### Welcome to VOGE

Thank you for choosing VOGE.

Read these operating instructions and familiarize yourself with your new vehicle so as to can ride safely and confidently in different traffic situations. It contains important notes about operating the vehicle and equipment, as well as important suggestions. It also contains preventive maintenance and care instructions. if you have any questions about your vehicle, any authorized dealer will be glad to help you.

We hope you enjoy every moment of your vehicle.

### About this instruction

This instruction contains important information about the use of the vehicle, precautions, warnings and so on. It is very important to ensure that this instruction is always kept in the car at all time. The illustrations in this instruction may be slightly different from those in the vehicle, but the described principle is the same. When you sell this car, please remember to hand over this instruction as it is an important part of the vehicle. With continuous in-depth research and design improvement of products, VOGE has always maintained the standards of high safety and quality. The manual may not keep in line with the latest improvements of the vehicle, so the authorized dealers of VOGE will be ready to give you correct guidance.

Executive standard of this product: Q/LX 1023-2020

This instruction to: GB/T 9969-2088 and GB/T 19678-2005

The final interpretation right of this instruction is Chongqing Longxin Locomotive Co., Ltd

### Important notes

The following warning symbols are highly crucial to the users. So please follow these safe driving and maintenance procedures when you see these warning symbols.

A Danger Indicates potential hazard that could result in injury or death.

AWarning Indicates potential hazard that could result in vehicle damage.

ANotice Indicates more information to make driving easier and more convenient.

▲ Danger
This product is only suitable for people with similar driving licence, and please driving reasonablely and carefully . Please pay attention to the following points: Please do not refit the vehicle; Please abidelocal laws and regulations; Any refit of the device or electric appliance of this product will affect the noise, emissions and vehicle performance, etc.

With the improvement of vehicle, the condition of the real vehicle may not be the same with this manual, so please refer to the real vehicle. Any change will be made without prior notice.

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### Head

 1.Clutch handle
 2.Left brake switch
 3.Gauge
 4.Fuel tank lock
 5.Ignition switch
 6.Front brake main oil cup
 7.Right brake switch and the oiler
 8.Front brake handle



### Left side

9.Thermostat 10.Coolant injection port 11.Shift arm 12.Lateral support 13.Engine oil drain bolt 14. Vehicle label 15.Front disc brake pump



### **Right side**



### Underneath the seat

24.Fuse box35.ECU25.Flasher36.Tools26.Battery anode27.Accumulator28.Electrical box29.Toppling switch30.ABS controller31.Battery cathode32.Starting relay33.Supplementary relay34.Diagnose interface

4 way fuse and control relay diagram (There are 6 branches for motorcycle power supply, which get power for positive pole of battery and with 1 fuse each, who are independent without interference.)





### Loading and attachment information

#### 🛦 Danger

Incorrect loading, improper refit or maintenance may cause safety hazard; Ensure your vehicle is not overloaded and follow these instructions.

Always use the original parts from VOGE and the accessories that we approved; Non-original parts, improper installation of accessories or loading, etc will affect the performance vehicle, even result in a violation of the law. Please be responsible for your own safety and the safety of others.

#### ▲ Warinng

Our parts and accessories for this car have been specially designed and verified, so we highly recommend the original parts from VOGE and the accessories that we approved.

Any change of the whole weight of the vehicle will have a great impact on the dynamic performance, so you must accept the stipulated weight of the cargo, the number of passengers and the installation of accessories.

### Notes for driving

1. Passengers must be familiar with the peculiarities of this vehicle. The improper positions of the passenger's seat, such as the deviation of gravity center of passengers and the sudden movement, may affect the control of the vehicle. Therefore, passengers need to stay in the seats as smoothly as possible to avoid affecting the driver. Animals are not allowed to be with driver.

2. In order to reduce the impact on the gravity center of the vehicle, all luggage carried on the vehicle must be as low as possible. The luggage must be distributed evenly on both sides of the vehicle. Luggage should be avoided to extend the rear parts of vehicle.

3、Luggage must be securely attached to the vehicle, and ensure it is not movable before driving. When the vehicle feels unstable, recheck the luggage and readjust it if necessary.

4、Do not carry heavy or bulky luggage. Overload must affect the control and power performance.

5. Do not install accessories or carry luggage that degrades vehicle performance. Ensure the function of lighting system, ground clearance, brake performance, heeling angle, driveability, tire compression stroke, front fork working stroke and other performance.

6. Heavy handlebars or forks will affect the steering performance and cause unsafe driving.

7、Fairwater, windshield, lazyback and other large parts will affect the stability and control performance by not only increase the weight, but also reduce the power performance. These designs lack validation and will create insecurity.

8. Conversion to a three-wheeled vehicle is prohibited. And this vehicle can not be used for towing trailers or other vehicles. VOGE is not liable for any damage or injury caused by the refit.

Maximum load: no more than 150kg (including driver, luggage and accessories).

### Ignition switch

The ignition switch is located in front of the upper panel of the fuel tank. The ignition switch and the directional lock are integrated. The vehicle is equipped with two keys, one of which please keep for spare. Ignition lock/direction lock, cushion lock and fuel tank lock share one key.

The ignition lock has three positions:"  $\Omega$  "This means ignition circuit is connected. Vehicle can be started at any time, and all the functional circuits will be connected. The key cannot be pulled out in this position.

"  $\boxtimes$  " This means ignition circuit is disconnected. Vehicle can not be started. In this position the key can be pulled out.

" In order to lock the steering handle, please first turn the steering handle to extreme left. Press the key down once in this position" i and then turn it counterclockwise to the " i position. In this position the key can be pulled out. Vehicle can not be started because ignition circuit is disconnected, and the steering handle is also locked.

#### A Warning

The vehicle is only equipped with a side bracket support system. In order to ensure the stability of parking, try to turn the steering handle to the extreme left position, rather than the extreme right position when locking the steering handle.

🛦 Danger

Do not turn the key to the "  $\bigotimes$  " position while the vehicle is in motion. Otherwise the vehicle will go out of control.



### Gauges and indicator lights

- 1.Left turn light
- 2.Maintenance light
- 3.Battery low voltage alarm lamp
- 4.Fuel gauge and low fuel warning light
- 5.Ice alarm
- 6.Environment temperature
- 7.Speed

8.Gear

- 9. Clock
- 10.Bluetooth
- 11. WIFI indicator
- 12.Right turn light
- 13.Lateral support alarm light
- 14.Engine fault alarm light
- 15.ABS fault alarm light
- 16.Oil pressure alarm light
- <u>17.O</u>dograph



18.The speed units 19.Engine tachometer

- 20.Tire pressure display
- 21.Photosensitive sensor

22.Neutral position indicator light

- 23. High Beam
- 24. Water-thermometer and Coolant temperature alarm light.

Turn the key to"  $\Omega$  "position, and the gauge is started for self-check:

The display lights up for self-check and shows the current vehicle status.

Engine fault alarm lamp" 🖎 "ABS fault alarm lamp" 🞯 "and Oil pressure alarm lamp" 🛬 "light up.

Warning

Do not wash the gauge directly with high pressure water. Please do not use gasoline, alcohol and other organic solvents to wipe the gauge, otherwise it will cause cracks or discoloration.

#### Left turn light" 🖙 "

When the left brake's steering switch is pushed to the left, the indicator"  $\Leftrightarrow$  ", lights up.

### 

#### Neutral position indicator light" N "

The engine is in neutral position, and the "N" indicator light is on.

#### Engine fault alarm light" 🜣 "

When the engine management system of the vehicle fails, the alarm light " a "lights up. When the ignition key is turned to the"  $\bigcirc$  "position, the indicator " a "lights up; The indicator light" a "goes out immediately after the engine starts.

#### Warning

If the indicator light" <sup>C</sup> "lights up or flashing after the engine starts, the engine may not be ignited normally and the fuel supply system may stop supplying fuel, etc if you continue to use vehicle. If the indicator light" <sup>C</sup> "is always on or flashing, stop using the vehicle immediately and turn to VOGE's authorized dealer for help as soon as possible.

