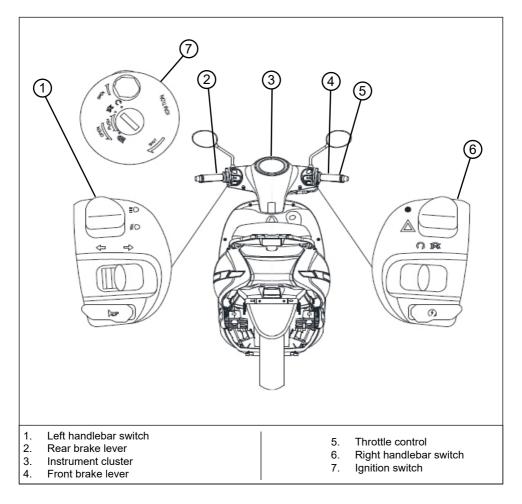
## DESCRIPTION OF THE VEHICLE

SIDE VIEW



## **DESCRIPTION OF THE VEHICLE**

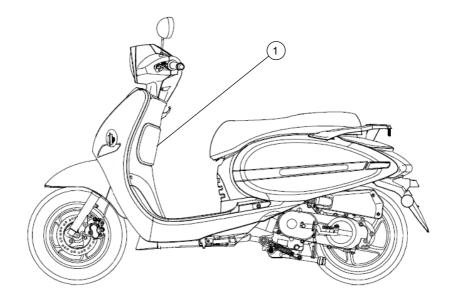
## CONTROLS AND INSTRUMENTS



## **CUSTOMER INFORMATION**

## **VEHICLE IDENTIFICATION NUMBER (VIN)**

The vehicle identification number (VIN) is stamped into the frame. To see it, open the glove box (1).



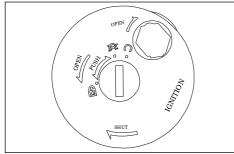
1. Vehicle identification number:\_\_

#### NOTE

Please make a note of the VIN (vehicle identification number) in order to order spare parts from your dealer or in case the vehicle is stolen. The vehicle identification number is used to identify your vehicle and can be used for registration with the registration authorities in your region.

## **INSTRUMENTS AND CONTROLS**

#### **IGNITION SWITCH**



The ignition lock controls the ignition and lighting system and is used to lock the steering and open the seat. The positions are described below.

0

All electrical circuits are supplied, the engine can be started, the key cannot be removed.

#### Ø

All electrical systems are switched off. The key can be removed.

#### Î

Steering lock, the steering is locked and all electrical systems are switched off. The key can be removed.

#### Lock the handlebars

- 1. Turn the handlebars fully to the left.
- 2. Insert the key into the ignition switch and turn the key, with light counterclockwise pressure, to the **û** position.
- 3. Remove the key.

#### Unlock handlebars

- 4. Insert the key into the ignition switch.
- 5. Turn the key clockwise to the Ø position.

#### WARNING

Never turn the key on  $\aleph$  or  $\hat{\mathbf{D}}$  while the vehicle is moving! This will switch off the electrical system and you may lose control of the vehicle.

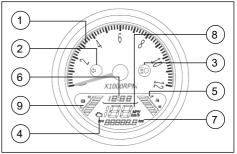
#### Anti-tampering protection

When the key is removed, the anti-tamper protection for the ignition switch can be activated by pressing the "Shut" button. This closes the keyhole with a metal flap. To open the flap, insert the hexagonal key on the head of the ignition key into the appropriate shape and turn it clockwise.

#### Opening the seat

Insert the key into the ignition switch and turn it anticlockwise without applying pressure, the seat unlocks.

## **INSTRUMENT CLUSTER**



#### 1. <u>Rev counter</u>

Indicates the current engine speed.

#### 2. Turn signal indicator

Indicates an active turn signal.

#### 3. High beam indicator

This indicator lights up when the high beam is on.

#### 4. Check engine light

When you switch on the ignition, the check engine light comes on. Once you have started the engine, it switches off again. If your vehicle detects a fault in the system, the check engine light will also come on when the engine is running.

#### 5. Fuel gauge

The current fuel level is displayed here. Here ",F" means Full and ",E" means Empty. If this indicator flashes, the fuel level is low.

#### 6. Clock

The clock shows the current time. To set the time, open the glove compartment (under the handlebars) and press and hold the button on the left for 4 seconds until the minute display flashes. Now press the button to set the minutes and hold it a little longer to set the hours. Once the clock has been set, briefly press and hold the button until the dividing points of the clock flash.

#### 7. Odometer

The odometer shows the total distance travelled by the scooter.

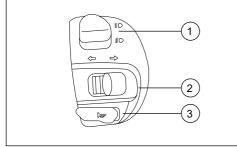
#### 8. Speed display

The current driving speed is displayed.

#### 9. Battery voltage

The bars show the current battery voltage. Here,  $_{\mu}L^{\mu}$  means low and  $_{\mu}H^{\mu}$  means high.

## LEFT HANDLEBAR SWITCH



#### 1. Light switch

By changing the switch position, you can switch between high beam and low beam.

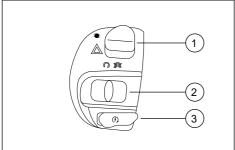
#### 2. Turn indicator switch

To turn right, slide the turn signal switch to the right. To turn left, push the turn signal switch to the left. To switch off the turn signal, press the button in the centre of the turn signal switch.

#### 3. <u>Horn</u>

Press to sound the horn.

#### **RIGHT HANDLEBAR SWITCH**



#### 1. Hazard warning lights

This switch activates the hazard warning lights.

