VOGE

Far & Beyond Quality

MOTORCYCLE OPERATION MANUAL
LX600-B

Welcome to VOGE

We say thanks and express our congratulations to your correct choosing on VOGE.

You need to know your motorcycle as well as yourself, to safely drive under various conditions. Please carefully read this book before your first driving, which includes important information and suggestion about driving and its equipment, also the maintenance and pre-cautions. In case there are some questions about this motorcycle, the VOGE dealers are very glad to suggest and help you. We hope you enjoy your every minute on driving.

Important information about this book

This book includes the important information, issues need pay attention to, warning and cautions about the motorcycle, so please always keep it on the motorcycle even lend or sell to others, this is very important. The pictures or details in this book may be different with the actual motorcycle, but their description and principle are the same. This book is a part of the motorcycle, keep it always on the vehicle even sell or lend. VOGE improves its products all the time to make sure its high quality and safety performance, so the information in this book may not be complete same with your actual motorcycle, in this case, the VOGE dealers are glad to provide your correct suggestions.

This user manual meets the standards：GB/T 19678.1、GB/T 9969、GB/T 40494

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I.Issues need pay attention to

This user manual has the warning marks as below, when you saw it, please follow these driving and maintenance procedure.

⚠Danger This mark indicates it may lead to bad injury even death.

⚠Warning This mark indicates it may lead to damage on motorcycle.

⚠Caution This mark means more effective and convenient point for driving.

⚠Danger
This book fits for the driver with license only, please correctly and cautiously drive and pay attention to: Refit at will is not allowed; Please follow the local laws and regulations; Any refit on this motorcycle may be bad for noise, emission and performance.

Because we keep improvements on motorcycle, so the actual motorcycle may not be complete same with !this book, please set the actual motorcycle as standard while without further information.

II.Safe driving

Loading, accessories and refit

You can get the origin VOGE and authorized parts, accessories and other products from our official dealers, meanwhile, the specialized workers will introduce you how to use and assemble.

Please always adopt origin VOGE parts or our authorized ones. The parts nor from VOGE factory, incorrect accessories or loading are bad for motorcycle performance even break laws, please take responsibility for your safety and that of others.

⚠Caution

•The parts this model equipped have passed the test for safety, practicability, and matching performance, and we take responsibility for them, otherwise, we have no responsibility for the parts not from us or without our authorization. So we strongly suggest you adopt the parts and accessories from VOGE factory only.

•All your replacement for parts must obey local laws. Make sure your motorcycle won't beak any laws and regulations

⚠Danger

•Incorrect loading, refit, accessories and maintenance are all hidden risk, before driving, make sure there is not any overloading and obey the stipulations above.

•Refit the electrical or controlling parts at will may damage your motorcycle even lead to accident.

Change the curb weight of motorcycle may be bad for its power performance, so please surely adopt the cargo weight, passenger numbers and accessories from our suggestion only.

Checking before driving

Before driving,make the inspections as below to reduce accident or damage:

•Steering system
-Handle bar turns freely without jamming.
-No run-out or flexibility on steering stem
•Throttle
-Correct clearance for throttle cable.
-Operate throttle smooth without jamming.
•Brake device
-Operate brake lever and pedal normal.
-Correct position of brake liquid in oil cup.
-Pressing point if clean during braking process.
-Not water or greasy dirt on brake plate or pads.
•Shock absorber
-Press it and get back smoothly.
•Transmission chain
-Without too much abrasion or damage.
-Tightness is correct.
•Tires
-Correct tire pressure.
-Without too much abrasion for depth of tire tread.
-No damage or crack on surface of tire.
•Oil in engine
-Correct oil level.
•Cooling system
-Correct coolant level.
-Without coolant leakage.
•Lighting
-Headlight/Front position light, tail light/brake light, turning signal light,rear registration plate light and instrument light could normally work.
•Indicating light
-Control high beam indicating light,neutral gear light, indicating light of turning signal through switch assembly can normally work. Oil pressure alarm light, EFI malfunction light, water alarm light and oil level alarm light are without flashing or permanent on when engine started.
•Horn
-Normally works.
•Kill switch of engine
-Normally works.
•Side stand
-Normally pick up.
-Inter-lock with ignition switch normally works.
•Back-view mirror
-Sit on motorcycle and keep it upright,the material 10m to tail of motorcycle within width of 4m could be clearly seen from back-view mirror.
-In case failed, please adjust the angle of back-view mirror.

Issues need pay attention to during driving

1.Any driver must know well about the motorcycle, the incorrect sitting position or off set during driving may be bad for operation or control of motorcycle; When driving, the passenger need. stably sit on his seat without influence driver. Passenger is an animal is not allowed.
2.Keep the luggage low to decrease the influence on focus, also the weight of luggage needs evenly spread on both sides, please avoid the luggage extend too long.
3.The luggage must fix on the motorcycle firmly, make sure it could not move before driving, in case it is unstable in driving, please check its fixing once again, and adjust if it is necessary.
4.Too heavy or big the luggage is not allowed, the overloading must be bad for driving and performance.
5.The accessories or luggage may decrease motorcycle performance shall not be loaded, make sure all what you do may not be bad for lighting system, ground clearance, brake performance, side angle, operation, compression distance of tire, working travel for front shock absorber or other performance related to driving.
6.More weight on handle bar or front fork may be and for turning, and lead to unsafe driving.
7.Fairing cover, wind shield glass, backrest or other parts with big size may have influence on stability or operation during driving, they increased not only the weight, but also the size, which lower down the power. In case their design lack of test, they may lead to unsafe driving.
8.Refit to tricycle with side car is not allowed, drawing for other vehicles is also not allowed, and we take no responsibility for refit without authorization.
The maximum loading: 180kg, (including driver, luggage, and accessories).

Driving on road

•Get on the motorcycle from left side and ride on.

•Pick up the side stand.

•Get the motorcycle upright to the ground, get the handle bar face front, keep its wheel face forward.

•Tightly hold the clutch lever.

•Slowly turn the throttle grip to accelerate, while slowly releasing the clutch lever, clutch meshed, then motorcycle slowly start.

•Wear helmet, gloves, driving boots, protective wear and pans before driving even only for a short driving.

•In case you drive fast, please pay attention to the factors below which bad for your driving.

–Loose cloths – Incorrect adjustment for spring of shock absorber.

–Overload or imbalance load may be bad for your driving and controlling.

–Don't drive after drink wines, drugs even medicines, even a few alcohol or medicine is bad for your sense and reflection.

⚠ Caution

This model equipped inter-lock switch for side stand/ignition switch, once engine is in a gear position not the neutral one, lay down the side stand, engine stops immediately.

⚠ Warning

Start engine from high gear position is not allowed,otherwise it may damage engine, Please start engine from 1st gear.

⚠ Danger

Before starting, please pick up the side stand to top position, otherwise, when you turning left, the side stand may touch the ground and lead to accident.

Braking and parking

•Please decelerate first when braking to reduce the speed and use the front and rear brake at same time.
•When the driving speed is low enough, get into low gear position, and tightly hold clutch lever.
•Get the engine into neutral gear, the motorcycle brakes and completely stops.
•When braking, your body get front and press down the front shock absorber, so there is more weight suddenly focus on the front wheel, so the front brake is more reliable, so the front brake is more powerful than the rear one and more easily get motorcycle stop.
•When you are driving on maintain way, use the rear brake only is dangerous, under some limit conditions, the brake may overheat and damage, please use the front, rear brake sand engine coordinately to decelerate.
•Driving in water and rain, the brake plate may get wet and reduce its braking performance, be careful under this situation. Under this case, we suggest you dry it up and then continue the operation.

⚠ Warning

•After a long driving, when parking, because the engine is very hot at this moment, so keep it far away from kids to avoid hurt.
•Don't park the motorcycle on soft ground to avoid rollover even damage the motorcycle.
•in case parking on a gentle slope, get the engine into low gear position, let its head face to uphill to avoid the turning of side stand and rollover.
•Parking or running on combustible materials such as dry grass is not allowed, because the three-way catalyzer is working under very high temperature which is very easy to light up the combustible materials.

Ⅲ. Main parameters

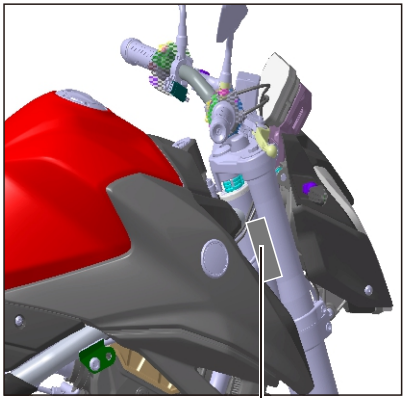
Motorcycle parameters	
LxWxH	2100mm×780mm×1090mm
Wheelbase	1445mm
Seat height	785mm
Ground clearance	165mm
Curb weight	202kg
Max. loading	180kg
Max. Weight	382kg
Front wheel loading	101kg
Rear wheel loading	101kg
Max. speed	High power output:185km/h Low power output:160km/h
Gradeability	≥40°
Braking deceleration	Follow GB20073-2018
Fuel consumption	≤4.8L/100km (Follow GB15744-2019)
Fuel tank capacity	16.5L
Coolant capacity	2.0L
Chain specification	520SX3(116 links)
Suspension rack/Brake system	
Front shock absorber type	Shock absorber upside down/Fork tube φ41mm with free play 119mm
Rear shock absorber type	Central shock absorber/Free play of 57mm
Front wheel hub size	3.5 x 17
Rear wheel hub size	4.5 x 17
Front tire size	120/70ZR17M/C
Rear tire size	160/60ZR17M/C
Front brake type	Double plate, double piston, floating caliper, floating plate/plate diameter of 298mm
Rear brake type	Single plate. Single piston, floating caliper, fixed plate/plate diameter 240mm
ABS	Double passage prevent locking-up

Engine parameters	
Engine type	Twin cylinders in line/water cooling/ 8 valves/DOHC
Bore x Stroke	76mm×64mm
Displacement	581ml
Compression ratio	11.5:1
Clearance of air inlet valve	(0.10-0.15) mm
Clearance of air exhaust valve	(0.15-0.20) mm
Clearance of spark plug	0.8mm-1.0mm
Specification of spark plug	CPR8EA-9
Max. net power output/Rotation speed	High power output:47kW/9000r/min Low power output:35kW/10000r/min
Max. torque/Rotation speed	High power output:57N.m/6500r/min Low power output:47N.m/6500r/min
Idling speed	(1300±100)r/min
Gear box type	International 6 gear positions
Clutch type	Wet clutch of multiple layers
Oil capacity	3.0L(10W/40-SL)
Fuel supply	EFI system
Power transmission system	
Primary transmission ratio	1.826
End transmission ratio	2.867
1st gear	3.285
2nd gear	2.105
3rd gear	1.600
4th gear	1.300
5th gear	1.150
6th gear	1.043

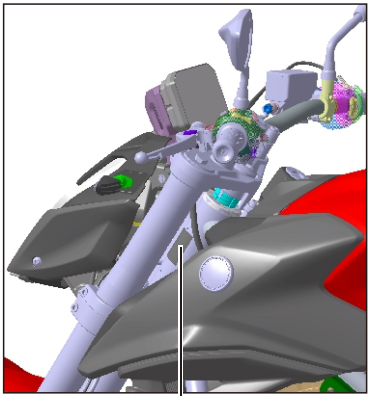
Ⅳ. structure of motorcycle

Identification for motorcycle

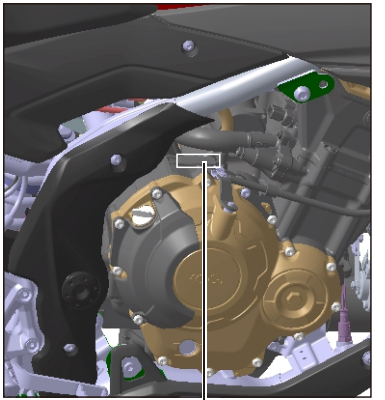
The Vehicle Identification Number (VIN) and Name plate Engine type number and Delivery number



