

## To owners

450Rally Factory Edition Two-wheel Motorcycle Instruction Manual

First Version (July,2023)

First of all, congratulations on your purchase of a new Kove motorcycle!

By choosing a Kove product, you have become a member of the Kove Motorcycle family.

The instruction manual introduces the main specifications, basic structure, adjustment methods, and maintenance knowledge of the motorcycle. It will guide you to master the basic operation of the motorcycle as well as troubleshooting or reducing common faults, which will effectively guarantee the safety of driving, bring out the best performance of the bike, and improve the service life of the motorcycle.

**This manual contains the basic configuration of the motorcycle, the content and pictures are for reference only, please refer to the real thing.**

**Due to the factory time, user requirements and design improvements, etc. may lead to differences between the actual bike and the manual content, we reserve the right to make changes at any time without further notice or obligation, so please understand the inconvenience caused.**

The instruction manual is one of the necessary accessories for the motorcycle and should be attached to the motorbike when reselling it to another person.

The copyright of this manual belongs to the company, without the written consent of the company is not allowed to reprint, violators will be investigated.

To ensure your safety and increase your riding pleasure:

- ☐ Please read this instruction manual carefully.
- ☐ Please follow all recommendations and procedures in the instruction manual.
- ☐ Please pay more attention to the safety information written in the instruction manual and pasted on the motorcycle.

## Security precautions

**This Motorcycle is a non-road motorcycle, only in the professional track driving, the driver must have some physical fitness and off-road driving experience.**


Your safety and the safety of others is very important. Safe riding of this motorcycle is an important responsibility, and the rider needs to be physically fit and experienced in off-road driving.

To help you make wise decisions about your safety , we have provided procedures and other information on the safety label and in the instruction manual that will alert you to potential hazards that could harm you or others.

Of course, it would be impractical for us to list all the dangers associated with motorcycle riding and maintenance, and you must make the correct judgment.


The addition of electrical equipment is prohibited because the battery used in this motorcycle is a lithium battery, which has a small capacity and may result in a loss of power if electrical equipment is added.


This motorcycle is equipped with a high-speed engine, and for your driving safety, it is recommended that you reduce violent driving. You will see important safety information in various forms, including:

- Safety label on the body of the motorcycle;
- The safety message is preceded by a safety warning symbol  and one of the following three warnings: CAUTION, DANGER, WARNING.

The meanings of the three warning phrases are shown below:

 **CAUTION** - if you don't follow the instructions, you may be injured.

 **DANGER** - if you don't follow the instructions, it will result in serious injury or death.

 **WARNING** - if you don't follow the instructions, it will result in serious injury or death.

**Additional important information is listed below the following headings:**

**Note** - Information to help you avoid damage to your motorcycle, other property or the environment.

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# Motorcycle Safety

**This section contains important information for safe motorcycle riding, please read this section carefully.**

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## Security Guide

To enhance the safety of your ride, please follow these guidelines:

- Perform all daily and routine checks specified in the operating instructions.
- Before refilling the fuel tank, turn off the engine and keep it away from sparks and open flames.
- Check key nuts and bolts for tightness after trail riding.
- Don't start the engine in a confined or semi-confined space because the exhaust gases contain carbon monoxide, a toxic gas that can be fatal.

### Before riding

Make sure you are in good physical condition, focused, and not drinking or taking medication. Wear certified off-road helmet, off-road windshield, armor, knee pads, off-road socks, off-road shoes, gloves, elbow pads, and other off-road protective gear. Keep your hands on the handlebars, feet on the pedals, and lean your body when turning, even when the bike is stopped.

### Take the time to learn and practice

Even if you have ridden other motorcycles, practice driving this motorcycle in a safe area to become familiar with the operation and handling of this bike and to adapt to the size and weight.

### Be aware of protection when riding a bike

Always pay attention to the surrounding situation, do not think that other drivers can see you, be ready to emergency brake or avoid detour.

### No passenger

This motorcycle is designed and constructed to be ridden by the driver only, never carry a passenger, carrying a passenger could result in an accident and you and others could be injured.

## Make yourself easily seen

Especially at night, wear bright reflective clothing to make yourself more visible, stop where other drivers can see you, turn on your signal before turning or changing lanes, and honk your horn to alert pedestrians when necessary.

## Do not drink and ride

Never ride beyond your personal capabilities or exceed the speed limit set by your motorcycle. Fatigue and negligence can impair your ability to make good judgments and ride safely.

## Keep your motorcycle in safe condition

It is important to keep your motorcycle in good condition at all times; check your motorcycle before each ride and complete all recommended maintenance and repairs, **do not modify your motorcycle or add accessories that would affect safety, and strictly prohibit overloading.**

## Dealing with unexpected events

Your personal safety is your first priority. If you or anyone else is injured, you should first carefully assess the severity of the injury and determine whether it is safe to continue riding. If necessary, call for emergency assistance. When other people or vehicles are involved in a collision, you should also follow the laws and regulations that apply.

If you decide to continue riding, first turn the bike off, then assess the condition of the motorcycle and check for oil leaks. Check that key nuts and bolts are tight, and check the steering handle, column, brakes, and wheels to ensure that people and vehicles are in a safe condition.

Your motorcycle may have sustained damage that is not immediately apparent. Please take it to a special Kove repair shop or a qualified repair store for a thorough inspection as soon as possible.

## Carbon monoxide hazards

Exhaust fumes contain toxic carbon monoxide. Carbon monoxide is a colorless, odorless gas, and inhaling higher concentrations of carbon monoxide can cause a person to lose consciousness and may even be fatal.

Never start the engine in a garage or other confined space for an extended period of time.



### WARNING

- Running a motorcycle engine in a confined or semi-confined space can lead to a rapid build-up of toxic carbon monoxide gas.
- Inhalation of this colorless and odorless gas can cause rapid loss of consciousness and death.
- Start the motorcycle engine only in a well-ventilated outdoor area.

## Safety Precautions

- Drive only, no passenger, do not carry passenger.
- Always drive safely and stay as far away from all kinds of vehicles as possible.
- Ride carefully, always keep your hands on the steering handle and your feet on the footrests.
- Make sure you always wear a certified off-road full helmet and related protective gear.



- Not wearing a helmet increases the chances of serious injury or death in an accident.



## Riding Precautions

### Break in period

Follow these guidelines during the first 500 miles of driving to ensure reliability and performance later in the motorcycle's life.

- Avoid full throttle starts or rapid acceleration.
- Avoid emergency braking and rapid downshifting.
- Ride with caution.

### Brake

Follow these guidelines:

- Avoid excessive emergency braking and downshifting.
  - ▶ Sudden braking can reduce the stability of your motorcycle.
  - ▶ Slow down before you turn, otherwise you will risk slipping.
- Always ride carefully on slippery roads
  - ▶ Tires on such surfaces are more likely to skid and require longer braking distances.
- Avoid continuous braking
  - ▶ When going downhill on long and steep slopes, repeated braking will cause the brakes to seriously overheat and affect the braking effect, so the brakes should be used intermittently to slow down with the help of engine braking.
- Using both front and rear brakes can achieve a complete braking effect.

## **Engine Brake**

When you release the throttle, the engine brake will help the motorcycle slow down. If you want to slow down even more, you can downshift to a lower gear; when going downhill on long and steep slopes, you should slow down with the help of the engine brake and use the brake intermittently.

## **Humid and rainy environment**

In wet and rainy conditions, the road will be slippery and wet brakes will reduce braking efficiency, so be extra careful when braking. If the brakes are wet, you can intermittently and repeatedly brake while driving at low speeds, which helps to dry the brakes quickly.

## **Parking**

- Park on a firm, level surface.
- If you must park on a slightly sloped or loose surface, make sure it is firmly parked and that the motorcycle cannot move or tip over.
- Make sure that hot parts do not come into contact with flammable materials.
- Do not touch the engine, muffler, brakes and other hot parts until they have cooled down.
- To avoid the possibility of theft, always lock the steering handlebars and remove the keys before leaving the motorcycle unattended.

## **Parking with side stand**

1. Turn off the engine.
2. Lower the side stand.
3. Lower the side stand.
4. Turn the steering handle completely to the left.

► Turning the steering handle to the right will reduce stability and may cause the motorcycle to fall over.

## Refueling/Brake Fluid and Fuel Guide

Follow these guidelines to protect your engine:

- Use only unleaded gasoline 92# and above.
- High octane gasoline is recommended; using lower octane gasoline will reduce engine performance.
- The use of ethanol gasoline is not recommended, the use of ethanol gasoline will reduce the performance of the engine.
- Do not use spoiled or contaminated gasoline, or oil-gasoline mixtures.
- Prevents dirt and water from entering the oil tank.
- Brake fluid has a corrosive effect, so please be careful to avoid splashing in the eyes, sticking to the skin and avoiding contact with non-metallic materials of the vehicle when adding it.

## Accessories and modifications

We strongly recommend that you do not use parts other than those designed specifically for this bike by KOVE MOTO, and do not modify the original design of the motorcycle, as doing so will make the motorcycle unsafe **Unauthorized modifications to your motorcycle will void your warranty.**

It is forbidden to attach a trailer or crossover bucket to your motorcycle, and to modify or add other equipment to the engine mounting points. Your motorcycle is not designed for these accessories and their use can seriously damage the handling and safety of the motorcycle.



### WARNING

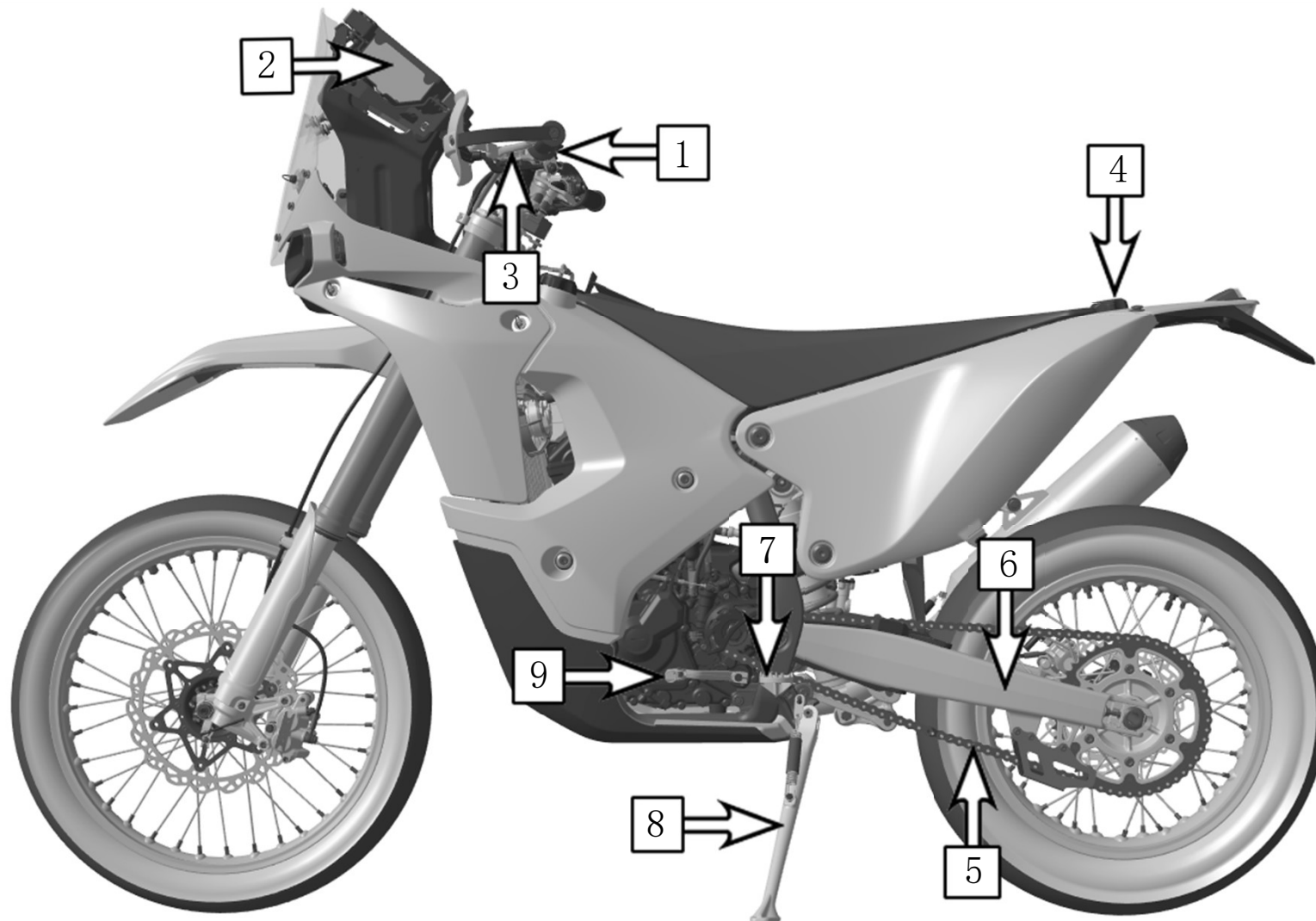
- Inappropriate accessories or modifications may cause a safety accident in which you could be seriously injured or even endanger your life.
- Obey all instructions on accessories and modifications in the instruction manual.

# Operation Guide

**This section contains important information on the operation of motorcycle use, please read this section carefully.**

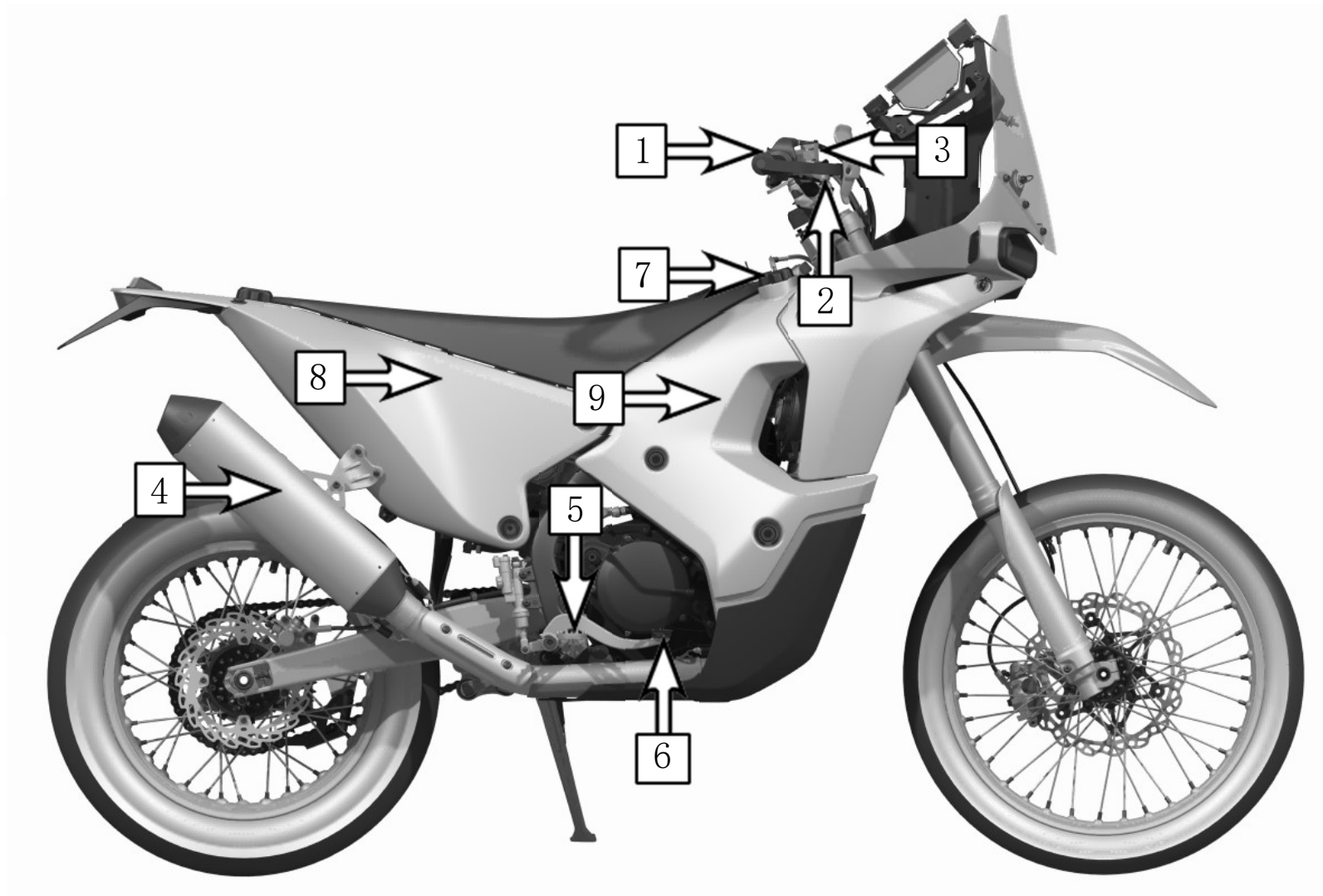
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## Parts Location Diagram



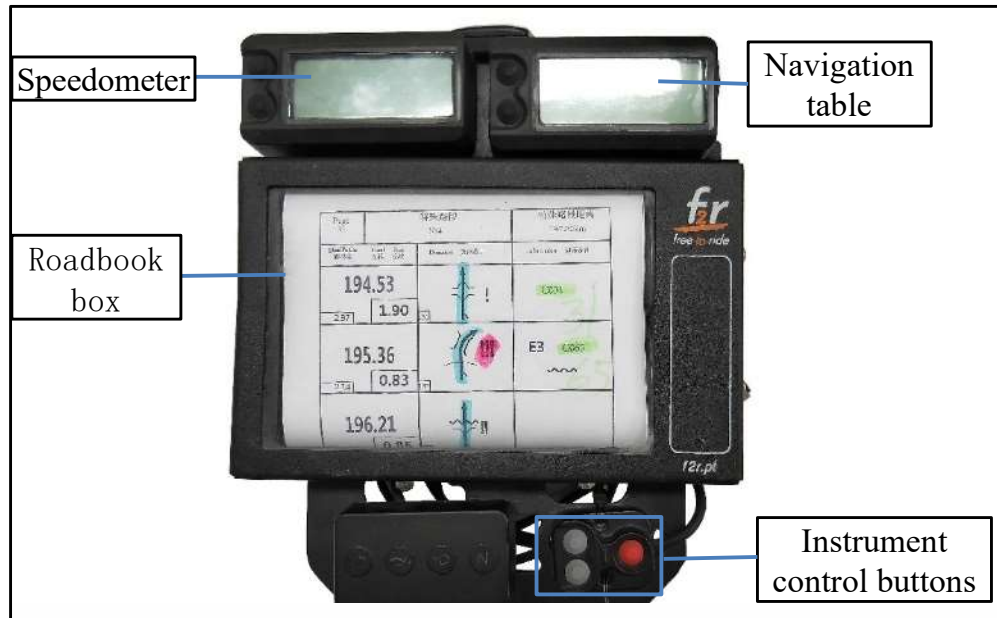
- 1.Left handlebar switch   2.Roadbook assy   3.Clutch handle   4.Rear fuel tank cap   5.Chain   6.Chain stay   7.Left front footrest  
8.Side stand   9.Shift pedal

## Parts Location Diagram




- 1.Right handle switch 2.Brake handle 3.Front brake fluid reservoir 4.Muffler 5.Right footrest 6.Rear brake pedal 7.Front fuel tank cap  
8.Rear fuel tank 9.Front fuel tank

## Instrument and Roadbook



### Display Check

Long pressing the electric start switch “” to the start state, the instrument is energized, if the instrument is not turned on, you can wake up the instrument by short pressing the instrument button.



The external GPS receiver is fixed in the empty space in the front of the bike, and the bike is placed in the open outdoor area to facilitate GPS signal reception.



## Roadbook Box



**Roadbook box**



Roadbook scrolling button-Roadbook scrolling button can switch to manual mode after power failure to continue to operate the roadbook box.

## Roadbox



1. Pull down the adhesive strip to open the top cover of the roadbook box



2. Manual knob for roadbook box



3. Press the red button to turn on/off the road book backlight

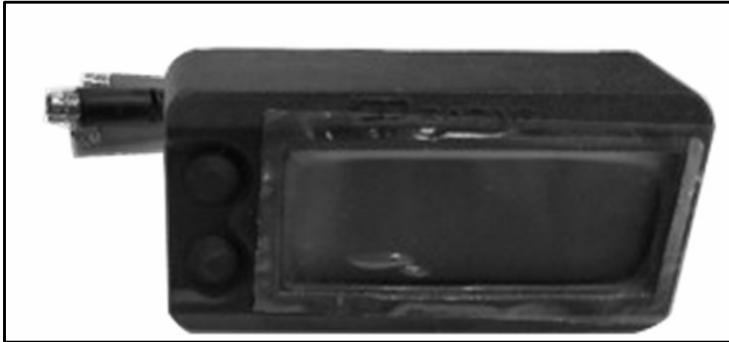


4. Red locking switch button

①Toggle the red button upward to restrict the manual rotation wheel of the roadbook box to turn the pages downward.