#### ABS fault alarm light" 🗐 "

When the ABS system of the motorcycle fails, the indicator light" 🗐 "lights up.

When the ignition key is turned to the " $\Omega$  "position, the indicator " (a) "lights up; The indicator light " (b) "goes out immediately after the engine starts.

# If the indicator light" (Ights up or flashing after the engine starts, abnormal brake of wheel and even locking will happen if you continue to use vehicle If the indicator light" (Ights) "is always on or flashing, stop using the vehicle immediately and turn to VOGE's authorized dealer for help as soon as possible.



#### TFT display screen

**Power on status:** When power on, the meter displays the information mode of the last setting.

**Backlight:** The meter automatically switches bright/dark mode according to light intensity.

**Bluetooth:** When the mobile phone is connected to the meter through Bluetooth, the meter can realize the call reminder (Number+Name).



**Tire pressure display:** When matched with a tire pressure sensor, the meter displays the current tire pressure of the front/rear wheels When tire pressure  $\leq 1.9$  bar or  $\geq 2.9$  bar, the tire pressure value and the corresponding tire icon turn red for alarm.

**Rotational Speed:** Engine speed(r/min-rotational speed/minute—The number of turns per minute of engine speed).

Gear: Current gear of the engine (Not in neutral).

**Speed:** The speed of the car(km/h-kilometer/hour, or mph-miles per hour).

**Water temperature:** Current coolant temperature value. (Unit: °C degree centigrade, Range  $20^{\circ}$ C~130°C, when temperature  $\geq 112^{\circ}$ C, the coolant temperature alarm lamp is on and the temperature indicator bar turns red as a whole. Outside the range of  $20^{\circ}$ C~130°C, it displays"--").

The fuel level: Show the residual fuel at the moment.

When the fuel is about running out, the fuel level alarm light may turn yellow, which remind you the prompt fuel filling-up.

#### Caution

The fuel in its tank during driving may wave, when the residual fuel is not much, the waves may lead to the indicator bar flash. This is normal, don't worry. In case the fuel alarm light gets yellow during driving, which indicates the capacity of residual fuel is about 3L.

#### 🛕 Danger

Taking off your hand to operate the instrument while driving will reduce the ability to control the vehicle.

#### Right turn" 🖒 "

When the left brake's steering switch is pushed to the left, the indicator"  $\Rightarrow$  "lights up.

#### A Notice

When the turning light is damaged or does not work due to other reasons, the flashing frequency of the indicator "  $\Box$  "will be faster than usual, warning to check the failure of the turning light.

#### High Beam" ≣⊃ "

When the High Beam switch of the left brake handle is pushed to the top, the indicator " ≣D "lights up. Press the overtaking light on the left brake, and the indicator light" ≣D " will lights up until you release the switch.



#### Engine oil pressure light" 🔤 "

When the engine oil pressure is below the normal range, indicator light" 😁 "lights up.

When the ignition key is turned to the " $\Omega$  "position, the indicator " $\mathfrak{T}$ "lights up; The indicator light " $\mathfrak{T}$ "goes out immediately after the engine starts.

#### A Notice

Engine oil pressure light" \*\*\* "means the engine oil pressure is abnormal, and the engine oil level need to be checked regularly. The only way to check the engine oil level is checking the position of the engine oil window level height.

#### A Warning

If the engine oil pressure indicator" \* "is always on after starting, continually use the vehicle will harm the engine by poor lubrication due to low engine oil pressure. Stop using the vehicle immediately and turn off the engine to check the engine oil level.

## This warning light warns you to refill fuel

Caution: The insufficient fuel in its tank may lead to engine ignition failure or abnormal power output, under this case, keep going on the ignition or driving may damage the motorcycle.

The fuel ran out in its tank is not allowed, fill up the fuel before its alarm light getting yellow.

### Notes for refueling

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Turn the ignition key clockwise to open and lift the tank cap. After filling the fuel, put the cap back in place and press the lock cap forcefully. The key can be pulled out when it is back in the place. When washing the vehicle, do not use the highpressure water gun to wash the lock cap of the fuel tank, preventing water from





Capacity of fuel tank :19L

entering the fuel tank. Please use No. 92 or above unleaded or low leaded gasoline.

A Warning

·Fuel oil can corrode paint surface, making it discolored. If fuel oil is attached to the paint surface, it should be immediately wiped off.

•Fuel oil will expands at high temperatures. Overfilling the tank can cause too much pressure inside the tank and the deform or spill.

Please do not refueling beyond the bottom of the tank.

🛕 Danger

Turn off the engine when refueling and keep away from fireworks or heat sources.

### Insufficient engine oil pressure

This warning light is on to warn that the lubrication system pressure is too low. Stop the vehicle immediately and turn off the engine.

Functional requirements of lubricants. The only way to check the lubricants level is by checking the position of the engine oil window level height. Low engine oil level is one of the reasons the engine oil warning light turns on. Check the engine oil level and refill the oil if the engine oil level is too low. If the engine oil warning light is on and the engine oil level is correct, some other reason may cause this situation. If you continue driving, these reasons may lead to engine damage. If this warning light has been on for a long time with the correct engine oil level, stop driving and go to professional repair sites for help as soon as possible, better at an authorized dealer.

### Coolant temperature is too high

This warning light is on to warn that the Coolant temperature is too high. When the engine overheats, engine damage will happen if you continue driving.

Follow instructions bellow:

Stop using the vehicle immediately and turn off the engine until the indicator light goes out. Check the coolant and radiator after the bike cools. If the coolant level is too low, check the coolant level and replenish the coolant.Radiator fan failure: if the coolant temperature warning light is on and the radiator fan does not work, go to professional repair sites for help as soon as possible, better at an authorized dealer.

### Insufficient coolant

If the coolant is insufficient or the surface of the radiator is seriously blocked by sediment, the following methods are recommended:

- -Lower the heat of engine by reducing the vehicle load.
- -Idle the engine and loosening the throttle in heavy traffic to avoid further temperature rise.
- -If the above methods does not work, turn off the engine and go to professional repair sites for help.

This warning light is on to warn the engine failure. If you continue driving when the warning light is on, the engine may stop working and the fuel supply system may stop supplying fuel, etc. turn off the engine and ignition switch, and restart the engine. If the warning light goes out, then the driving can be continued. If the warning light does not go out, please go to professional repair sites for help.



### Meter interface instruction

#### **1.Button instruction**



#### First interface of the insturment



#### Second interface of the instrument



- (1)Short press the Up button to enter the Internet mode.
- (2)Short press the Down button to switch between aggregate and subtotal.
- (3)Long press the confirm button to enter the Setting.
- (4) After the Blue teeth connected, shortly press the lower key for listening the call, then shortly press the upper key for hanging off the call, connect the headset of Blue teeth with mobile before conversation.

(5)Level 1 menu: Vehicle Settings, My Vehicle, Exit.

(6) Level 2 menu: Language selection, Metric and Inch System Switch, Interface Switch, Trip Reset,

Clock Setting, Bluetooth, WiFi, Tire Pressure Matching, Phone Book Synchronization.

(7)Level 2 menu of My Vehicle: My Vehicle Information, Various Version Numbers.

(8)Enter My Vehicle and long press the Up button to clear the maintenance symbol.



Short press is 0.5 seconds, long press is 2 seconds.