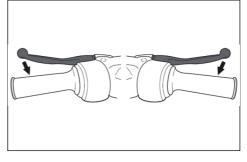
#### 2. Emergency stop switch

With this switch, the current flow to the engine can be interrupted.

#### 3. Start button

To start the vehicle, press the start button. At the same time, pull the right brake lever to start the vehicle.

## FRONT AND REAR BRAKE LEVERS



#### Rear brake

The brake lever for the rear brake is located on the handlebar on the left. To brake, pull the lever towards the handlebar.

#### Front brake

The brake lever for the front brake is on the handlebar on the right. To brake, pull the lever towards the handlebar.

The fuel filler cap (1) is located under the seat. Open the seat with the ignition key.

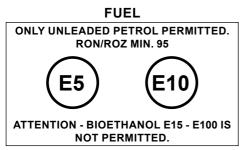
#### FUEL FILLER CAP

## **INSTRUMENTS AND CONTROLS**

#### Opening the fuel filler cap

Turn the fuel filler cap anticlockwise and the fuel filler cap can be removed.

Close the fuel filler cap in reverse order.

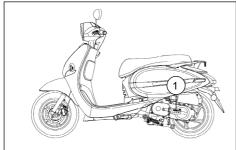


Ensure that there is enough fuel in the tank. Fill the petrol tank to the lower edge of the filler neck at the most.

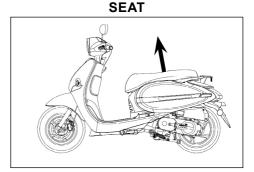
#### WARNING

- Do not overfill the petrol tank, otherwise petrol may leak out.
- Never run fuel over hot vehicle parts such as the engine or exhaust. This could ignite.
- Wipe away spilled fuel with a suitable cloth, as painted surfaces and plastic parts may be damaged.

#### KICKSTARTER



- Fold out the kick starter lever (1).
- Pull the front brake lever (right).
- Move it down with your foot until you feel a noticeable resistance.
- Then kick it down evenly and forcefully.



#### Openin the seat

- 1. Place the vehicle on the main stand.
- Insert the key into the ignition switch and turn the key anticlockwise without pushing it in. The lock unlocks automatically and the seat pops up.
- 3. Fold up the seat.

#### Closing the seat

Fold down the seat and press it shut with the ball of your hand directly above the lock.

# STORAGE COMPARTMENT

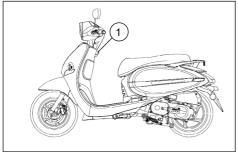
The storage compartment (1) is located under the seat.

#### NOTE

Do not exceed the maximum load of 2.5 kg. The storage compartment heats up due to the sun and the engine. The inside of the storage compartment can get wet during vehicle cleaning. Therefore, do not store any sensitive objects in it. Do not store any valuables in the storage compartment.

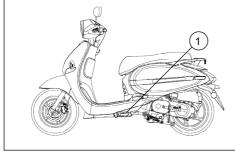
## **INSTRUMENTS AND CONTROLS**

#### HELMET AND LUGGAGE HOOKS



NOTE Do not exceed the maximum load of 1 kg.

#### SIDE STAND



The side stand (1) is located on the left side of the vehicle. Fold out the side stand with your foot and park the vehicle.

#### NOTE

When the side stand is folded out, the engine does not start. A running engine will stop when the side stand is folded out. Do not use the side stand for parking on a slope or on soft or uneven ground.

The main stand (1) is located under the vehicle. To place the vehicle on the main stand, step on the operating lever on the left side of the vehicle with your foot, then pull the vehicle onto the stand by the grab handle and handlebar.

Make sure that your vehicle is well and stably parked to avoid tipping over.

#### COMBINED BRAKE SYSTEM (CBS) (ONLY 125 CM<sup>3</sup> MODELS)

The CBS (Combined Brake System) is a combined braking system designed to improve the riding safety of your motorbike. Your vehicle is equipped with a single CBS. When the left hand brake lever is operated, the front and rear brakes are applied simultaneously. This reduces the risk of either wheel locking.

#### WARNING

Although both brakes are applied with the left hand brake lever, the front brake must also be applied for optimum deceleration of the motorbike.

#### MAIN STAND

## **PRE-OPERATION CHECKS**

#### CHECKLIST BEFORE SETTING OFF

It is the sole responsibility of the owner to keep the vehicle in optimum condition. The driver must check the vehicle by simple but thorough inspections in order to ensure the optimal condition of the vehicle. Before each journey, some important parts must be inspected quickly to avoid serious malfunctions of the vehicle that could lead to serious accidents.

#### CAUTION

A brief inspection should be carried out before each journey. This only takes a short moment and is for your own safety.

#### WARNING

If a component of the vehicle is found to be defective during inspection, have the vehicle repaired by an authorised dealer. In the event of negligence on the part of the vehicle owner, e.g. lack of care and maintenance, operation of the vehicle with defective or improperly maintained parts, the manufacturer will not accept any warranty.