②Toggle the red button downward to restrict the manual wheel of the road book box to turn the pages upward.

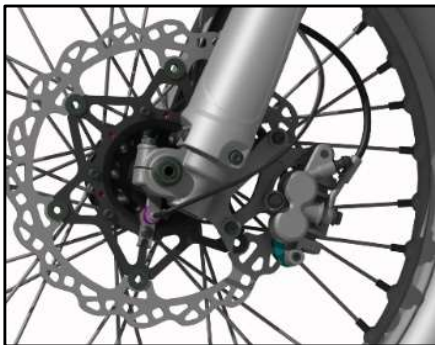
## Speedometer



Speedometer



Instrument control button



Speed Sensor

## Speedometer setting

### Power off and on

1. Short press any button on the left side of the speedometer to turn on the speedometer.

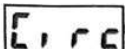
When there is no button activity or wheel movement, the speedometer will go to sleep after 20 minutes.

The speedometer will wake up automatically when the wheels are turned.

2. At the same time, long press the up and down buttons on the left side of the speedometer to turn off the speedometer.

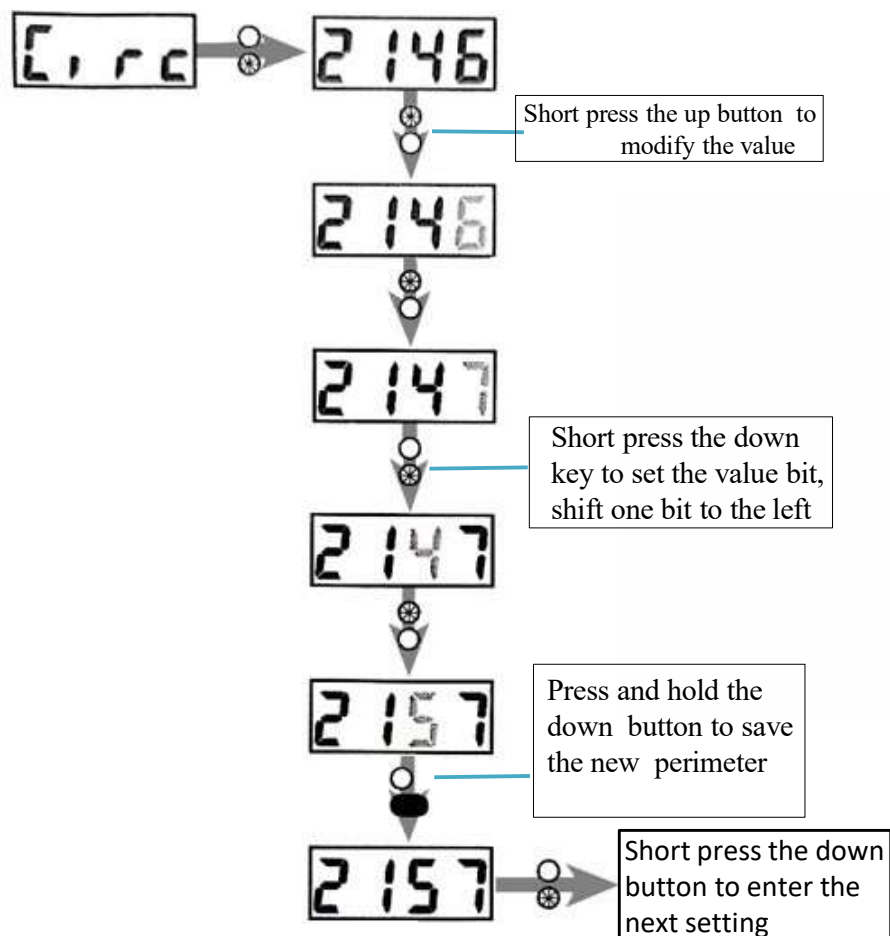
### Instrument mode setting

After the meter is turned on for the first time, press and hold the lower button of the meter to enter the mode setting of metric mile/tire circumference/speed display/time display/mileage display/travel time.

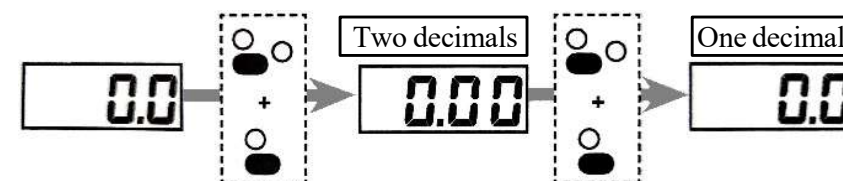
For example: Tire circumference setting: short press the down button in the meter setting mode to enter the “” icon display, short press the down button meter interface to display the current setting value, short press the up button to modify the value. Short press the upper key once to increase the value once. Short press the down key to set the value bit and shift one bit to the left. When the modification is finished, press and hold the down key to save the data. Short press the down button to go to the next setting

## Speedometer setting

### Perimeter setting

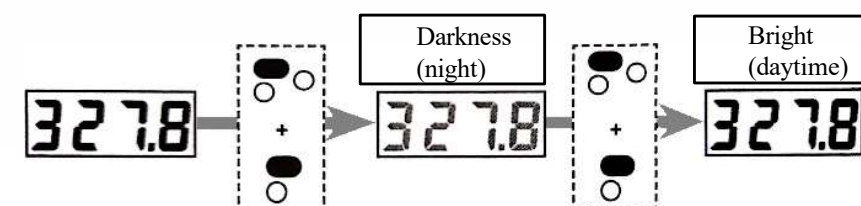


### Accuracy settings



Simultaneously press and hold the meter control lower button and the meter left lower button for accuracy mode setting.

### Brightness setting



Press and hold the upper button of the instrument control button and the upper button on the left side of the instrument at the same time to set the brightness mode.

#### Note

•The wheel symbol in the icon indicates a short press of the button, and the black oval indicates a long press of the button.

## Speedometer setting

### Display setting

Short press the upper key to increase the number

Mileage

327.8



327.9



327.7

Short press the lower key to decrease the number



Resetting the mileage: long press the right button of the meter control

Reset the mileage

0.0



Set

Set mileage

000.0



Short press the right button to enter the speed setting.

Speed

- 68



Max.speed

100

Reset the max.speed

0

Short press the right button to enter the clock display

Press and hold the lower button of the instrument control to display the current maximum speed

Long press the instrument control button right to reset the maximum speed.

00:00

### Clock setting

Long press the down button to enter the clock setting

00:00

Clock

00:00

Short press the upper button to enter the hour hand setting

0 1:00

Short press the lower key to shift one position to enter the minute hand setting

0 1:00

0 1:10

Long press the lower button to save the new time.

0 1:10

Time is: 1:10 am

If you are using the clock for a race, you can reset it to 00:00 by pressing and holding the right button on the instrument control

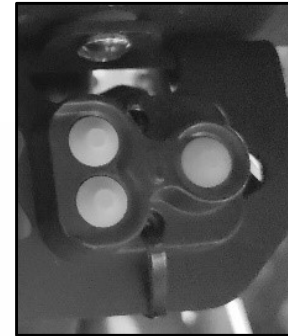
00:00



## Navigation meter



Navigation meter



Instrument control buttons



External GPS receiver

## Navigation meter

### GPS receiver

Heading gauge is a GPS based high precision racing instrument that allows the GPS receiver to be mounted in as horizontal a position as possible to allow the GPS to obtain a satellite position. When you turn on the heading meter, the LCD display will flash while the GPS receiver is acquiring satellite position, once the display stops flashing, you can start riding.

If the GPS signal is lost during a ride, the LCD display will flash and the GPS beacon on the LCD will illuminate. During a signal loss, the display will flash the last known distance and speed. Once a new signal is obtained, the ride will continue and the accumulated distance will be calculated.

#### Note

- When the GPS is first powered up or at a new location, it may take a few minutes to receive the signal.



## Heading gauge setting

### Power off and on

1. Short press any button on the left side of the heading meter to turn the heading gauge on.

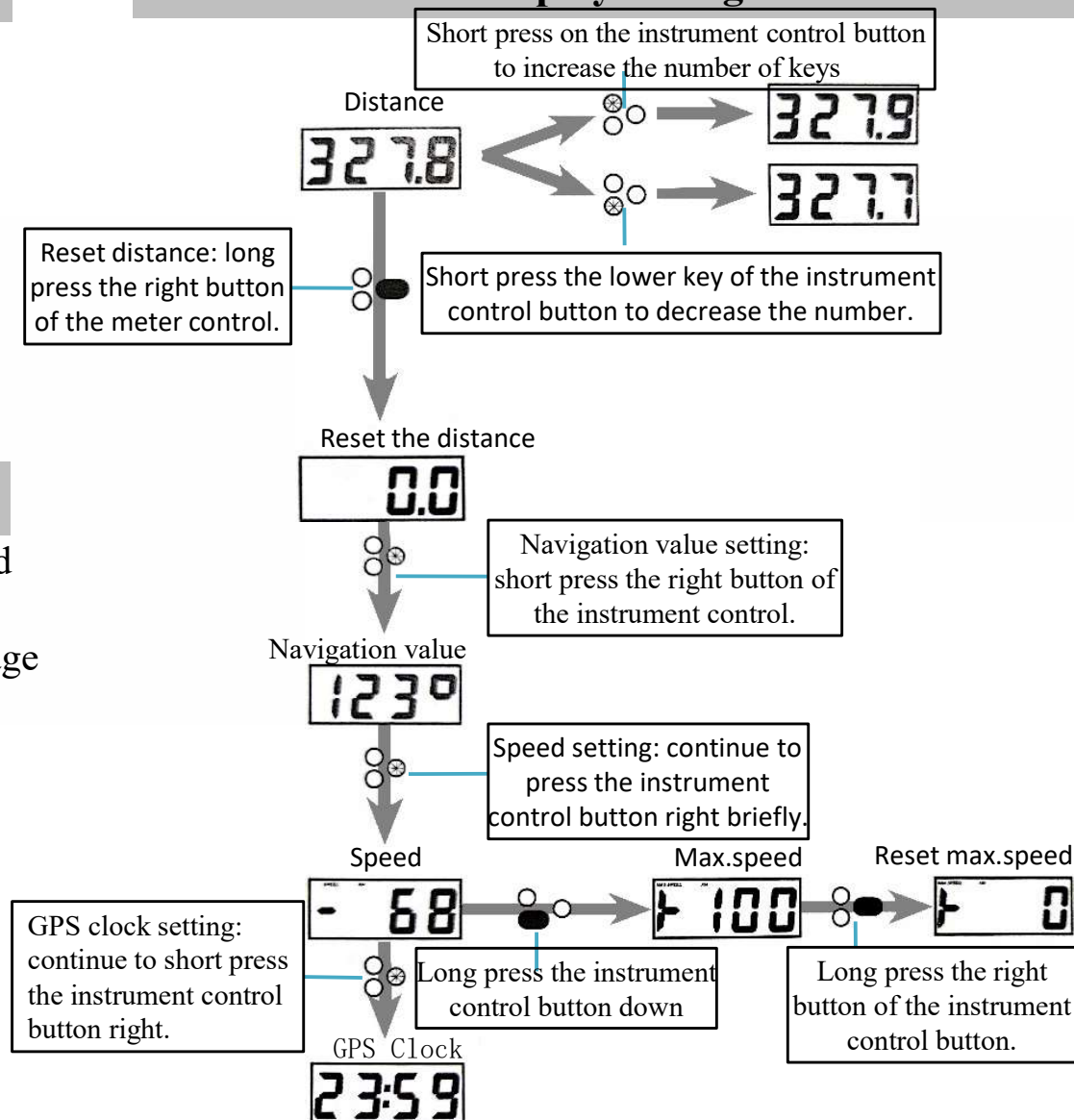
- When there is no button activity or movement after power on, the gauge will go to sleep after two hours.
- The speedometer automatically wakes up when the wheels are turned.

2. Press and hold the up and down buttons on the left side of the heading meter at the same time to turn the gauge off.

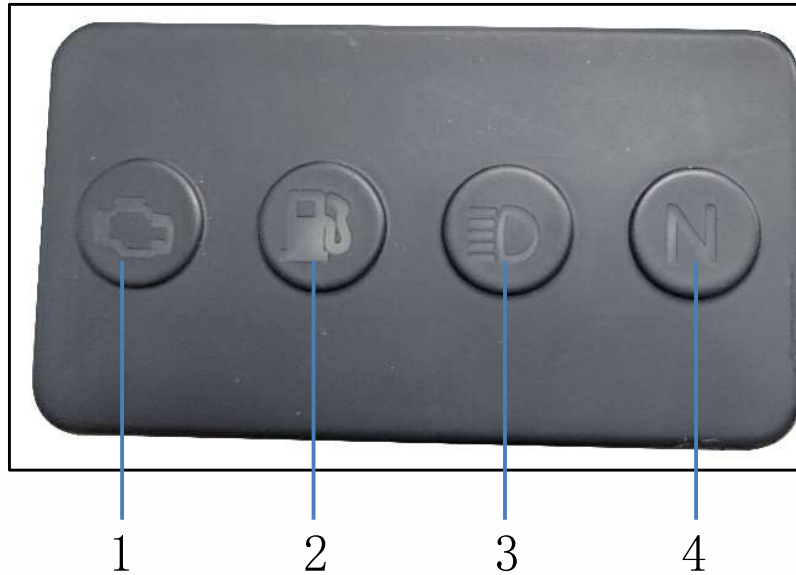
### Instrument setting

After the meter is turned on for the first time, press and hold the lower button of the meter to enter the settings of metric mileage/speed display/time display/time zone display/mileage display/travel time, etc. The setting method can refer to the speedometer setting.

### Display setting

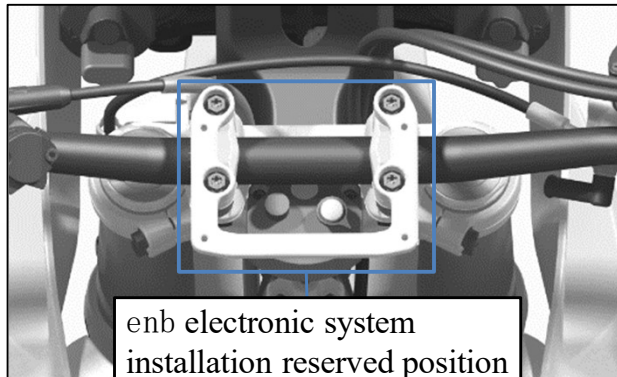


## Indicator light

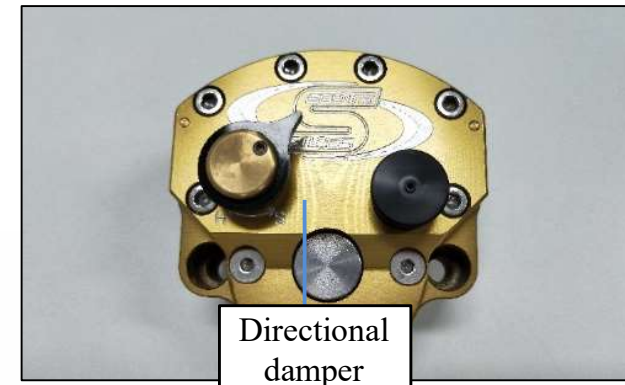


No.	Name	Remark
1	EFI fault indicator light	This light comes on when there is a fault in the EFI system (this light comes on when the engine is powered up. After normal start, this fault light goes off as normal)
2	Fuel indicator light	Display the current oil level: no light, indicating sufficient oil level; green, indicating normal oil level; orange, indicating low oil level; red, indicating too low oil level
3	High beam indicator light	This light is on when the high beam is on
4	Idle indicator light	This light comes on when in idle indicator

## Electronic system installation location display and directional resistances



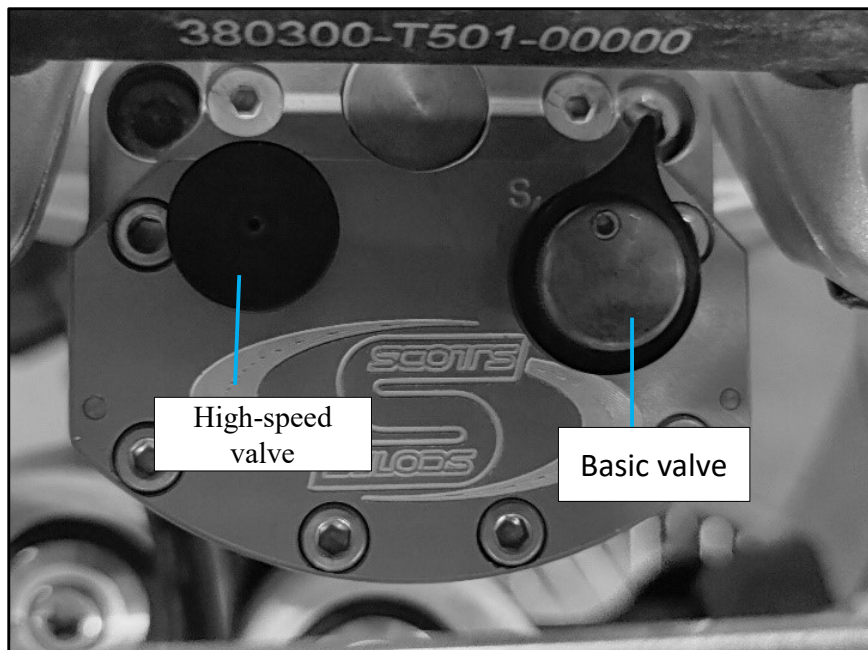
1. The main committee of the event will provide the participants to install enb electronic meters.



2. There are three valve paths on the directional damper: the base valve, the high speed valve and the sweep control valve, which you can adjust infinitely.

## Directional damper adjustment

### Basic valves



The basic valve adjusts the amount of resistance you feel when you turn the steering handle from left to right, increasing the "hardness" of the damper when you turn the button clockwise (to the right), and softening the damper when you turn the button counterclockwise.

When you turn the base valve knob, you will feel a "click", 8 clicks in one rotation.

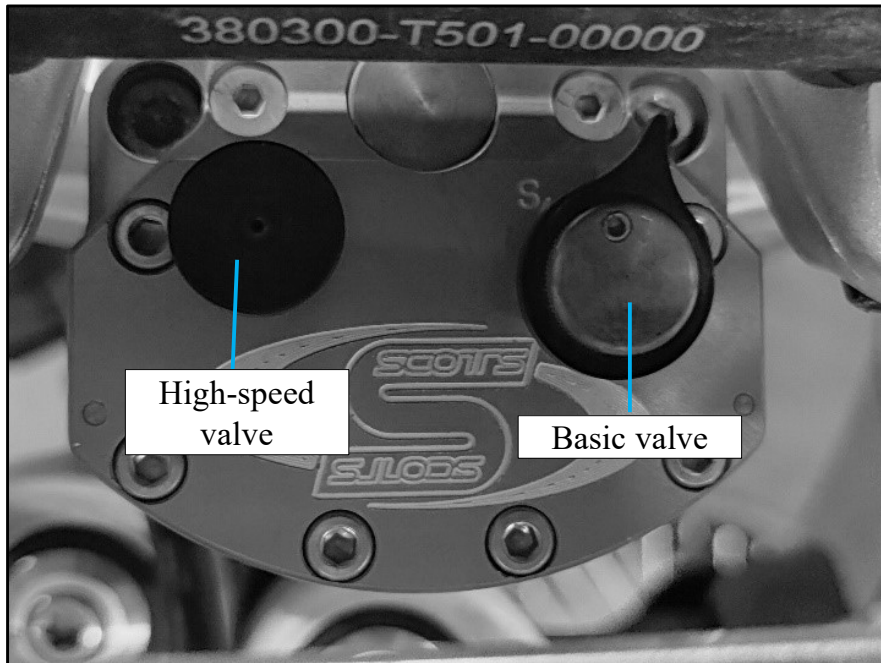
The starting position of the basic valve is to rotate the valve clockwise until it cannot be turned, and then rotate counterclockwise 8 times click (one full turn), we recommend that you ride for a period of time before making adjustments.