#### 2.Enter the setting page

Enter level 1 menu	Long press the Confirm button to enter the level 1 menu.	Image: Constraint of the second se
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Enter my vehicle	Press Up and Down to select my vehicle, and then press Confirm to enter the selection mode. Short press the Confirm button on "next page" and "previous page" to switch. Short press Confirm button on"Exit " to return to the level 1 menu.	Image: Market with the second seco
Enter vehicle setting	Press Up and Down button to select my vehicle; Short press the confirm button to enter level 2 menu.	Image     Image     Image

Language selection	Press Up and Down to select Language selection, and then press Confirm to enter.Use Up and Down button to switch between Chinese and English, and short press Confirm button to select.Then long press Confirm button to confirm and return to the level2 menu.	English   English   M     Image: Settings   Image: Settings   Image: Settings     Image: Settings
metric/inch switch	Press Up and Down to select Metric/ Inch switch, and then press Confirm to enter. Use Up and Down button to switch between Metric and Inch, and short press Confirm button to select. Then long press Confirm button to confirm and return to the level 2 menu.	Employee   Englage   MPH     Settings   Internet   MPH     My vehicle   Trip reset   MPH     My vehicle   Trip reset   MPH     E Exit   Settings   Settings     E Exit   Settings   Settings     Bluetooth   Time   Settings     Bluetooth   Time   Settings     Bluetooth   Settings   Settings     Bluetooth sync   20:00
Interface switch	Press Up and Down to select Interface switch, and then press Confirm to enter. Use Up and Down button to switch between Classic and Sport, and short press Confirm button to select. Then long press Confirm button to confirm and return to the level 2 menu.	Image: Settings   Image: Sport   M     Image: Settings   Image: Sport   Image: Sport     Image: State   Image: Sport   Image: Sport     Image: Sport   Image: Sport   Image: Sport  <

trip reset	Press Up and Down to select Trip reset, and then press Confirm to enter. Use Up and Down button to switch between Confirm and Exit, and short press Confirm button to select. Then long press Confirm button to confirm and return to the level 2 menu.	Image: Settings   Language     My vehicle   Unit   OK     My vehicle   Unit   OK     Exit   Bulletooth   Bulletooth     WiFi   UTPMS   WiFi     Exit   Phonebook sync   123.0 km   20:00
clock setting	Press Up and Down to select Clock setting, and then press Confirm to enter. Use Up and Down button to switch to Tens of hours, and short press Confirm button to enter, use Up and Down button to set up parameter. Then short press Confirm button to return to setting page. Repeat the steps above to set the Units of Hours and Minutes. Long press Confirm button to return to level 2 menu when the setting is done.	Image by the settings     Language     Document     20:00       Image by the settings       Image by the settings     Image by the settings     Image by the settings     Image by the settings     Image by the settings       Image by the settings     Image by the settings     Image by the settings     Image by the settings     Image by the settings     Image by the settings       Image by the settings     Image by the setting

Bluetooth	Press Up and Down to select Bluetooth, and then press Confirm to enter. Use Up and Down button to switch between Open and Close, and short press Confirm button to select. Then long press Confirm button to confirm and return to the level 2 menu.	Entropy   Entropy   Entropy   M     Settings   Unit   ON   Eff     Myvehicle   Trip reset   OFF   Eff     Myvehicle   Trip reset   OFF   Eff     Exit   Succooth   Wife   U     Off   Trip reset   Trip reset   OFF     Exit   Succooth   Succooth   Succooth     Signification   Signification   20:00
WIFI	Press Up and Down to select WIFI.and then press Confirm to enter. Use Up and Down button to switch between Open and Close, and short press Confirm button to select. Then long press Confirm button to confirm and return to the level 2 menu.	Image: Settings   Image: Settings   Image: Settings     Myvehicle   Image: Settings   Image: Settings     Myvehicle   Image: Settings   Image: Settings     Exit   Image: Settings   Image: Settings     Image: Settings   Image: Settings   Image: Settings     Image: Setti
tire pressure matching	When entered the secondary menu, press the upper and lower key to select the Tire pressure matching, which shortly press the OK key to enter; Press the upper and lower key shift between front and rear wheel, use the cursor then shortly press the OK key to confirm the matching, keep the air discharging for tire until the reminder indication of success. Finally long press the OK key to return the secondary menu.	End (M)     End (M)     End (M)     N       Image: Settings     Unit     Front Successful Rear     Front Succesful Rear     Front Succ

phone book synchronization	Press Up and Down to select phone book synchronization, and then press Confirm to enter. short press Confirm button to download. When download is completed then long press Confirm button to confirm and return to the level 2 menu.	Image: Settings   Image: Settings   Image: Settings     Image: Settings   Unit   Image: Settings     Image: Settings   Image: Settings   Image: Settings
Exit the Settings page	Long press Confirm button in the level 2 menu to return to the level 1 menu, and use Up and Down button to select Exit, then short press Confirm button to exit the setting page.	Image   Image   Image     Settings   Unit   OK     My vehicle   Trip reset   OK     Exit   Image   Image     25'C   Image   123.0 km     Settings   Image   Image     Image   Image   Image     States   Image   123.0 km     Image   Image   Image     Settings   Image   Image     Image   Image   Image

At the positions of front and rear wheel on the "My motorcycle" in instrument screen, there is the show for battery status of tire pressure sensor. When the battery power is not enough, it reports you the abnormality, and the driving interface on instrument may show abnormal tire pressure with sign"-.-", the red mark is lighting on. Disconnect the positive and negative terminals of battery first, then connect, the driving interface on instrument may show"-.-", or tire pressure, after a driving for a distance, it may show the normality.

### USB Power port"~~"

USB power port is installed on the headlight. Output specifications:5V 2A.The waterproof rubber cap

#### A Warning

Prepare the charging cable when using the USB power port, and cover the waterproof rubber cap to prevent it from water and dust.

### handlebar switches

- 1.Clutch switch
- 2.Dimmer and pass switches
- 3.Horn button
- 4. Turning light switch
- 5. Buttons on the instrument panel
- 6.Emergency light button
- 7.Choke switch
- 8.Front brake switch
- 9.ENTER Key





#### Dimmer and pass switches

Push the high beam and pass switches forward to"  $\equiv \mathbb{O}$  ", both the high light and the high beam indicator lamp"  $\equiv \mathbb{O}$  "will light up.

Pull the high beam and pass switches back to" ≝○", the low light will turn on and the high beam indicator lamp" ≣○ "will turn off.

The high light and high beam indicator on the instrument panel" **□**" will be on when pressing " **□**" backward and off when releasing.

#### A Notice

The headlight can still keep light up without starting the engine which depends on the battery. Please do not switch on the ignition for a long time before the engine starts.

#### Horn switch" 🛏 "

Press " 🗠 ", and the horn will ring.

#### **Turning light switch**

Push the turning light switch of the left brake to the left"  $\Box$ ", all the turning lights of left side and the left indicator " $\Box$ ", of the instrument panel will light up.

Push it to the right" □>", the turning lights of right side will light up as well as the right light indicator "□>".

Push it inside. Both the turning lights and indicator will be off.

#### Emergency light Button" rianglessimes "

Press " A ", then all the turning lights and the indicator lamps on the instrument panel will shine simultaneously. Please turn on emergency light for emergency parking and vehicle accidents to warn others.

#### Choke switch

Press the Choke switch to this icon"  $\mathfrak{P}$  ",he circuit of engine will be cut out ,and engine cannot start. The engine will immediately stop working if pressing choke switch to"  $\mathfrak{P}$  ".

The Choke switch is the quickest and easiest way to switch off the engine.

#### Front brake handle

Clutching the handle, the front wheel will brake and rear brake lamp will light up.

### ▲ Danger If press the choke switch" 🖗 "when driving, the rear wheel might be locked which leads to a crash. Please do not operate the choke switch on driving. Press electrical starting" 🔇 "to switch on engine circuit operation and start working.



### Transmission pedal



This vehicle has six-drive transmissions with the shifting theory as follows:



### Rear brake pedal

treading it will drive the rear wheel and light the rear brake light.



### The side stand

This vehicle only installs the side stand system covering a security choke switch, which is a part of starting engine circuit.





#### A Warning

1.If the ground is uneven or not hard, the vehicle cannot park steadily. Please park it on the solid and flat road.

2. If vehicle has to be parked on a slope, keep the front facing uphill and the engine in gear 1, which will avoid reversing due to side stand rotation as possible.

3. The vehicle weight is largely considered in designing side stand. Please do not lean on the motorcycle after parking, otherwise the side stand will be deformed due to the maximum bearing capacity.

#### A Notice

When the side stand is working, the engine can only start in neutral; The engine cannot start as long as the engine is in gear (i.e. not in neutral position).
 When the side stand is fully retracted and the clutch is gripped, the engine can start in any gear; The engine immediately switches off once putting down the side stand when engine is working.