CHECKPOINT	то снеск
Fuel	<ul><li>Check fuel level in fuel tank. Refuel if necessary.</li><li>Check fuel hoses for leakages.</li></ul>
Engine oil/transmission oil	<ul><li>Check oil level. Add oil if necessary.</li><li>Check vehicle for oil leakages.</li></ul>
Front brake	<ul> <li>Check operation.</li> <li>If the hydraulic system is soft or spongy, have it bled by a dealer.</li> <li>Check the brake pads for wear.</li> <li>Replace if necessary.</li> <li>Check the fluid level in the tank. If necessary, top up recommended brake fluid to the prescribed level.</li> <li>Check the hydraulic system for leaks.</li> </ul>
Rear brake	<ul><li>Check operation.</li><li>Check the brake pads for wear. Replace if necessary.</li></ul>
Accelerator grip	Make sure that the operation runs smoothly.
Wheels and tyres	<ul><li>Check for damage.</li><li>Check the tyre condition and tread depth.</li><li>Check the air pressure.</li></ul>
Brake lever	<ul><li>Make sure that the operation runs smoothly.</li><li>If necessary, lubricate the pivots.</li></ul>
Main stand/side stand	<ul><li>Make sure that the operation runs smoothly.</li><li>If necessary, lubricate the pivots.</li></ul>
Fastening elements on the chassis	<ul> <li>Make sure that all nuts, bolts and screws are properly tightened.</li> <li>Re-tighten if necessary.</li> </ul>
Instruments, lights, sig- nals and switches	Check operation, correct if necessary

## **DRIVING OPERATION**

#### WARNING

Before driving the vehicle, please make sure...

..that you are fully familiar with all operating controls & their functions.

..to consult a dealer shop if you not thoroughly understand.

#### WARNING

Please do not start the engine in a closed area, the exhaust fumes are poisonous, and inhaling them can cause loss of consciousness and even death in short time.

#### STARTING THE ENGINE

#### Starting with the electric starter

- 1. Turn the ignition key to ON.
- 2. Pull the right brake lever otherwise the vehicle will not start.
- 3. Push the start button for a few seconds.

#### CAUTION

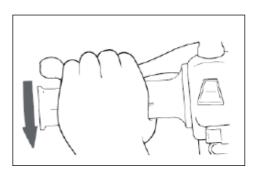
- Do not crank the engine more than 5 seconds on any single attempt.
- The engine starts immediately upon actuation of the starter, then wait a few seconds before you try to start it again. Each starting process should be as short as possible in order to save battery and the starter.

#### Starting with the kick-starter (if available)

- 1. Turn the ignition key to ON.
- 2. Pull the right brake lever otherwise the vehicle will not start.
- Unfold the kick-start lever and push with your foot down until you feel a noticeable resistance, then kick the kick-starter evenly and powerfully downwards.

#### CAUTION

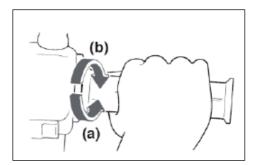
The vehicle must be started occasionally with the kick-starter (once a week), otherwise the lubricant on the kick-starter pinion will harden and this will cause it to malfunction.



**DRIVE OFF** 

- 1. Pull the brake lever with your left hand and hold the carrier with your right hand. Then push the car off the main stand.
- 2. Sit on the seat and adjust the rear-view mirrors.
- 3. Set the indicator.
- 4. Pay attention to the traffic and slowly turn the accelerator grip (right) to start driving.
- 5. Switch off the indicators.

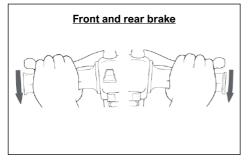
#### **ACCELERATION / DECELERATION**



The speed is regulated with the accelerator grip. To accelerate, turn the accelerator grip in direction (a). To decelerate, turn the accelerator grip in direction (b).

## **DRIVING OPERATION**

## BRAKING



- 1. Turn the acceleration grip fully in direction (b).
- 2. Pull the front and rear brakes simultaneously, increasing the brake pressure evenly.

#### WARNING

- Avoid abrupt or sharp braking. You could skid.
- Railway crossings, tram tracks, steel plates in construction site areas and manhole covers are particularly dangerous when they are wet. Reduce your speed and cross these sources of danger with extreme caution.
- Remember that braking is more difficult on wet roads.
- Please drive slowly downhill, braking downhill is particularly difficult.

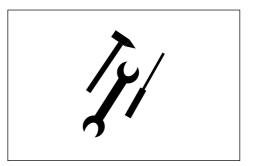
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PARKING



To park, turn off the engine using the key, place the vehicle on the main or side stand, deactivate the safety switch and remove the key.

#### INITIAL MAINTENANCE

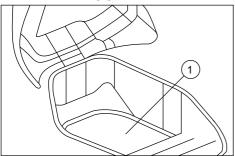


After the first 1,000 km, the initial maintenance is the most important. By then all parts have been run in. For this reason, all parts and components must be readjusted during this maintenance and all fastening elements must be tightened. Careful maintenance after the first 1,000 km ensures the best performance of your vehicle and extends its life.

#### CAUTION

Maintenance over 1,000 km must be carried out according to the contents specified in the section "Service and maintenance".

## TOOL KIT

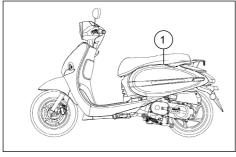


The on-board tool kit is located in the storage compartment (1).The maintenance information and the on-board tool kit supplied help to carry out preventive maintenance and minor repairs. However, certain maintenance requires special tools.

#### WARNING

Leave maintenance work that affects the warranty claim or with which you are not familiar to an authorised specialist dealer. Modifications to the vehicle that have not been approved by the manufacturer can lead to a change in performance, non-permitted exhaust emission values and unsafe driving behaviour. If such modifications are carried out by the customer without authorisation from the manufacturer, the warranty claim will be invalidated.

## **BATTERY COVER**



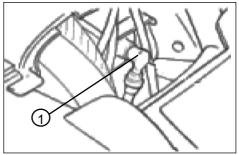
The battery (1) is located under the seat.