After more than 20 clicks of counterclockwise rotation, the base valve is basically closed, but the high-speed valve is still resisting the resistance shock.

#### Note

- Check basic valve settings before each ride.

## High-speed valve



The high speed valve resists mainly large, unexpected impact forces (such as hidden roots and potholes).

The adjustment knob is located under the black cover. This cover is tight and you will need to remove the cover when adjusting.

The factory preset is one turn of the high speed valve from the fully rigid position, we recommend that you adjust it only after a period of riding. Adjustment is made in 1/8 turn increments.

Turning the high speed valve clockwise (to the right) will increase its sensitivity, which means that less force is needed for the high speed valve to respond. Do not set this too "hard" as it may limit your steering response time.

High-speed valves do not click, each position is a new setting, and adjustments are best made in 1/8 turn increments.

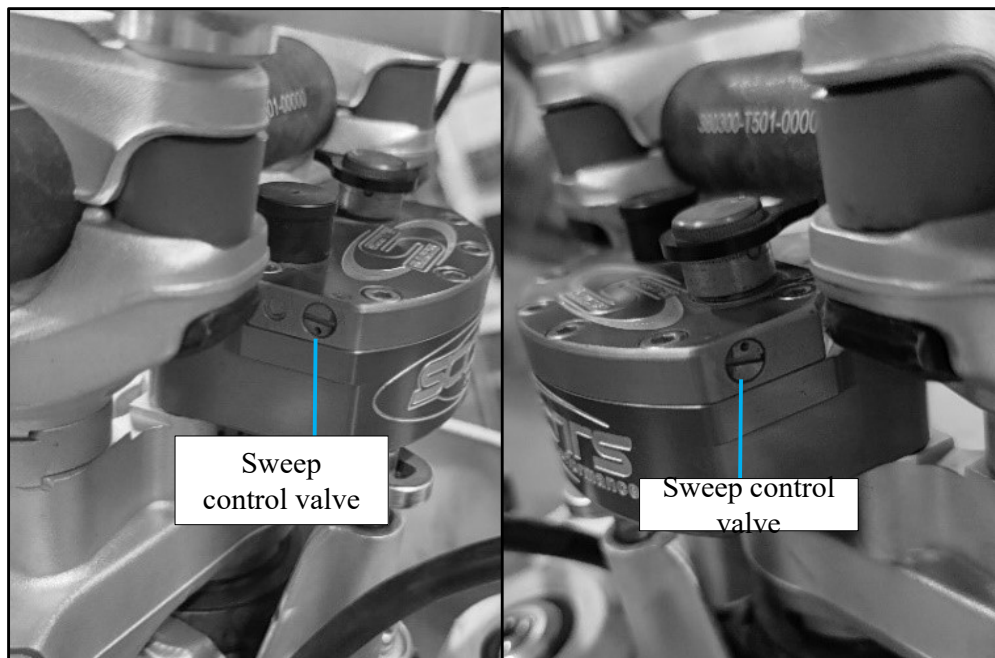
The effect of high speed valve is affected by the setting of the base valve. When turning the base valve clockwise (to the right), the effect of adjusting the high speed valve will gradually become less obvious; conversely, when adjusting the base valve counterclockwise (to the left), the effect of the high speed valve will be more obvious.

Do not test the high speed valve while the motorcycle is in the stand.

Do not turn the valve more than 3 turns from the fully closed position.



## Sweep control valve

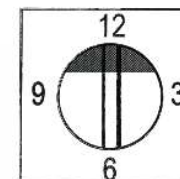


The sweep control valves are located on both sides of the damper, with machined bevels on the grooved head recess side. The distance of the controlled resistance sweep extends from the center line to both sides, and then the damper is free to move to the steering gear, allowing the motorcycle to turn easily in tight turns.

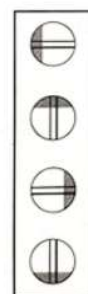
- You can think of each sweep control as the face of a clock.
- If set at 3 o'clock, the right valve will face the front of the motorcycle and the left valve will face the back of the motorcycle. Allowing for partial absence of damping.

12 o'clock, with both valves facing up.

6 o'clock, both sides of the valve facing down.



For off-road riding, the sweep control valve should be preset to 12 o'clock, and for road riding, to 6 o'clock.



9 o'clock - damping is 34 degrees

12 o'clock - damping is 44 degree

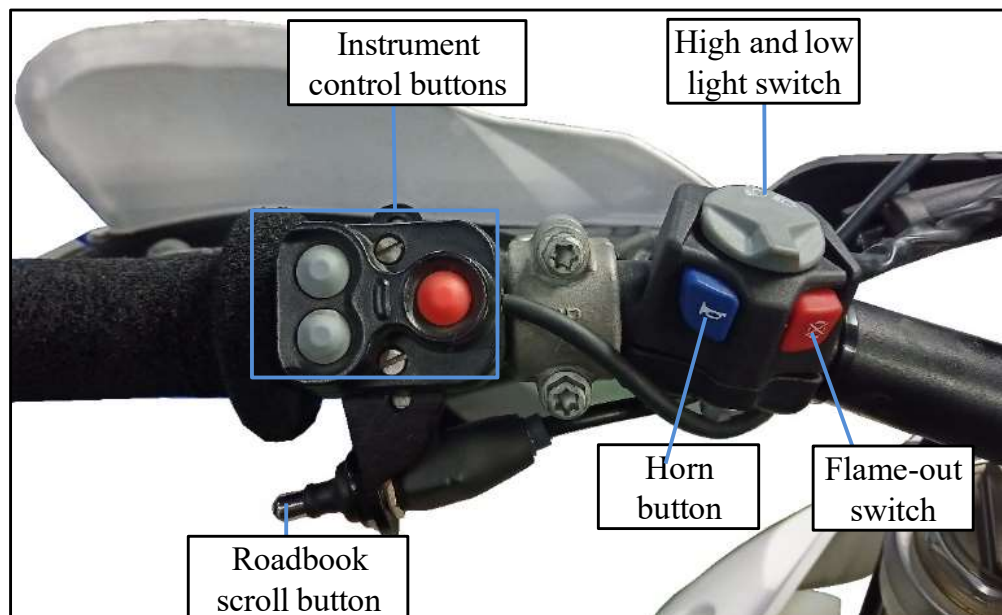
3 o'clock - damping is 54 degrees

6 o'clock - damping is 90 degrees



## Switch

### Left Handlebar Switch




#### Light switch

The full lights turn off automatically when the bike is pressed off switch.

Motorcycle headlights, instrumentation, and rear position lights come on after the bike is started.

#### High and low light switch

 Turn on the high light switch

 Turn on the low light switch

#### Roadbook scroll button and instrument control button



The roadbook scroll button— toggles back and forth to control the paper in the roadbook box, and the roadbook scrolls forward and backward.



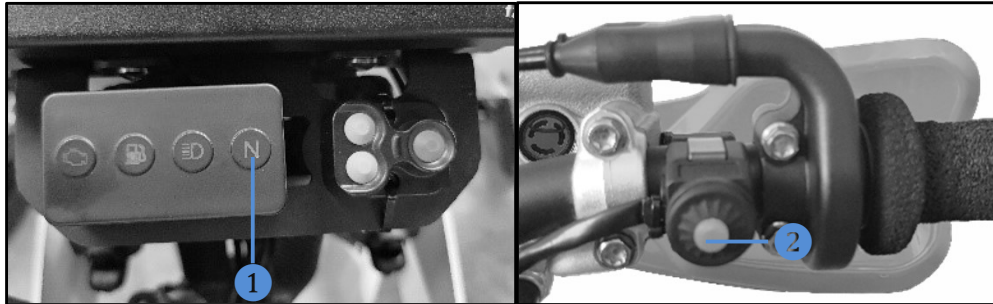
Instrument control button— for speedometer setting operation.


#### Note

- The headlights come on automatically when the engine is started and turn off automatically when the engine is turned off.
- Please use compressed air to blow out the water inside the switch after washing the bike or washing by heavy rain, etc. to avoid abnormal function of the switch.

## Start the engine

Follow the instructions below to start the engine, whether it is hot or cold.



- ① Gear shift to neutral or squeeze the clutch.
- ② Press the "  "ignition switch until the motorcycle starts.

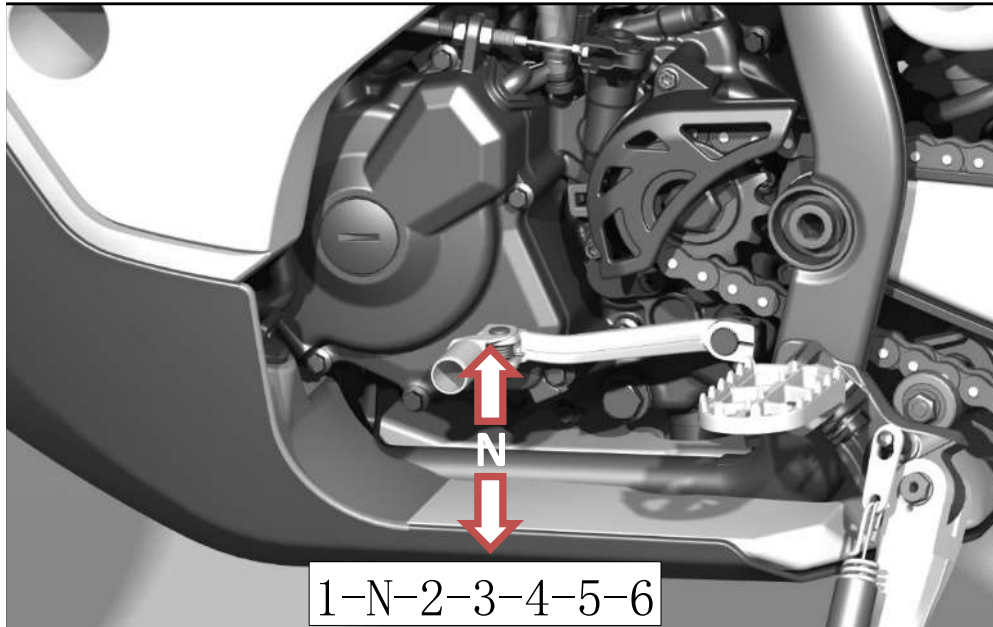
### Note:

1. If the engine fails to start within 3 seconds, wait 10 seconds for the battery voltage to return and start the engine again.
2. Prolonged high speed idling and spinning can damage the engine and exhaust system.
3. Slamming the gas pedal or idling at high speed for more than 5 minutes may cause discoloration of the exhaust pipe.
4. If the throttle is fully open, the engine will not start.



## Gear Shift

Your motorcycle has 6 forward gears with a 1 down 5 up shift pattern.



### Method of shifting gears:

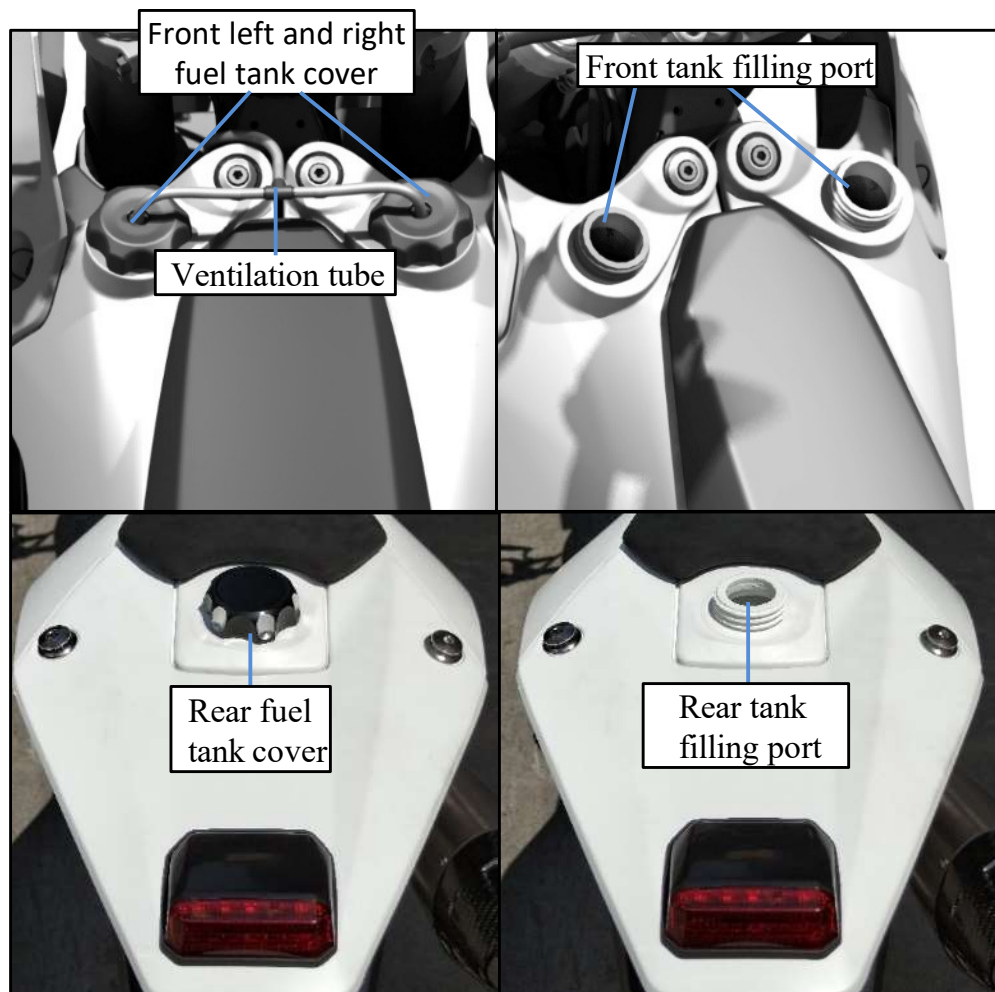
Preheat the engine for proper operation.

1. When the engine is at idle, disengage the clutch and press down on the gearshift pedal to put the transmission into a low gear (1st gear).
2. Gradually increase the engine speed and slowly release the clutch handle, these two actions are coordinated to ensure a natural start.
3. When the motorcycle reaches a balanced driving state, lower the engine speed and then disengage the clutch and hook the shift pedal upward into the second gear, and so on, and the rest of the shifts can be made in the same way.

### Things to pay attention to while driving

1. Avoid unnecessary engine idling, and do not allow the engine to idle at high speed, otherwise it will seriously damage the machine parts.
2. Driving with the clutch in a semi-disengaged state will cause the clutch plates to wear out quickly.
3. When climbing a hill, if you feel that the engine horsepower is not enough, you should switch to a lower gear in time.
4. In the driving, especially downhill and high-speed driving, do not allow the use of the front brake alone or idle gear coasting, do not allow off the handle to drive.
5. When stopping, you should close the throttle and cut the clutch at the same time, then brake.

## Refueling



Your motorcycle is equipped with 3 fuel tanks, 2 front tanks and 1 rear tank. The two front fuel tanks have a total capacity of 14L and the rear tank has a total capacity of 17L. You need to add fuel separately. When adding fuel, you should fill the front tank first and then the rear tank. It is recommended to use 92# or above unleaded gasoline.

**Open the fuel tank cover:** Open the front or rear fuel tank cover by turning counterclockwise.

**Close the fuel tank cover:** Turn clockwise to tighten the front or rear fuel tank cover, and do not twist the vent pipe during tightening.

### When refilling with fuel:

After using the side stand to stop, open the fuel tank cover for refilling, fill the fuel and close the tank cover.

Avoid filling the fuel too full, pay attention to the change of fuel level during the adding process, it is recommended to add no more than 90% of the total tank capacity (to avoid fuel expansion due to heat).



•When refueling, please do it outside, be sure to turn off the engine and keep it away from heat sources, fire, or open fire, and wipe up any spills immediately.

## Maintenance

Please read the "maintenance" and "maintenance specifications" carefully before preparing for maintenance, and please refer to the "technical parameters" for maintenance data.

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## Maintenance

### The importance of maintenance

Always keep your motorcycle in a good state of care and maintenance as this is essential for your safety, as well as to protect your property, get the best performance, prevent breakdowns and reduce air pollution.

Maintenance is an important responsibility of the motorcycle owner to ensure that inspections are carried out before each ride and that regular checks are carried out according to the instructions in the maintenance intervals table.

#### Please follow these guidelines for maintenance:

- Press and hold the ignition off switch button to turn off the engine.
- Park the motorcycle on a firm and level surface with a side stand, or support it with a maintenance stand.
- Please wait for the engine, muffler, brakes and other hot parts to cool before starting operation, otherwise burns may result.
- Start the engine only under specified conditions and in a well-ventilated environment.



- Failure to perform proper maintenance prior to riding or to properly remove malfunctions may result in serious injury or fatal accidents.
- Follow the inspection, maintenance recommendations and maintenance cycle table provided in the instruction manual.

## Maintenance interval table

The motorcycle should be serviced within the specified time, and to ensure safety, it can only be serviced by the special repair store of KOVE. The meaning of each symbol in the table is as follows:

I: Inspection, cleaning, and adjustment R: Replacement A: Adjustment L: Lubrication

Items	Number	Project period	Mileage km(Remark 2)				
			1000km/3M	3000km/6M	5000km/6M	7000km/6M	9000km/6M
*	Fuel system oil circuit		I		I		I
*	Fuel filter		R 10000km/1 year				
*	Throttle operation system		I	I	I	I	I
*	Air filter cartridge	Remark 1	1000km or 1 month for replacement, daily replacement for venue or desert rides				
*	Spare plug		I		I		I
**	Exhaust valve clearance		I 2000km/30 hours				
**	Intake valve clearance		I I 2000km/30 hours				
*	Engine oil		For the first 2000km, replace every 500km, after 2000km, replace every 2000km				
*	Oil cartridge		Change it together with the oil change				
*	Timing chain tension		A	A	A	A	A
**	EFI system		I		I		I
*	Drive Chain		I、L	I、L	I、L	I、L	I、L
*	Battery	Every month	I		I		I
*	Brake shoe wear		I	I	I	I	I
**	Brake system		I	I	I	I	I
*	Headlight dimming		I		I		I
*	Clutch		I Pavement 5000km/non-pavement 20 hours I				
**	Fastener		I	I	I	I	I
**	Directional bearing		I	I	I	I	I
**	Coolant		R 30000km/2 years				
**	Shock absorber oil		R 5000km/100 hours				

\*The item is repaired by the personnel of the special repair store of Kove repair shop. If the user has special tools, repair parts and repair ability, he can also repair by himself, and the repair knowledge can refer to this instruction manual.

\*\*： To ensure safety, this project can only be repaired by the personnel of the special repair store of Kove.

### Remark:

- When driving in dusty areas, such as deserts or grounds, the air filter element needs to be changed or cleaned daily
- When the odometer reading exceeds the highest number given, its maintenance interval is still repeated at the mileage interval specified in the table.
- The motorcycle maintenance interval should be reduced by 50% when the motorcycle is frequently used in harsh conditions.

Service outlets:  
(official seal of the unit)

Service Personnel: \_\_\_\_\_  
User Signature: \_\_\_\_\_  
Date: \_\_\_\_\_

## Maintenance specifications

To ensure safety, it is your responsibility to conduct a pre-ride inspection and ensure that any problems you find have been corrected. A pre-ride check is required.

Items	Content
Handlebar	Flexible rotation, no clearance and loosening
Brake system	Check its health, check the front and rear brake fluid levels and the amount of brake pad wear
Fuel level	Sufficient fuel storage for the planned distance (refueling if necessary)
Throttle	Check that it opens smoothly and closes completely in each steering position
Clutch	Check its health and, if necessary, adjust the free itinerary
Wheels and tires	Check its condition of use and tire pressure, and replenish air pressure if necessary
Drive chain	Check its condition and sag status, adjust and lubricate if necessary
Lighting, horns	Check whether the lighting system and horn performance is good
Oil level	If necessary, add engine oil and check for leaks
Instrument indication	Check whether the indicators on the meter are displayed normally
Cooling System	Check coolant level and radiator operation is normal

## Replace parts

### Battery

#### Check and replace the battery

1. Before battery installation, if the electrode is found to be dirty, please wipe it clean before installing, otherwise it may cause functional failure due to poor contact.
2. If the battery is deformed, abnormally heated, smoked and other abnormal phenomena during use, please stop using it immediately and go to the Kove repair shop in time for investigation.
3. If the battery is placed in a high temperature and humid environment for a long time, there may be functional failure, life shortening, etc., before using it again, please ensure that the appearance and function of the battery are normal before installation and use.
4. If the whole motorcycle cannot be started, please check whether the battery is normal, if the battery is damaged, please replace it in time.
5. When installing the battery, be sure to lock the battery pole bolts.