### Adjustment before driving

#### Steering handle adjustment

Adjust the steering handle according to your height and driving gesture. If you want to adjust , asking dealers authorized by VOGE operate.

Releasing bolt1

Slightly turn the handlebar to proper position Lock bolt 1

#### **Rearview mirror adjustment**

According to your height and driving posture, adjust the rearview mirror to the correct position.

The rearview mirror body 1 can be adjusted directly





Bolt torque:25Nm

Nut3's torque: 40Nm

by hand Loosen nut 3 to adjust mirror bar 2 with the vehicle's own tool, and confirm the rear lock nut 3.

#### 🛕 Warning

After the steering handle adjustment is completed, repeatedly confirm whether there is interference between the handle and the fuel tank when turning to the left and right limits. If so, please readjust to non-interference, otherwise it will affect your control performance of the vehicle.

#### 🛦 Danger

Adjusting the rearview mirror when driving will reduce the control to vehicle . Do not adjust the rearview mirror when driving.

### Adjustment of the front brake handle

•Adjusting button can adjust the distance between the handlebar and the throttle handle.

•The distance can be adjusted in 5 gears, methods as follows: –Push the handle to the front as you adjust

-Turn the adjusting button to the position that you want -After finished the adjustment, releasing the handlebar

#### 🛕 Danger

It is dangerous to adjust the front brake handle when you are driving. Leaving the hands off the steering handle will reduce the control to the motorcycle.

### Adjustment of gear-shift pedal

•The road condition is variable when you drive your motorcycle, and the gear-shift pedal can be used to change the speed and traction force. •Adjust the gear-shift pedal bar to suit your driving habits.

-First loosen the two hexagonal nut 1 that lock the transmission linking rod. -Then rotate back to transmission linking rod 2 so as to adjust the pedal to proper position.

–Last lock hex nut.







### Adjustment of the rear brake pedal

•The rear brake pedal should be kept in an appropriate height. If too high, the brake plate is easily trampled in use, which will cause the crash between the brake friction plate and disc, damaging the friction plate and the brake disc.

·In order to ensure the reliability of braking, the free stroke of the rear brake pedal is 25-35mm. If the free stroke is not correct, adjust it according to the following methods.

-Take out split pin 1.

-Remove pin shaft 2.

-Loosen screw nut 3 on adjusting rod.

- Rotate the adjusting screw connector 4 clockwise or counterclockwise

the free stroke of the rear brake pedal:25-35mm the nut torque of the adjusting bar: 18 Nm

 Rotate the pedal clockwise to increase the height, on the contrary, turn the pedal counterclockwise rotation to decrease the height.

-Tighten the adjusting rod nut when the brake pedal height on its appropriate position.

-The reassembly process is the opposite of the disassembly process.

•New split pin should be replaced when reloading.

After the reassembly is completed, the brake pedal shall be repeatedly pressed down and the pressure point shall be clearly felt.

A Danger

· If you cannot feel the pressure point clearly, please consult the authorized dealers of VOGE for handling.

· If the adjustment is not correct, the force between the friction plate and the brake disc will always be exerted, which will damage the friction plate and the brake disc.



### Adjustment of throttle control handle

•The throttle control handle is used to control the engine speed. •Turning in the direction of oneself is acceleration, and vice versa is deceleration.

·Adjustment of throttle cable clearance.

-Remove the rubber sleeve 1.

-Loosen lock nut 2.

- Rotate the regulator 3 to adjust the throttle cable clearance to between 2-4mm.

–Lock nut 2.

-Reinstall the rubber sleeve 1.

### Adjustment of clutch handle

When starting the engine, braking or shifting gears, grip the clutch handle to disengage the clutch friction plate, thus cutting off the engine transmission power.

. The free travel of the end of the clutch handle should be between 5-8mm. If it is not correct, please adjust it in accordance with the following methods.

– move glue set.

-Loosen lock nut 1.

-Rotate regulator 2 to ensure free travel between 5-8mm.

-Lock nut 1. - Reinstall the rubber sleeve.

The free stroke of the clutch handle ends:5-8mm.

#### 🛦 Warning

Free stroke of clutch handle is too large, which is easy to cause wear and failure of clutch and shift-gear mechanism.

🛕 Notice

 $\cdot$  After the throttle cable clearance adjustment is completed, ensure the throttle control handle can automatically return to position and idle speed won't increase.

·Turn the direction to the left and right limits respectively, and the idle speed shall not be increased.




# Adjustment of rear shock absorber

Adjusting the loading of the rear shock absorber is to adapt different drivers, loads, driving ways and road condition. ·A flexible spring

-Looking downward, the spring will become soft as the regulator1 spins anticlockwise.

-Hard as the regulator1 spins clockwise.

# Adjustment of the height of headlamp

·The headlight should keep proper height for the shock absorber to adapt different loading.

·To ensure the safety of night-driving, it is required to adjust the beam angle of the headlight to meet the loading 's requirement to the vehicle light height.

-The back of the headlight is the position to adjustment bolt, and adjust the bolt with the cross screwdriver according to the light adjustment map.

-Rotate high light clockwise to turn down the light and vice versa.

-Rotate low light clockwise to turn up the light and vice versa.

🛕 Danger

·Arbitrarily adjust the loading of rear shock absorber will reduce you controllability to the vehicle.

·Go to dealers authorized by VOGE for help if necessary.

light adjustment map

Please call the dealer to ensure the real height of the light.



The dealers authorized by VOGE will prepare specialized tools for the rear shock absorber adjustment.

🛕 Danger







# Run-in period for motocycle

Before driving the motorcycle, you need to read carefully the instruction for the service life and fuel consumption greatly affected by the run-in period. (You will keep the vehicle's performance and attain fun with your right driving way in the first 1000 km miles).

## Run-in period of the engine

•No matter the motorcycle is start or not, you need to keep enough time for the engine oil all over the whole motorcycle before starting to drive.

•During the run-in period, the turning speed is not beyond the 5000r/min within 0-500km, and not beyond 7000r/min within 500-1000 km.

•The gear and turning speed need to change frequently during the run-in period and forbid to work continuously at one certain gear.

•The engine fixed on a low-speed(light load) will damage the motorcycle, thus producing a bad cooperation between driver and vehicle, therefore, you should not drive at a constant speed with light load.

•Except the emergency, avoiding the acceleration and brake during the run-in period.

·You should keep the engine at its best work condition and do not driving with unmatched gear, driving low-speed lows the gear in advance.

Keep enough idle time for engine and avoid the long-driving during the run-in period.



# The run-in period of the tire

·High speed driving and bend driving with the new smooth tire will cause danger. So it is necessary for vehicle to execute the run-in period and obtain the viscous force.

·Bending driving with low speed is a way to get tire run-in period in the first 200km including the completion of the run-in of the crown.

•The swelling part of the tire crown will increase the probability of accident and the run-in time is the best way to avoid the swelling .

# Run-in period of the braking system

The new braking disc is in its original state at the period of the first 500km and without achieve its best friction time. You can compensate the brake with your great strength to pull the brake handle.

### 🛕 Danger

To get the best run-in period of the tire, you need to avoid using the high speed driving, bend driving and emergency brake for your new tire in the first 200km.

# The driving of the motocycle

Check before driving

Without check before driving will increase the risk of the accident and damage. check items as follows:

- ·Turning system
- the flexibility of the steering handle.
- the steering stem loosens
- or not.
- ·Throttle
- -the clearance between throttle is correct or not
- -the flexibility of the throttle.
- •The brake
- -The brake handle and brake pedal is normal or not.
- -the position of the brake fluid on the brake oil cup is correct or not.
- -The clear pressure point of the braking process.
- -The water logging and the greasy dirt between the brake disc and the friction plate
- ·shock absorber
- -Press to return smoothly.
- $\cdot$ Transmission chain
- -No excessive worn-out and damage . -<u>Co</u>rrect degree of relaxation.
- Tire -The correctness of the tire pressure. -Tread depth without excessive worn-out. -No cracks or cuts in tread. Engine oil -The correctness of the engine oil level. ·Cooling system - The correctness of the coolant position -No leakage of coolant ·light -Headlight/the front position light, tail light/brake light, turning light, license plate light and instrument lights light up normally. indicator light -Controlled by the brake handle switch, high light indicator, Neutral indicator and turn indicator are normal Instructions and working fine. The engine oil pressure alarm lamp,
- engine failure indicator light, water temperature alarm light, and the oil level alarm lamp does not flash and keep light up after the engine starts. •The horn
  - -Correct function.
  - ·The choke switch of the engine
  - -Correct function.
  - ·The side stand
  - -It can be closed and released normally.
  - -The interlock function with the ignition switch is normal.
  - ·The rearview mirror
  - -Sitting on the vehicle keeps it upright and see clearly the object within a 4m wide range at 10m behind the tail end.
  - If not, please adjust the angle of the rearview mirror.