#### SPARK PLUG

The spark plug is an important part of the engine and is easy to check. Heat and deposits wear out the spark plug, so it must be checked according to the maintenance chart. The spark plug gives an indication of the condition of the engine. The spark plug is located on the underside of the vehicle.

#### Check spark plug

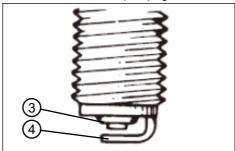
1. Remove the spark plug connector (1).



2. Unscrew the spark plug with the spark plug spanner (2) of the on-board tool.



3. Check that the insulator (3) around the centre electrode of the spark plug is fawn.



#### NOTE

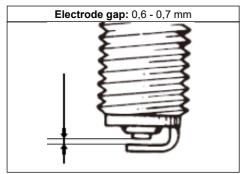
If the spark plug shows a different colour, this could indicate a malfunction of the engine. Do not diagnose such problems yourself. Please contact your specialist dealer.

 Check the spark plug for burning of the electrode (4) and excessive charring or other deposits. If necessary, replace the spark plug.

#### WARNING

Please note that no other spark plug model is permitted. The use of a different spark plug model can lead to engine damage in a short time.

- Before reinserting the spark plug, check the electrode gap and clean the spark plug with a dry cloth.
- 6. Insert the spark plug in reverse order.



#### WARNING

Please observe the maximum tightening torque when inserting the spark plug.

If you have no way of checking this, leave this task to the specialist dealer.

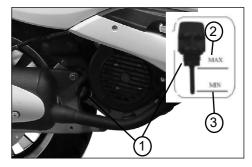
Max. Tightening torque: 12 Nm

#### ENGINE OIL

#### WARNING

The level of the engine oil must be checked each time the tank is filled.

- 1. Place the vehicle on the main stand, remove the dipstick (1) and wipe it.
- 2. Insert the dipstick (1), do not screw it in, take it out again and check that the oil level is between the upper (2) and lower (3) marks.



#### NOTE

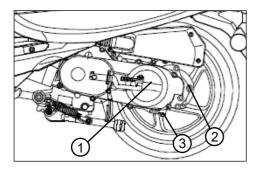
Make sure that the engine oil dipstick is properly inserted before driving off.

#### **TRANSMISSION OIL**

The gearbox housing (1) must be checked for oil leaks before each journey. In case of leaks, please contact your dealer for maintenance and repair. The gearbox oil must be changed according to the maintenance table.

#### NOTE

As long as the vehicle is within the warranty period, the transmission oil change is the responsibility of the specialist dealer.



#### Change transmission oil

- 1. Start the engine and drive for a few minutes to warm up the transmission oil.
- 2. Place the vehicle on the main stand.
- 3. Place an oil drain pan under the gearbox housing to collect the used oil.
- 4. Unscrew the oil filler plug (2) and the oil drain plug (3) and drain the oil from the gearbox housing.
- 5. Screw the gearbox oil drain plug back in and tighten it to the correct torque.
- 6. Fill with the required amount of gearbox oil and screw the oil filler plug back in with the correct tightening torque.
- 7. Check the gearbox housing for oil leaks. If oil leaks, contact the specialist dealer.

Max. Tightening torque: 18 Nm

#### WARNING

- Make sure that no foreign bodies get into the gearbox housing.
- Make sure that no oil gets on the wheel or tyre.

#### **AIR FILTER**

The air filter must be changed according to the maintenance table. Change the air filter more frequently if you drive in unusually dusty or humid environments.

#### Replace air filter

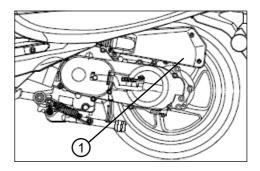
- 8. Unscrew the screws of the air filter housing (1).
- 9. Pull out the air filter.
- 10. Replace it with a replacement filter from the

manufacturer.

- 11. Slightly grease the air filter housing and the contact surface for an airtight seal.
- 12. Install the air filter.
- 13. Screw on the air filter housing.

#### NOTE

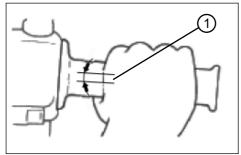
- Make sure that the air filter is correctly seated in the air filter housing and that it is correctly closed.
- The engine must never be operated without an air filter. Unfiltered air can immediately cause engine damage.



#### ECU

The engine control unit "ECU" is an important part of the engine and must always be set correctly. Any manipulation can have a negative effect on engine running and result in engine damage. Leave maintenance and adjustment work to the specialist dealer.

#### THROTTLE CABLE CLEARANCE



The throttle cable clearance (1) should be 1.5 - 3.5 mm.

#### NOTE

Regular checks of the throttle cable play and adjustment should be carried out by your dealer.

#### **TYRES**

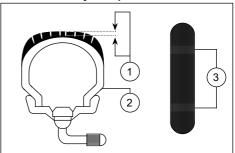
For best performance, longevity and safe operation of your vehicle, please follow the tyre instructions below.

#### Tyre pressure

The tyre pressure should be checked before every journey and corrected if necessary. Check the tyre pressure at least every time you refuel.

#### WARNING

Check tyre pressure when tyres are cold (before driving off). Adjust tyre pressure according to operating conditions. Do not overload the vehicle! The higher the load on the vehicle, the higher the pressure on the tyres, brakes and steering. This can lead to damage or accidents. The weight distribution on the vehicle is important for your safety and the performance of the vehicle. Tie down your load properly and load the heaviest loads centrally on the vehicle. This will keep you in control of the vehicle. **Tyre inspection** 



- 14. Tread depth
- 15. Sidewall
- 16. Wear indicator

#### WARNING

Check the condition of the tyres before every journey. If a tyre shows cross lines (minimum tread depth), this indicates damage. Have the tyre checked immediately by a specialist and have the tyre replaced immediately if necessary.