#### If the battery has not been used for a long time, please pay attention to the following situations:

- In order to prevent the occurrence of over-discharge, the battery should be charged once every 2 months.
- When the battery is not in use, it should be placed in a cool and dry environment and prevent short circuit of the positive and negative poles of the battery.

#### Note

- Improper disposal of batteries may cause harm to the environment and human health, please dispose of disposed of batteries in accordance with local environmental protection regulations.
- Adding vehicle electrical appliances may cause battery loss and even cause electrical system failure.



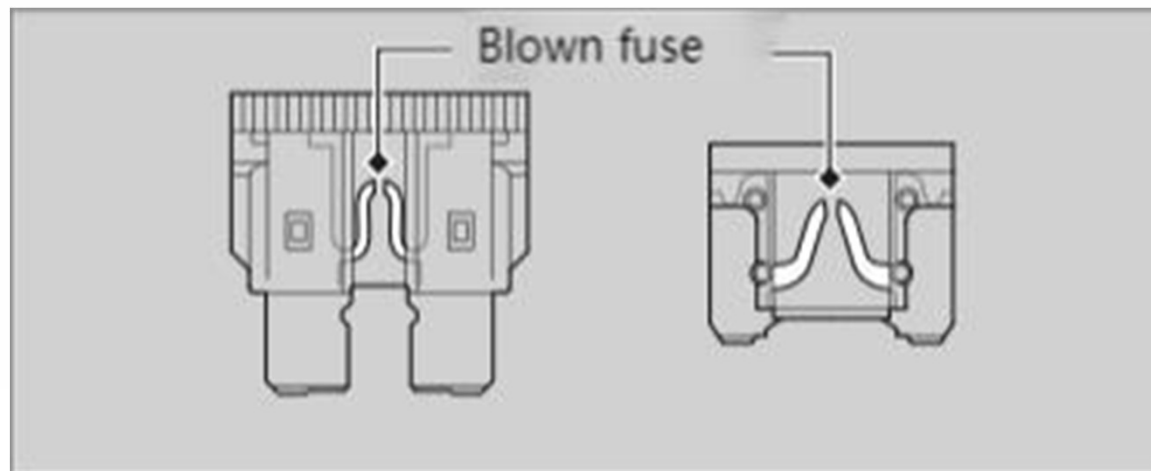
## Fuse

Fuses protect your motorcycle's circuitry, if some electrical parts on your motorcycle stop running, check and replace the blown fuse.

### Check and replace the fuse

Turn off the engine, remove and check the fuse, if the fuse is blown, replace it with a fuse of the same size. Please refer to "Technical Data" for fuse specifications.

If the fuse is often blown out, there may be hidden problems in the electrical appliance, please leave it to Kove Repair Shop for repair.



#### Note

- Fuses need to be replaced in equal amounts, if you replace a higher rated fuse will increase the chance of damaging the electrical system and risk burning the bike.
- Installing non-Kove electrical fittings can overload the electrical system, cause the battery to discharge, and even damage the system.



## Engine oil

The consumption of engine oil and the drop in oil quality will vary depending on the riding conditions and use time, the higher the operating speed, the faster the oil consumption rate, long-term high-speed or high speed operation, should shorten the oil change interval, check the engine oil level frequently, if necessary, add the recommended engine oil.

When used in extreme temperatures, the oil quality drops faster, and the oil that has become dirty or has been used for a long time should be replaced as soon as possible.

### Select engine oil

The oil should be SN grade of API classification, and its grade is SN10W-40.

## Brake fluid

Do not add or replace brake fluid except in an emergency. Use only brake fluid freshly removed from the sealed container, and if you add brake fluid, have the brake system checked by a Kove repair shop as soon as possible.

## Coolant

Only the original undiluted Kove pre-mixed coolant can be used, the original Kove pre-mixed coolant can be excellent in preventing corrosion and overheating, please pay attention to the coolant capacity, if the liquid level is lower than the lower limit, please add it in time. Coolant freezing point  $-38^{\circ}\text{C}$ , boiling point  $125^{\circ}\text{C}$ .

### Note

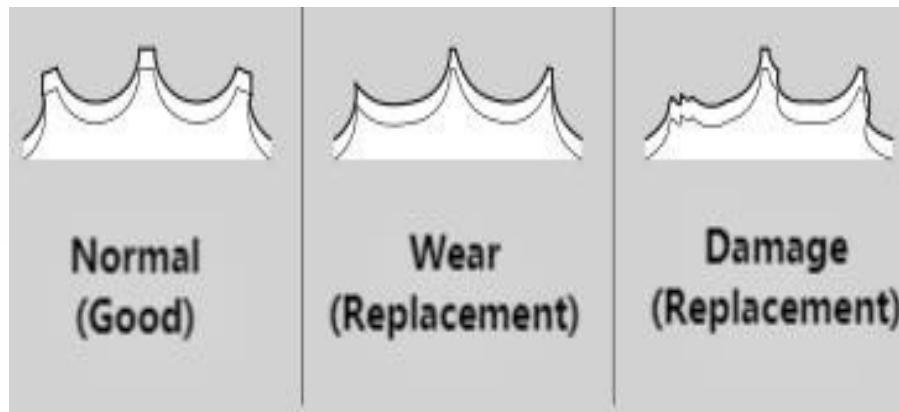
- Brake fluid can damage plastic and paint surfaces, so wipe it off immediately and wash it thoroughly.
- Recommended brake fluid: DOT4 brake fluid or equivalent.
- The use of coolant dedicated to non-aluminum engines, ordinary tap water or mineral water can cause corrosion.

## Drive chain

The drive chain must be checked and lubricated regularly. If you are constantly driving in poor road conditions, driving at high speeds, or repeatedly increasing the speed, you need to check the chain more often.

If the drive chain does not run smoothly, makes abnormal noises, has damaged rollers or loose latches, or the oil seal is missing or bent, please refer the chain to Kove Repair Shop for inspection.

Also check the active sprocket and driven sprocket, if any of them have worn or damaged teeth, please take it to the Kove repair shop for replacement.



### Note

- Using a new drive chain on a worn sprocket will accelerate chain wear, and both the drive chain and sprocket should be replaced at the same time.
- Recommended lubricant: chain oil seal special lubricant SAE80 or 90 gear oil.

## Clean and lubricate

After checking the sagging, turn the rear wheel while cleaning the chain and sprocket, you can use a dry cloth, special cleaner for the oil seal chain or neutral detergent, if the chain is dirty, you can use a soft brush; After cleaning, wipe dry and lubricate with the recommended oil.

Do not use steam cleaners, high-pressure cleaners, wire brushes, volatile solvents such as gasoline and benzene, scrubs, chain cleaners and lubricating oils that are not dedicated to oil seal chains, otherwise the chain oil seal may be damaged.

Avoid getting oil on the brakes or tires, and avoid using excessive amounts of oil to avoid splashing on clothes or motorcycles.



## Tires (inspection/replacement)

### I Check the specifications

Front tire : 90/90-21M/C 54R

Rear tire : 140/80-18M/C 70R

Type : With inner tire (sponge inner tire)

### II Abnormal wear check

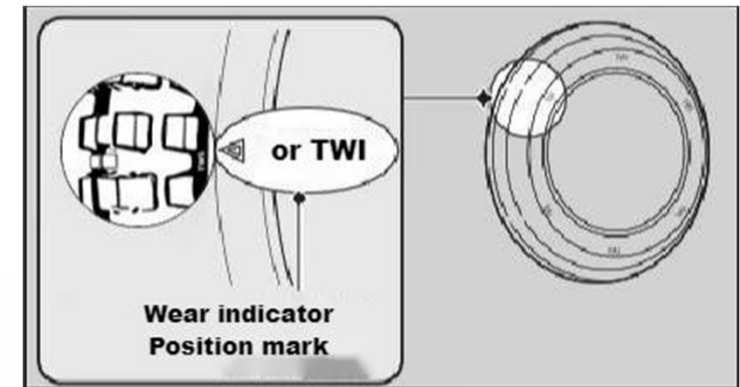
Check the contact surfaces of the tires for signs of abnormal wear.

### I Check the depth of the tread

Check the tread wear indicator and replace the tire immediately if the wear reaches the indicator mark.

### II Injury examination

Inspect the tire for cuts, cracks, exposed fabric, tire threads, nails or other foreign objects embedded in the side tread of the tire, and check the sidewall of the tire for any abnormal bulges or swelling.



This motorcycle is equipped with a sponge inner tube, you do not need to inflate it, and you do not need to patch it in case of a common puncture, but the following guidelines should be followed in its use:

- The performance of the sponge inner tube after repeated punctures will be reduced, please go to the special repair store of Kove Moto regularly to check or replace it.
- When the mileage is close to the effective service life marked on the sponge inner tube, it must be replaced.
- Long-term intense driving, frequent high-intensity impact, extreme low temperature environment, etc. will accelerate the loss of sponge inner tube life, please shorten the replacement cycle according to your riding environment.
- When installing the sponge inner tube, you must use special grease to coat the rim and inner tube, otherwise it may cause the sponge inner tube to wear out and affect the service life.

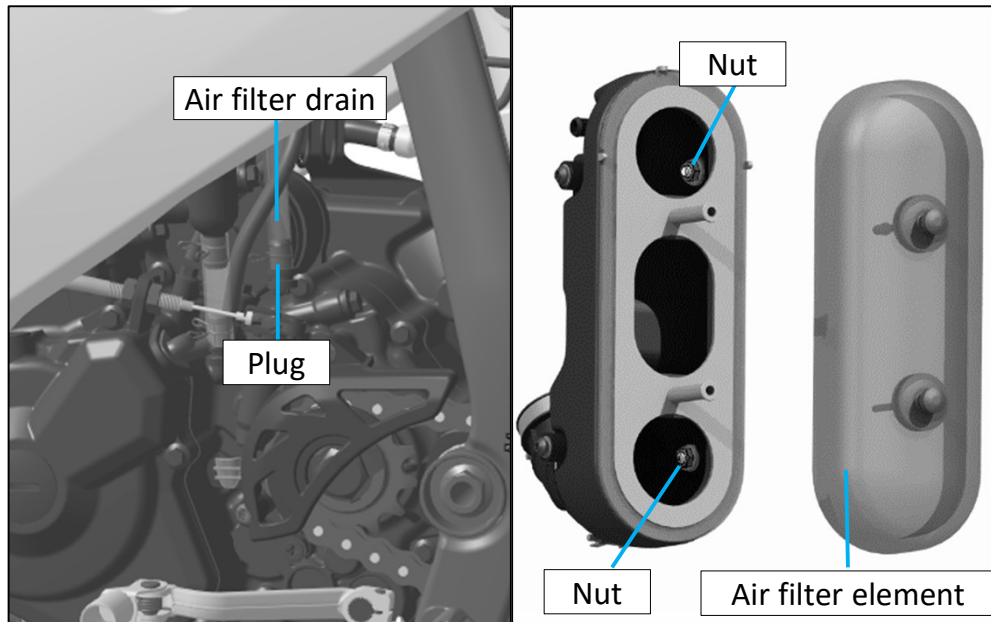
### **Whenever you change a tire, follow these guidelines:**

- Use recommended tires or equivalent products with the same size, construction, speed rating and load capacity.
- After the tires are mounted, the wheels are balanced and positioned using the original balance locator or equivalent equipment for Kove.
- If the outer tire is badly worn, the inner tire must be checked at the same time when replacing the outer tire.
- Removing the wheels requires special tools and expertise, and we recommend leaving this type of repair to an Kove special repair shop.



- Using excessively worn tires can lead to accidents and serious injuries, so please follow the relevant tire maintenance guidelines in the instruction manual.
- Mounting unsuitable tires can affect handling and stability and lead to accidents that can leave you seriously injured or even endanger your life.
- Always use the size and type of tires recommended in this instruction manual.

## Air filter



This motorcycle is equipped with a sponge air filter; please do not maintain it by yourself, and it should be cleaned or replaced by the Kove repair shop. If you ride in dusty road conditions, the air filter should be cleaned or replaced every 3 days according to the actual situation, and the desert environment needs to be cleaned or replaced every day.

Air filter maintenance requires specialized tools and mechanical skills, do not do it yourself, it should be done by a Kove repair shop.

### Note

•After disassembling and assembling the air filter, check whether the 4 nuts inside are loose, and the bolt nuts must be tightened.

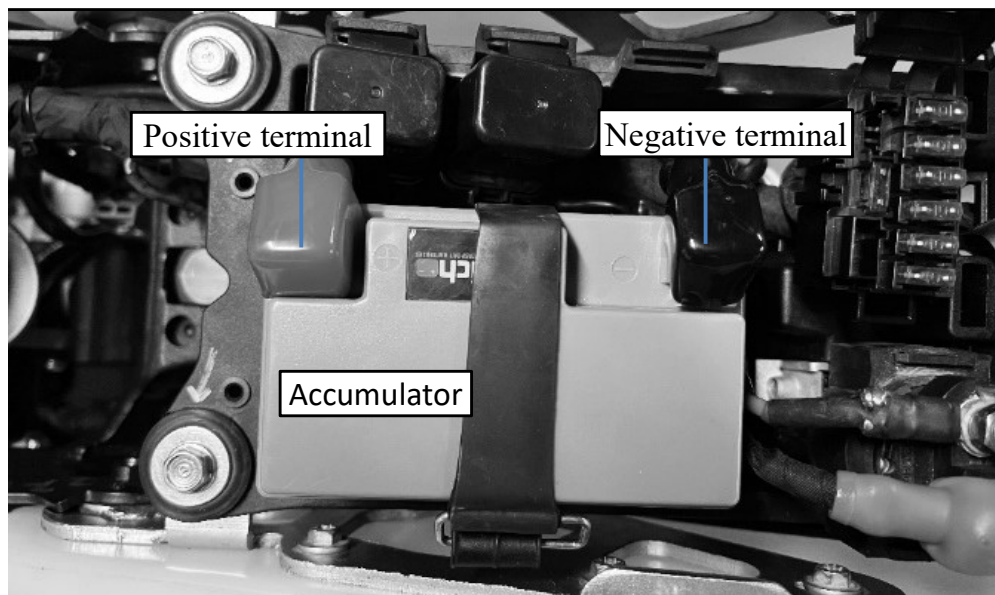
## Tools

You can use the on-board tool for simple repairs, minor adjustments, and parts replacement.

- Double-ended screwdriver
- Double-ended wrench 8\*10
- Double-ended wrench 12\*14
- Double-ended internal wrench T25×T30
- No.6 Hex.wrench
- Fish Plier

## Removing and installing components

### Battery



#### Disassembly

Confirm that the bike is off.

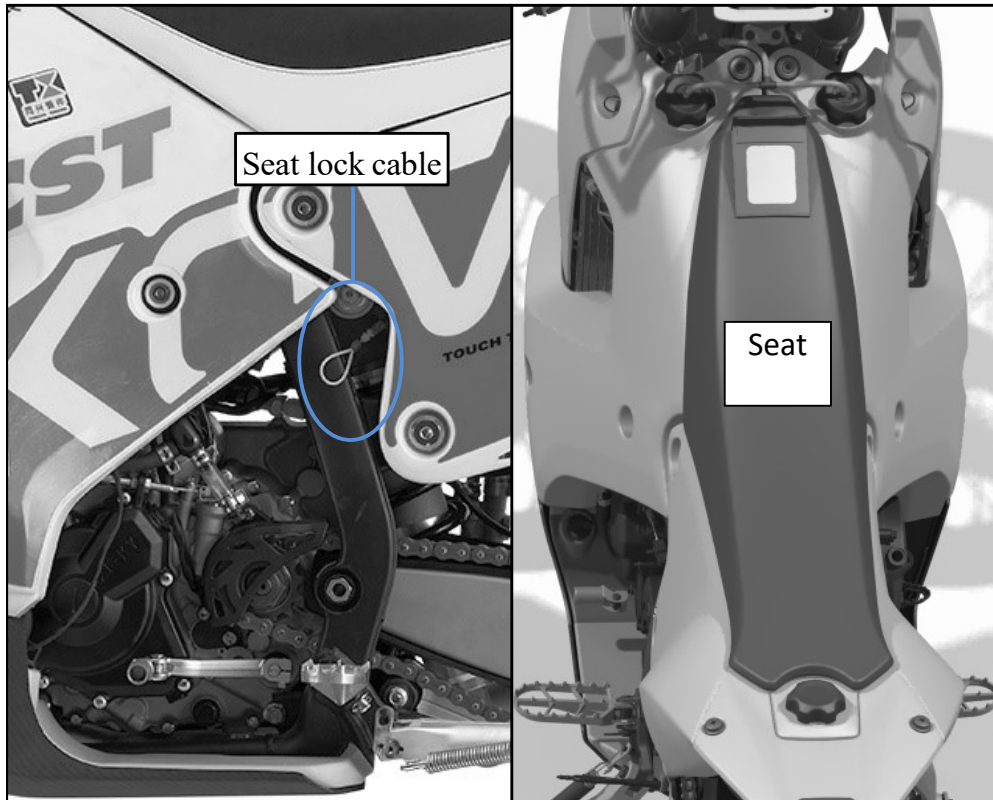
1. Remove the seat cushion.
2. Loosen the rubber strap from the rear side.
3. Disconnect the negative (-) battery terminal.
4. Disconnect the positive (+) battery terminal.
5. Remove the battery and be careful not to lose the bolt and nut.

#### Installation

Install the parts in the reverse order of removal, always connecting the positive terminal first (+) terminal, and finally the negative (-) terminal, make sure that the bolts and nuts are tightened.



## Seat



### Disassembly

1. Pull the seat lock cable down while pulling the rear end of the seat up to disengage from the lock, then remove the seat diagonally backward.

### Installation

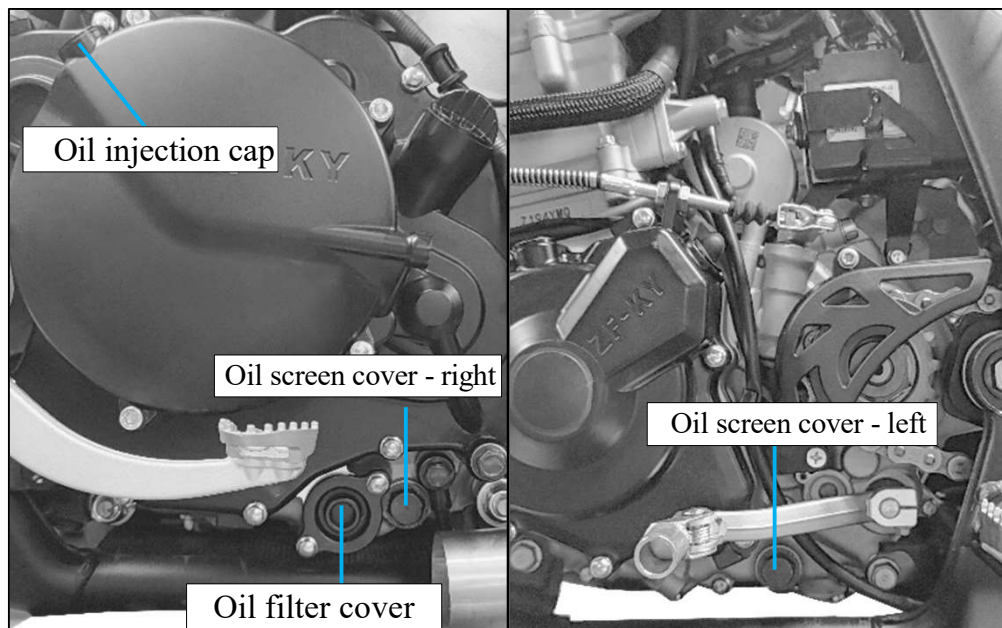
1. Snap the front and rear latches of the seat assembly into the frame card slots.
2. Align the seat lock pin and lock hole, press down the back of the seat, the lock pin is inserted into the seat lock hole, and is automatically locked by the lock tongue. Gently pull up to ensure the seat cushion is securely locked in place.
3. When the seat is closed, the seat lock will lock automatically.

### Note

•Please ensure that the seat latch is inserted accurately into the frame card slot, otherwise the seat product will not be able to support your weight and the seat product may be crushed.

## Engine oil and oil concentrate filters

### Replace the engine oil and oil filter



Changing engine oil and oil concentrate filters requires special tools, which we recommend being done by Kove Repair Shop. Please refer to the "Maintenance Cycle Table" for engine oil and oil concentrate filter maintenance intervals.