### The start of the engine

Lay down the side stand.

Check the choke switch of the engine on this icon " $\mathbf{O}$  " or not.

Insert the key into the ignition switch and rotate it into this icon"  $\mathbf{O}$ ".

🛕 Danger

Stimulant exhaust from motorcycles contains carbon monoxide, a colorless, odorless but highly toxic gas. To avoid the risk of poisoning, you should not idle the engine for a long time in a poorly ventilated place or in a room without ventilator equipment.

Check whether the engine is in the neutral position, if so, the neutral light of the meter "N" will light up. After meeting the following conditions, you should clench the clutch with your left hand to ensure safety and right hand to press the electronic start button" ()". No need to rotate the throttle handle at this time.

Release the electric start button immediately after engine ignition.

Start engine and allow engine to continue idling until fully warms up.

The interlock switch of ignition circuit and start circuit is designed in this car. The engine can only start under the following conditions:

–When the gear is in its neutral position, the ignition switch and the choke switch start the position on " $\Omega$ ". Hold the clutch handle to ensure the safety.

– When the gear is in its non-neutral position , the ignition switch and the choke switch start the position on " $\Omega$ ". Take back the stand side and clenching the clutch handle.

#### 🛕 Notice

The colder the weather is, the longer the engine needs to warm up accordingly. Adequate preheating can achieve better lubrication to reduce the engine wear and tear. Please do not idle the car for a long time, because the poor heat dissipation easily causes engine overheating and damages to the internal parts. In cold conditions, rotate the throttle properly while pressing the electric start button for easy start. Engine lubrication works only when the engine is running. So don't let the engine shut down to drive the motorcycle for a long distance. After the engine starts, please check whether the indicator light of the instrument is always on or flashing abnormally. If so, please turn off the engine immediately and check accordingly.

# Driving on the road

·Get in on the left and straddle the seat mat.

·Retract side stand.

•Adjust the motorcycle to the vertical ground orientation and straighten the steering handle. Keep the wheels forward.

·Grip the clutch.

• Slowly turn the throttle control handle in the direction of acceleration and gently release the clutch handle simultaneously to wait the clutch engages and start the motorcycle.

 $\cdot$  It is necessary for short-term driving to wear helmet, gloves, riding boots, motorcycle protective clothing and trousers before driving.

·If you are a fast driver, please notice the following factors which will affect your driving.

- Improperly adjusted shock absorber spring preloading -Loose clothing.

- Overweight and unbalanced loads will adversely affect your handling.

-Even small amounts of alcohol or drugs that act on nerves can have an adverse effect on how you feel and react.

Never drive a motorcycle under the influence of alcohol or drugs which act on nerves.

A Notice	🛕 Danger	
The motorcycle is equipped with a side stand/ignition	Motorcycle start without high - grade	
interlock switch that stops the engine as soon as the side	transmission will cause engine damage.	
stand is lowered in any other gear that is not in neutral.	You have to start in first gear.	

### 🛕 Danger



•Make sure the side stand is retracted to the top limit position before starting the vehicle, other wise they may hit the ground and cause a crash when turning left.

# Speed variators

 $\cdot The speed variators allow the engine to run smoothly within the normal speed range.$ 

•The speed ratio carefully designed to adapt to the characteristics of the engine, the driver should choose the

most suitable gear according to the driving conditions, forbidding to drive at low speed.

In order to ensure smooth shift and reduce the impact of the rear wheel and with the use of clutch, the speed should be reduced or the engine speed should be increased before the shift to low gear.

 $\cdot$  In order to ensure smooth shift and reduce the impact of the rear wheel and

with the use of the clutch, the speed should be increased or the engine speed should be reduced before the shift to the high gear position.

### A Notice

Do not control the motorcycle speed with semi-clutch at any time and forbid to grip the clutch to slide at any gear.

# Braking and parking

When braking, please return oil first to reduce the speed, and use the front and rear brakes to brake.

When the speed is low enough, put it into low gear and hold the clutch tightly.

•Put the gear into neutral and stop completely.

• When the front brake is braking, because the body leans forward and the front shock absorber is pressed down, the weight of the vehicle will be transferred to the front wheels instantly, so that the front wheels can be made more reliable and easy to stop the vehicle.

Only the rear brake is a potential hazard when you are riding on mountain roads. In the extreme case, the brake will overheat and cause serious damage. Rational use of front and rear braking and engine deceleration function.

After driving in water, rain or after driving, the disc brake will get wet and reduce the braking performance. It is recommended to use it after drying.



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# ABS system

1.Release the throttle and grip the steering handle in a normal braking deceleration case. Holding the clutch and lowering the gear must be required as the vehicle slows down.

2.Crossing the curve, the vehicle should brake and slow down. Keep an uniform speed while crossing. Braking is prohibited and slightly brake should be allowed for emergency.

3.Slow down and drive carefully when encountering severe road conditions such as snow and icy and water-logging pavement.

4.Pre-judge the road situation and avoid emergency braking as much as possible.

5. Release the throttle and grip the steering handle for full braking when emergency happens.

▲ Notic		
The vehicle is equipped with tipping switch. When the vehicle is tipped over, the engine will shut off		
automatically. After the vehicle is lifted up, the ignition switch key will be turned on to clear the fault		
and start the vehicle.		
The vehicle Installed with ABS system to brake completely will cause braking handle and the braking		
pedal to rebound obviously and frequently , which is normal. Do not be panic and be sure to hold the		
handle.		

🛕 Danger

When slowing down in the process of high speed driving, such as using only the front brake or the rear brake, the vehicle is easy to skid and out of control. Must use both front and rear brakes in a balanced way.

#### A Warning

•Keep the vehicle away from children after long driving in case that they could be burned by the heating engine.

•Do not park the vehicle on soft ground t in case of toppling over and being damaged. If the motorcycle parks on a gentle slope, shift the gear into the low gear and make the front of the motorcycle facing the uphill side to avoid overturning caused by the rotation of the side stand. •Parking or driving on inflammables as hay is prohibited. The high working temperature of the three-way catalyst in the muffler is easy to ignite these inflammables.

### Fuel

The fuel consumption parameter of motorcycle is different from the actual fuel consumption, which is lower than the the actual fuel consumption.

 $\cdot$  Reduce fuel consumption as much as possible under the following operations:

-Drive softly and smoothly, reduce the frequency of sudden braking in driving because of the restarting and acceleration consuming more fuel.

-Driving in the city is not good for fuel consumption. Frequent stop and walk means frequent start of the engine.

-Motorcycles often run at the economic speed, which is 90km / h. The speed increases from 100km / h to 140km / h, and the fuel volume increases about 20%.

-Avoid short distance driving. After starting, the fuel consumed by the motorcycle in the first kilometer is more than twice that of the whole vehicle, because the engine has not yet reached the optimal working temperature.

-Insufficient tire pressure will increase the rolling resistance of the wheel, thus increasing fuel consumption.

-Strictly according to the maintenance cycle inspection and maintenance of your motorcycle is also an important part of saving fuel.

In addition to the above reasons, driving skills will gradually improve with the increase of your mileage. In order to enjoy the driving fun, some quick acceleration and deceleration operations should be required, and the fuel consumption will be improved compared with your previous more



soft and smooth driving. In fact, this is caused by the change of your driving style.