Vehicle Identification number



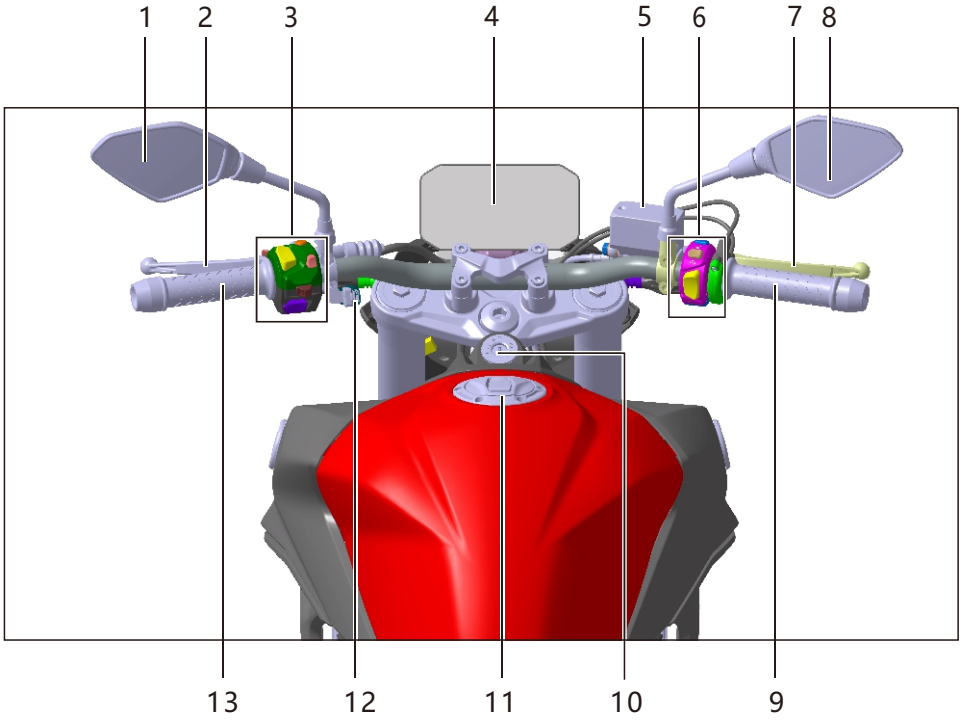
Name plate



Engine type and Delivery number

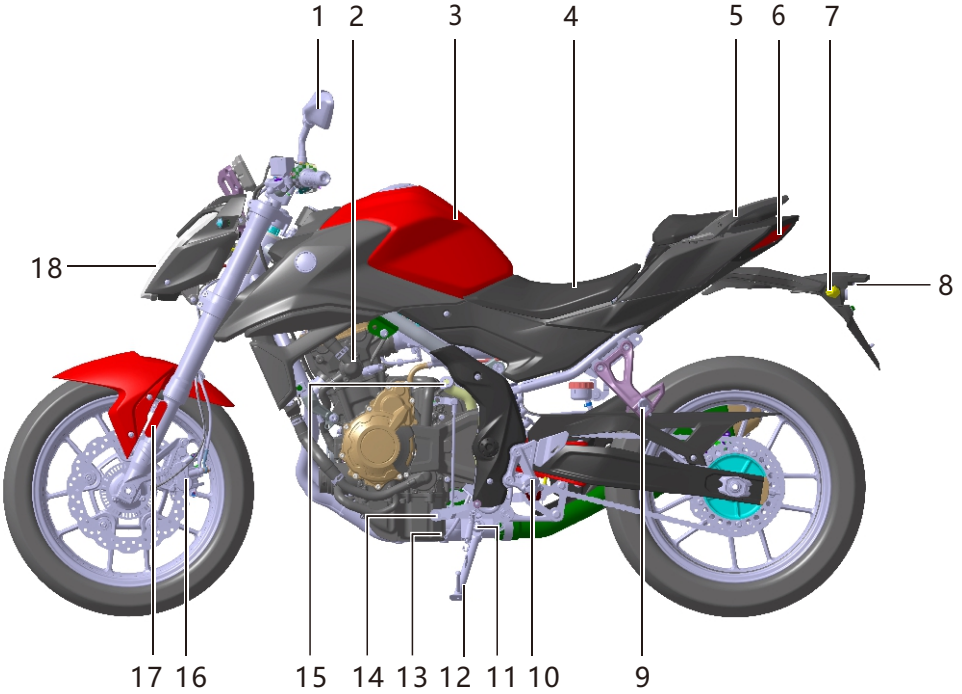
Head part

1.Left back-view mirror
2.Clutch lever
3.Left switch
4.Meter
5.Front brake oil cup
6.Right switch assy.
and accelerator base
7.Front brake lever
8.Right back-view mirror
9.Accelerator
10.Ignition switch
11.Fuel tank cap
12.USB electrical
charging port
13.Grip set,handle



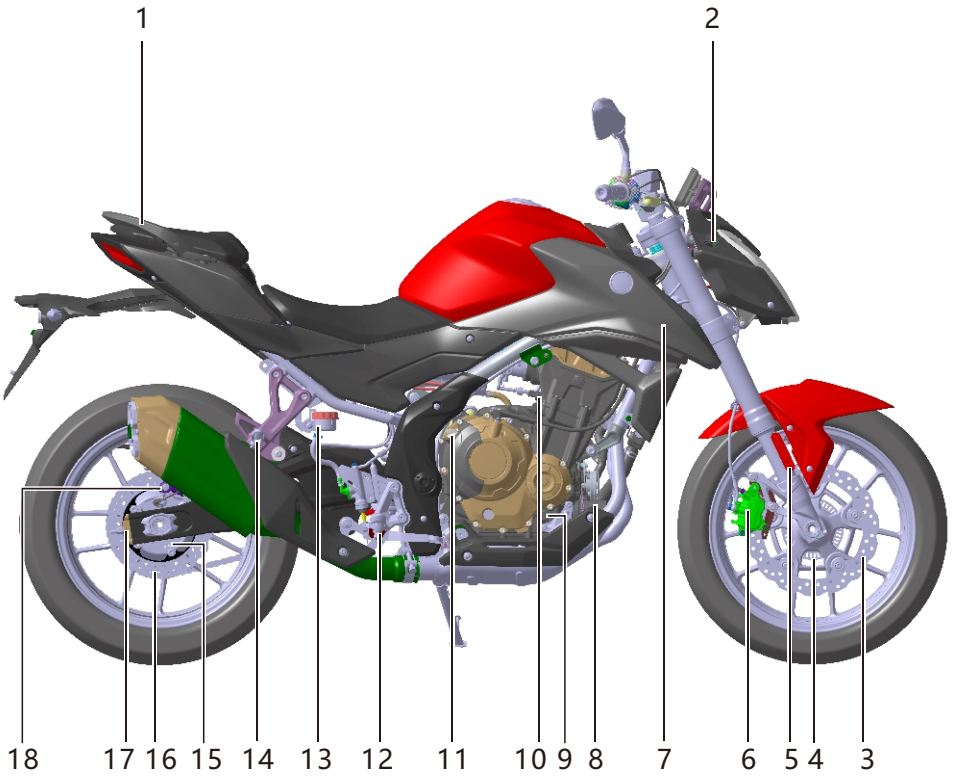
Left side

1.Rear view mirror body
2.Thermosta
3.Fuel tank
4.Driver seat
5.Passenger seat
6.Taillight
7.Rear turn signal
8.License plate lamp
9.Left pillion step body
10.Left footrest body
11.Kill switch of side stand
12.Side stand
13.Engine oil drainage bolt
14.Gear change pedal
15.Coolant filling-up port
16.Front brake caliper
17.Left side reflector
18.Headlight



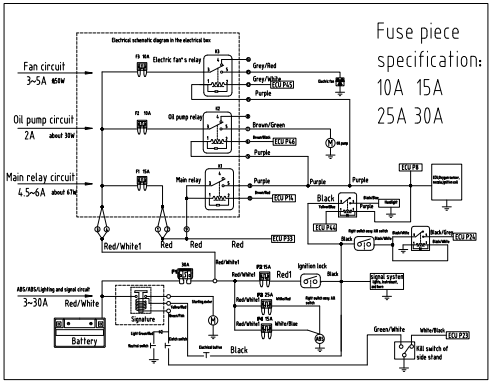
Right side

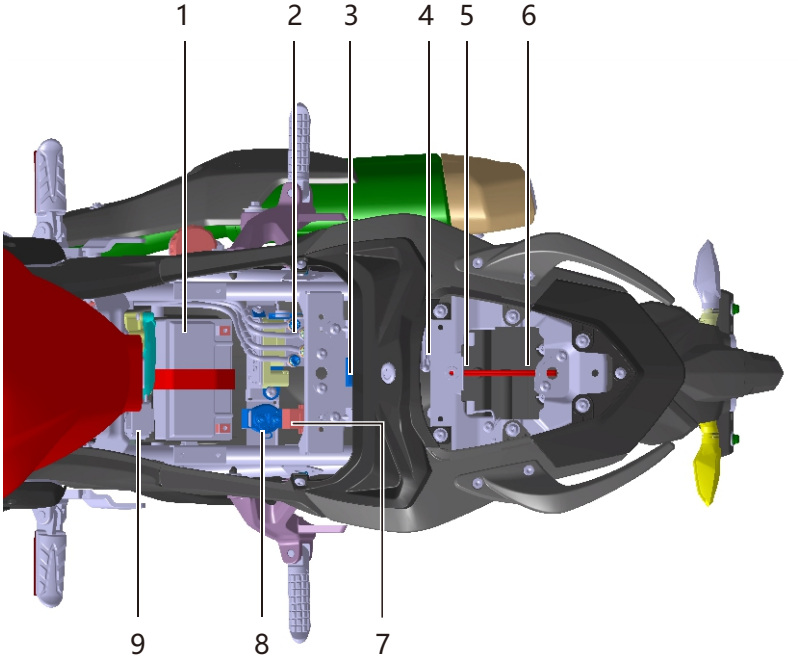
1.Passengers armrest
2.Front turn light
3.Front brake disk
4.Front ABS gear ring
5.Right side reflector
6.Front brake caliper
7.Heat radiator water
fitting-up port
8.Oil element
9.Oil pressure sensor
10.Water temperature sensor
11.Oil filling-up portand
12.Right footrest body
13.Rear disc-brake oil cup
14.Right pillion step body
15.Rear ABS gear ring
16.Rear brake disk
17.Chain adjustor
18.Rear disc-brake lower pump



Lower side of seat

1.Battery
2.ABS Anti-lock device
3.Interface of diagnosis device
4.ECU
5.Seat release cable
6.Accessories tool
7.Fuse case
8.Starting relay
9.Rollover sensor

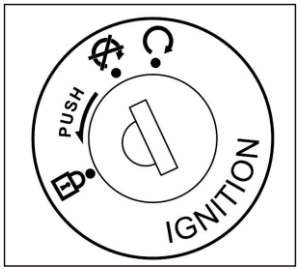




Fuse and controlling relay diagram
There are 6 branches for power supply of this model, in which everyone take power for battery positive terminal while each has one fuse, which were mutually independent without interaction.

V .Operation

Ignition switch



The ignition switch of this model is at front side of fuel tank, the ignition switch and steering lock are in one piece.
This model equips two pieces of key, please set one as spare use and well keep it.
The ignition/steering lock, seat and fuel tank lock share a same key.
The ignition switch has three positions:" ○ " means the circuit for ignition is connected, which could be started any time, all circuits in motorcycle are power on, at this position, the key could not be removed, position " ⊗ "means ignition circuit power off, the motorcycle could not be started, at this position, the key could be removed.
Position" 🔒 " is for locking up steering lock, please turn the handle bar to the left limit, the press down key at position "⊗ " , then turn it anti-clockwise to position " 🔒 ", at this position, the key could be removed, ignition switch is power off which could not be started, while steering lock is locking up which could not be turned.

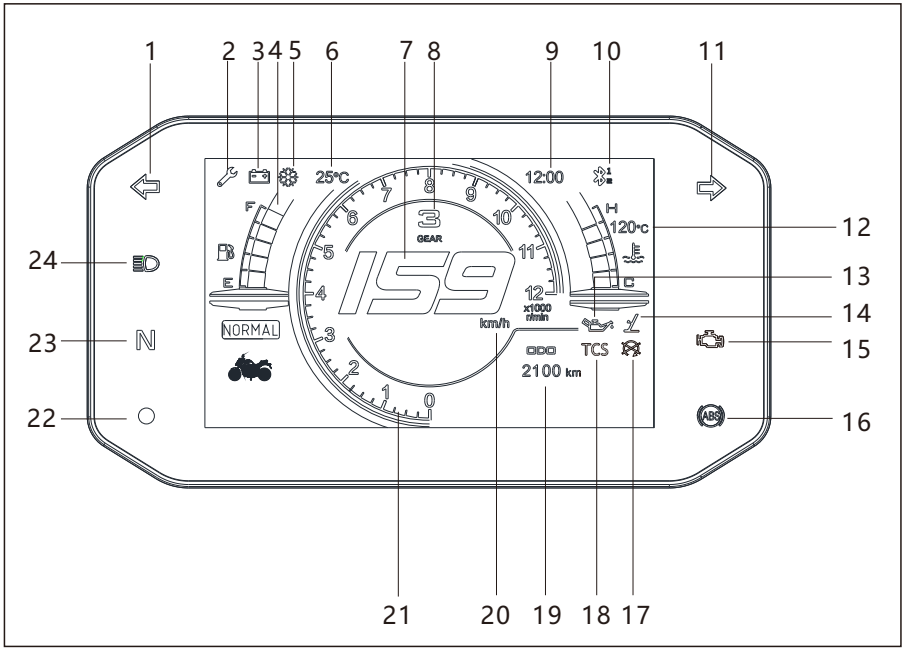
⚠Caution

This model equipped side stand only, for steady parking, turn the handle bar to left limit when locking up the steering lock, not right.

⚠Danger

Please don't turn the ignition key to " ⊗ " during driving, otherwise the motorcycle may get out of control.

Instrument and its indicating light



1.Indicating light for left turning signal
2.Indicating light of maintenance
3.Alarm light for voltage in battery
4.Fuel meter and alarm light for low fuel level
5.Indicating light for low temperature surrounding
6.Displaying for surrounding temperature
7.Speed display
8.Gear position display
9.Clock display
10.Bluetooth connection display
11.Indicating light for right turning signal light
12.Alarm light for coolant temperature and coolant temperature gauge
13.Oil pressure alarm light
14.Indicating light for kill switch of side stand
15.Engine malfunction alarm
16.ABS malfunction alarm light
17. Indicator light for kill switch
18.TCS switch indicator
19.Mileage total
20.Unit for driving speed
21.Engine rotation meter
22.Photo sensitive sensor
23.Neutral indicator
24.High beam indicator light

Turn the ignition key to position " ", the instrument begins its self-inspection The display screen gets on and begins its self-inspection, and show you the status of motorcycle at the moment.