Use the original engine oil and oil concentrate filter of Kove for your model.

1. If the engine is cold, please idle for 3-5 minutes, turn off the engine and wait another 2-3 minutes.

2. Park the motorcycle on a solid horizontal surface and place an oil drain pan under the oil drain bolt.;

3. Remove the oil filter cover of the left and right boxes and take out the oil filter;

4. Remove the oil fine filter cover and spring, and take out the oil fine filter

5. Remove the engine oil filler cap with a No. 6 Allen Wrench;

6. Remove the oil drain bolt and sealing gasket, and remove the oil until the oil is droplet;

7. Replace a new oil fine filter, and then install the spring and oil fine filter cover in turn; (Torque: 11~13N·m).

8. Reinstall the cleaned oil filter into the left and right boxes and tighten the oil filter cover; (Torque: 11~13N·m).

9. Install a new sealing washer on the oil drain bolt and tighten the oil drain bolt to torque: 24 N·m;

10. Add the recommended original engine oil to the crankcase. After filling, tighten the oil injection port cap. torque: 11 to 13 N·m.

**When replacing the oil fine filter, the amount of oil required: 1.6L**

**When disassembling the engine and reassembling it, the amount of oil required: 1.8L**

11. Check whether the oil is leaking.

## Precautions for replacing engine oil and oil concentrate filter:

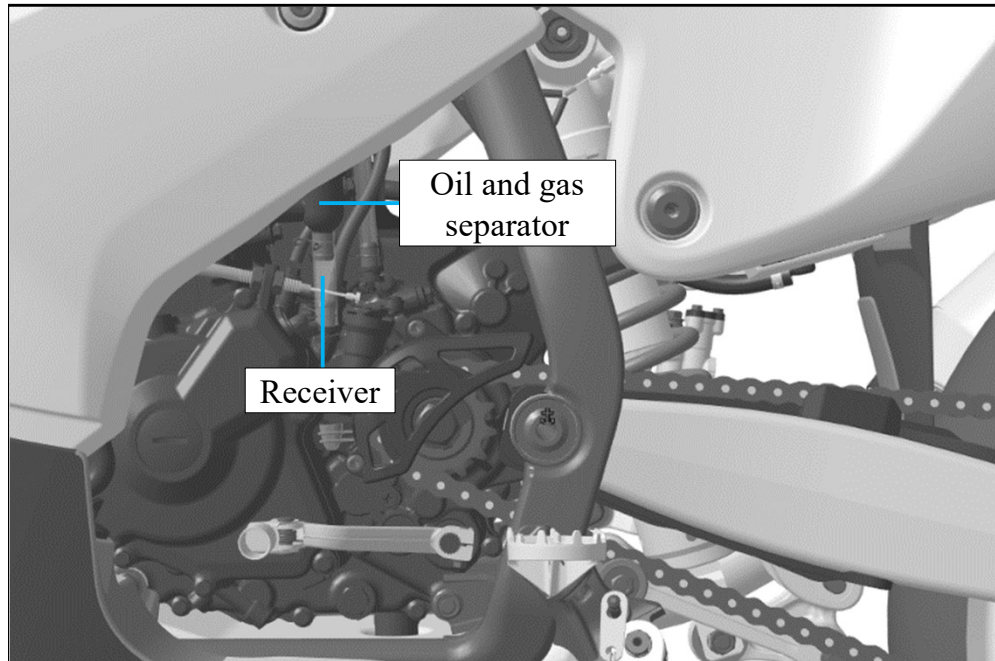
1. Using the wrong engine oil and oil concentrate filter can seriously damage the engine.
2. Excessive refueling or insufficient oil will damage the engine, do not mix different brands and grades of oil, which will affect lubrication and clutch operation.
3. When changing the oil, it is necessary to replace the new oil fine filter and clean the left and right oil filter.
4. When installing the oil fine filter, it should be noted that the opening end of the oil fine filter should face the left body.
5. Long-term contact with engine oil should be avoided, and it should be thoroughly washed after contact with engine oil.
6. Used oil, oil concentrate filter and container are harmful to health and the environment, can not be treated as daily garbage, treatment methods should be in line with local environmental protection regulations.

## Oil strainer inspection and cleaning

The oil filter should be inspected and cleaned whenever the oil is changed and should be replaced in a hurry if it is found that the oil filter is damaged.

1. Remove the oil filter cover of the left and right boxes;
2. Take out the oil filter with needle-nose pliers;
3. Wash it with clean gasoline until the oil filter is washed clean;
4. Reload the clean oil filter into the box;
5. Install the oil filter cover. (Torque: 11~13N·m)

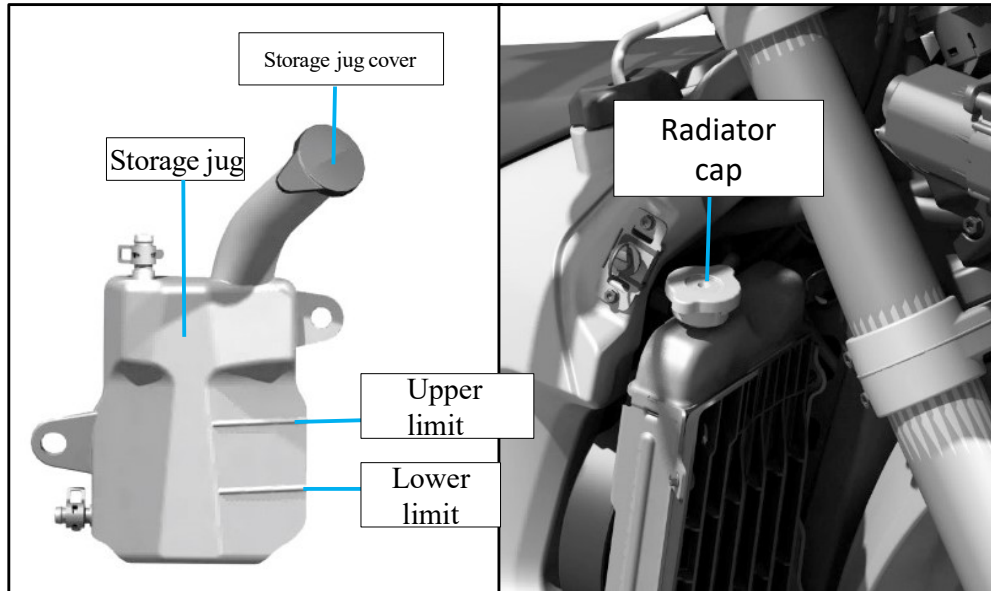
## Oil and gas separator



During daily maintenance, check the liquid collection tube, if there is fluid accumulation in the collection tube, it needs to be discharged in time.

Remove the plug under the collection tube, let it sit for a while, drain the oil or water, and then install the plug.

## Coolant



### WARNING

- Do not remove the radiator cap while the engine is not cooled down, as this will cause coolant to spray out and may cause you burns.

### Check the coolant

While the engine is cooling, check the coolant level in the jug.

1. Park the motorcycle on a stable level and keep the motorcycle upright.
2. Check that the coolant level is between the upper and lower limit level marks.
3. If the liquid level drops significantly or the storage tank is empty, serious leakage may occur, please hand over to Kove Repair Shop to overhaul the motorcycle.

### Add coolant

If the coolant level falls below the lower limit mark, add the recommended coolant until the level reaches the upper limit mark. When adding coolant, only from the lid of the water storage jug.

1. Remove the storage jug cover, add coolant and pay attention to the coolant level.

- Do not exceed the upper limit.
- Make sure no foreign objects enter.

2. Reinstall the cover.

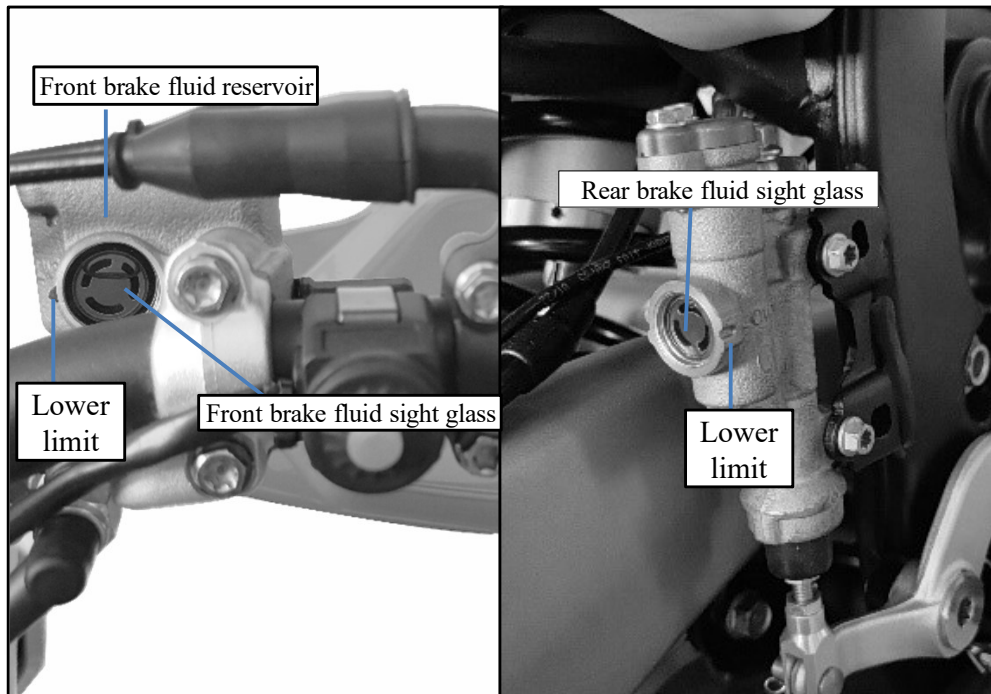
### Change the coolant

Unless you have the right tools and qualified mechanical skills, have the coolant changed by an authorized Kove Repair Shop.



## Brake

### Check the brake fluid



1. Place the motorcycle vertically upwards on stable flat ground.
2. Check that the brake fluid reservoir is level.
3. Check whether the brake fluid can be seen in the oil window, if the brake fluid is lower than the lower limit of the oil window, please add it immediately.

If the brake fluid level in the reservoir is below the lower level mark (LOWER or LWR), or if the free travel of the brake lever and pedal exceeds the mark, the brake pads must be checked for wear, if they are not worn, there may be a leak, please have them serviced by an authorized Kove repair shop.

## Check the brake pads

Check the condition of the brake pad wear indicator mark, if the brake pad is worn to the indicator mark, it needs to be replaced.

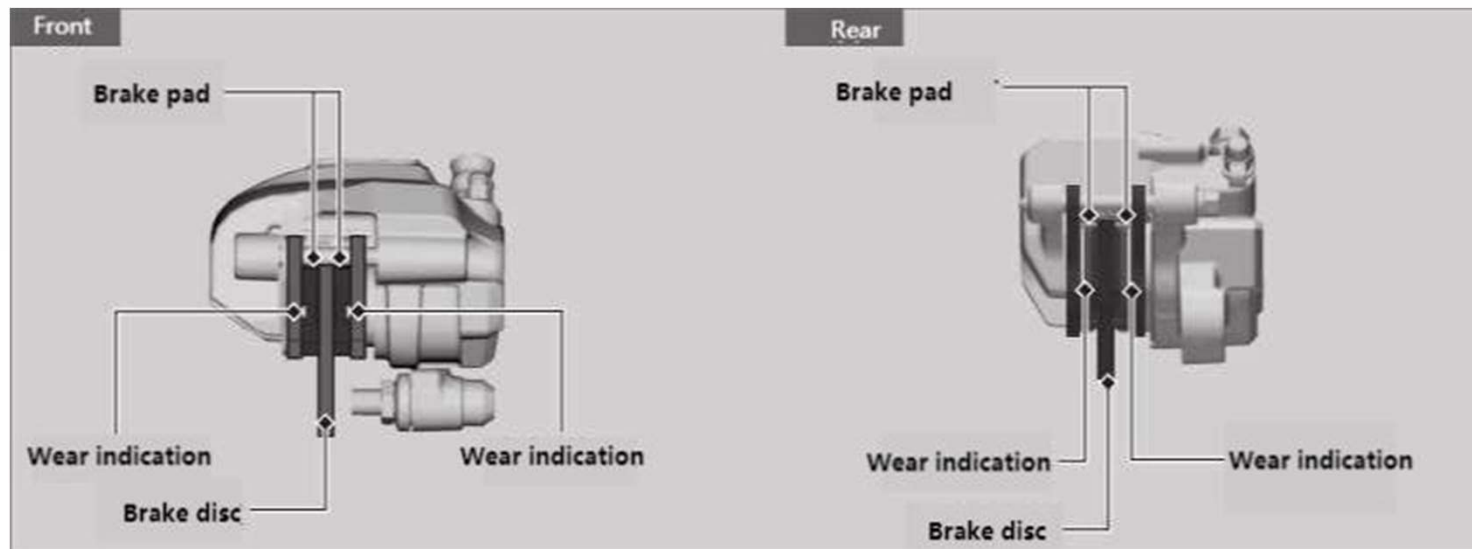
**F**

Check the brake pads from under the calipers  
Brake pad lining thickness: 3mm (indicated as wear limit)

**R**

Check the brake pads from the right rear of the caliper  
Brake pad lining thickness: 5.4mm (indicated as wear limit)

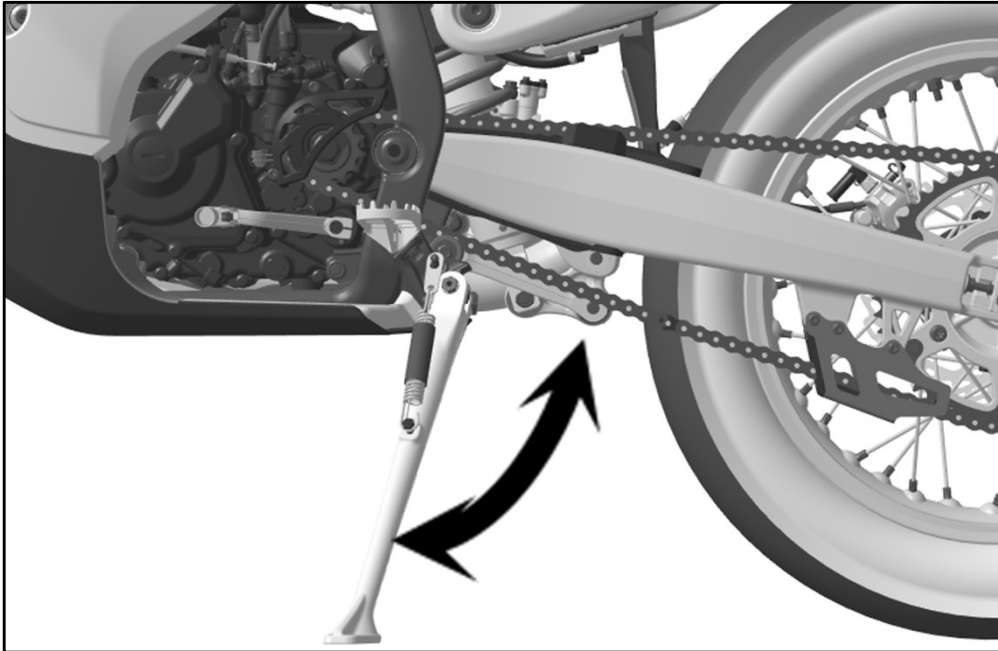
If necessary, please take the brake pads to the Kove Repair Shop to replace the brake pads, when the wear limit is reached, the left and right brake pads must be replaced at the same time.





## Side bracket

### Check the side bracket



1. Check whether the side bracket operates freely, if the side bracket operation is stuck or makes a “squeaking” sound, clean the pivot area and lubricate the pivot bolt with clean grease.
2. Check whether the spring is damaged or loses its elasticity.

## Drive chain

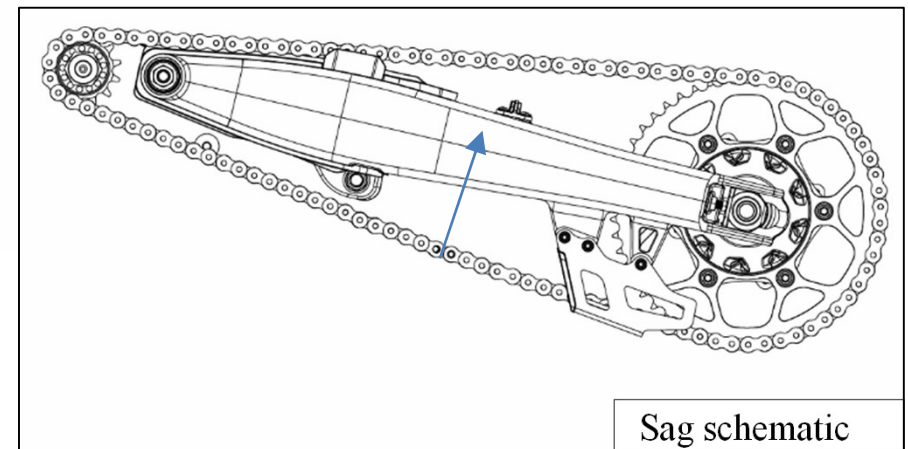
### Check the sag of the drive chain

Check the sag of different points along the chain, if not all points have the same sagging, some links may have been bent and kinked, please leave the chain to the Kove repair shop.

1. Hook the transmission into neutral and turn off the engine.
2. Place the motorcycle vertically on a stable and flat ground.
3. In the area behind the chain guard, push the chain in the direction close to the flat fork to determine the sag of the chain.
4. Turn the rear wheel forward to check whether the chain runs smoothly.
5. Check the sprocket.
6. Clean and lubricate the drive chain.

Drive chain sagging: 35-50mm

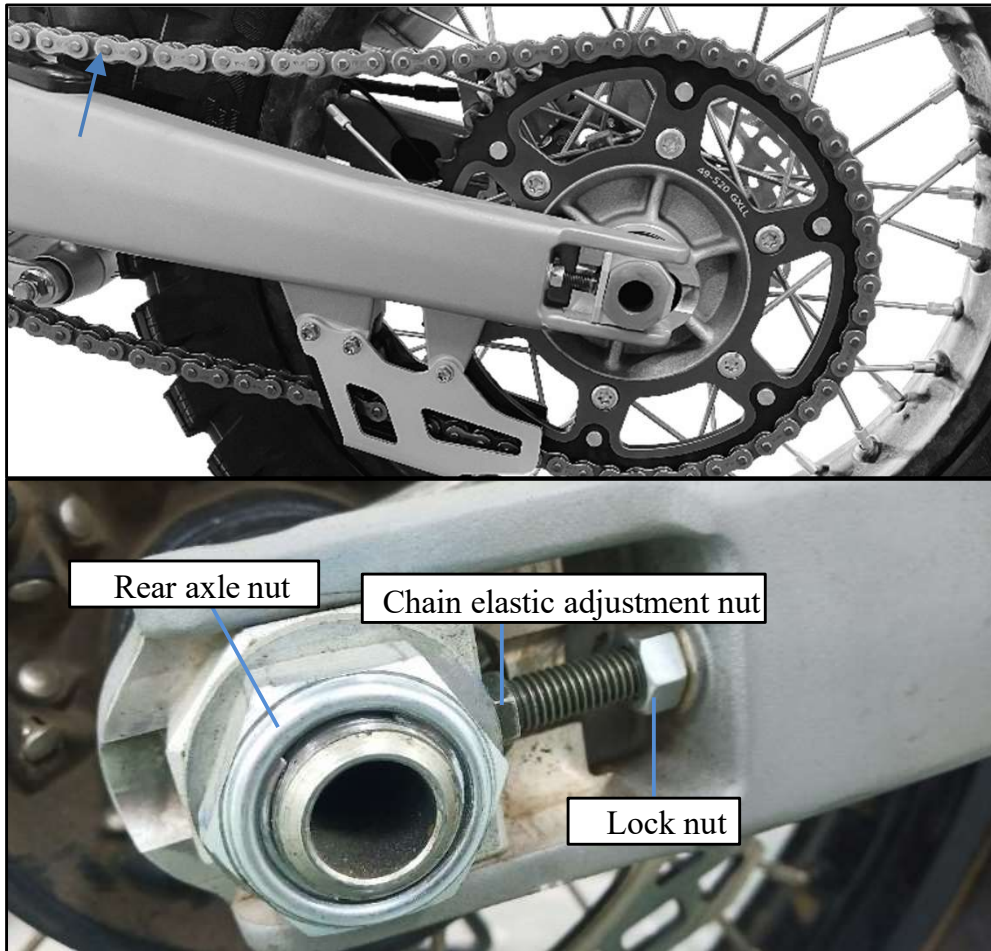
If the sag exceeds 50mm, you can't continue to ride the motorcycle.