#### NOTE

The tread depth may differ depending on the country. Observe the local regulations. The values given here are technical values and may differ from the legal values in your region.

Minimum tread depth: Front and rear: > 1.6 mm

#### WARNING

- Driving with worn tyres is illegal, reduces stability and can lead to loss of control of the vehicle.
- Have worn or damaged tyres replaced immediately by your specialist dealer.
- Work on tyres and wheels is the responsibility of your specialist dealer.

#### RIMS

For best performance and durability and safe operation of your vehicle, please follow the instructions below regarding the rims.

- Check the rims for cracks and deformations before every ride. Have damaged rims replaced by your specialist dealer. Do not carry out any unauthorised repairs to the rims. A deformed or broken rim must be replaced.
- The wheel must be balanced after a tyre change. An unbalanced wheel will result in poor performance, difficult control of the vehicle and shorten the life expectancy of the tyre.
- After changing a tyre, drive slowly at first, as the tyre must be run in.

#### **BRAKE LEVER CLEARANCE**

#### NOTE

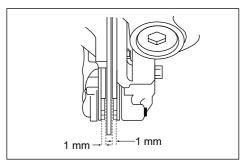
The brake levers should have no play. If they have play, please contact your specialist dealer to have the brake system checked.

#### WARNING

A brake lever that feels soft or spongy when braking may indicate that there is air or water in the hydraulic system. If there is air or water in the hydraulic system, please have it bled or the brake fluid replaced by your dealer. Air or water in the hydraulic system reduces braking performance and may cause loss of control of the vehicle.

#### **BRAKE PADS**

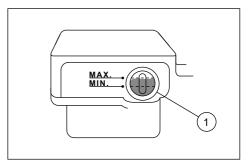
The brake pads must be checked at regular intervals. In the best case, before every journey. The pads have a notch that must always be visible. The wear of the pads depends on the driving style and the road surface. When the minimum pad thickness of 1 mm is reached, both pads must be replaced. Leave the replacement of the brake pads to the specialist dealer. Worn brake pads increase the braking distance.



#### **BRAKE FLUID**

#### WARNING

Insufficient brake fluid level can lead to air entrapment in the brake system, which reduces braking force. Check that the brake fluid is above the minimum mark (1) before each journey and top up if necessary.



- A low level may also indicate worn brake pads or a leak in the brake system.
- If the brake fluid level is low, please check the brake pads for wear and the brake system for leaks.
- When checking the brake fluid level, make sure that the brake master cylinder is level. Turn the handlebar accordingly.
- Use only high quality brake fluid, otherwise the rubber seals may degrade and result in poor braking performance.
- Always top up with the same brake fluid. Mixing can lead to chemical reactions and reduced braking performance.
- Make sure that no water enters the brake master cylinder when refilling. This reduces

the boiling point of the brake fluid considerably and can lead to the formation of vapour bubbles.

- Brake fluid attacks painted surfaces and plastic. Always wipe off overflowing brake fluid immediately.
- As your brake pads wear, the level of brake fluid also decreases.
- However, if the brake fluid level decreases quickly, please contact your specialist dealer.

#### WARNING

The brake fluid may only be changed by the specialist dealer.

#### Change brake fluid

Have your specialist dealer check the brake fluid according to the maintenance table and replace it if necessary.

#### **BOWDEN CABLES**

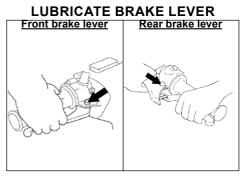
The operation and condition of the Bowden cables should be checked before each ride. The ends of the cables must be greased if necessary. A damaged rope or one that is difficult to move should be checked or replaced by your specialist dealer.

#### WARNING

Damage to the sheathing can lead to rusting and sluggishness. Replace damaged Bowden cables immediately to avoid unsafe situations.

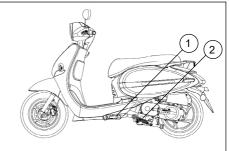
#### THROTTLE GRIP AND THROTTLE CABLE

Check the throttle grip before each ride. Service the throttle cable according to the maintenance table.



The pivot points of the brake levers for front and rear brakes must be lubricated regularly.

#### SIDE AND MAIN STAND

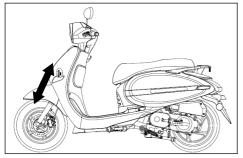


Check the side stand (1) and main stand (2) before each ride and lubricate the surfaces where metal meets metal regularly.

#### WARNING

If a stand does not fold in and out easily, please contact your specialist dealer.

#### **TELESCOPIC FORK**



The condition of the telescopic suspension fork must be checked according to the maintenance table. Furthermore, it should be briefly checked before each ride and treated with care products if necessary.

#### WARNING

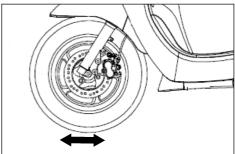
Park the vehicle securely so that it cannot fall over during the inspection.

- Park the vehicle level and upright.
- Check the inner tubes for scratches, damage and oil leaks.
- Pull the front brake and push the handlebar down hard several times to check the suspension of the fork.

#### WARNING

- In case of damage to the fork, please contact your specialist dealer.
- If you treat the telescopic fork with care products, make sure that they do not get onto the tyres or the brake system. This can lead to dangerous accidents.

#### STEERING



#### WARNING

A worn or loose steering bearing is dangerous. Have the steering checked according to the maintenance table. Furthermore, it should be subjected to a brief check if necessary.