The alarm light " "of engine malfunction, oil pressure alarm light " "and that " " for ABS and TCS slowly flash.

Warning

Direct wash on instrument by high pressure water is not allowed. Wipe up the instrument by gasoline, ethanol or organic solvent is not allowed, or the instrument may partly crack or color fading.

Left turning light " "

When push the left switch to" ",the indicator" "is on.

Caution

In case the turning light is damaged or in other malfunction,this indicator light " "flashes faster than normal situation, which reminding you the malfunction of turning signal light.

Neutral indicating light " N "

When engine is at neutral gear position, whose indicating light " N " gets on.

Engine malfunction alarm" "

When the managing system of engine is in malfunction,the alarm light" "is on. When turned ignition key to position " ", the indicating light" "gets on,After the engine started,the indicating lightt" " goes off immediately.

Warning

After the engine started, the indicating light" "goes on or flashing,at this moment, the motorcycle may not be normally stated, and the fuel system may not work.

In motorcycle driving, in case the indicating light" "goes on or flashing, please stop using, then contact the VOGE dealers.

Alarm light " " for ABS malfunction

When there was malfunction in ABS system, the indicating light " " gets on.

Turn the ignition key to position " " , the indicating light " " is slowly flashing, when the motorcycle started driving, the indicating light " " gets off immediately.

Danger

In motorcycle driving, in case the indicating light" "gets permanently on, please stop using immediately, then contact theVOGE dealers.

Indicating light for"TCS "

When motorcycle got power on, the indicating light for "TCS "is slowly flashing, when the motorcycle is in normal driving, the indicating light gets off.

When the"TCS" function is abnormal, its indicating light gets permanently on.

The TCS could be on or off through button switch of “TCS” on right switch assembly (Long press by 3S~5S), When it is off, the indicating light of "TCS" gets permanently on.

Every time when motorcycle gets power on, the default for "TCS" is on.

When the TCS is on, during driving, in case rear tire is skidding, the "TCS"may reduce engine torque to decrease tire skidding. At this moment, the"TCS" is under working status, whose indicating light may flash frequently.

Right turning indicating light"⇨"

When pushed the right turning signal switch of right switch assy. to"⇨",the light"⇨"gets on.

⚠Caution

When the turning signal light got damaged or without getting on due to other malfunction, the indicating light "⇨" flashes faster than under common conditions, which remind you to check the malfunctions on turning signal light.

High beam indicating light"≣D"

When pushed the headlight switch on left switch assy. upwards,the indicating light "≣D"gets on.

When pressed the overtaking light switch on left switch assy.,"the indicating light"≣D"gets on until you release the switch.

Oil pressure alarm light "🛢"

When oil pressure is lower than normal range, whose indicating light "🛢"ggets on.

When turn the ignition key to position" ◯ ", while indicating light "🛢" gets on; When engine started, the indicating light "🛢" goes off immediately.

⚠Caution

Oil pressure indicating light "🛢" is not for showing oil level, it reminds you the abnormal oil pressure.
Please periodically check and confirm the normal oil level. The only way for checking the oil level is: Check the oil level on oil gauge to confirm.

⚠Warning

In case the indicating light "🛢" gets permanently on when engine started or during driving, at this moment, keep driving may damage engine due to too low the oil pressure who makes poor lubrication. Under this case, stop driving and engine immediately, then check the oil level.

Displaying screen of TFT

When the instrument was power on: When it got power on, It shows you the information last time.

Light background of instrument: The instrument adjusts brightness according to strength of light, shift between modes between Bright/Dark.

Bluetooth connection: When the mobile phone connect through Bluetooth, the instrument can provide call reminder (Number + Name).

Rotation speed: The speed for engine rotation. (r/min – rotation/minute – rotation of crankshaft per minute current)Gear position: The current gear position of engine> (Not neutral gear position).

Speed: The driving speed of motorcycle. (km/h – kilometers/hour, or mph – miles per hour)

Water temperature: Current coolant temperature. (Unit is ℃, with displaying range between -48℃ ~143℃, when it is ≥112℃, the alarm light for coolant temperature gets on, the indicating bar for temperature gets in red, when it is out of range-48℃ ~ 143℃, it shows you " - - ").

Fuel level: Shows you residual fuel currently.

When fuel in tank is about to run out, the alarm light for fuel level gets yellow, who reminds you get fuel filling-up as soon as possible.

⚠Caution

During driving, the fuel in its tank is easy to get waving, when the residual fuel is not much, it may cause the indicating bar flashing, which is normal, please don't worry. When you found the alarm light for fuel got yellow, which means the residual fuel in tank is about 3L.

⚠Danger

Operate instrument during driving is dangerous, the hand leaves handle bar may reduce your control for motorcycle.

VOGE Global Function Description

1.The mobile phone Bluetooth is connected to the instrument cluster, it can display the information of motorcycle. (ODO/vehicle speed/engine speed/gear, etc, As shown in Figure 1)
2.Navigation history and track review.(As shown in Figure 2)
3.Navigation will be available, when the Bluetooth connected. Detailed introduction please page to the “Navigation” chapter.

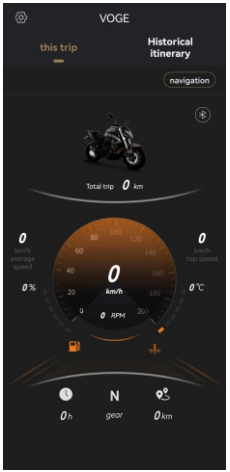


Figure 1

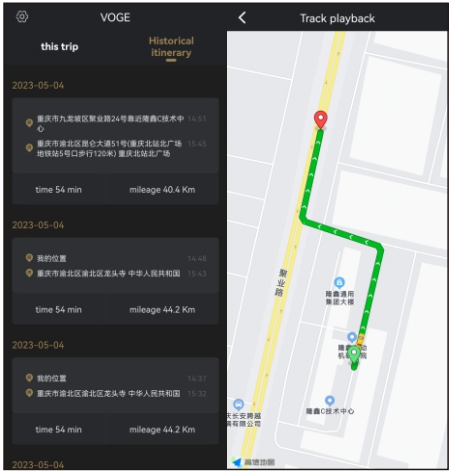
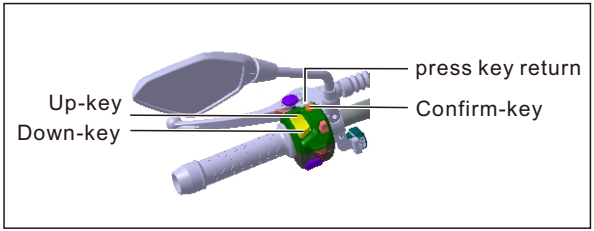


Figure 2

Introduction for instrument operation

1.Introduction for buttons



Common mode

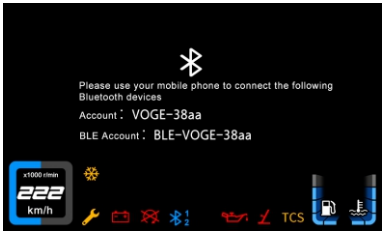
Sports mode

(1).Short press down-key for shifting to sub-total.Short press key Up to get into Bluetooth account or page of basic navigation.
(2).Short press confirm-key to get into page of setup.
(3).Under Bluetooth connection, when call coming in, short press down key to answer the call, short press up-key to ring off, connect headset of Bluetooth to mobile phone first, then answer the call.
(4).One-level menu: Setup, My motorcycle, Quit.
(5).Two-stage menu for Setup: Language selection, shift between Imperial and Metric, shift between pages, mileage subtotal and zero clearing, clock setup, Bluetooth connection, and phonebook sync.
(6).Two-stage menu for My motorcycle: Information and version number of My motorcycle.
(7).Get into My motorcycle, long press up-key to eliminate maintenance mark.

⚠ Caution
Short press is 0.5 second, while long press is 2 seconds.

2.Bluetooth connection

(1).Display the name of Bluetooth Short press up-key to enter interface for displaying Bluetooth name,Short press key return to get back to main page of meter.



(2).Bluetooth connection

search the similar device name as above, and connected with mobible phone, the bluetooth 1 icon will be illuminated, At this moment, the meter shows you the incoming call or its name.

(3).Simple Bluetooth navigation

(3.1).VOGE Global download

Apple download:
App Store

Android download:
Google Play

(3.1.1).Apple version download:

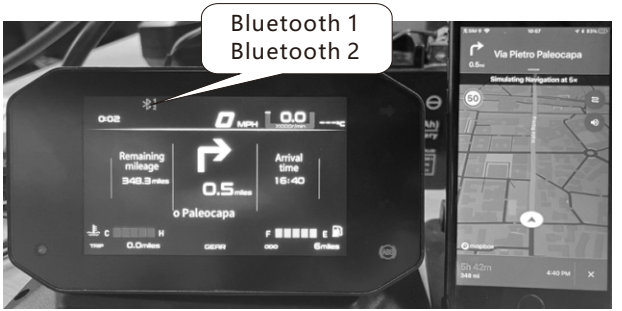
Scan the upper QR code Via the iphone camera or search the " VOGE Global" in Apple App store and download.

(3.1.2).Android version download:

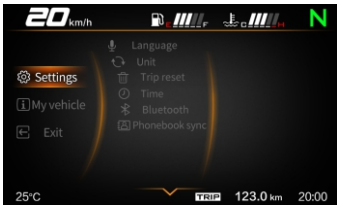
Scan the upper QR code Via the mobile phone scanning tools or search the " VOGE Global" in Google play store and download.

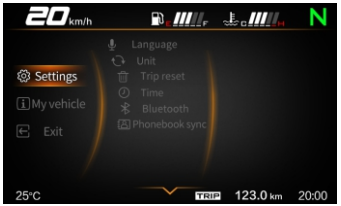
(3.2). Navigation manuels

Click the " VOGE Global" App, configure the maps settings, connect the Bluetooth again inside the App,When it was connected, the 2 signs for Bluetooth on meter get on, meanwhile the function for navigation works. (details operation pls check the manuals that involved)



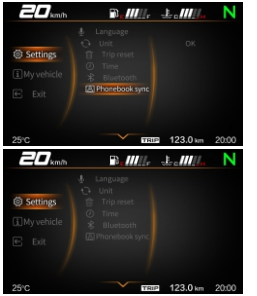
3.Enter page of setup

23	Enter one-level menu	Short press confirm-key on instrument to enter one-level menu.	

Enter My motorcycle	When got into one-level menu, short press up and down-key to select My motorcycle, then short press confirm-key to enter mode of selection, when the cursor selected page, short press confirm-key the Next page or Last page for shifting in circulation, when the cursor selected Back, short press confirm-key to get back the one-level menu. Short press key return to get back to menu 1st.	
Enter setup for motorcycle	Up and down-key to select setup for motorcycle; then short press confirm-key to get into two-stage menu.	

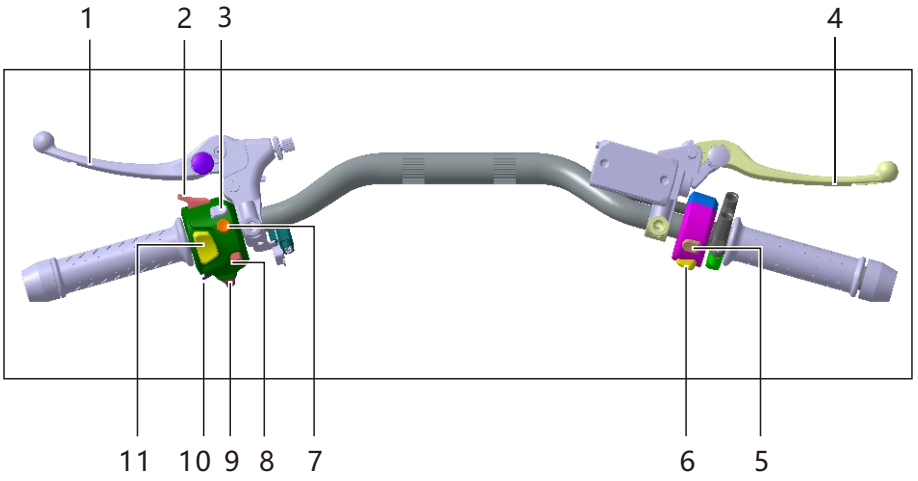
Select language	When got into two-stage menu, short press up and down-key to select “Language selection”, short press confirm-key to enter “Language selection”, press up and down-key to shift language between Chinese and English,Spanish,Italian, put cursor on the item then press confirm-key to select, then long press confirm-key to confirm and get back to two-stage menu.	
Shift between Imperial and Metric	When got into two-stage menu, short press up and down-key to select “Imperial shift”, short press confirm-key to enter “Metric and Imperial shift”, press up and down-key to shift between Metric and Imperial, Select the item you need by cursor, then short press key return to save the current setup then get back to menu 2nd.	