#### Note

- When checking the drape of the drive chain, make sure that the upper part of the chain must be tensioned.

## Adjust the sag of the drive chain

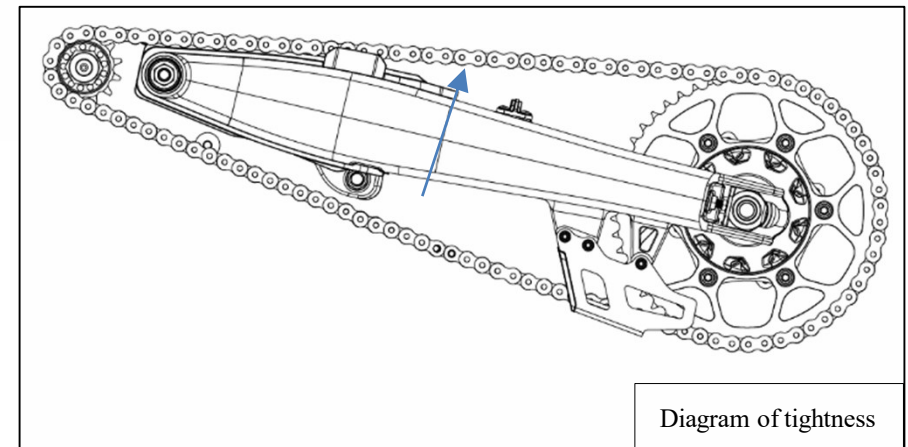


### Note

- When adjusting the drive chain sag, make sure that the upper part of the chain must be tensioned.

### When adjusting the drive chain sag:

1. Hook the transmission into neutral and turn off the engine.
2. Place the motorcycle vertically on a stable and flat ground.
3. Loosen the rear axle nut.
4. Use an open wrench to loosen the lock nut and chain tightening adjustment nut.
5. Rotate the chain tightness adjustment nut to adjust the tightness of the chain, the chain tightness adjustment range is: 35-50mm.
6. In the middle position of the upper part of the rear flat fork, push the chain in the direction of the flat fork to determine the reasonable sag of the chain.
7. The left and right sides of the sag are adjusted on the same tick line.



## Clutch



### Free travel of clutch handle: 10-15mm

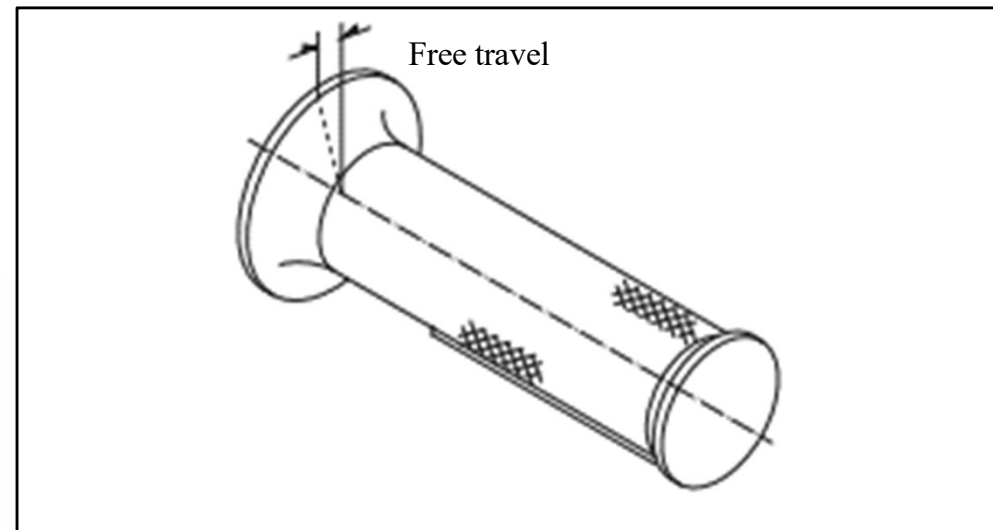
Check the clutch cable for bending and breakage. If necessary, have it replaced by a special repair shop for Kove.

Please lubricate the clutch cable with special cable lubricant to prevent premature wear and corrosion.

#### Note

- Incorrect adjustment of the free travel can cause premature clutch wear.

## Throttle



### Free travel of throttle handle flange: 2-6mm

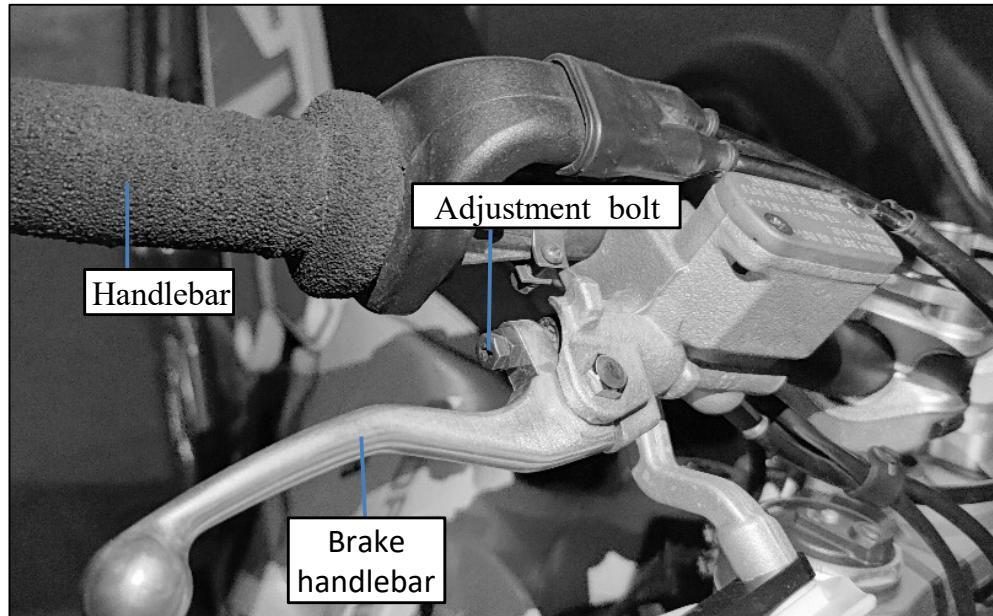
#### Check the throttle:

With the engine off, check that the throttle operates smoothly from fully closed to fully open in all steering handle positions and that the free travel is correct.

If the throttle does not operate smoothly, closes automatically, or if the cable is broken, have it serviced by an Kove special service shop.



## Brake Handle



You can adjust the distance between the top of the brake handle and the handle rubber.

### **Adjustment method**

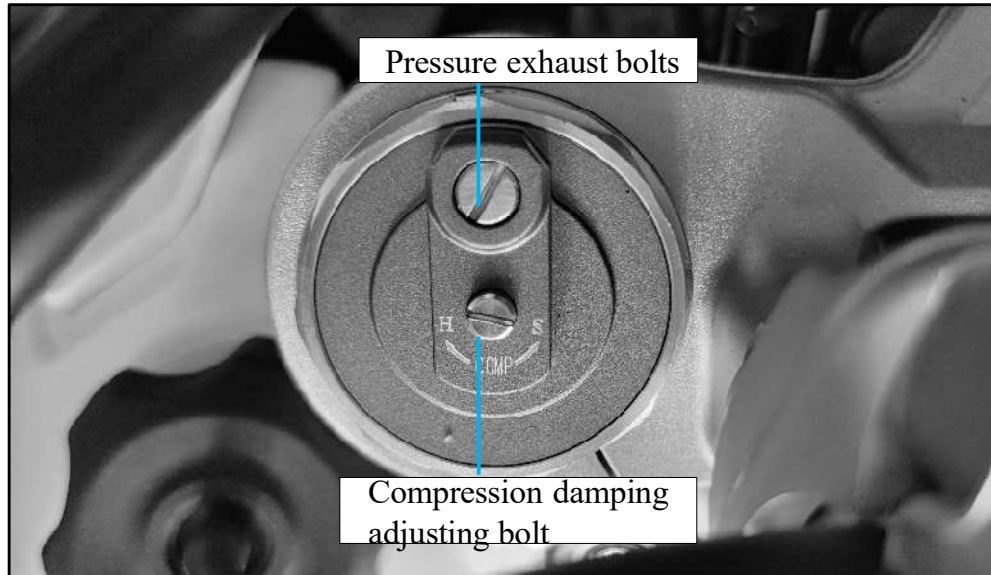
Turn the adjusting bolt counterclockwise to move the brake handle closer to the handle; turn the adjusting bolt clockwise to move the brake handle away from the handle.

The adjustment range is limited, do not turn the adjusting bolt beyond its natural limit.

No adjustment should be made during riding.

## Front shock absorber adjustment

### Air pressure adjustment



The shock absorber creates air pressure inside as it does its work. The air pressure acts like a progressive spring that affects the entire stroke of the motorcycle. On long rides, the front shock absorber will become stiffer. Therefore, the air pressure inside the front shock absorber needs to be released in time.

You can use the pressure vent bolt to release the air pressure built up in the front shock absorber. Always make sure the front tires are off the ground before releasing the pressure, at which point the front shocks are fully extended.

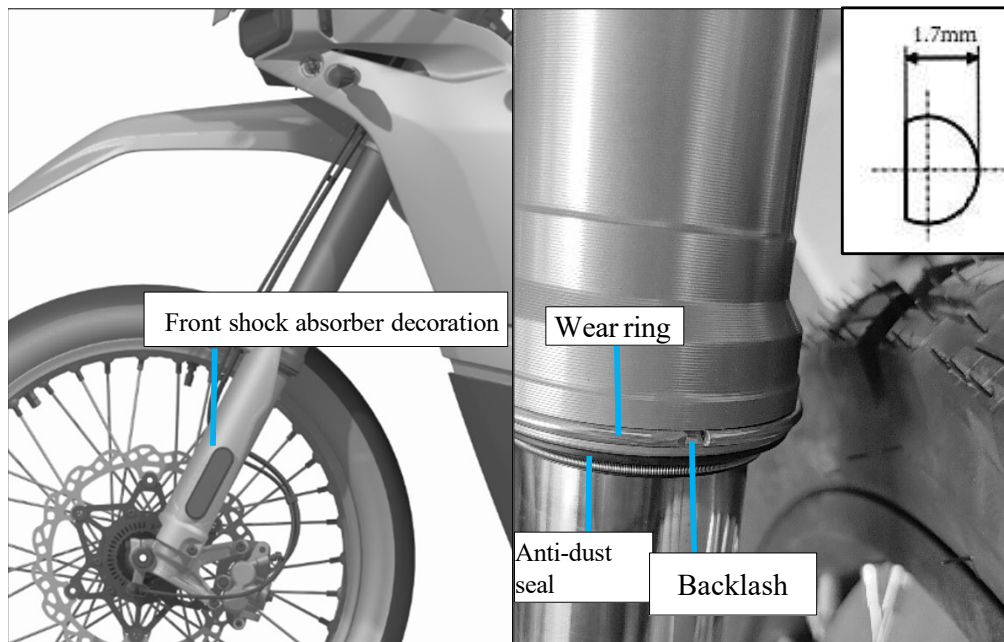
### Adjustment methods:

1. Place an optional table under the engine to keep the front wheels off the ground.
2. Remove the pressure exhaust bolt.
3. Apply lithium base grease No. 2 to the O-ring and install.
4. Tighten the pressure vent bolt. Torque: 1.3N·m

### Note

- If the O-ring ruptures when discharging the front shock absorber air pressure, it should be replaced promptly.
- The front wheel is on the ground to adjust the air pressure, will give the wrong degree of pressure.

## Front shock absorber inspection

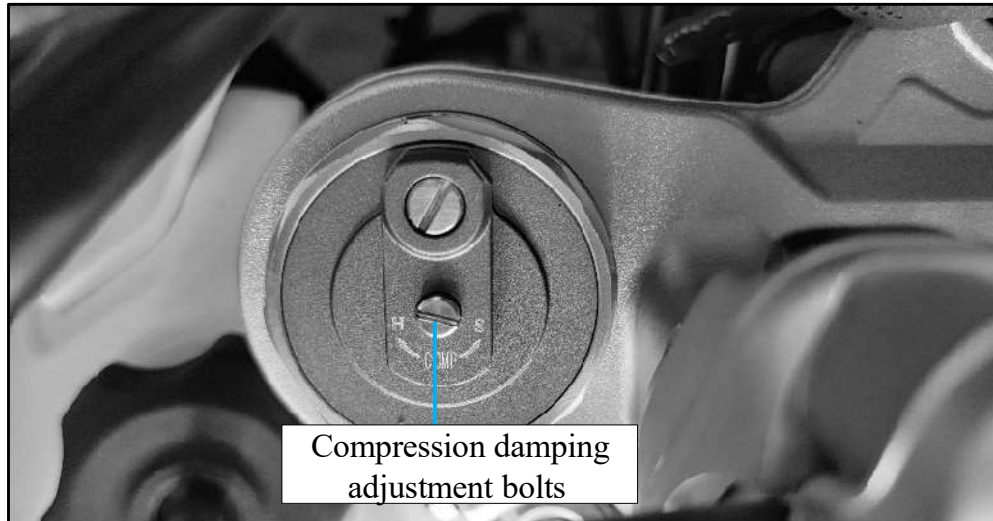


Regularly inspect and clean all components of the front shock absorber to ensure the best performance of the front shock absorber:

1. Check that the front shock absorber decoration and dust seal are clean and not stuffed with mud and dirt.
2. Check for oil stains under the shock absorber dust seal, if there are signs of oil leakage, replace the damaged dust seal and oil seal.
3. Check the wear ring for wear or damage. If the wear ring is less than 1.7mm in diameter or flush with the outer barrel, the wear ring needs to be replaced. When replacing the wear ring remove the bottom barrel and install the wear ring so that the end gap position is towards the rear of the motorcycle.
4. Squeeze the brake handle and press down on the handlebars a few times to check that the front shock absorber rebounds smoothly.



## Compression damping adjustment



Compression damping adjustment bolts

The compression damping adjustment affects the speed of the front shock compression. There are 22 segments of front damper compression damping. Each segment is 1/4 turn. Turning the compression damping adjustment bolt one full turn will turn the adjuster 4 segments.

Turn the adjusting bolt clockwise (H) to make the compression damping harder, and counterclockwise (S) to make the compression damping softer.

### Note

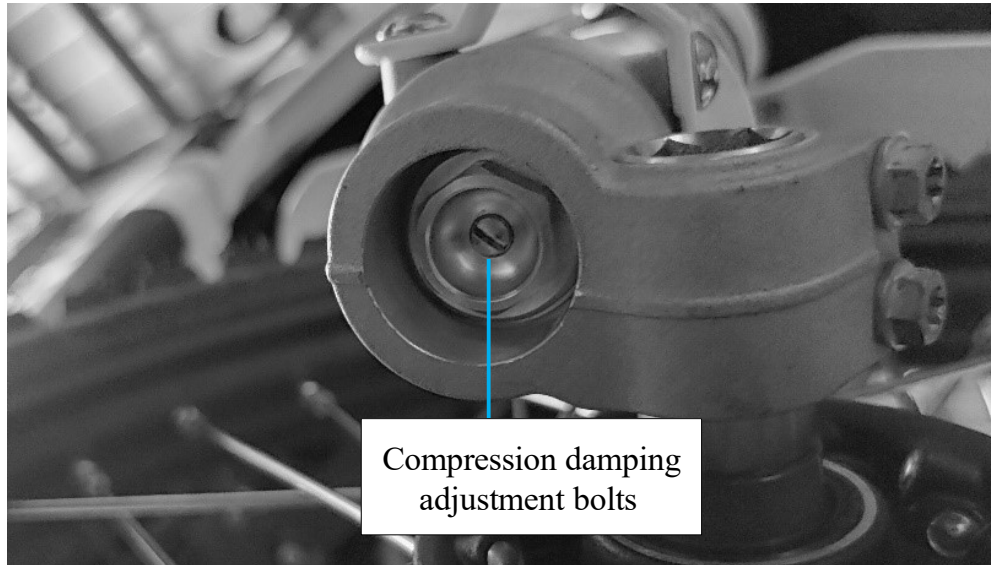
•Do not rotate the adjusting bolt beyond the given position, otherwise, the adjusting device may be damaged. Adjustment torque should not exceed 0.5N·m.

### Set standard compression damping:

1. Turn the compression damping adjustment bolt clockwise until it stops turning;
2. Turn the adjusting bolt counterclockwise again, the standard compression damping is from the hardest position to turn counterclockwise for 10 segments and hear the clicking position.

You can adjust accordingly to your weight and riding conditions, make sure that in each adjustment, the adjusting bolt stops at the clicking position and the left and right ends are adjusted to the same position.

## Compression damping adjustment



Compression damping  
adjustment bolts

The compression damping adjustment affects the speed of the front shock compression. There are 22 segments of front damper compression damping. Each segment is 1/4 turn. Turning the compression damping adjustment bolt one full turn will turn the adjuster 4 segments.

Turn the adjusting bolt clockwise (H) to make the compression damping harder, and counterclockwise (S) to make the compression damping softer.

### Setting standard compression damping:

1. Turn the compression damping adjusting bolt clockwise until it stops turning;
2. Then turn the adjusting bolt counterclockwise, the standard compression damping is from the hardest position counterclockwise turn 10 sections, and hear the click position.

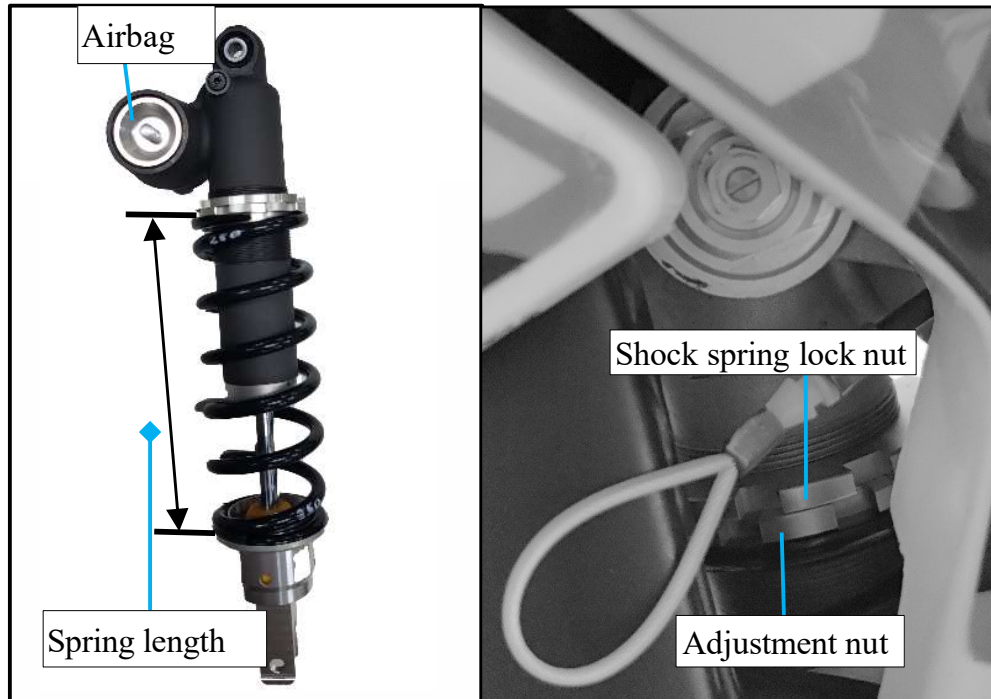
You can adjust accordingly to your weight and riding conditions, making sure that in each adjustment, the adjustment bolt stops at the click position and the left and right ends are adjusted to the same position.

### Note

- Do not rotate the adjusting bolt beyond the given position, otherwise, the adjusting device may be damaged. Adjustment torque should not exceed 0.5 N·m.
- Both compression damping and rebound damping can be increased by turning the adjusting bolt clockwise.

## Rear shock absorber adjustment

### Airbag



The rear shock assembly includes a shock-absorbing airbag containing high-pressure nitrogen gas. Do not attempt to disassemble, repair or dispose of the unit; puncture or exposure to flame may also cause an explosion resulting in serious injury. Repair or disposal should be referred to a Kove authorized repair shop.

### Spring preload adjustment

Spring preload should be adjusted while the engine is cool. Turn the damper spring lock nut and adjust nut to adjust the spring preload.