- Place the vehicle on the main stand and unload the front wheel. This should be done by an assistant by pushing down on the rear of the vehicle.
- Hold the fork down and try to move it back and forth.
- If you see play, please contact your dealer to check the steering.

#### WHEEL BEARING

The wheel bearings of the front and rear wheel must be checked according to the maintenance table.

#### NOTE

If you notice play in the wheel hub or if the wheel does not turn easily, have the wheel bearing checked by your specialist dealer.

#### BATTERY

This model is equipped with a sealed and maintenance-free battery. There is no need to refill battery acid or distilled water.

#### WARNING

- Do not remove the battery cell seal under any circumstances! This can be dangerous and will permanently damage the battery.
- Battery acid is toxic and dangerous! It contains sulphuric acid and can cause dangerous chemical burns.
- Avoid skin, eye and clothing contact and always protect your eyes when working near the battery.
- In case of contact, render FIRST AID immediately.
- In case of skin or eye contact with battery acid, rinse the affected areas with plenty of water.
- If battery acid is swallowed, drink large quantities of water.
- In both cases, seek medical attention as soon as possible.
- Batteries emit explosive hydrogen gas. Keep naked flames, cigarettes, etc. away from the battery and provide adequate ventilation when charging a battery indoors.
- Batteries, store away from children.

#### Charging the battery

If you do not have a suitable charger, contact your dealer to have the exhausted battery charged. The battery discharges more quickly if you have fitted electrical accessories.

#### **Battery storage**

- If the vehicle is not used for more than one month, remove the battery from the vehicle.
   Fully charge the battery and store it in a cool, dry place.
- If the battery is stored for more than two months, check the charge level at least once a month and recharge the battery if necessary.
- Fully charge the battery before reinstalling it.
- After installation, make sure that the battery cables are connected correctly.

#### WARNING

If you are not familiar with how to handle the battery, contact a specialist dealer.

#### NOTE

Always keep the battery charged. Storing a depleted battery will permanently damage the battery.

#### FUSES

The fuses are located under the battery cover.

#### Change fuse

- 1. Turn the ignition key to ⊠ and switch off all electrical consumers.
- 2. Remove the blown fuse and insert a new fuse with the same ampere rating.

#### WARNING

Do not use a fuse with a higher ampere rating as this may cause serious damage to the electrical system or fire.

- After changing the fuse, turn the ignition key to O and switch on the electrical consumers to check.
- 2. If the fuse blows again, please contact your dealer and have the electrical system checked.

#### LIGHTING

All lighting units of this model are LED technology. If a lighting unit does not function properly, please contact your specialist dealer.

## TROUBLESHOOTING

Although your vehicle has been thoroughly checked before delivery, problems may occur during operation.

The fault detection table below shows quick and easy test methods that you can use to carry out a quick check yourself. If your vehicle needs repairs, please contact your dealer who has the necessary tools, expertise and experience to maintain your vehicle properly.

FAULT	CAUSE	MEASURE
Engine does not turn when the electric start button is pushed	<ul> <li>Battery discharged.</li> <li>Fuse is blown.</li> <li>Starter relay defective.</li> <li>Starter motor defective.</li> <li>Engine-stop-switch activated</li> </ul>	<ul> <li>Charge the battery.</li> <li>Replace the fuse.</li> <li>Check the starter relay.</li> <li>Check the starter motor.</li> <li>Deactivate engine-stop- switch.</li> </ul>
Engine turns but does not start or dies off	<ul> <li>Fuse is blown.</li> <li>Idle speed not correct.</li> <li>Spark plug contaminated.</li> <li>Failure in ignition system.</li> <li>Wiring harness is worn.</li> <li>Contact problem in a plug.</li> <li>No fuel in the tank.</li> <li>Problem with fuel pump.</li> <li>Problem with the fuel filter.</li> <li>Fuel leakage.</li> </ul>	<ul> <li>Check the fuses.</li> <li>Adjust the idle speed.</li> <li>Replace the spark plug.</li> <li>Check the ignition system.</li> <li>Check the wiring harness.</li> <li>Check the connectors.</li> <li>Refuel gasoline.</li> <li>Check the fuel pump.</li> <li>Check the fuel plitter.</li> <li>Check the fuel circuit.</li> </ul>
Engine power is poor.	<ul> <li>Air filter contaminated.</li> <li>Fuel filter contaminated.</li> <li>Failure in fuel system.</li> <li>Problem with ignition system.</li> <li>Valve clearance incorrect.</li> </ul>	<ul> <li>Replace the air filter.</li> <li>Replace the fuel filter.</li> <li>Check the fuel system.</li> <li>Check the ignition system.</li> <li>Adjust valve clearance.</li> </ul>
Too high oil consumption.	<ul><li>Engine oil level too high.</li><li>Cylinder/piston worn.</li><li>Engine ventilation bad</li></ul>	<ul><li>Bleed the oil system.</li><li>Replace worn parts.</li><li>Check engine ventilation</li></ul>
Engine warning light is on.	Failure in the fuel injection or electrical system.	Contact your dealer to identify the failure.

## FAULT DETECTION LIST

## **CLEANING THE VEHICLE**

By cleaning your vehicle you not only make it look like new, but you also extend its durability and improve its performance.

#### **Preparation**

Close all caps, lids and electrical connections so that no water can penetrate.