Zero clearing for mileage sub-total	When got into menu 2nd, press key up and down to choose “Sub-total mileage 0-out”, short press key confirm to get into “Sub total mileage 0-out”, press key up and down to shift between confirm and return, select the item you need by cursor, the short press for 0-out, when selected return by cursor, then short press key confirm to get back to menu 2nd; Also could short press key return directly to get back to menu 2nd.	
Clock setup	When got into menu 2nd, press key up and down to select clock setup, short press key confirm to get into clock setup, press key up and down to shift to tens place of hour, then short press key confirm to get into blinking, the press key up press key up and down to shift to ones place of hour, then short press key confirm to get into blinking, the press key up and down to set up parameters, Then short press key confirm to get back to item setup; and down to set up parameters, Then short press key confirm to get back to item setup; press key up and down to shift to tens place of minute, then short press key confirm to get into blinking, the press key up and down to set up parameters, Then short press key confirm to get back to item setup; press key up and down to shift to ones place of minute, then short press key confirm to get into blinking, the press key up and down to set up parameters, Then short press key confirm to get back to item setup; When setup finished, short press key return to save current setup and quit setup page of clock.	

Bluetooth connection	When got into menu 2nd, press key up and down to select “Bluetooth connection”, get into “Bluetooth connection” through short pressing key confirm; Press key up and down to shift between on and off, select the item you need by cursor, then short press key return to save current setup and back to menu 2nd.	
Phonebook sync	When got into menu 2nd, press key up or down to select “Phone book sync”, short press key confirm to get into “Phone book sync.”, select the item you need by cursor, then short press key confirm to download, the downloading disappeared, short press key return to save current setup and get back to menu 2nd.	
Quit setup page back to instrument page	Short press key return in menu 2nd to get back to menu 1st, then press key up and down to choose quit, short press key confirm or short press key return directly to get back to main page, then quit setup.	

Steering set switch

1.Clutch lever
2.High/low beam switch,
Overtaking switch
3.Key return on meter/TCS switch
4.Front brake lever
5.Shift button for driving mode
6.Electrical kill switch
7.Confirmation key of ENTER
8.Emergency button
9.Turning signal switch
10.Horn switch
11.Up & Down selection



High/Low beam and overtaking switch（When engine is under working)

When the high beam/overtaking switch push forward to" ≡D ",the high beam gets on,while the indicating light on instrument" ≡D " also gets on.

When the high beam/overtaking switch move back to" ≡D ",the low beam light gets on,while the indicating light on instrument" ≡D "gets off.

When move back the switch" ≡D ",the high beam is on,while the indicating light on instrument is on" ≡D ",and it recovers when released the switch.

Button " " for horn

When pressing" ",the horn rings.

Turning signal light switch

When push the turning signal light switch on left switch assy. to the left" ",the turning signal light at left side both front and rear are all on, the indicating light "on instrument is also on.

When the switch on left switch assy. push to right " ",the turning signal light at the right side both the front and rear are allon,its indicating light" " is also on.

When pressed the turning signal switch on left switch assy. inward, the turning signal lights get off while its indicating light on instrument also gets off.

Emergency light switch " "

When press down button" " , all the lights such as turning signal light and its indicating light, also the light on instrument gets flashing.

Please let other vehicle know by emergency light in case you met traffic accident or emergency.

Kill switch for electrical starting

With turn kill switch to position" " , the starting circuit for engine cut off, under this case, engine could not be started.

When engine is working, when kill switch turned to " " , the engine stops immediately.

Kill switch for electrical starting is the easiest and fastest way to let engine stop.

Front brake lever

Tightly hold the brake lever, the front wheel stopped, meanwhile the rear brake light gets on.

⚠ Danger

In case shift kill switch to position " " during driving, it may lead to rear wheel lock up even accident.

Please don't operate kill switch during driving.

Electrical starting button " ", when pressed down button" ", the circuit of engine gets connected, then start engine.

⚠ Caution

This model equipment the inter-lock between ignition and starting circuit, also with kill switch on side stand, then engine could be started under conditions only as below:

Engine is located at neutral gear position " N" , the ignition and kill switch are at position " ".

The engine is not in neutral gear position, the ignition and kill switch are at position" ", pick up side stand and tightly hold clutch lever.

USB power supply socket" "

The specification of output for this model's USB power supply socket is: 5V 2A

The water-proof cap on USB power interface is with the mark " ", pick the cap up the USB power supplying socket could be normally used.

⚠ Warning

When user need this function, please prepare a charging wire by himself. After used, please cover the water-proof cap in place to prevent water or dust getting in and reduce its working life.

ABS system

1.Deceleration and braking under normal situation, release the throttle first, tightly hold the handle bar and then brake. When driving speed fell, to avoid engine stop working, hold clutch lever to get into low gear position.

2.Decelerate before turning, when passing the turning, do everything possible to keep an even speed, in case it is needed, slightly brake, the sudden braking is forbidden.

3.Decelerate in advance in case met the wet road even water on road, take care.

4.Judge the road condition in advance to avoid sudden braking.

5.When the emergency was met, swiftly release the throttle and tightly hold the handle bar and brake by full power.

⚠ Caution

The model with ABS, when fully braking, the bounce with some frequency on brake lever or pedal is obvious, this is normal, don't worry, please tightly hold the handle bar.

⚠ Danger

In case decelerate from high speed, use the front or rear brake only is dangerous, the motorcycle is easy to skid or get out of control, please use the front and rear brake in a balancing way.

TCS traction control system

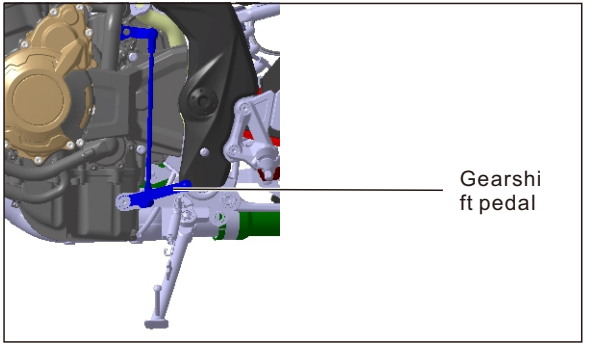
Confirm sliding difference according to differential device, compare the wheel speed for front and rear wheel. Then confirm stable surplus for rear wheel. In case the sliding difference was exceeded, the control system of engine will adjust torque from engine.

⚠ Caution

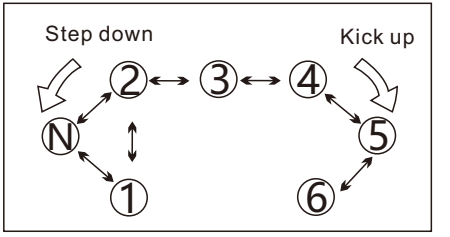
Some special operation of TCS under some special road conditions:
In case the front wheel gets apart ground under high accelerating speed, the TCS will reduce the torque for engine until front wheel touch ground once again. We suggest turn back throttle lever a little under this kind of situation to get back to stable driving as soon as possible.
On smooth surface, sudden acceleration or full throttle is not allowed which may lead to rear wheel skidding under engine torque, which makes unstable driving, this kind of situation could not be controlled by TCS.
On soft ground such as snow or sand road, the controlling and adjusting ability of TCS largely reduced, even makes rear wheel can turn enough, under this kind of situation, we suggest turn off TCS at this moment.
Except this special road condition, for safety, please always open TCS.

The shift between On and Off of TCS please refer to P16 and P20.

Gearshift device



This model equipped gearshift device with 6 gear positions, whose gearshift details are shown as below:



•The gearshift device makes engine stale work within normal rotation speed.

•Gearshift ratio is carefully designed according to engine performance, the driver shall select the most suitable gear position, please don't drive in high speed while in low gear position.

•To ensure smooth gearshift and reduce impact on rear wheel, use clutch in cooperation, before shift to low gear position, reduce driving speed and rise up rotation speed of engine.

•To ensure smooth gearshift and reduce impact on rear wheel, use clutch in cooperation, before shift to high gear position, rise up driving speed and reduce rotation speed of engine.

⚠ Warning

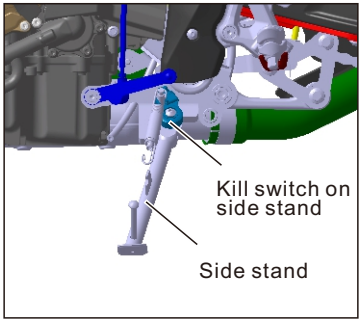
Any time, please don't control driving speed in semi-clutch way. Any gear position, sliding while tightly holding clutch is not allowed.

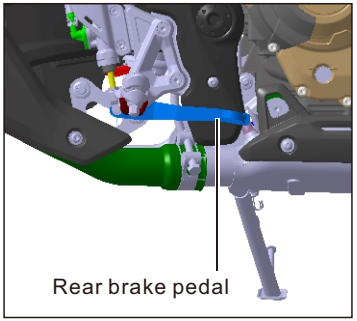
Side stand

This model equipped side stand for parking only. Kill switch on side stand is a design for safety, which is a part in starting circuit of engine.

Rear brake pedal

Step down rear brake pedal, the rear wheel brakes, while its indicating light gets on.





⚠ Warning

1.Please park the motorcycle on solid and flat ground, otherwise the parking is not stable.
2 In case the motorcycle need be parked on slope, make its head forward to uphill while getting engine into 1st gear position.to avoid turnover due to turning of side stand.
3.The design of side stand takes more consideration for the weight of motorcycle itself, so don't take your body on motorcycle when adopting the side stand to avoid distortion due to overweight.

⚠ Caution

1.When the side stand working, it just supports the motorcycle, the engine could be started only when it is in neutral gear; When engine is not in neutral gear, any gear positions the engine could not be started.
2.When side stand completely picked up, tightly hold clutch lever, the engine could be started at any gear position; When the engine is in gear position, once lay down the side stand, then engine stops immediately.

Engine starting

Make sure the side stand is laid down.

Check and confirm the kill switch for engine is at position" ⟲ ".

Insert key into ignition switch and turn to position " ⟲ ".

Confirm if engine is at neutral gear, the indicating " N" on instrument for neutral gear gets on.

When conditions above equipped, tightly hold clutch lever to ensure safety, right hand press electrical starting button " ⚡ " , at this moment, needn't turn the throttle lever.

When engine started, release electrical starting button immediately.

When engine started, let engine keep idly run to pre-heat enough.

This model equipped inter-lock for ignition circuit and starting circuit, engine could work only under conditions below:

-Engine is at neutral gear, the ignition and kill switch are both at position " ⟲ ", tightly hold clutch lever for ensuring safety.

-Engine is not at neutral gear, the ignition and kill switch are both at position " ⟲ ", pick up side stand, and tightly hold clutch lever.

⚠ Warning

Enough pre-heating makes better lubrication, to decrease engine abrasion, the colder the weather the more pre-heating minutes are needed. Long time idling working of engine is not allowed, because the poor heat radiation lead to engine overheated and damage the inner parts.

Under cold conditions, suitably turn the throttle grip while pressing the starting button to easier start.

The lubrication works only when the engine is running, so don't push the motorcycle forward for a long way when the engine is stopping. After the engine started, check the flashing or abnormal power on of indicating lights on instrument, in case it is, please top the engine and make corresponding inspection.

⚠ Danger

The exhasut gas of motorcycle has carbon monoxide, which is without color, smell, but poisonous.
In the place without smooth ventilation or indoors, start engine for idling too long is not allowed, to avoid poisoning.

Fuel filling-up

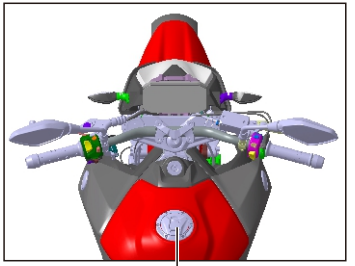
This alarm light reminds you fuel filling-up

Caution: In case the fuel is not enough, it leads to engine starting failure, or abnormal power output, under this case, keep driving will damage fuel pump.

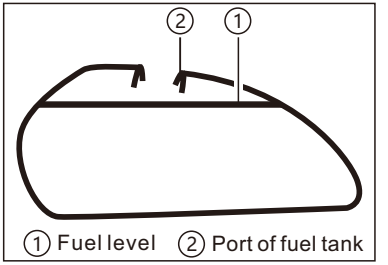
Don't run out the fuel in the tank, make fuel filling-up before the alarm light gets yellow.

Insert key into lock's core of fuel tank cap completely, then turn the cap clockwise to lift up. When fuel filled up, get the fuel tank cap to its original position, then powerfully press down to lock it up. Get key back, at this moment, the key could be removed. Please don't wash the lock's keyhole by water gun with high pressure to prevent water get into fuel tank.

Please adopt unleaded or low lead gasoline above 92#.



Fuel tank cap



Fuel tank capacity:16.5L

⚠ Warning

·The fuel is corrosive to painting surface, get its color fading and ugly. In case there is fuel on the painting surface, please wipe it up.

·The fuel may expand when it is hot, fully fill up may lead to overflow due to too strong the internal pressure makes fuel tank distort.

·When filling up the fuel, don't make it too full, let the fuel reach the bottom of anti-surge ring on fuel tank's port is enough.

⚠ Danger

Please stop the engine when filling up the fuel and get it far away from spark, smoke, fire or heat source.

VI. Malfunctions

Insufficient oil pressure

This alarm light indicates too low the pressure in lubrication system, at this moment, please stop the motorcycle and engine immediately.

The only way for checking lubricant level is viewing through oil view window.

The alarm light for oil gets on, one cause is too low the oil level. Check the oil level in engine, in case too low the oil level, please fill up.