### **Fuel evaporation**

When the fuel evaporation system fails, please contact dealers authorized by VOGE service store for maintenance. Do not change the fuel evaporation system, otherwise it may cause non-compliance with the requirements of the fuel evaporation emission regulations. After disassembly and maintenance, check that the connection of each pipeline should be good, and the pipe joint should be free of air leakage and blockage. The rubber pipe shall be free of extrusion, rupture, damage, etc. The fuel vapor in the fuel tank is released into the carbon tank through the desorption pipe. When the engine stops working, the fuel vapor is absorbed by the active carbon in the carbon tank.

When the engine is working, the fuel vapor in the carbon tank is released to the engine combustion chamber through the desorption pipe to participate in combustion, so as to prevent the direct emission of the fuel vapor into the atmosphere and cause environmental pollution. Meanwhile, the adsorption pipe also has the balance of the air pressure in the fuel tank. When the air pressure in the fuel tank is lower than the atmospheric pressure, the air pressure in the fuel tank can be supplemented by the air pipe and adsorption pipe of the carbon tank. Therefore, the pipeline shall be smooth to prevent blockage, extrusion and other phenomena, so as to ensure the correct

installation of the anti-dump valve, otherwise, the fuel pump or fuel the tank may be damaged, deformed, cracked, or other parts damaged.

The fuel evaporation control system works as following principles: (1)After the gasoline in the fuel tank is heated, the gasoline vapor evaporates and is absorbed by the tank through the dump valve. (2)When the vehicle tilts more than 60 degrees, the dump valve is closed, and the gasoline cannot flow to the carbon tank through the dump valve.

(3)The fresh air flows from the a end of the carbon canister to the purge end, and the oil vapor is brought into the throttle, and then through the air inlet pipe to the engine to participate in combustion.



# Three-way catalyst

The exhaust system of motorcycle is equipped with three-way catalyst, which can reduce the harmful components of engine exhaust. The engine will damage the three-way expediting due to the bad operation of the engine, therefore, should follow the following behaviors:

·Regular maintenance must be carried out in accordance with the quality assurance and maintenance manual.

·If the engine is running unstable, please contact an authorized dealer as soon as possible.

When the fuel alarm light is on, replenish the fuel as soon as possible. The low oil level will cause irregular fuel supply.

·Do not start the engine in the form of a cart or trailer.

·The ignition can only be switched off at idle.

### Troubleshooting

The content of troubleshooting can help you find the cause of general problems. Of course, these are just some basic judgments. If you still can't solve the problem, please send the motorcycle to the dealer authorized by VOGE.

### Fail to start the engine

In a neutral condition, the choke switch turns on.

In gear, the choke switch is in the open position, the clutch is clenched, and the side stand is in the retracted state. Whether the engine has enough fuel .Whether the engine has enough battery power.



# Difficulty starting the engine

-If in a low temperature, take a little throttle at the startup.

- -Whether the battery is enough.
- Judge whether the oil needs to be replaced due to its viscous feature.

### Weakness of the engine

-Check whether the filter element of air filter is clean.

- check whether the fuel filter is blocked.
- whether it is in a high altitude area.

·Incorrect maintenance and adjustment will damage your motorcycle and can not find the cause of the fault. Such damage can not enjoy VOGE's three guarantees policy.

If you are not sure how to operate correctly, please contact an authorized dealer.

#### A Warning

The very delicate three-way catalyst must use unleaded gasoline because the leaded gasoline will damage the three -way catalyst and other important components.

Danger Do not parking and driving on the inflammable materials as hay. The high temperature of the working three-way catalyst will ignite these objects.

### Inspection and maintenance

### On board tools

The tools are placed in the tool box under the cushion. Open the cushion lock and remove it to see the tool box.

It should be lubricated after using in the harsh condition or the rainy day or the vehicle washing. In order to drive safely, it is necessary to maintain good lubrication of working parts for prolonging service life.

Daily inspection and lubrication parts are as follows:

- -clutch handle shaft.
- -brake handle
- -brake pedal bearing.
- -side stand shaft and
- side stand spring hook.

-main and auxiliary foot rest shaft and return spring.

-drive chain.

### **Battery maintenance**

The battery of this model is maintenance free colloidal battery. It is not necessary to check the position and proportion of electrolyte regularly during the service life, but the charging condition should be checked regularly.

If conditions permit, the battery should be charged for 30 minutes before the first use, which can effectively extend the service life of the battery.

A Notice

Notice Except that the transmission chain is required to be lubricated with chain oil, other lubrication points recommend to apply lithium grease.



#### **Battery charging**

When the ignition lock is off and the battery terminal voltage is lower than 12.6V, charge the battery.

·Use a DC regulated power supply for charging, or use a suitable charger to charge the battery, and strictly follow the instructions of the charger.

·The charging voltage is (14.5  $\pm$  0.3) V and the charging current is not more than 1A.

·Charging 6 to 8 hours, please do not exceed the maximum charging current.

·Battery overcharge will shorten the service life of the battery, please do not overcharge the battery.

### 🛕 Danger

The battery will produce combustible hydrogen. Please keep the battery away from heat sources and sparks. Wiping the battery with a dry cloth will cause static sparks. So please wipe with a damp cloth to avoid static electricity.

Be sure to disconnect the battery from the on-board circuit before charging.

· Check the cleanness of the electrode and cable joint of the battery. If corroded or oxidized, they should be cleaned in time.

•When frequently used, the vehicle charging system will automatically charge the battery. If the vehicle is only used occasionally or for a short time, the battery may be low. The battery will discharge, and the discharge speed depends on the type of battery and increases with increase of ambient temperature. For example, the self discharge speed is doubled when the ambient temperature increases by 15 °C.

In extreme cold weather, improper charging of the battery will freeze the electrolyte. The battery will break, and the metal plate will deform if the electrolyte is frozen. Fully charging the battery can improve the frost resistance.

When the motorcycle is not used for a long time, the negative pole of the battery should be disconnected.

Otherwise, the power will be gradually exhausted by the electronic parts on the electrical circuit.

·If the motorcycle is not used more than one month, the battery should be charged monthly. The battery is easy to fail naturally when it is not charged for a long time.

·Please handle waste batteries or waste electrolyte environmentally.

#### Disassembly and assembly of battery

·Before disassembling and installing the battery, turn off the ignition key.

•When removing the battery, remove the negative terminal first, and then the positive terminal.

•When installing the battery, the positive terminal should be installed first, and then the negative terminal.

•After each installation of the battery, turn on the ignition and wait for 1 minute before starting the engine, so that the electronic equipment can be initialized.

#### **External power**

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•When the battery power can not support the engine starting, external power could be used.

• Starting with the help of external power, special spring clamp with complete insulation at both ends shall be used to prevent short circuit and fire jump caused by mutual contact of wires. Battery A is the vehicle power and battery B is the external power.

The positive pole 1 of the external power B is connected to the positive pole 2 of the vehicle power A, and the negative pole 3 of the external power is connected to the metal body of the motorcycle for

grounding. If the engine fails to start, wait a few minutes for the next start to protect the engine and battery. Allow the engine to run for a few minutes before removing the starting lead of the external power, and disconnect the negative lead and ground wire first, then the positive lead.





Do not turn the battery upside down as this will cause the electrolyte inside to come out of the vent.

# Air filter maintenance

•The air filter is located under the fuel tank. If the air filter is blocked by dust, the air intake resistance will increase, resulting in a decrease in output power and an increase in fuel consumption.

·If driving in dusty conditions, you should increase the frequency of cleaning and replace the air filter element.

·Cleaning and replacement of air filter element:

- Remove the seat cushion.
- Remove the battery.
- -Remove the four screws of the air filter housing cover and pull them out as a whole.

-Remove the element and the four bolts connecting them.

-Carefully clean the air filter element with compressed air.

•Dust will enter the engine from broken air filter or element, and the engine will be damaged. Please replace the broken filter.

·If the air filter element is not installed in the correct position, dust will bypass the element and enter the engine, damaging the engine. Make sure the filter element is installed in the correct position.