#### CAUTION

- It is best to use only water and mild detergents or special cleaners from specialist dealers to avoid damaging the sensitive components of the vehicle. Then dry the plastic parts with a soft, dry cloth or sponge.
- Do not use acidic cleaning agents. If such agents are used, only use them selectively. Dry the area immediately and then apply rust protection spray. Always follow the manufacturer's instructions for care and cleaning products.
- Protect plastic parts, paintwork and headlight lenses in particular from aggressive chemicals such as fuel, rust remover, brake cleaner or similar. The use of such agents can lead to malfunctions or damage and impair safety.
- Do not use high-pressure or steam cleaners. This can cause water to enter bearings, breather hoses or electrical components such as connections, switches or lighting and may damage brake pads, brake linings, seals, paintwork or other surfaces.

#### Cleaning after normal use

Wash off dirt with warm water, a mild detergent and a soft and clean sponge. Then rinse thoroughly with clean water. Use a small brush for hard to reach areas.

#### Cleaning after driving in a salty environment or with road salt

- Clean the vehicle with cold water and a mild detergent.
- Do not use warm water! This increases the corrosive effect of the salt. Apply anti-rust spray to all metal parts, including chrome and nickel-plated ones.

After cleaning:

- Dry the vehicle.
- To prevent rust, we recommend using suitable care products according to the manufacturer's instructions.
- Wax all painted surfaces.

#### CAUTION

Salt is extremely corrosive in combination with water, so please follow the cleaning instructions below.

#### WARNING

- Ensure that no cleaning or care products are left on the brake system or tyres before the vehicle is put into operation.
- If this is the case, please do not put the vehicle into operation. First remove the residues.
- Test the brakes and tyres before putting the vehicle into operation.

#### STORAGE

#### Short term storage (a few days)

 Store your vehicle in a cool and dry place and protect it with a tarpaulin if necessary.

#### Longer-term storage (for weeks)

- Clean the vehicle.
- Store your vehicle well ventilated and dry.
- Check or correct the tyre pressure and lift the vehicle off the ground so that neither wheel is in contact with the ground. If this is not possible, turn the wheels a little further every month so that they are not always in the same place (standing damage).
- Charge the battery and remove it.
- Store the battery at room temperature (+20 to +25 °C).
- Charge the battery to 100% every 2 months.

# **TECHNICAL SPECIFICATIONS**

ENGINE				
Туре	4-stroke, air cooled			
Cylinder arrangement	Forward-inclined single cylinder			
Displacement	50 cm <sup>3</sup> / 125 cm <sup>3</sup>			
Compression ratio	50 cm³: 10,5 : 1 125 cm³: 9,2 : 1			
Starting system	Electric starter, Kick-starter			
Lubricating system	Forced-feed lubrication			
ENGI	NE OIL			
Туре	4-stroke engine oil SAE 10W-40			
Quantity	50 cm³: 0,7 L 125 cm³: 0,8 L			
TRANSMI	SSION OIL			
Туре	SAE 85W-90			
Quantity	50 cm³: 0,14 L (Full) 0,13 L (Change) 125 cm³: 0,12 L (Full) 0,11 L (Change)			
FU	IEL			
Туре	Unleaded fuel, RON/ROZ min. 95			
Quantity	5,0 L +/- 0,2 L			
!! CAUTION !! !! BIOETHANOL FUEL E15-E100 IS NOT PERMITTED !!	E5 E10			
AIR FILTER				
Туре	Paper element			
E	CU			
Manufacturer	50 cm³: Continental 125 cm³: Delphi			
SPAR	( PLUG			
Manufacturer	NGK			
Туре	CR7HSA			
	-			
Spark plug gap	0,6 - 0,7 mm			
	0,6 - 0,7 mm TCH			
CLU Clutch type Transmission type	TCH Dry, centrifugal automatic V-belt automatic			
CLU Clutch type Transmission type	TCH Dry, centrifugal automatic			

# **TECHNICAL SPECIFICATIONS**

FRONT WHEEL				
Rim	MT 2.75 x 12			
Туге	110/70-12			
Tyre pressure	2,3 bar			
REAR	WHEEL			
Rim	MT 2.75 x 12			
Туге	120/70-12			
Tyre pressure	2,3 bar			
FRONT BRA	KE SYSTEM			
Туре	Single hydraulic disc brake			
Diameter brake disc	190 mm			
Operation	50 cm³: Right Hand 125 cm³: Right Hand/Left Hand (CBS)			
REAR BRA	KESYSTEM			
Туре	Drum brake			
Diameter brake drum	110 mm			
Operation	Left Hand			
BRAK	FLUID			
Туре	DOT 4 brake fluid			
FRONT SU	SPENSION			
Туре	Telescopic fork			
Spring / shock absorber	Coil spring / oil damper			
REAR SU	SPENSION			
Туре	Swing arm			
Spring / shock absorber	Gas / oil damper			
BAT	TERY			
Voltage / capacity	12 V / 6 Ah or 12 V / 7 Ah			
FU	ISE			
Main fuse	15 A			

# **TECHNICAL SPECIFICATIONS**

DIMENSIONS 50 CM <sup>3</sup>			
Length	1900 mm		
Width	690 mm		
Height	1135 mm		
Wheelbase	1330 mm		
DIMENSIO	NS 125 CM <sup>3</sup>		
Length	1880 mm		
Width	670 mm		
Height	1130 mm		
Wheelbase	1300 mm		
MASSE	S 50 CM <sup>3</sup>		
Mass in running order	96 kg		
Maximum permissible mass	246 kg		
Permissible mass on front axle	77 kg		
Permissible mass on rear axle	169 kg		
Maximum payload	150 kg		
MASSES	6 125 CM <sup>3</sup>		
Mass in running order	107 kg		
Maximum permissible mass	267 kg		
Permissible mass on front axle	98 kg		
Permissible mass on rear axle	169 kg		
Maximum payload	160 kg		

## WARRANTY

Before using the vehicle, please read the operating instructions thoroughly to familiarise yourself with the use of the vehicle. We would like to point out that the operating, care and maintenance instructions given in the operating instructions must be followed in order to maintain the warranty and guarantee claim. Compliance with the operating, care and maintenance instructions contributes significantly to increasing the service life of the vehicle.