In case alarm light for oil gets on, while oil level is correct, that means there may have some other causes. In case keep driving, these causes may damage engine. In case you confirm the light is on while oil level is correct, please don't drive any more and stop.

Please contact VOGE dealer immediately.

Too hot the coolant

This alarm light on means too high the coolant temperature.

When the engine overheated, continue the driving may damage the engine, so please follow the instructions below.

Stop driving and engine until the indicating light off. Check coolant and heat radiator when the motorcycle completely cool down.

–Check coolant level: In case too low the coolant level, fill it up.

–When the coolant temperature light got on, which means the fan of heat radiator is without working, please contact the service station for troubleshooting, it is better the station authorized by us.

The coolant is not enough

We suggest the operation below when the coolant is not enough or the heat radiator blocked by mud or sand:

–Reduce the loading to decrease the engine heat.

–Keep the engine idly run when in the traffic, don't turn the throttle to avoid engine temperature rise.

–In case the operation above fail to cool down, please stop the engine and contact the service station for troubleshooting.

Malfunction in engine system

This alarm light on means there is malfunction in engine. Under this case, keep driving may lead to engine ignition failure or fuel supply stopped.

Please stop the engine, turn off the ignition switch, then start once again, in case the alarm light goes off, please keep driving, in case still on, please contact the service station nearby,

Engine starting failure

When engine is at neutral gear, if the kill switch is working.

When engine is at gear position not neutral, if the kill switch is working, tightly hold clutch lever, the side stand was picked up.

If the fuel is enough.

Difficult engine starting

If it is in cold temperature, in case it is, slightly turn the throttle when starting.

Battery power loss.

Too thick the oil; Confirm if the oil need be replaced.

Weak engine power

Check if the element of air filter is clean.

If the motorcycle is at high altitude.

Incorrect check and adjustment may damage your motorcycle and let you fail to find out the malfunction, which can't get the service of Quality Guarantee. In case you don't know much about the correct operation, please contact the VOGE dealer.

Malfunction inspection and repair

The content for malfunction inspection and repair in this book can only help you on normal problems, of course they are just basic ones, in case the troubleshooting failed, please contact VOGE dealer.

Ⅶ.Grinding-in

Grinding-in for new motorcycle

The grinding -in period is important to working life and fuel consumption, so before driving, read the User Manual carefully. (The correct driving within the first 1000km is good for motorcycle performance and bring you fun of driving.

Grinding-in for engine

•No matter the engine is hot or cold, before starting, idly start the engine for enough time, to let oil spread to all positions need lubrication.

•During this time, the rotation seed of engine in the first 500km should not be over 5000r/min, 50km/h, the second 500km without over 7000/min.

•During grind-in, the gear position and rotation speed of engine shall change usually, don't let motorcycle work in a same gear position or rotation speed for a long time.

•During this time, in case the engine works under fixed low speed with light loading, this may lead to bad matching for parts and greater wear-out, so please don't drive under even speed with light loading for long time.

•During grind-in, except emergency, avoid sudden acceleration or braking as possible.

No dragging for gear, get into lower gear before deceleration, let engine always works under comfortable situation.

•During this period, don't drive for a long journey, let engine have enough rest.

Grinding-in for tire

•The surface of new tire is smooth, so it is dangerous to driving too fast or at turning. To get the strongest gripping force, the grinding-in is important.

•In the first 200km, you can drive at turning in low speed until all angles of tire tread completely grinded-in.

•The protrusion on tire tread is dangerous, the grinding is a good way for avoid protrusion on tire tread.

Grinding-in for brake system

In the initial 500km, the new brake plate hasn't reached the best friction, to make up for braking loss, you can more powerfully draw the brake lever.

⚠ Danger
To get the best tire grinding-in, in its first 200km, sudden acceleration, turning or braking are not allowed.

Ⅷ.Adjsutment

Adjustment for direction handle

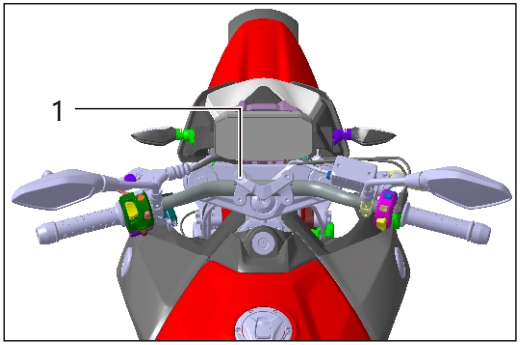
Adjust handle bar to suitable place according to your stature or driving habit.

If adjustment is necessary, please contact VOGE dealer for this work.

-Loosen bolt 1.

-Slightly turn handle bar to suitable position.

-Lock up bolt 1.

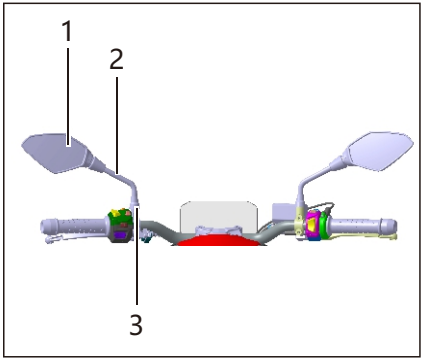


Adjustment for back-view mirror

Adjust back-view mirror to correct position according to your stature or driving pose.

-The mirror body 1 could be adjusted by hand directly.

-Loosen nut 3 to adjust mirror rod 2 by tools on board, when confirmed, lock up nut 3.



⚠ Warning	⚠ Danger
Sit on the motorcycle and keep it upright, make sure you can clearly see the object in range behind the tail of motorcycle by 10m with width 4.	Adjust the back-view mirror during driving may reduce your control on motorcycle, so please don't do this work during driving.

Adjustment for front brake lever

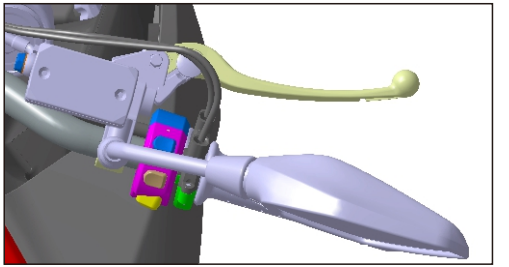
The adjusting button could adjust the distance between brake lever and throttle grip.

•There are 5 positions for adjusting, whose way is below:

-Push forward lever when adjusting.

-Turn the adjusting button to you the place you want.

-Release the lever pushing forward, the adjustment achieved.



⚠ Danger

Adjust front brake lever in driving is dangerous, take hands apart from handle bar may reduce your control on motorcycle.

Adjustment for throttle grip

•The throttle lever is for controlling engine rotation.

•Turn to your own direction is acceleration, the opposite direction is deceleration.

•The adjustment for clearance of throttle cable.

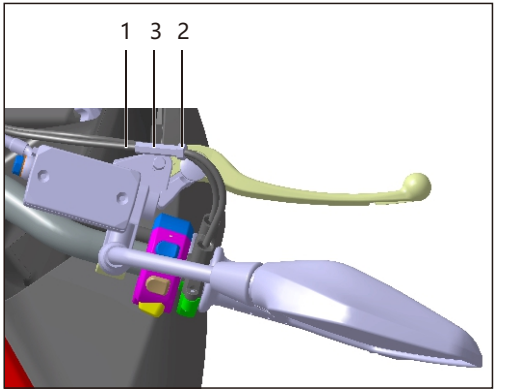
–Remove the rubber jacket 1

–Loosen the locking nut 2

–Turn the adjustor 3 to let the clearance of throttle cable to 2-4mm

–Lock up the nut 2

–Re-assemble the rubber jacket 1



Free play for throttle cable shall be 2-4mm

Adjustment for clutch lever

•When engine started, in case need braking or gear shift, tightly hold clutch le to let friction plates of clutch separate to cut off the power transmission from engine.

•The free play at end of clutch lever shall be within 5-8mm, in case it is incorre please adjust as below:

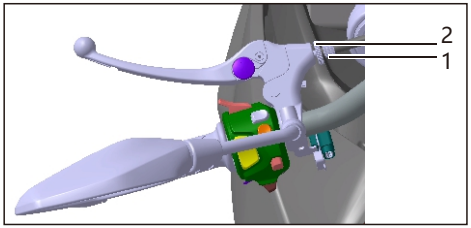
-Remove the rubber jacket

-Loosen locking nut 1

-Turn the adjustor 2, to make free play within 5-8mm.

-Lock up nut 1

-Re-assemble the rubber jacket



Free play for end of clutch lever shall be: 5-8mm

⚠ Warning

Too wide the free play of clutch lever is easy to produce abrasion and malfunction on clutch and gearshift device.

⚠ Caution

•After the clearance of throttle cable adjusted, make sure the throttle lever could return automatically whose idling speed should not rise.

•After the clearance of throttle cable adjusted, turn the handle bar to the left and right limit, whose idling speed should not rise.

Adjustment for gearshift pedal

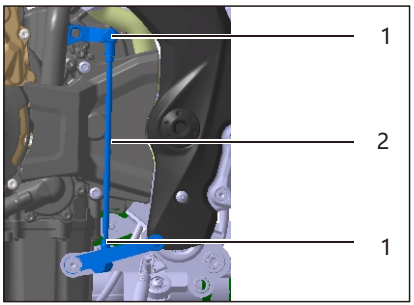
•During driving, the road conditions are various, gearshift pedal can change speed and traction force.

•The rod for gearshift pedal is adjustable to suit your driving habit.

-Loosen 2 pieces of hex. nut 1 for locking up connective rod for gearshift.

-Turn the connective rod 2 of gearshift, to adjust the gearshift pedal to the position make you comfortable during driving.

-Finally lock up the hex. nut.



Adjustment for rear brake pedal

•Keep the height of rear brake pedal at a suitable position, in case too high, it is easy to be stepped during driving, which lead to brake pads and plate usually touch makes friction even damage.

•For ensure reliable braking, the free play of rear brake pedal shall be within 25-35mm, in case its free play is incorrect, please adjust as below:

-Remove split pin 1

-Remove pin axis 2

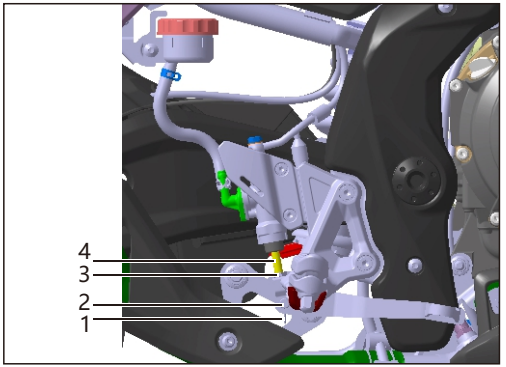
-Loosen nut 3 on adjusting stud

-Turn connective piece 4 of adjusting stud clockwise or anti-clockwise

-Turn clockwise the pedal gets up, anticlockwise it gets down.

-When the height of brake pedal adjusted to suitable position, lock up the nut on adjusting stud.

-Re-assembly is precisely opposite to disassembly.



Free play for rear brake pedal shall be 25-35mm
Fastening torque for nut of adjusting stud shall be 18 N.m

⚠ Danger

When re-assembling, please replace split pin for a new one.

When re-assembled, repeatedly press and release brake pedal, while confirming you can clearly feel the pressing point.

In case pressing point failed to be felt, please contact VOGE dealer.

In case adjustment is not correct, the brake pad and plate are always under stress, which may lead to their damage.

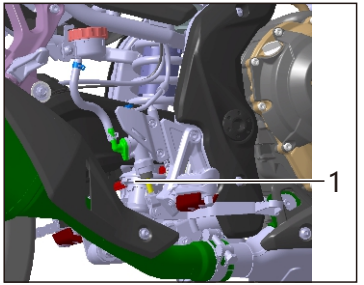
Adjustment for rear shock absorber

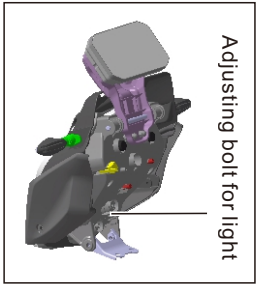
Adjust the pre-loading for rear shock absorber is to suit different drivers, loading, driving style and road conditions.

•The pre-loading for spring is adjustable.

-Look downwards, turn adjustor 1 anticlockwise, the spring gets soft.

-Look downwards, turn adjustor 1 clockwise, the spring gets hard.





he adjusting figure for light

Adjustment for headlight dimmer

•All the height of headlight must be correct under any loading of shock absorber.

•To keep safe night driving, adjust the light angle of headlight to suit different loadings.

-The adjusting screw is at the lower rear of headlight, please align the adjusting screw of figure by cross screwdriver.

-The low beam shall be turned clockwise, the light gets low, opposite is high.

-The high beam shall be turned clockwise,the light gets high, opposite is low.

⚠ Caution

Adjust pre-loading for rear shock absorber need tools for it only, the VOGE dealer will provide you this kind of service

⚠ Danger

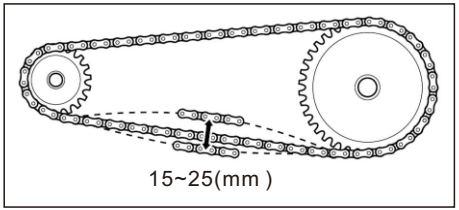
•Please don't adjust the pre-loading of rear shock absorber at will, otherwise incorrect adjustment will reduce you control on motorcycle.