### A Warning

When cleaning the filter element, the gas should be blown in from the side with metal mesh. If it is blown in from the other side, the dust will stay in the gap of the filter element, which greatly reduces the cleaning effect.



# Engine oil maintenance

Engine oil can ensure the effective lubrication of the parts in the engine, cool the engine down and

seal the engine. The maintenance of the engine oil is very important.

# Inspection of engine oil level height

•Check the level of and inject the engine oil on the right side engine cover, as shown in Figure 1.

 $\cdot$ How to check the engine oil level:

- The engine is cooling down.
- -Then make sure the vehicle body is upright.
- check the engine oil level from the engine oil observation point.

- the correct engine oil level should be between the upper and lower scale marks of the engine oil observation window.

·If the engine oil level is higher than the upper mark, discharge a certain amount of engine oil.

·If the engine oil level is lower than the lower mark, inject a certain amount of engine oil.

•Whether it is to discharge or inject engine oil, the oil level shall be rechecked according to the above engine oil level inspection methods after operation.





·How to drain the engine oil:

-If the engine oil level is too high, remove the engine oil drain bolt

(as shown in Figure 1 below, on the lower left side of the engine) with a socket wrench.

-Reset and lock the engine oil bolts after draining a moderate amount of engine oil.

Unduly high or low engine oil level can damage the engine.

Make sure the engine oil level is in the correct scale.



### A Notice

The volume and level of engine oil will increase with the increase of temperature.

The higher the temperature, the higher the engine oil level, and vice versa, which is normal.

Make sure the motorcycle body is vertical to the ground when checking the engine oil level.

# Change Engine Oil

·Change engine oil when maintenance period is due.

•Change engine oil after the engine is heated, so as to completely discharge waste engine oil.

·How to change engine oil:

-Put the vehicle stand upright with the auxiliary parking frame.

-Unscrew engine oil filler cap counterclockwise.

-Place the engine oil drain pan under the engine oil drain bolt, remove the engine oil drain bolt with a tool, and drain the used engine oil.

Lock the drain bolt before filling in new engine oil.

### A Warning

It is necessary to replace the engine oil drain bolt and sealing copper washer. It is easy to cause engine oil leakage at this position if still installing the used bolt and washer.

#### 🛕 Danger

It will be more thorough to drain the waste engine oil after heating up the engine. Please wait for the drain bolt and muffler to cool down before draining the engine oil as the heated engine oil and muffler might burn you.





# Change Engine Oil Filter Element

•Change the engine oil filter element periodically. •The engine oil filter element should be changed when draining the engine oil.

·Remove lower air deflector.

•Pad a piece of engine oil absorption paper or cotton cloth under the engine oil filter cover to prevent overflow of engine oil and pollution to the engine surface when removing the cover.

·Remove the front engine oil filter element with special tool.

•Take out the engine oil filter element and drain all the engine oil.

·Replace the engine oil filter element with a new one.

•Reinstall the engine oil filter element. It is extremely important to correctly position the O-ring on the engine oil filter element cover to avoid engine oil leakage at this position.

Check the O-ring on the engine oil filter cover and replace it with a new one if necessary. Ensure install genuine element provided by VOGE as unsuitable parts will damage the engine.

engine oil filter element





#### A Warning

# Fill Engine Oil

·Make sure engine oil filter element has been replaced and the cover has been assembled.

·Make sure engine oil drain bolts and gaskets have been replaced and assembled.

-Firstly, fill about 2,500 ml of new "engine oil for VOGE EFI motorcycle" into the oil engine, ensure the engine oil level is between "MAX and MIN", and then tighten the engine oil filler cover. Run the engine at different speeds for 5 minutes. Check whether there is leakage at the disassembled parts when operating.

-Finally, check the engine oil level.

▲ Notice		
Fuel type: 10W/40-SJ and above Capacity: 2.5 L		
It is recommended to change the engine oil of 5W/30-SJ and above when working temperature		
is below 10 degrees Celsius.		
Please recycle the replaced fuel and engine oil filter element environmentally		

### 🛕 Warning

Inconsistent or inferior engine engine oil will damage the engine and components of the EFI system, and shorten the service life of the catalyst in the spark plug and muffler. Please never use it.



# Maintenance and Inspection of Coolant

The coolant can dissipate the heat from the high-temperature parts of the engine, keeping the engine appropriate working temperature. •Replenish and check the level of coolant at the expansion tank. •Switch off engine.

·Check the coolant level after the engine cooled down as the coolant is of thermal expansion.

 $\cdot Make$  sure the body is vertical to the ground.

•Observe the level of the liquid at the expansion tank. The height should be between LOWER and UPPER.

·If below the LOWER line, the coolant should be added from the expansion tank.

·Do not overfill coolant in case of scald as coolant will spray out of the overflow pipe due to temperature rise in use,

•Attention! Frequent replenishment of coolant indicates operation troubles of cooling system.Please go to dealers authorized by VOGE for maintenance.

### A Warning

Do not replenish the coolant without authorization if the expansion tank has been completely dried out. The air that might have entered the cooling system needs to be removed at this time. Please go to dealers authorized by VOGE for maintenance.





### Replacement of Coolant

·Discharge Coolant:

-Keep the motorcycle upright with dedicated parking racks.

-Place a tray under the engine.

-Remove drain bolts. All coolant will be discharged from the port as the whole heat dissipation system is interlinked.

-Install the drain bolts back.

·Fill coolant:

-Coolant is required to be filled from both the radiator and expansion tank.

-Open the tank cover (as shown in Figure 2) and add coolant

-Observe the coolant level and pinch the water pipe to inject water and exhaust air while until it is full, and then cover the radiator tank.

-After covering the radiator tank, start the engine for 30s to ensure coolant fills all parts that need cooling.

-Turn off the engine and open the radiator tank again after it is cooled down. Check whether the coolant is full. If not, fill it full. Cover the radiator tank and repeat the process until it is full. Sometimes twice is necessary.

-Finally, remove the black rubber cover of the expansion tank (as shown in Figure 3) and add coolant between the specified LOWER and UPPER level.

Warning The cooling system will be damaged by tap water which is prohibited. Due to different formulations, different types of coolant are not compatible.

Drain bolt







Water injection port

When the air temperature is lower than that indicated on the cooling label, the coolant with higher antifreeze performance should be selected.

•The coolant approved by VOGE is ethylene glycol coolant with freezing point of-45 °C. Please go to dealers authorized by VOGE to buy or replace coolant.

▲ Notice		
∙The coolant should be replaced every two years to ensure the performance of the coolant. Model: ethylene glycol coolant with freezing point of-45 ℃ Capacity: 1.5 L Please handle the replaced coolant environmentally.		



When filling coolant, make sure the engine is cooled while reopen radiator tank after switch on engine, otherwise the high-temperature liquid in the radiator will spray out and scald you once opening.

### Maintenance of Brake Fluid

As an important medium for transmitting braking force in hydraulic braking system, brake fluid is required to be of quality-assured performance both in HIGH and LOW temperature and well fluidity in low temperature as well as anti-corrosion. Please fill the proper brake fluid.

#### Inspection of brake fluid

•Air will enter the brake system if the fluid level in the brake-engine oil cup is too low. Braking efficiency will be significantly reduced. Check the brake fluid level regularly.

·Check the level of and replenish brake fluid at the front or rear brake fluid cups.

•The liquid should always keep in between the maximum (MAX) and minimum (MIN) level.

·Brake fluid is corrosive to a certain extent, which will corrode the paint or plastic surface.

### A Warning

Gas and moisture may enter when opening the brake fluid cup without authorization, which will greatly reduce or fail the braking performance. Please go to agencies authorized by VOGE to replenish or replace it.

### Model of brake fluid

•When polluted by moisture or impurities, brake fluid should be replaced or filtered in time, or braking performance will be affected due to insufficient dynamic pressure. This is especially important in humid areas.

•Brake fluid is easy to deteriorate due to long service time, over 2 years, and should be replaced in time.

Model: DOT4 Please handle the replaced brake fluid environmentally.

# A Notice



Do not mix fluid of different types or brands. Efficiency of brake fluid will be decreased due to inconsistent formulation.