From the date of the first handover to the end customer, the vehicle is guaranteed to be free from defects in material and manufacture in accordance with the state of the art for a period of 24 months (limited warranty) or the legally applicable warranty period. Maintenance work may only be carried out at a specialist workshop authorised by us. No warranty or guarantee can be claimed for damage caused by improper handling, manipulation or by disregarding the operating, care and maintenance instructions. Guarantee or warranty can only be granted if any damage occurring is reported directly to the seller or to a specialist workshop authorised by us. A claim under warranty only entitles the customer to have the defect remedied. Compensation for direct and indirect damage is not granted. No warranty or guarantee can be claimed on neglected vehicles. Please therefore observe the following instructions.

The bodywork and trim parts must be regularly cleaned of dirt. Never use a high-pressure cleaner, a strong water jet or sharp, caustic or abrasive cleaning agents. This can permanently damage surfaces and paintwork and promote rust formation. Always use gentle care products. Your dealer will be happy to advise you. Treat aluminium parts or parts with refined surfaces (chrome-plated, anodised or other refined surfaces) with suitable care products to prevent oxidation. Always treat frames and metal parts with suitable corrosion protection to prevent corrosion.

A vehicle parked permanently outdoors must be covered with a protective tarpaulin to prevent weathering of painted parts and cracking of seats and plastic parts.

If the vehicle is used on unpaved roads or paths or in racing, no guarantee or warranty can be claimed.

No guarantee can be given for the following parts and for parts subject to wear and tear: bulbs / brake and clutch linings / filter elements / spark plugs / drive pinion, chain wheel and drive chain / tyres

Vehicle batteries are guaranteed for a period of 6 months.

#### **IMPORTANT INFORMATION**

The time at which the maintenance work is to be carried out is the limit value that is reached first. This means kilometres driven or operating time since the last maintenance.

The warranty can only be granted if the vehicle has been maintained according to this plan and has not been subjected to extraordinary loads.

#### ATTENTION

Only carry out applicable work intended for your vehicle.

#### CAUTION

- Hydraulic lines should be replaced every 4 years.
- The vehicle should be checked continuously for rust. The vehicle owner himself is responsible for rust prevention.

On the following pages you will find the maintenance table and the service booklet.

## MAINTENANCE TABLE

COMPONENT	το do	After the first 1.000 km	Every 3.000 km	Every 6.000 km	Every year	Every 2 years
Spark plug	Check / Replace		~	Replace		
Air filter	Check / Replace		~	Replace		
Tyres, rims, wheel bearings	Check	~	~	~	~	~
Steering bearings	Check / Clean / Lubricate	~	~	~	~	~
Tightness of all visible screws	Check	~	~	~		
Brake system	Check	~	~	~	~	~
Brake fluid	Check / Replace	~	~	~	~	Replace
Battery	Check	~	~	~	~	~
Side / main stand	Check / Clean / Lubricate	~	~	~		~
Telescopic front fork	Check			~	~	~
Rear shock absorber	Check			~	~	~
Engine oil and oil filter	Replace	Replace	Replace	Replace	Replace	Replace
Transmission oil	Check / Replace	Replace	~	Replace	~	Replace
Valve clearance	Check / Adjust	~	~	~	~	~
CVT belt	Check / Replace		~	Replace		
CVT pulleys	Check / Replace		~	Replace		
Brake lever front/rear	Check / Clean / Lubricate		~	~	~	~
Wire cables / Bowden cables	Check / Clean / Lubricate	~	~	~		~
Throttle grip	Check	~	~	~	~	~
Lighting and switches	Check	~	~	~	~	~
Fuel line / fuel filter	Check	~	~	Replace	~	~
Exhaust system	Check / Re-tighten	~		~		~
Vehicle road test / test ride	Check	~	~	~	~	~

The inspection intervals must be observed, otherwise the warranty claim will expire.

General:

- With "Check" this point must be checked for correct function.
- If additional instructions such as "Lubricate" or "Replace" are given, this work must be carried out additionally.
- If errors/defects are detected, they must be corrected.

## SERVICE BOOKLET

General Data			
Model:			
Vehicle Identification Number (VIN):			
Customer name:			
Customer signature:			

DELIVERY INSPECTION
Mileage:
Date:
Dealer stamp / signature

AFTER THE FIRST 1.000 KM				
Mileage:				
Date:				
Dealer stamp / signature				

2 <sup>nd</sup> SERVICE	
Mileage:	Mileage
Date:	Date:
Dealer stamp / signature	

3 <sup>rd</sup> SERVICE
lileage:
ate:
Dealer stamp / signature

4 <sup>th</sup> SERVICE
Mileage:
Date:
Dealer stamp / signature

5 <sup>th</sup> SERVICE
Mileage
Date:
Dealer stamp / signature

6 <sup>th</sup> SERVICE	
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Date:	Dat
Dealer stamp / signature	

7 <sup>th</sup> SERVICE
Mileage:
Date:
Dealer stamp / signature

8 <sup>th</sup> SERVICE	
Mileage:	Mileage
Date:	Date:
Dealer stamp / signature	

9 <sup>th</sup> SERVICE
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