•In case adjustment is needed, please contact VOGE dealer.

⚠ Danger

In case you don't know much about the height of light, please contact the VOGE dealer.

Adjustment for transmission chain



•Too tight or loose the chain are both incorrect.

•Too loose the chain, it may cause the chain drop during driving then lead to accident.

•Too tight the chain is bad for its working life, meanwhile increase resistance for power transmission.

The correct way for adjust chain is as shown:

In case the tightness of chain fail to meet the demand, the adjustment is necessary.

•Keep motorcycle upright by parking rack.

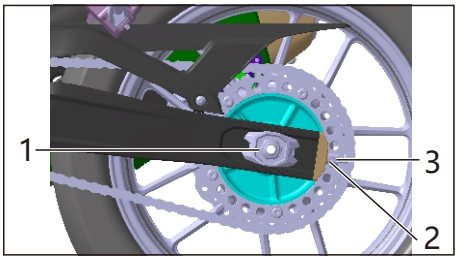
•Loosen nut 1 for rear wheel axle and adjusting nut 3, then adjust nut 2 according to chain tightness.

•In case too loose the chain, please turn the nut anticlockwise.

•In case too tight the chain, turn the nut clockwise, then powerfully push the motorcycle forward to get it loose.

•When the chain got the suitable tightness, fine tuning for nut at left and right, let the scale lines on adjusting piece and rear fork aligned.

•Lock up nut 1 for rear wheel axle, then lock up nut 2 and 3 on both sides.



Fastening torque for nut on rear wheel axle shall be 75±7.5N.m

Specification for driving chain:

Specification: 520 Links: 116 pieces

Oil seal Chain Locking ring without opening

⚠ Danger

This kind of driving chain is without opening, the one with opening could not be adopted, otherwise it leads to accident. Replace this kind of driving chain need tools for it only, poor riveting for links without opening will also leads to chain break up even accident.

IX.Check, repair and maintenance

The fuel

The fuel parameter when you purchasing the motorcycle is the most fuel saving way or under a fixed speed, which is quite different to your actual driving, which may be higher than the fuel parameter for reference only.

•The operations below may decrease the fuel consumption under correct driving:

–The driving shall be gentle, stable and without sudden braking as possible, the re-start and acceleration may use more fuel.

–Driving in the city is bad for fuel consumption, the frequent stop and move means frequent start of engine.

-Motorcycle shall drive under economic speed first, whose economic speed is 80km/h, the faster the bigger fuel consumption.

–Avoid driving for short distance. The fuel consumption in the first km after started is double times to normal situation due to the motorcycle hasn't reached the best working temperature.

–In case the air pressure in tire is not enough may increase the rolling resistance of wheel, and then increase the fuel consumption.

–Strictly follow the Period Maintenance table is important to save fuel.

Except the causes above, you may become more skillful with the mileage rise, for more driving fun, you may usually make sudden acceleration or deceleration, at this moment, the fuel consumption uprises compare to your former stable and gentle driving, which actually because of your change of driving style.

The fuel evaporation

When the fuel evaporation system gets failed, please contact the VOGE service station. Refit on fuel evaporation system is not allowed, otherwise the emission may not meet the standard. After removal and repair, check the connection of tube joint, leakage of pipeline, or block; Check the squeeze, crack or damage on rubber hose. The fuel vapor was released into carbon canister though the desorption tube, when the engine stopped, the activated carbon in the canister absorb the fuel vapor; When the engine is working, the fuel vapor in the carbon canister releases into combustion chamber through desorption tube join the combustion, which prevent the fuel vapor get into air directly to be pollution.

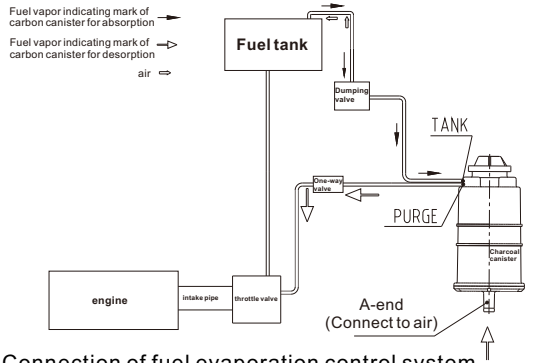
The absorbing tube also make the air pressure in fuel tank get balanced, when the air pressure in fuel tank was lower than air outside, supplement the air pressure through the absorbing tube on carbon canister; In this case, please make sure all the tube smooth without blocking and squeeze, make sure the correct installation of anti-toppling valve, otherwise the fuel pump may damage or fuel tank may get distortion even damage other parts.

The fuel evaporation control system works as below:

(1)When the gasoline in fuel tank gets heated, the gas vapor get out, absorbed after get though the end TANK of carbon canister of dumping valve.

(2)When the motorcycle inclined over 60°, the dumping valve gets closed, the gasoline failed to flow into carbon canister through dumping valve.

(3)The fresh air flow from end A of carbon cannister to the end PURGE to bring the gas vapor into throttle valve, then join combustion by getting though the air inlet tube.



Connection of fuel evaporation control system

Tool box

The tool kit was in its box under passenger seat, open seat lock, remove passenger seat, the tool kit could be seen.

Moving parts and their maintenance

After the driving under bad conditions, washing or in rainy days, please lubricate corresponding place.
For safe driving, keep the good lubrication for moving parts is a necessary work for getting its working life longer.

-Clutch lever's shaft
-Brake lever's shaft
-Bearing for brake pedal
-Shaft for side stand and spring hook for side stand.
-Shaft for main footrest, pillion step, and returning spring.

⚠ Caution

Except the chain needs lubricant for it only, other lubrication point we suggest adopt lubricant of lithium.

battery

Maintenance for battery

The battery on this model is completely free of maintenance which needn't check the electrolyte level and its ratio, but need to check the power charging periodically.

⚠ Caution

In case it is possible, charge the new battery by 30 minutes for the first time, which could effectively make working life longer.

The power charge for battery

In case the ignition lock is off, while the voltage of battery is lower than 12.6V, we suggest charge the battery.

•Charge the battery by stable DC power source or use the suitable power charger and strictly follow its instruction.

•The DC charging voltage shall be DC (14.5±0.3)V with stable current no more than 1A;

•The charging hours is 6 to 8, don't let the current than the maximum limit.

•The overcharging may shorten the batter working life, so don't adopt this way.

⚠ Danger

The battery may produce hydrogen, so keep it far way to heat source of park.

Wipe up by dry cloth may produce spark of static electricity, to avoid this, please adopt wet one.

•Cut off the power circuit with motorcycle before charging.

•Usually check the cleanliness of terminal or wire joint, in case already corroded or oxidized, please clean it up.

•In case the motorcycle is usually in driving, the motorcycle may charge the battery automatically. In case just a few times or driving for short time, the power in battery may not be enough. The battery may discharge by itself, whose speed depends on the battery specification or surrounding temperature. When the surrounding temperature gets rise, the discharge speeds up, for example, the discharge speeds up by 100% with each temperature rise by 15°C.

•In case the battery is without suitable charge in cold weather, the electrolyte may get frozen, then makes the battery damage or terminal distort, make the battery full of power can let it stronger in low temperature.

•Parking for a long time without driving need to cut off the negative terminal of battery first, otherwise the electrical parts on the circuit may gradually make power run out.

•Parking without driving more than 1 month need to charge the battery monthly. In case the battery is without charging for a long time may lead to natural failure.

•Correctly dispose the abandoned battery or electrolyte, don't let it be the pollution to the environment.

Disassembly and re-assembly for battery

•Before the disassembly and re-assembly, turn off the ignition switch first.

•Remove the negative terminal first when disassembling the battery, then the positive one.

•Install the positive terminal first when re-assembling, then the negative one.

•Every time when re-assembled the battery, turn on the ignition switch for 1 minute and then turn off to let the electrical equipment initialize.

⚠ Warning

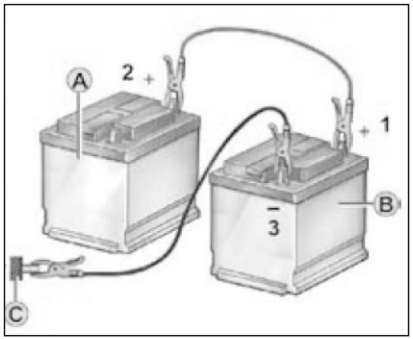
Don't put the battery up side down, otherwise the electrolyte may flow out from the breathing hole.

External power supply

•When the power in battery fail to start engine, the outer power source could be adopted for engine starting.

•When the outer power source is adopted, use the wire clip for spring only of completely insulated to avoid short cut or non-jump spark between guiding wires. The battery A is the power source on motorcycle while the battery B is an outer one. The positive terminal 1 on outer power source B connect to positive terminal 2 on power source A on motorcycle, while the negative terminal 3 connect to the metallic part C on engine to connect the ground. Start the engine, in case failed, wait for minutes and then start once again to protect the engine and battery.

Before removing the guiding wire of outer power source, let engine run for minutes, then cut off the negative wire and ground wire first, then the positive wire.



Maintenance for air filter

•The air filter locates under fuel tank, if it is blocked by dust, the air inlet may get harder, which reduce power output and increase fuel consumption.

•In case driving under dusty condition, clean up and replace the element more frequent.

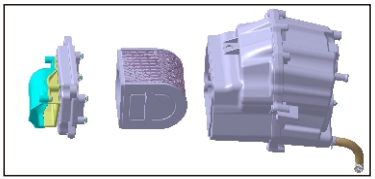
•The cleaning up and replacement for air filter element:

-Remove the seat.

-Remove battery.

-Remove 4 pieces of screw on cover of air filter's case, then draw it out as a whole set.

-Remove element of air filter.



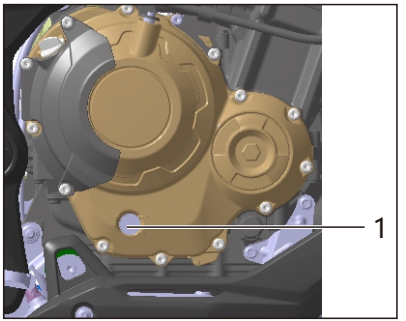
•The broken element may let dust get into engine and make engine damage, so please replace the broken one.

•In case the element is installed in wrong position, the dust may bypass the element and get into engine then get engine damaged, so please install it in place.

⚠ Caution

When cleaning up the element, the blowing air shall inlet from the side of metallic net, in case get in from another side, the dust may stay in the clearance of element, which largely reduce the effect of cleaning up.

Oil in engine



Check the oil level

•The oil inspection window and filling up port are both at the right picture cover of engine.

•The checking for oil level:

–Do this work when the engine is cold.

–Keep the motorcycle upright.

–Check oil level through oil view window.

–The correct oil level shall be within upper and lower scale lines on view window.

•In case the oil level is higher than upper line, outlet some oil.

•In case the oil level is lower than the lower line, inlet some oil.

•No matter inlet or outlet, check the oil level once again when the operation finished.

The maintenance for oil in engine

The oil can make sure the effective lubrication for parts in the engine, besides more, the oil helps cooling down the engine, in addition, the oil is also good for sealing the engine, so the maintenance of oil is very important.

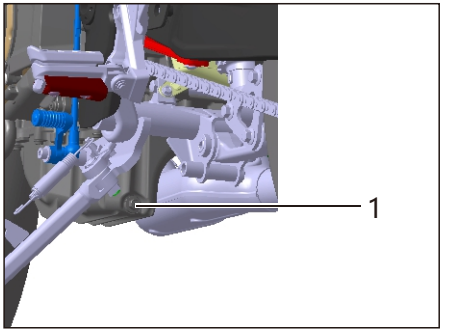
•Outlet the oil:

–In case too high the oil level, please remove the oil drainage bolt by socket wrenthe oil drainage bolt is at the middle place of engine bottom (right picture),.At left lower place of engine.

–After releasing an appropriate amount of engine oil, please reset and lock the engine oil bolts.

–Outlet some oil then re-assemble the oil drainage bolt. Too high or low the oil level may both damage the engine.

Please make sure the oil is at a correct level.



⚠ Caution

The oil may expand with temperature rise, so its level also changes.

The hotter the engine the higher the oil level, while the colder engine with lower oil level, which both are normal.

Keep the motorcycle upright when checking the oil level, in another word is vertical to the ground.

Replacement for engine oil

•Replace the engine oil when maintenance period reached.

•Replace the oil when engine is hot to totally drain off the old oil.

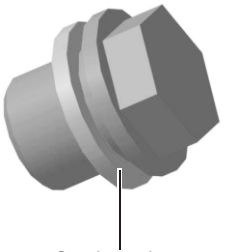
•The replacement for oil:

–Keep the motorcycle upright by standing rack.

–Turn the cap of oil filling-up port anticlockwise.

–Lay an oil tray under oil drainage bolt, then remove the bolt by tools and drain off the old oil.

Fasten the oil drainage bolt before filling up with new oil.



⚠ Warning

Replace the oil drainage bolt and its seal ring for a new one when re-assembling, in case still use the old one, it is easy to make oil leakage.

⚠ Danger

Drain off the oil when the engine is hot makes total drainage, but the hot oil and muffler may get user hurt, so before the drainage, wait for the bolt and muffler basically cooled down.

Oil filling up for engine

•Confirm the oil element already replaced and its cover already assembled.