#### Adjustment methods:

1. Securely support your motorcycle with a maintenance stand or crane and lift the rear wheel off the ground.
2. Check if the spring preload is at the standard length.
3. Loosen the shock spring lock nut and rotate the adjusting nut. The spring length will change by 1.5mm for each turn of the adjusting nut.
4. Adjust accordingly as needed.
5. After the adjustment is completed, hold the adjusting nut and tighten the shock spring lock nut. Torque:  $44 \pm 3\text{N} \cdot \text{m}$ .

**Increase spring preload:**

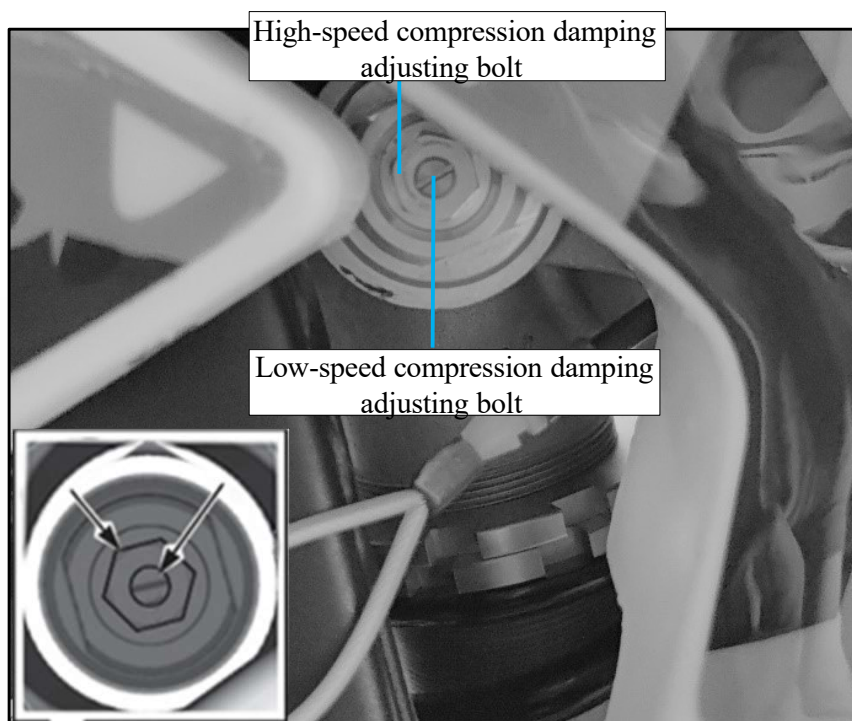
Loosen the shock spring lock nut with a special tool, turn the adjusting nut, and shorten the spring length, the shortest should not be less than 215mm.

**Reduce spring preload:**

Loosen the locking nut of the damping spring with a special tool, turn the adjusting nut, and increase the length of the spring, the longest length must not be higher than 230mm.

Each turn of the adjustment nut changes the spring length and spring preload.

## Compression damping adjustment



Compression damping can be adjusted with separate bolts for 2 stages of high speed compression damping and low speed compression damping, so you can adjust accordingly to your weight and riding conditions.

When adjusting the compression damping adjustment bolt, be sure to use the right size tool to avoid damage.

### High-speed compression damping adjustment

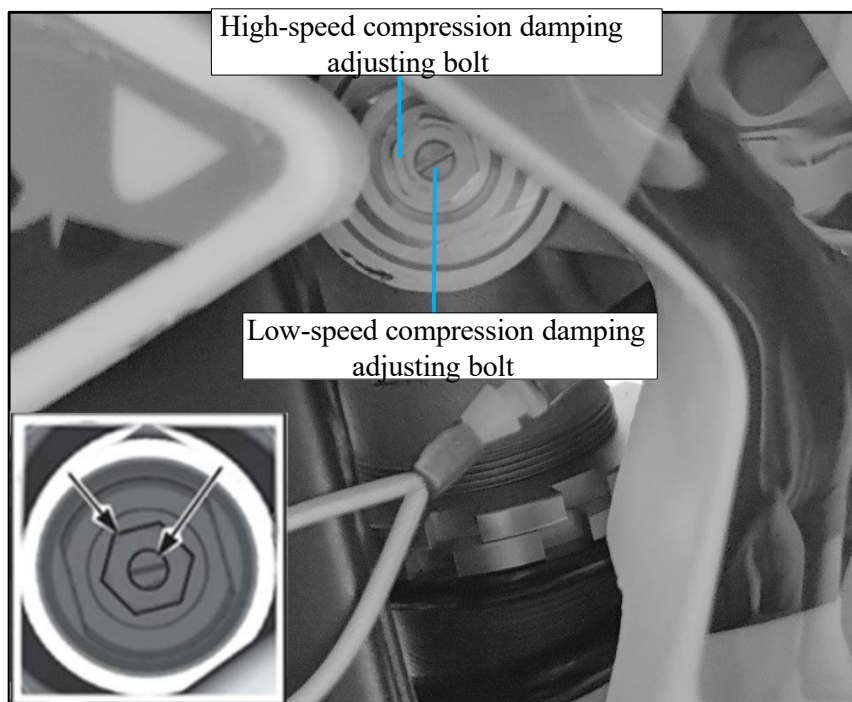
When it is necessary to adjust the compression damping of the shock absorber for high-speed movement, adjust the hexagonal part of the compression damper with an adjustment stroke of about 4 turns. The compression damping increases when adjusted clockwise (H) and decreases when adjusted counterclockwise (S).

Adjust to standard position:

1. Turn the adjusting bolt clockwise (H) until it cannot be rotated.
2. Turn the adjusting bolt counterclockwise 2 turns from the hardest position.



## Compression damping adjustment



### Low-speed compression damping adjustment

When it is necessary to adjust the compression damping of the shock absorber for low-speed motion, adjust the center one-bolt part of the compression damper, and the adjustment range is 16 segments in total. Each segment is 1/4 turn. The compression damping increases when adjusted clockwise (H), and decreases when adjusted counterclockwise (S).

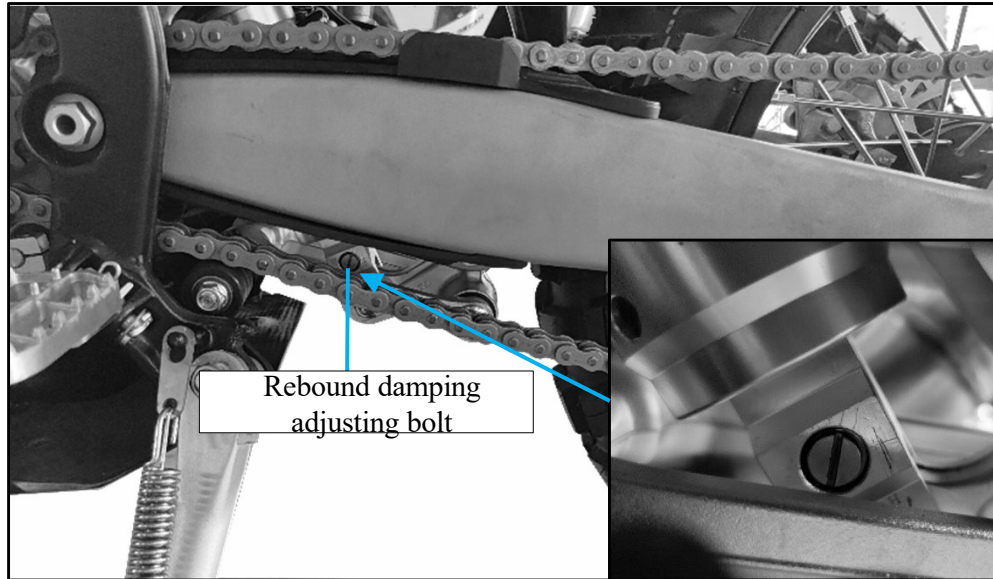
Adjust to standard position:

1. Turn the adjusting bolt clockwise (H) until it cannot be turned.
2. Turn the adjusting bolt 8 sections counterclockwise from the hardest position and hear a click at the position.

#### Note

- Low-speed compression damping adjustment torque does not exceed 0.5N·m.

## Rebound damping adjustment



The rebound damping adjusting bolt is located at the lower left end of the rear shock absorber. Turn the adjusting bolt clockwise to increase the rebound damping (hard) and counterclockwise to decrease the rebound damping (soft).

### Note

- Gently turn the adjusting bolt to prevent damage to the rear shock absorber.
- When adjusting the rebound damping adjustment bolt, be sure to use the right size tool to avoid damage.
- Make sure the adjusting bolts are firmly located in the fixed position during each adjustment.
- Adjustment torque not more than 0.5N·m.

### Setting standard rebound damping:

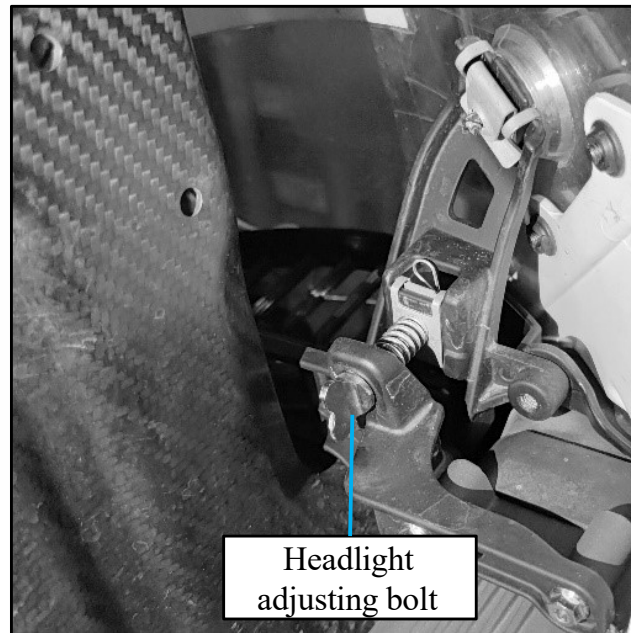
1. Turn the rebound damping adjustment bolt clockwise (H) until it cannot be turned;
2. Then turn the adjusting bolt counterclockwise (S), the standard rebound damping is from the hardest position counterclockwise rotation of 10 sections, hear the click position.



## Headlight

### Adjustment of headlight beam

You can adjust the headlight beam angle by rotating the adjusting bolt, clockwise rotation for the overall headlight beam down; counterclockwise rotation for the overall headlight beam up, please pay attention to the left and right synchronous dimming when adjusting.



# Troubleshooting

Please read the "maintenance" and "maintenance specifications" carefully before maintenance, maintenance data please refer to the "technical parameters “.

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## Engine doesn't start

### The starter motor runs, but the engine doesn't start

#### Check the following items:

- Check if there is gasoline in the tank.
- Check if the battery voltage is too low.

### Starter motor doesn't work

#### Check the following items:

- Confirm whether the engine starter motor is damaged.
- Check whether the battery voltage is too low, whether the fuse is blown, whether the battery connection is loose, whether the starter relay is working, if the problem still exists, please refer to the Kove repair shop for overhaul.

#### Note

- Engine running at high speed in neutral in place for a long time may lead to high coolant temperature.

## Engine overheating (coolant boiling)

The engine may overheat after a long period of low speed driving. If you find that the coolant is boiling, push the motorcycle to a safe area and take the following measures:

1. Check if the radiator fan is running normally.

**If the fan does not run:** Do not start the engine and have your motorcycle serviced by an authorized Kove repair shop.

**If the fan is running:** Waiting for the engine to cool down.

2. After the engine has cooled, check the radiator hose for leaks.

**If there is leakage:** Do not start the engine, and take your motorcycle to an authorized Kove repair shop for service.

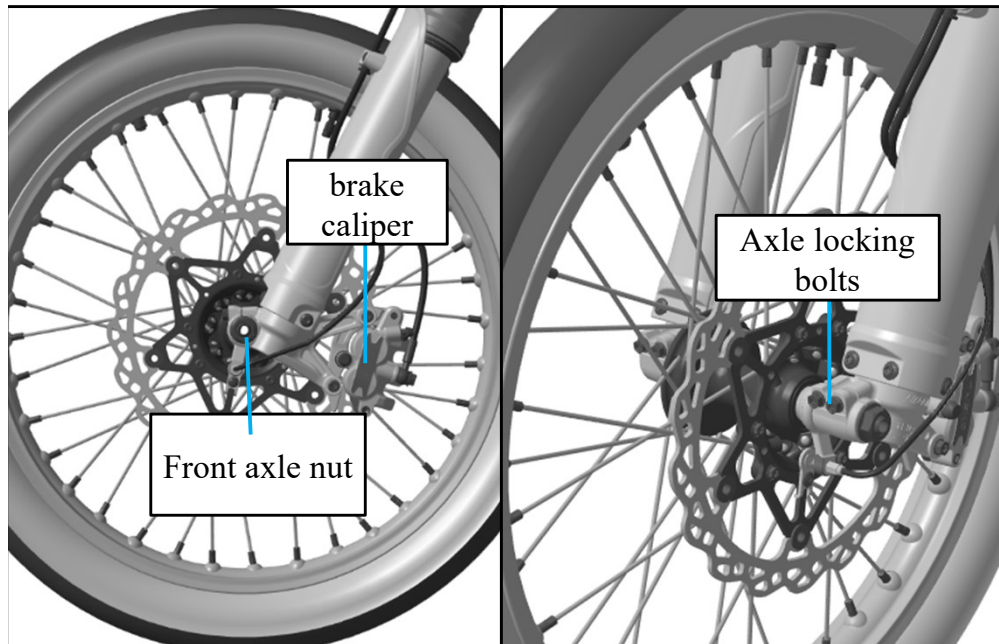
3. Check the coolant level in the reservoir, and add if necessary.

### Note

- In the case of engine overheating continue to ride will seriously damage the engine.

## Removal of wheels

### Front wheel



If you need to remove the wheel to change the tire, follow these steps:

#### Disassembling

1. Securely support your motorcycle with a maintenance stand or crane and lift the front wheel off the ground.
2. Loosen the front axle nuts and the left and right axle locking bolts.
3. Pull the front axle out of the hub and remove the front wheel.

## Installation

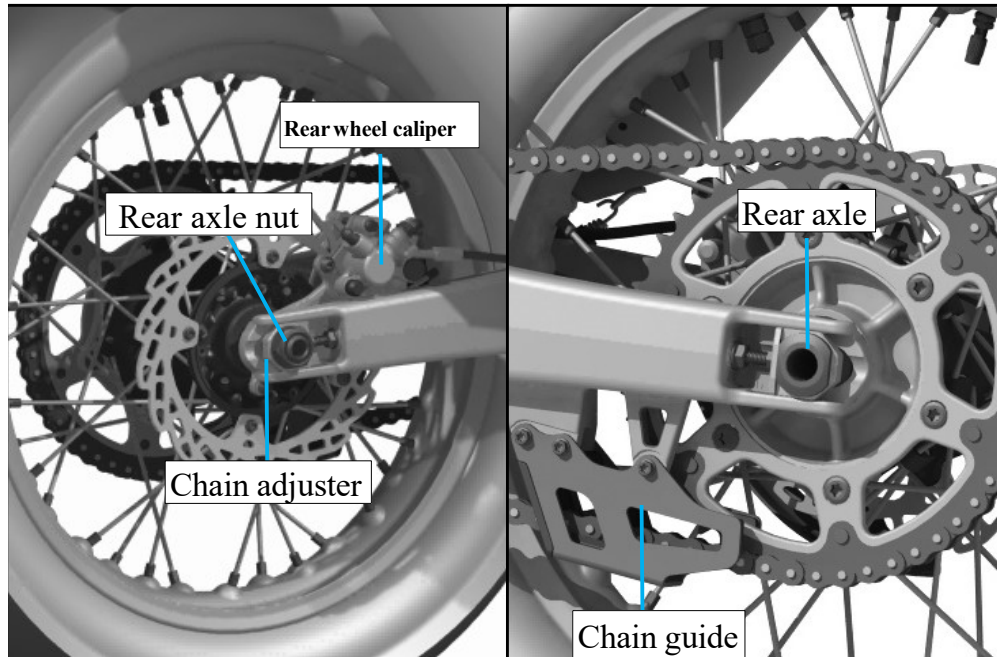
1. Clean the front axle and front shock mount holes and apply grease evenly around the front hub oil seal.
2. Place the front wheel in the middle of the front shock absorber, while jamming the brake disc into the brake caliper, taking care not to damage the brake pads.
3. Put the front axle through the front shock absorber and wheel hub from right to left, and tighten the front axle nut and the locking bolt on the left and right sides. (Front axle M16, torque: 88N·m; front axle locking bolt M8, torque: 22N·m)
4. Place the front wheel on the ground.
5. Operate the brake handle several times, then shake the fork up and down several times.
6. Raise the front wheels off the ground again and check that the wheels are turning smoothly after you release the brake handle.

If a torque wrench is not used in the installation process, please hand it over to a Kove repair shop as soon as possible, improper installation will lead to a decrease in braking performance.

### Note

- When installing wheels or calipers in place, to prevent scratching them, please install the discs between the brake pads carefully, damaged discs will affect the braking effect.
- When installing the front wheel, the front axle must be tightened first, followed by tightening the locking bolts on the left and right sides of the front axle, and the order of the two cannot be switched.

## Rear wheel



### Disassembling

1. Park the motorcycle on a solid level surface.
2. Securely support your motorcycle with a maintenance stand and raise the rear wheel off the ground.

3. Remove the rear axle nut.
4. Hold the rear wheel and pull out the rear axle.
5. Removing the drive chain from the drive sprocket.
6. Remove the rear wheel.
7. Remove the rear brake caliper assembly from the flat fork slot.
  - Support the caliper assembly, do not hang on to the brake hose and do not twist the brake hose.
  - Avoid getting lubricant, oil or dirt on the brake discs or pads.
  - Do not operate the brake pedal when the brake caliper is removed.
  - Be careful to prevent the brake caliper from scratching the wheel during removal.



## Installation

1. Check whether the rear wheel bearing is damaged, if the bearing is damaged, the rear wheel bearing needs to be replaced and grease is applied to the oil seal.
2. Clean the rear axle and rear flat fork mounting holes.
3. Snap the rear brake caliper assembly into the rear flat fork slot.
4. Push the rear wheel into the rear flat fork, and at the same time snap the brake disc into the brake caliper, taking care not to damage the brake pads.
5. Reinstall the drive chain on the drive sprocket.
6. Insert the rear axle and turn the rear wheel so that the drive chain and the drive sprocket are fully seated.
7. Tighten the rear axle nut, Torque: 128N·m.

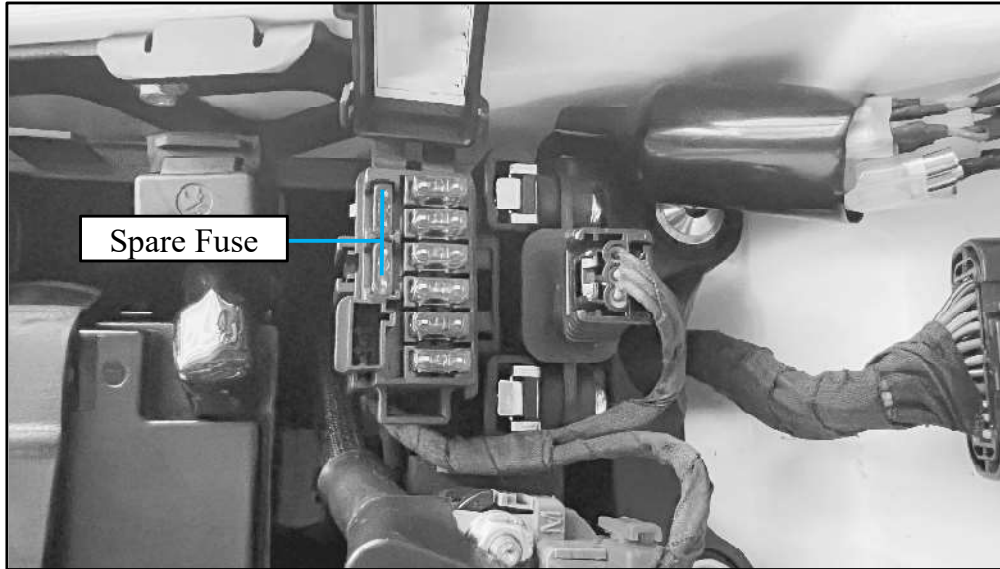
If a torque wrench is not used during the installation process, please hand it over to a Kove repair shop as soon as possible, improper installation will lead to a decrease in braking performance.