•Confirm the oil drainage bolt and gasket are both replaced and re-assembled.

•Fill up with new oil from the filling-up port with volume of 3000mL (2900mL in case without replacing secondary oil filter, while filling up with 3400mL when engine needs be broken up and totally repaired).

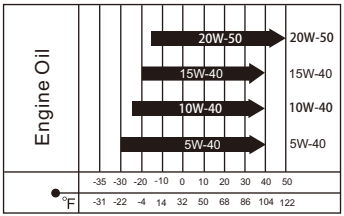
•Start the engine to let it idly run for seconds.

•Stop the engine and wait for one minute, Remove the oil gauge to check the oil level, when checking, the motorcycle must be horizontally upright, in case the oil level is under lower scale mark, please fill up to the middle position between upper and lower scale marks.

⚠ Caution

Replace the oil when engine is warm.

Specification of oil: 10W/40-SL or above with volume of 3.0L. Dispose the replaced old oil and element in environment friendly way.



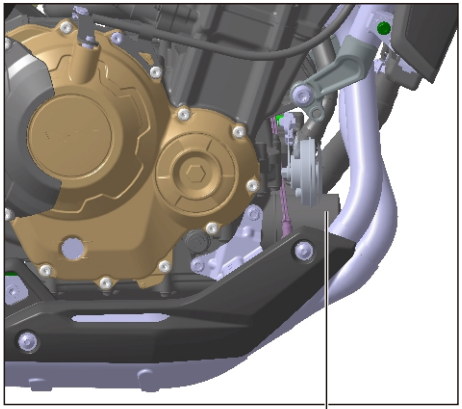
If you need to use them in winter,please exchange 5W-40 or 0W-40 low temperature resistant oil and you need to exchange 10W-40 or 20W-50 oil again in Summer.

⚠ Warning

Wrong oil specification or bad oil may damage the engine, EFI system and shorten the working life of spark plug and catalyst in muffler, don't use them.

Replacement for oil filter's element

- Replace oil element when each maintenance period reaches.
- Replace oil element when oil in engine was drained off.
- Hold the motorcycle by its side stand.
- Screw off oil drainage plug on left crankcase body, then drain oil off.
- Lay an oil absorbing paper or cotton under element cover of engine to prevent oil outflow to touch engine surface.
- Remove oil element on the front of engine by tool for this work only.
- Remove oil element then drain the oil off.
- Replace the oil element for a new one (Caution: Assemble element back in place, whose correct location for o-ring on element when assembling is important, otherwise there may have oil leakage. Fastening torque of oil element is 10N.m, while for drainage plug is 30N.m.)



Oil element cover

⚠ Warning

Check if the o-ring on element cover is perfect, please replace it for a new one if it is necessary. Replace oil element for a wrong one may damage engine, so please adopt the parts from VOGE factory only.

Coolant

Check and maintenance for coolant

The coolant can radiate the heat for hot parts in engine and keep its normal " working temperature" .

•The check and filling-up of coolant are all done in sub tank.

•Stop the engine.

•Check when the engine is cold, because the coolant may expand when it got hot.

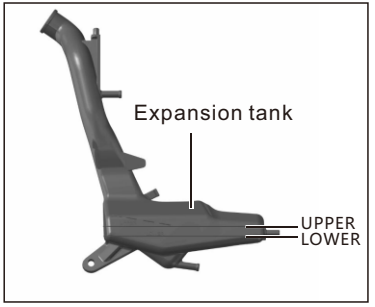
•Keep the motorcycle upright.

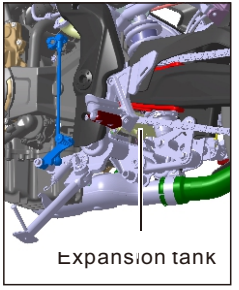
•Check the coolant level through expansion tank, whose level shall be between the scale line LOWER and UPPER.

•In case the coolant level is under scale mark LOWER, fill up from the port of expansion tank.

•In case the coolant level is higher than scale mark UPPER, the coolant may overflow from tube when it got hot and expand in working, for avoid hurting by hot coolant, fill up too much is not allowed.

•In case the motorcycle need fill up the coolant frequently, which means there is malfunction in the cooling system, under this case, please contact the VOGE dealer.





⚠ Warning

When the expansion tank is totally dried up, don't fill up coolant by yourself, because under this case, the air may already get into the cooling system and need to be exhausted, so please contact the VOGE dealer for maintenance.

The replacement for coolant

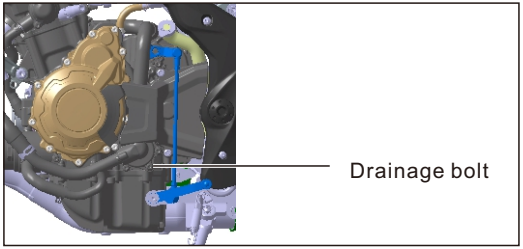
•The coolant drainage:

–Keep the motorcycle upright by standing rack.

–Lay a liquid tray under the engine.

–Remove the water drainage bolt, because all the heat radiation system is connected, so all the coolant may flow out from this port.

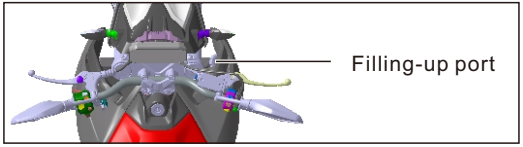
–After the old coolant drained off, install and fasten the water drainage bolt in place.



•The coolant filling-up:

–The coolant need be filled up from the heat radiator and expansion tank the two positions:

–Open the tank cap of heat radiator and fill up with the coolant



Check the full filling-up of coolant from the tank cap of heat radiator, pinch the water tube when filling up to exhaust until it is full, then well cover the tank cap.

–After the tank's cap of heat radiator covered, start and run the engine for 30 seconds to make the coolant fully reach every position need it.

–Make the engine stop, after the engine cooled down, open once again the tank's cap of heat radiator, check if the coolant already was full, in case the level fell down, please fill up once again until it is full, then well cover the tank's cover of heat radiator, repeat this action until it gets full, in case it is necessary, it may need to repeat two times or more.

–Remove the black rubber cap of expansion tank, then fill up with coolant to the level between scale mark UPPER and LOWER.

⚠ Warning

Fill up with running water is not allowed, otherwise it may damage the cooling system, the mixture among coolant of different brand of specification is not allowed.

•In case the air temperature is lower than the one marked up on the label, please adopt the coolant fits for lower temperature.

•The VOGE coolant is with ice point of -45°C of glycol so we suggest purchase or replace by Made in VOGE.

⚠ Caution

•To keep the coolant performance, replace each two years.

Coolant specification: ice point of -45°C of glycol

The filling-up volume: 2.0L

Dispose the replaced old coolant in environment friendly way.

⚠ Danger

When filling up the coolant, in case open the tank's cap of heat radiator after engine started, please let the engine cool down first, otherwise the hot coolant may inject out and make you hurt when you opening the cap of heat radiator.

Brake liquid

The brake liquid is an important part in hydraulic system for power transmission, so it need be reliable under high, low temperature or flowing performance at low temperature and good in anti-corrosive, so please adopt the correct one.

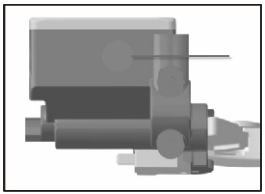
Check the brake liquid

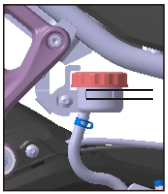
•Too low the liquid level in brake oil cup may let air get into brake system to reduce the braking performance. So please periodically check the liquid level.

•Check and fill up the brake liquid shall conduct at the front and rear oil cup.

•The liquid level shall not be higher than mark (UPPER or MAX),when it lower than mark(LOWER or MIN), please fill up immediately.

•The brake liquid is corrosive, which is bad for the surface of plastic or paint.





⚠ Warning

In case the filling-up of brake liquid is needed, open the cap of oil cup by yourself may let air and moisture in, which largely reduce the braking performance even failure, so please contact VOGE dealer to do this work.

The specification of brake liquid

•When there is impurity or moisture in the brake liquid, please filter or replace, otherwise it may reduce the pressure for braking and make bad braking performance, especially in wet weather or place.

•The brake liquid works more than 2 years, it may get bad due to the long work, please replace immediately.

•The specification for brake liquid is DOT4.

•Please dispose the replaced old liquid in environment friendly way.

⚠ Caution

Mixture of brake liquid among different brand and specification is not allowed due to the different formula of different brake liquid may let the braking performance fall down.

Driving chain

The driving chain for this model is the one with oil seal, the place of chain's pin has a special oil seal for sealing lubricant, this chain is the one without opening, so in case replacement is needed, please contact VOGE dealer.

Before driving every time, please check and confirm problems below:

– Flexible pin of chain – Roller damaged –Rusty or corrosive plate of chain.

– Jamming in turning of chain links.

– Any problems above were found, please contact VOGE dealer.

Wear-out on chain may also lead to abrasion on sprocket wheel, please confirm problems below:

– Wear-out on sprocket wheel - Damage or crack on tooth of sprocket wheel.

– Any problems above were found, please contact VOGE dealer.

Maintenance for driving chain

Dirt or dust on chain is bad for its working life, please clean it up and lubricate periodically, because there is o-ring and lubricant at place of chain's pin, so incorrect washing and lubrication may damage rubber o-ring and lubricant, which decrease chain's working life.

•Wash driving chain by steel brush is not allowed.

•When washed up, wipe up water or neutral cleanser immediately, then dry the chain up in air for preparing to lubricate.

•The chain with oil seal needs the oil for it only, evenly coat the inner and outer plate of chain with oil, when finished, wipe up the surplus oil.

•Some lubricant for chain have solvent or additive may damage seal ring of chain, so please adopt the one for this kind of chain only.

⚠ Caution

When replacing driving chain, please check the abrasion on driving and driven sprocket wheel, replace sprocket wheel at same time in case it is necessary.

In case there is not any oil for chain with oil seal, please adopt gear oil of SAE90 as substitution.

⚠ Warning

Please wash up chain by water or neutral cleanser.

Adopt solvent with volatility such as painting thinner or gasoline is not allowed.

Adopt washer with high pressure for chain washing is not allowed.

Tire

The tire connects the motorcycle and ground, it is very important, the incorrect specification and status is very bad for motorcycle performance.

The tire pressure in tire

•The wrong tire pressure makes its working life shorter.
•Too low the tire pressure makes difficult turning, and speed up athe tire wear-out.
•Too high the tire pressure decreases the contact area between tire and ground, which is easy to skid and out of control.
•When driving in high speed, the centrifugal force may open the air valve core on the tire, to avoid the sudden air leakage, we equip it a rubber with metallic liner, cap and connect with air valve core by thread.
•The pressure of tire's air charging rises with tire temperature, so adjust the tire charging pressure when it is cold and its temperature almost the same with surroundings.

⚠ Danger

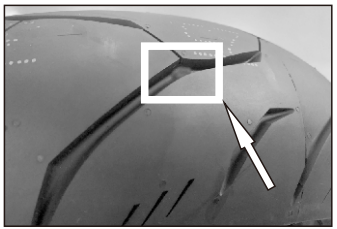
The incorrect tire pressure is not only bad for performance, but also lead to accident.
Overloading may lead to tire failure and bring motorcycle out of control.
Make monthly inspection on tire pressure

Under normal temperature, please check the tire pressure as table below.

	Pressure in tire
Front tire	230KPa
Rear tire	250KPa

Check the limit of tire wear-out

•The tire surface is with the mark of wear-out.
•In case the tire tread already reached the mark, which means the tire could not be used any more.
•The wear-out mark is near the TWI mark at tire edge, the wear-out mark is in the water drainage groove on tire tread, which is a protrusion, when the protrusion is worn out, means the tire already worn out and need to be replaced.
•The worn out tire may get penetrated and bring motorcycle out of control.



•When the depth of tire tread reached the minimum limit, its performance and gripping force may largely fall down.

The repair for tire

•Repair the small hole on tubeless tire, please remove the tire first, patch up inside of tire without outside, because the high speed driving may lead the outside patch outside flexible under centrifugal force.

•Within 24 hours after patched up, the max speed shall not be higher than 80km/h.

•In case the side of tire get broken while the breaking size is bigger than 6mm, the tire could not be used any more.

•In case many damages such as damage, scratch or wear-out were found on the tire, the tire need be replaced.

The replacement for tire

•When replacing the tire, two tires on one motorcycle with different brand, specification, tire tread or 1 new while another is old are all not allowed.

•After the tire replaced, the motorcycle needs to make dynamic balance and alignment, in case the dynamic balance is poor, the operation performance of motorcycle may fall down, also makes uneven wear-out on tire.

•The rolling direction of tire has the mark arrow, turn the tire along this direction only, which make sure water & skidding proof, improve gripping force, reduce noise and make working life longer, get the tire performance better.

•The tires with given specification are all strictly tested, who meet the demands of most road conditions, while the ones without test can't make sure the safety and suitability.

•Seal the contact position between the wheel rim and tire lip of tubeless tire.

•To avoid air leakage, the tubeless tire needs special tool and machine for disassembly and re-assembly.

•The tire replacement need be done by VOGE dealer, they are skillful and with necessary tools or machine.

Fuse chip

Before replacing the fuse chip, please know well about the root cause of malfunction then make troubleshooting.

•This model equipped one electrical box (There is a integrated circuit inside) and one fuse box.

•All the specification and usage of fuse chip are marked up.

– Fuse chip for motor power supply of ABS system (25A): Control the power supply for motor of ABS anti-locking up system. Spare fuse chip: 25A (1 piece white – In fuse box).

– Fuse chip for solenoid valve of ABS system (15A): Control the power supply for solenoid valve of anti-locking up system.

– Fuse chip for motorcycle except EFI system (15A): Control power supply for instrument, lights set, horn, flasher, starting relay, and switch assy. Spare fuse chip: 15A (1 piece blue – In fuse box).

– Fuse chip for EFI system (15A): Control power supply for ECU of EFI system, oxygen sensor, diagnosis joint of ECU, solenoid valve for carbon canister, fuel injector, and ignition coil which all the parts for EFI system. pare fuse chip: 15A (1 piece blue – In electrical box).

– Fuse chip for power supply of electric fan (15A): Control power supply for electric fan. Spare fuse chip: 15A (1 piece blue – In electrical box).

– Fuse chip for fuel pump (10A): Control power supply for fuel pump. Spare fuse chip: 10A (2 pieces red – In electrical box).

Electrical box

F1 fuse for power supply of EFI 15A	
F2 fuse for power supply of oil pump 10A	
F3 fuse for power supply of electric fan 15A	
F4 spare fuse 15A	F5 spare fuse 15A
F6 spare fuse 15A	F7 spare fuse 15A

Fuse box

Spare fuse 25A		Spare fuse 15A	
Spare fuse 15A	Fuse for solenoid valve of ABS 15A	Fuse for motor of ABS 25A	Fuse for non-EFI system parts 15A

•When the fuse chip was checked or replaced, please well cover the cap of fuse box to avoid water getting in in rainy day or after motorcycle washed, which is easy to lead to electrical malfunctions.

⚠ Caution

In case the fuse chip usually burns out in short time, which indicates there is malfunction in electrical system, please contact the VOGE dealer immediately.

⚠ Danger

•Please use the fuse chip with given specification, substitution such as aluminum sheet or iron wire are not allowed.
•Connect the fuse chip out of our suggestion is not allowed, otherwise it is very bad for circuit even catch fire or burn out the motorcycle.

Brake pad

The abrasion of brake pad passed the min. thickness limit may lead to poor braking performance, under some cases, it may lead to brake system damage. For the reliability for braking, the abrasion passed Min. thickness limit is not allowed.

Replacement for brake pad

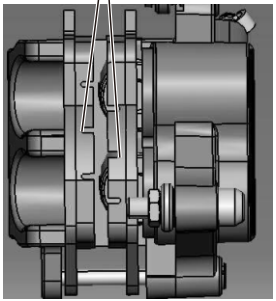
The correct replacement needs to remove the wheels, so this work shall be done by VOGE dealer.

No matter the front or rear brake pads, replace them in pairs as a set, in case only replace one piece of them, it may make imbalance brake even accident.

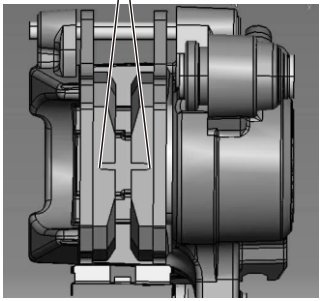
After the brake pads removed, don't operate the brake lever or pedal, otherwise the brake piston may return hardly, meanwhile making leakage of brake liquid.

•The oil or other dirt touches brake pad and plate when replacing is not allowed, in case if there is, please clean it up, otherwise it may make poor braking performance.

Limit for front pad:



Limit for rear pad:



⚠ Danger

When replaced for new pads, please repeatedly confirm the brake lever and pedal, confirm the pads tightly press the brake plate, meanwhile confirm the free travel of brake lever and pedal

Replacement for secondary fuel filter

•The secondary fuel filter is for filtering the impurity in fuel and stop it getting into fuel injector.

•The nozzle for fuel injector is a fine work, easy to be blocked by impurities, in case it is, the blocked fuel injector can not work and makes engine starting failure.

Please replace the secondary fuel filter on time.

-Remove the fuel tank, the front side of air filter could be seen.

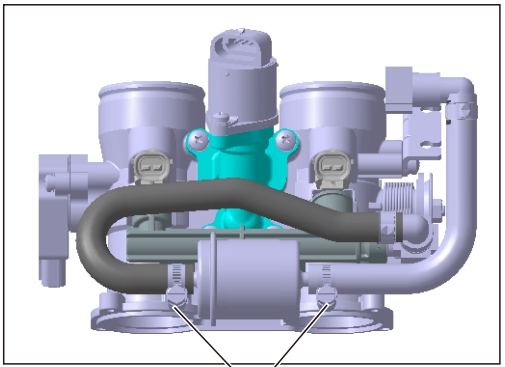
-Remove the clamp which tightly hold secondary fuel filter by screwdriver.

-Wrap the both ends of secondary fuel filter by cotton cloth to avoid the fuel splashing when removing the clamps on both ends, because there is residual fuel and pressure in the tube, the internal pressure makes the residual fuel splash out of the tube..

-Replace the secondary fuel filter for a new one.

-The re-assembly is precisely opposite to disassembly.

•When removing the secondary fuel filter, absorb the splashing fuel from tube inside by cotton cloth.



⚠ Caution
Replace the secondary fuel filter each 6000km.

Dispose the replaced secondary fuel filter in environment friendly wa

Replacement for lighting signal

•If there is no light signal, you may be in danger, because the light helps others easily pay attention to you and your motorcycle.

Please replace the broken lights.

The headlight, front position light, turning signal light, rear position light, brake light and registration plate light are all LED and sealed, in case broken, go to the service station for replacement. The replacement for lights please follow the description and specification below.

The dirt especially the grease on light's surface may be bad for heat radiation, which lead to light overheat even reduce its working life.

Parameters for electrical system	
Battery specification	12V10Ah
Headlight (High/Low beam)	12V 29.4W/12.84W
Front position light	12V 2.9W
Rear position light	12V 0.84W
Rear brake light	12V 1.08W
Front turning signal light	12V 1.8W
Rear turning signal light	12V 1.8W
Rear registration plate light	12V 0.257W
Specification for fuse chip	30A、25A、15A、10A

⚠ Warning

When a signal light is broken, replace for a new one with completely same rating power and specification, otherwise the different one may lead to electrical circuit overload or light broken very early.

Routine check table for key fastening parts				
Ref. No.	**Fastening position**	**Thread**	**Numbers**	**Torque (N.m)**
1	Front wheel axle	M18	1	75±7.5
2	Locking-up for front wheel	M8	2	18±1.8
3	Caliper of front disc brake and shock absorber	M8	4	32±3.2
4	Rear fork shaft	M14	1	120±12
5	Engine and frame (Rear lower suspension)	M10	1	55±5.5
6	Engine and frame (Rear upper suspension)	M10	1	55±5.5
7	Engine and frame (Front suspension)	M10	2	55±5.5
8	Engine and frame (Upper suspension)	M10	2	55±5.5
9	Fastening for rear suspension rack (Rear shock absorber, big and small swinging rack, frame and rear fork	M12	5	60±6
10	Rear wheel axle	M20	1	105±10
11	Main footrest, pillion step and frame	M8	8	18±1.8
12	Front shock absorber and steering stem.	M8	6	18±1.8

Please carefully and strictly make periodic maintenance according to requirement of this book.

•The maintenance in the table only the least user needs to do. In case your motorcycle is usually driving under bad conditions, the maintenance shall be more frequent than the table

•After a long driving in sandy weather or muddy road, the special maintenance is necessary.

•We suggest this kind of work shall be done by VOGE dealer.

•Correctly dispose the abandoned materials such as cleanser or waste oil, don't let them to be pollutions.

•The key for correct maintenance is the spare parts, in case you fail to confirm who made the parts, this kind of parts may lead to accident.

•We suggest this kind of work shall be done by VOGE dealer.

X. Maintenance for the motorcycle in long parking

Storage for motorcycle

•In case the motorcycle needs to park for a period without driving, the special maintenance is necessary, which need some special tools, equipment or technologies, because of this, we suggest these works shall be done by VOGE dealers.

•If your prefer to do these works by yourself, please do as below:

–Totally replace for new oil.

–Block the air inlet port of air filter and exhaust port of muffler by cloth with new oil, to avoid moisture get into engine,

–Totally drain off the fuel in the fuel tank.

–Remove the battery, then wash its surface by neutral soap water, meanwhile cleaning up the oxidizing material on its terminals.

–Store the battery in a room with temperature above 0°C.

–Adjust the tire pressure to stipulated one.

–Totally wash up the motorcycle.

–Spray the protective agent on rubber parts' surface.

–Spread the protective wax for auto on the covering parts of this motorcycle.

–Finally well cover the motorcycle by dry cloth and park the place with fine air ventilation.

⚠ Caution
Charge the battery monthly.

The re-use

•Totally clean up the motorcycle. •Remove the cloth blocked the air inlet port of air filter and exhaust port of muffler.

•Totally replace the oil in engine and oil element. •Re-install the battery. •Start the motorcycle.

Protection for motorcycle

•According to the daily driving, usually wash the motorcycle and keep it clean and dry.

•Wash up the dirt, bird shit, asphalt or salt on motorcycle surface as quick as possible.

•Try best to cover the motorcycle by dry cloth, long time exposed under sunshine may make covering parts get aged or color fading.

Cleaning up for motorcycle

•Wash the motorcycle by cold water.

•Totally wash up the motorcycle by soft cloth and neutral cleanser.

•Don't wash the motorcycle by spray.

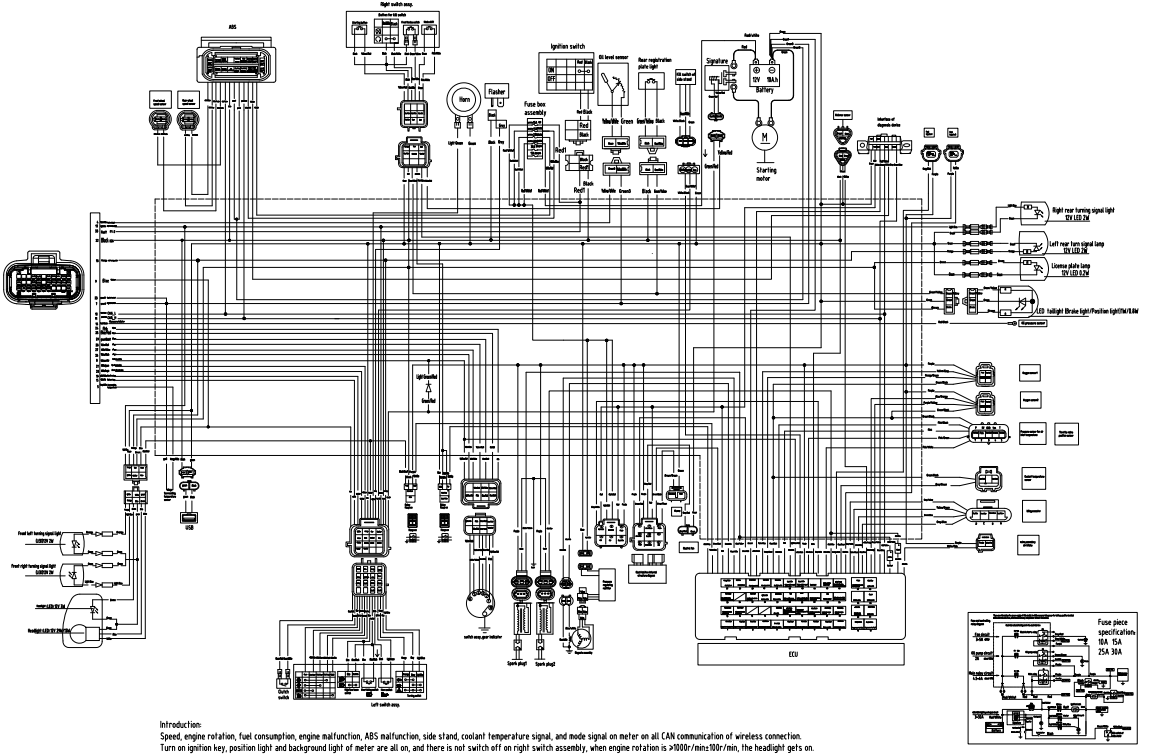
•Don't wash the motorcycle by high pressure water.

•When driving motorcycle in low temperature, high moisture, rain or after washed, there may be some moisture in the lights, turn on the light for a while the moisture may disappear, because there is design of ventilation hole, which are normal.

⚠ Danger

The wet brake may have poor braking performance, so please repeatedly test the brake system after motorcycle washed, and fast dry it up.

XI. Electrical diagram



Introduction:

Speed, engine rotation, fuel consumption, engine malfunction, ABS malfunction, side stand, coolant temperature signal, and mode signal on meter on all CAN communication of wireless connection.

Turn on ignition key, position light and background light of meter are all on, and there is not switch off on right switch assembly, when engine rotation is >1000r/min±100r/min, the headlight gets on.

Current direction for headlight: Battery positive terminal→Master fuse (30A) →Branch fuse (15A) →Relay→Headlight kit→Battery negative terminal.

Current direction for position light or background light or meter: Battery positive terminal→Master fuse (30A) →Branch fuse (15A) →Ignition switch→Position and background light of meter→Battery negative terminal.

Maintenance download

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