### Note

- When installing the wheels or calipers into place, install the discs between the brake pads carefully to prevent scratching.

## Electrical Failure

### Fuse blown



### Fuse replacement

1. Remove the seat cushion.
2. Open the fuse box cover, take out the fuse, check if the fuse is blown, if it is blown, make sure to replace it with a spare fuse of the same specification.
3. Close the fuse box cover and install the seat cushion.

### Dead battery

Please charge the battery with a special charger for lithium motorcycle batteries, and remove the battery from the motorcycle before charging. If the battery is still not recovered after charging, please contact Kove repair store.

#### Note

- Prohibit the use of automotive battery chargers or motorcycle lead-acid battery chargers for charging, which may lead to battery damage or even fire.
- Before handling fuses, please refer to "Checking and Replacing Fuses".

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## Motorcycle maintenance

Frequent cleaning and polishing will ensure that the motorcycle is used for a long time. A clean motorcycle is more likely to detect potential faults, and it should be especially noted that anti-icing seawater and salt spilled on the road will accelerate the formation of corrosion, and the motorcycle must be thoroughly cleaned after driving on the coast or on roads treated as described above.

### Clean

Wait for the engine, muffler, brakes and other hot parts to cool before cleaning.

1. Rinse the motorcycle thoroughly with a low pressure hose connected to water to remove loose dirt.
2. If necessary, use a sponge or soft towel dipped in a flexible cleaner to remove the dust and dirt from the top.
3. To rinse the motorcycle thoroughly with sufficient water and dry it with a clean soft cloth.
4. After drying the motorcycle, lubricate the moving parts to ensure that no oil is spilled on the brakes or tires; oil-contaminated brake discs, brake pads, brake rotors, and brake shoes can significantly reduce braking performance and may lead to accidents.
5. Lubricate the drive chain immediately after cleaning and drying the motorcycle.
6. Waxing protects against corrosion.

Avoid products containing strong detergents or chemical solvents that can damage metal parts, paint and plastic parts of the motorcycle do not wax tires and brakes.

If your motorcycle is equipped with matte finish parts, do not apply wax to these matte finishes.

## Cleaning Precautions

- Do not use high-pressure water guns:
  - ▶ High-pressure water guns can damage moving parts and electrical components, making repair impossible.
  - ▶ Moisture from the air inlet may be drawn into the throttle body or into the air filter.
- Do not use water to flush the muffler directly:
  - ▶ Water in the muffler may lead to non-starting and muffler rusting.
- Drying Brake:
  - ▶ Water will reduce the braking performance, cleaning should intermittently use the brakes at low speeds, repeatedly press the brake pedal gently, using the heat generated by brake friction to dry the water until the braking performance is restored.
- Do not use water to rinse directly under the seat cushion:
  - ▶ Water entering the seat box can damage your documents and other items.
- Do not flush directly with water near the headlights:
  - ▶ The internal lens of the headlight may temporarily fog up after cleaning or when riding in the rain, this will not affect the function of the headlight. However, if you find that a large amount of water or ice has accumulated inside the lens, please have it serviced by an authorized Kove repair shop.
- Do not wax and polish on matte finishes:
  - ▶ Clean the matte finish with enough water and mild detergent and dry with a clean soft cloth.

## Aluminum components

Aluminum corrodes when exposed to dirt, mud or salt. Clean aluminum parts regularly and follow these guidelines to prevent scratching:

- Do not use hard brushes, wire balls or other abrasive cleaning products.
- Do not drive or scrape on the edge of the road.

## Panel

Follow these guidelines to prevent scratches and damage:

- Gently wash with a sponge and enough water.
- Clean with diluted detergent and rinse thoroughly with sufficient water to remove stubborn dirt.
- Please avoid contact of instrument panel and lamp cover with corrosive fluids such as gasoline and brake fluid.

## Moving parts

Anti-rust oil can effectively prevent mechanical rust. When washing the bike or after a rainstorm, you can apply anti-rust oil to the motorcycle's moving parts, such as the engine output shaft, clutch cable, side bracket, shift lever, etc.

## Muffler

The muffler is stainless steel, but it may also be dirty due to mud or dust. You can remove the mud or dust with a wet sponge dipped in cleaning agent, and then rinse carefully with water. Then dry with a chamois leather or soft towel. If necessary, use a fine-textured commercially available compound to remove burn marks, then rinse in the same way you would remove mud and dust.

If the muffler is painted, use a neutral degreaser to clean the exhaust and muffler finish. If you are not sure if the muffler has been painted, please contact an Escalade Motorcycle Service Shop.

### Note

Even though the muffler is stainless steel, it can rust, so remove all traces and dirt as soon as you notice it.



## Motorcycle storage

If you leave your motorcycle outdoors, you should consider using a motorcycle full body shield. If not riding for an extended period of time, please follow these guidelines:

- Clean the motorcycle and wax all paintwork (except matte paintwork) and apply rust-proof oil to all chrome-plated parts.
- Lubrication of the drive chain.
- Place the motorcycle on the maintenance stand and pad it with a wooden block so that both tires are off the ground at the same time.
- After it rains, take off the body cover and let the motorcycle dry out.
- Remove the battery to prevent discharge.

Keep the battery fully charged and in a cool, ventilated place. If you leave the battery in place, disconnect the negative terminal to prevent discharge. Before reusing the stored motorcycle, check all items required on the maintenance interval schedule.

## Motorcycle transportation

If you need to transport your motorcycle, you should use a motorcycle trailer, a flatbed truck loaded with a ramp or lifting platform, and you should use motorcycle tie-down straps. Never try to tow a motorcycle with its wheels on the ground.

### Note

- Towing a motorcycle can seriously damage the transmission.

## **You and the Environment**

Owning and riding a motorcycle is enjoyable, but you must do your part to protect the environment.

### **Choose the right cleaner**

Use biodegradable decontaminates when cleaning motorcycles and avoid sprays containing chlorofluorocarbons (CFCs), which can damage the protective layer in the atmosphere (the ozone layer).

### **Waste recycling**

Separate motor oil and other toxic wastes in approved containers and take them to a recycling center. Call your local national public affairs or environmental services office to find the recycling center in your area and instructions on how to dispose of non-recyclable waste. Do not dump used engine oil in trash cans, sewers or on the ground because used motor oil, gasoline, coolant and cleaning solvents contain toxic substances that can harm cleaners and pollute drinking water, lakes, rivers and the ocean.

## Frame number, engine number

The frame number and engine number are required for motorcycle registration. This number is unique and is used to identify your motorcycle and may also be required when ordering replacement parts, so please keep a record of these numbers and keep them in a safe place.

### Frame number

The frame number is engraved on the left side of the frame riser.



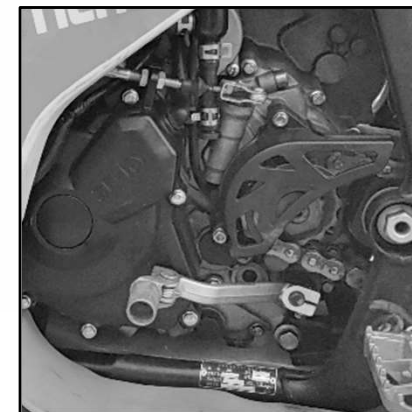
### Engine number

The engine number is engraved on the left side of the engine block.



### Nameplate

Nameplate affixed to the lower left edge of the frame



## Technical Specs

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## Motorcycle related specs-1

	<b>450Rally</b>	Engine model	Z194YMQ
Length (mm)	2190	Bore(mm)×Stroke(mm)	94.5×64.0
Width (mm)	830	Compression ratio	12.5: 1
Height (mm)	1487	Max. net power(kw/r/min)	38±2%/9500±1.5%
Wheelbase (mm)	1475	Max. torque(N·m/r/min)	42±2%/7000±1.5%
Wheelbase	/	Idle speed (r/min)	1500±150
Curb weight (kg)	155	Cylinder working volume (ml)	449
Preload (kg)	75	Spark plug	NGK-CR8E
Front tire	90/90-21	Spark plug gap (mm)	0.7-0.8
Rear tire	140/80-18	Valve clearance (mm)	Intake valve: 0.10
Max. speed (km/h)	170		Exhaust valve: 0.15

## Motorcycle related specs-2

Lubricant capacity(L)	1.8 (Note: 1.6L when replacing oil fine filter, 1.8L when disassembling engine for reassembly)	<b>Fifth gear</b>	0.846
Gasoline capacity(L)	29.4	Final gear ratio	3.769
Primary ratio	2.286	Battery	12V 4Ah
First gear	2.357	Main fuse	30A
Second gear	1.823	Headlights	LED
Third gear	1.474	Rear positio light/brake light	LED
Fourth gear	1.182	Neutral lights	LED
Fifth gear	1.000	Ignition method	ECU control ignition



## Torque Specs

Fastener type	Torque	Fastener type	Torque
5mm bolts and nuts	6	6mm screws	8
6mm bolts and nuts	12	6mm flange bolts(8mm head:small flange)	10
8mm bolts and nuts	22	6mm flange bolts(8mm head:big flange)	12
10mm bolts and nuts	60	6mm flange bolts(10mm head) and nuts	12
12mm bolts and nuts	80	8mm bolts and nuts	22
5mm screws	5	/	/

### Note

- In addition to the specified torque, this vehicle adopts the standard torque values in the table above.

## Frame tightening torque

Assembly position	Thread diameter (mm)	Torque (N·m)	Remark
Rear mudguard rear section lower cover and tail trim attachment screws	ST4. 8	2	
Front and rear oil cup filler cap fastening screws	M4	3	
OBD and electrical bracket connection bolt	M4. 2	1	
Front brake upper pump oil cup cover fastening screw	M4	3	
Small meter and road book bracket connection nut	M5	4	
Front brake pipe pressure plate and front shock absorber trim connecting screw	M5	5	
Instrument indicator and road book bracket connection nut	M5	4	
Rear position light/tail light mounting Phillips pan head screw	M5	6	
Fuel pump and tank connection bolts	M5	6	
Positive and negative battery cable bolts	M5	4	
Fuel line fitting mounting plate and left and right rear fuel tank connection screws	M5	6	TC4 Titanium Alloy
Oil level sensor mounting plate and left fuel tank connection screw	M5	2	TC4 Titanium Alloy
Hand windshield and hand windshield bracket	M5	5	
Brake pedal and brake arm connecting bolt	M5	5	(Thread glue)TC4 Titanium Alloy
Oil-cooling grille and lower shield connecting bolt	M5	5	TC4 Titanium Alloy
Rear brake card fuel line clamp fixing screw	M5	5	TC4 Titanium Alloy
Fuel filter bracket and left fuel tank connection screw	M5	4	TC4 Titanium Alloy
Side bracket hook bracket and fuel tank mounting bolts	M5	5	TC4 Titanium Alloy
Front fuel tank guard trim bracket left and right and fuel tank connection bolts	M5	6	TC4 Titanium Alloy

Assembly position	Thread diameter (mm)	Torque (N·m)	Remark
Headlight bracket pressure plate mounting bolts	M5	4	TC4 Titanium Alloy
Headlight and headlight bracket mounting bolts	M5	5	TC4 Titanium Alloy
ECU and rear fuel tank connection bolt	M5	4	TC4 Titanium Alloy
Radiator grille and radiator connection bolts	M5	5	TC4 Titanium Alloy
Rear tailcap and fuel tank 1 mounting screws	M5	5	TC4 Titanium Alloy
Side shields and windshields away from the connection screws	M5	4	TC4 Titanium Alloy
Sway sensor and electrical mounting bracket connection bolts	M5	4	TC4 Titanium Alloy
Roadbook and roadbook bracket connecting bolt	M5	4	TC4 Titanium Alloy
Air filter cotton and air filter shell fastening bolts	M5	4	
Start relay nut and main line connection bolt	M6	5	
Main line tower wire and engine connection bolt	M6	10	
Chain retainer and flat fork attachment screw	M6	8	TC4 Titanium Alloy
Front windshield and windshield mounting bolts	M6	12	
Front reduction trim cover and front reduction attachment screw	M6	8	TC4 Titanium Alloy
Front brake disc and hub connecting bolt	M6	12	(Thread glue) TC4 Titanium Alloy
Headlight module and cowl bracket connecting bolt	M6	12	TC4 Titanium Alloy
Air filter and frame connection bolts	M6	10	TC4 Titanium Alloy
Horn and frame connection bolts	M6	12	TC4 Titanium Alloy
Lower guard and emergency water bottle attachment bolts	M6	12	TC4 Titanium Alloy

Assembly position	Thread diameter (mm)	Torque (N·m)	Remark
Headlight bracket to head cover bracket attachment bolt (rubber)	M6	8	
The front brake pipe clamp and the upper and lower coupling plate connection bolts	M6	10	TC4 Titanium Alloy
Rear fuel tank protection cover and rear fuel tank mounting screws	M6	6	TC4 Titanium Alloy
Rear ABS sensor and bracket mounting screws	M6	8	TC4 Titanium Alloy
Head cover bracket and road book bracket connecting bolt	M6	8	
Chain guide rear bolt and flat fork connecting bolt	M6	10	TC4 Titanium Alloy
Rear water barrier rubber and rear fuel tank connection bolts	M6	8	TC4 Titanium Alloy
Headlamp cover trim and headlamp mounting bracket connecting bolts	M6	8	TC4 Titanium Alloy
Sub water bottle and frame connection bolts	M6	8	TC4 Titanium Alloy
Head cover bracket and road book bracket 1 connecting bolt	M6	10	TC4 Titanium Alloy
Muffler mounting bracket and rear fuel tank connecting bolt	M6	10	TC4 Titanium Alloy
Lower shield and frame connection bolts	M6	12	TC4 Titanium Alloy
Headlight mounting bracket and cowl bracket connecting bolt	M6	10	TC4 Titanium Alloy
Rear fuel tank mounting bracket and rear fuel tank connecting bolt	M6	10	TC4 Titanium Alloy
Rear fuel tank lower mounting bracket and rear fuel tank connecting bolt	M6	10	TC4 Titanium Alloy
Steering damper bracket and frame connecting bolt	M6	12	TC4 Titanium Alloy
Rear brake master cylinder and frame connection bolts	M6	12	TC4 Titanium Alloy
Rear brake disc and rear hub connecting bolt	M6	12	TC4 Titanium Alloy
Head cover bracket and road book bracket fastening nut	M6	8	
Rear fuel tank vent fitting mounting screw	M6	4	

Assembly position	Thread diameter (mm)	Torque (N·m)	Remark
Hand windshield bracket and clutch handle bracket/brake handle bracket connecting bolt	M6	8	
Steering dampers and upper connecting plate connecting bolts	M6	10	TC4 Titanium Alloy
Front brake pump and brake handle mount connecting bolt	M6	10	TC4 Titanium Alloy
Fuel filler and handle connection bolt	M6	10	TC4 Titanium Alloy
Clutch handle mount with handlebolt	M6	10	TC4 Titanium Alloy
Instrument operation switch and handgrip connection bolt	M6	10	TC4 Titanium Alloy
Shift lever and engine connection bolt	M6	12	TC4 Titanium Alloy
Front mudguard and lower connecting plate connecting bolt	M6	10	TC4 Titanium Alloy
Injector cap and throttle tightening bolt	M6	8	TC4 Titanium Alloy
Seat cushion lock and rear fuel tank mounting connection bolt	M6	8	TC4 Titanium Alloy
Electrical mounting bracket and frame connection bolts	M6	12	TC4 Titanium Alloy
Oil cooler and frame connection bolts	M6	12	TC4 Titanium Alloy
Left and right radiator bolts to the frame	M6	12	TC4 Titanium Alloy
Regulator and electrical bracket connection bolts	M6	12	TC4 Titanium Alloy
Left and right radiator under and frame connection bolts	M6	12	TC4 Titanium Alloy
Small sprocket cover with engine mounting bolts	M6	10	TC4 Titanium Alloy
Frame and air filter housing connection bolts	M6	8	
Left and right side of the front fuel tank and the lower frame connection nut	M8	22	
Guide sprocket self-locking nut and guide sprocket connecting bolt	M8	22	
Front fuel tank under the frame connection bolts	Inside: M8, Outside: M16*1*11	22	TC4 Titanium Alloy

Assembly position	Thread diameter (mm)	Torque (N·m)	Remark
Front brake caliper and bottom cylinder bracket connecting bolt	M8	32	(Thread glue)TC4 Titanium Alloy
Muffler middle section and frame connecting bolt	M8	22	TC4 Titanium Alloy
Lower connecting plate and shock absorbing fastening bolt	M8	22	TC4 Titanium Alloy
Muffler rear section and bracket connecting bolt	M8	22	TC4 Titanium Alloy
Tail trim and fuel tank 2 mounting bolts	M8	22	TC4 Titanium Alloy
Flat fork chain adjustment lock nut	M8	22	
Clutch cable lower adjustment nut	M8	8	
Hodd bracket to frame attachment bolts	M8	22	(Thread glue)TC4 Titanium Alloy
Steering handle upper and lower mounting bolts	M8	22	TC4 Titanium Alloy
Brake arm bolts and frame connection bolts	M8	22	(Thread glue)TC4 Titanium Alloy
Cover nut of the front section of the muffler connected to the engine	M8	22	
Front fuel tank mounting bracket bolts left and right	M8	15	TC4 Titanium Alloy
Rear fuel tank mounting bolts	M8	30	TC4 Titanium Alloy
Engine front suspension and frame connection bolts	M8	26	TC4 Titanium Alloy
Engine upper suspension and frame connection bolts	M8	36	TC4 Titanium Alloy
Mounting points on the front fuel tank and frame connection bolts	M8	22	TC4 Titanium Alloy
Locking bolt for front bottom cylinder	M8	22	TC4 Titanium Alloy
Rear mudguard rear section and rear fuel tank connecting bolt	M8	22	TC4 Titanium Alloy
Front fuel tank side mounting point and frame connection bolt	M8	22	TC4 Titanium Alloy
Upper connecting plate and shock absorbing fastening bolt	M8	22	TC4 Titanium Alloy



Assembly position	Thread diameter (mm)	Torque (N·m)	Remark
Hand windshield bracket left and right and handlebar connection bolts	M8	22	TC4 Titanium Alloy
Engine upper suspension to engine attachment bolts	M10	54	TC4 Titanium Alloy
Steering handle lower mount connecting bolts	M10	34	TC4 Titanium Alloy
Special bolts for attaching side brackets to the frame	M10	First 10N-m, then loosen 1/3 turn, tighten the bolt and hit the nut 60N-m.	TC4 Titanium Alloy
Steering handle lower mount connecting bolts	M10	34	TC4 Titanium Alloy
Rear shock upper and frame connecting bolts	M10	45	TC4 Titanium Alloy
Oil cooler over oil bolt installation	M10	25	Copper pad
Overfill bolts for rear main pump connection	M10	22	
Chain guide wheel and U-shaped rocker connecting bolt	M10	60	TC4 Titanium Alloy
Triangle rocker and the lower connection bolt of the rear reducer	M10	45	
Engine front suspension and engine connection bolts	M10	54	TC4 Titanium Alloy
Engine lower rear suspension and frame connection bolts	M10	54	TC4 Titanium Alloy
U-shaped rocker and frame connecting bolts	M10	60	
Engine lower front suspension and frame connection bolts	M10	54	TC4 Titanium Alloy
Brake oil pipe and front brake caliper connecting bolt	M10	30	TC4 Titanium Alloy
Brake oil pipe and front brake upper pump connecting bolt	M10	22	TC4 Titanium Alloy
Brake oil pipe and rear brake pump, caliper connection bolts	M10	22	TC4 Titanium Alloy
Brake oil pipe and rear brake upper pump connecting bolt	M10	22	TC4 Titanium Alloy
U-shaped rocker and triangle rocker connecting bolt	M12	60	TC4 Titanium Alloy

Assembly position	Thread diameter (mm)	Torque (N·m)	Remark
Chain stay and triangle rocker connecting bolt	M12	60	TC4 Titanium Alloy
Upper coupling plate and directional column fastening bolts	M14	80	(Thread glue)
Front fuel tank mounting hexagonal nut and frame connection	M16	35	TC4 Titanium Alloy
Front wheel axle lock nut	M16	88	TC4 Titanium Alloy
Chain stay shaft fastening nut	M16	88	TC4 Titanium Alloy
Engine small sprocket fastening nut	M16	88	
Oxygen sensor and muffler front section connection bolt	M18	44	
Rear axle lock nut	M22	128	
Steering column locking four-slot nut	M25	First hit 40N·m, loose and then hit 10N·m, and then male 1/4 turn	