### Maintenance of Drive Chain

The motorcycle is equipped with engine oil-seal chain. Chain pin is wrapped by a special O-shaped sealing ring filling grease. Special tools are required to replace such non-open locking chain. If necessary, please go

to the dealers authorized by VOGE for help.

Check or adjust the drive chain before driving every day. Check the following problems:

- -Chain pin Loose -Roller breakdown -Chain plate corrosion -inflexibility of chain link rotation
- -Contact authorized dealer if there is any of the above problems. Wear of the drive chain can also cause wear of the sprocket. Aim at the following problems:
- -Severe wear of sprocket -Broken of the tooth

-Contact authorized dealer if there is any of the above problems.

#### **Cleaning and lubrication**

Dirt and dust on the chain will reduce the service life of the chain. Please clean and lubricate regularly. Incorrect cleaning and lubrication will damage the O-rings and grease, which will accelerate the reduction of the service life of the chain. •Wire brushes is prohibited in cleaning the chain.

Wipe off water or neutral detergent immediately after cleaning, and dry the chain for lubrication.

·Use chain oil for oil-sealed chain to evenly coat the inner and outer chain plates. After coating, wipe off excess chain oil.

·Some chain lubricants contain solvents and additives that can damage the sealing ring. Please adopt special oil seal chain lubricants.



Check the worn condition of the driven and driving sprocket when replacing the drive chain, and replace the sprocket simultaneously if necessary.

•High-viscosity gear engine oil, SAE90, can be used instead if there is no special chain engine oil for engine oil seal chain.

#### A Warning

•Clean the chain with water or neutral detergent. Volatile solvents, such as paint thinner, gasoline, etc. are prohibited in cleaning the chain. •High pressure cleaner is prohibited in cleaning the chain.



# Adjustment of Drive Chain

•The drive chain can neither be too loose nor too tight.

•Chain will break away from the sprocket easily due to the excessive loose of chain, which causes accidents.

•Chain will highly consume service life and obtain transmission resistance due to the excessive tight of chain. The correct chain tension is shown in the figure:

Adjustment is required if there is any inconformity between your motorcycle transmission chain and above requirements:

·Keep the motorcycle upright with a special parking rack.

•Loosen the rear axle nut 1 and the adjusting nut 2, and adjust the bolts according to the tension of chain.

•Turn the bolt counterclockwise, if the chain is too loose.

 $\cdot Vice \ versa, \ and \ then \ push \ the \ rear \ wheel \ forward \ to \ loosen \ the \ chain.$ 

•Fine-tune the left and right bolts to reconcile the adjustment top block consistent with the scale on the flat fork after the chain is adjusted to required tension.

Lock the rear axle nut 1 and adjustment nuts 2 both in left and right. Specification and model:

Model: 520 Knots: 118 Sections Specification: lock ring without opening of engine oil seal chain





Locking torque of adjusting nut: 14NM Locking torque of rear axle nut: 95NM

#### 🛕 Danger

The drive chain is of the non-open locking ring, and the open locking type cannot be used, otherwise the chain will be detached and cause accidents.

Special tools are required when replacing the drive chain. If not riveted properly, the chain will be disconnected, which causes accidents.



### Maintenance of Tire

Tires play a significant role in connecting motorcycles and the ground. Disordered condition and inappropriate size of tire will greatly degrade the performance of motorcycles.

#### Tire pressure

•Abnormal tire pressure will reduce the service life of tires. Low tire pressure will cause poor performance in turning and aggressive wear of tire.

•Excessive tire pressure will reduce the contact area between tire and the ground, making it slippery and out of control. At high speed, the valve of the tire is inclined to open due to centrifugal force. To avoid sudden air leakage, a rubber cover with metal lining is installed in the valve core by threaded connection.

•Tire inflation pressure is proportional to tire temperature. Tire pressure can be adjusted in the cold state only when the tire is basically consistent with the ambient in temperature.

#### Inspection of tire wear limit

 $\cdot Tires$  have wear marks on the main tread.

•The tire is prohibited to use when the pattern wears to the mark. •There is a wear mark near the TWI mark on the tire edge, which is located in the drain groove of the tire crown and is in the shape of a convex hull. Replace the tire immediately when the convex hull is worn. •Excessive wear of tires can puncture the tires and make the vehicle out of control.

When the motorcycle tire pattern is worn to the minimum allowable depth, its operability and grip will be greatly weakened.



Abnormal tire pressure will affect the handling performance of motorcycles and may lead to accidents. Overload can cause tire failure and make motorcycle out of control. Check the tire pressure at least once a month.

Check the tire pressure according to the table below at normal temperature.

	Single Riding	Double Riding
Front wheel	220KPa	250KPa
Rear wheel	220KPa	250KPa



#### **Repair of tire**

•To repair the tiny hole of tubeless tire, it is necessary to remove the tire and patch the inside of the tire. External maintenance should be avoided as the centrifugal force will loosen the repaired place when driving at high speed.

•The vehicle speed cannot exceed 80km/h 24 hours after tire repair.

·If the side is damaged, or the damaged place is more than 6mm, the tire cannot be repaired. Check the tire. If considerably obvious depreciation exists on the tire, such as damage, scratch, or wear to the limit, the tire must be replaced.

#### **Replacement of Tire**

•Ensure the vehicle adopts tires same in brand, models, patterns and use conditions when changing tires. The reinstalled wheels should be checked and adjusted for dynamic balance. The handling of vehicle will be reduced and tire wear will be uneven with poor dynamic balance.

•The tire side is marked with an arrow to indicate rolling direction. The tires must run in this specified direction to optimize driving performance in preventing water skiing, improving adhesion ability, reducing driving noise, prolonging wear resistance and so on.

•The specified type of tire has been strictly tested and verified, and can meet the work requirements of most roads. Adaptability or safety of untested tires cannot be guaranteed.

·Tubeless tires seal at the contact between rim and tire lip.

•To avoid air leakage, special tools and tire changer machines are required for disassembling and installing tubeless tires. Attention should be paid to protecting tire pressure sensors when replacing tires.

·Replacing tires should be handled by authorized dealers who have necessary tools and experience.



### Fuse

 $\cdot \textsc{Before}$  replacing the fuse, the fault cause must be detected and eliminated.

 $\cdot This model installs an electrical box (with internal integrated relay) and a fuse box.$ 

•The specifications and uses of all fuses are explained.

-Main fuse (30A): control the power supply of the EFI system, ABS system, other electric loads (instruments, lamps, etc.) of the whole vehicle and the charging circuit of the battery. Spare fuse: 30A (1 PCS- Green- In the fuse box).

-ABS system motor fuse (25A): control the power supply of ABS anti-lock system motor.

-ABS system solenoid valve fuse (10A): control the power supply of ABS anti-lock system solenoid valve.

-Signal system fuse (10A): control the power supply of instruments, lamps, horns, flashers, side bracket flameout switches, starting relays, etc. Spare fuse: 10A (1 pcs-Red- In the fuse box).

-EFI system fuse (15A). Control ECU of EFI system, oxygen sensor, ECU diagnostic interface, carbon canister solenoid valve,

fuel injector, ignition coil and other electric injection system power supply. Spare fuse: 15A (1 pcs-blue-inside electric box).

-Fan fuse (15A): control the power supply of the cooling fan.

Spare fuse: 15A (1 pcs-red-inside electric box).

-Fuel pump fuse (10A): controls the power supply to the fuel pump. Spare fuse: 10A (2 pcs-red-inside electric box).



•The fuse box must be properly covered after checked or replaced, otherwise serious electrical faults will easily occur in rainy days or after vehicle washing and water inflow.

### A Notice

The electrical system is faulty if the fuses blow frequently in a short period of time. Please go to an authorized dealer immediately for handling.

### 🛕 Danger

·Please choose specified fuses, and do not install substitutes, such as aluminum foil or iron wire.

·Circuit system will be severely damaged and vehicles will even be burned if other unspecified fuse pieces are used or directly lapped.



### Brake Pad

Braking efficiency will be decreased and brake system may be damaged when brake pad wear exceeds the allowable minimum thickness. The wear of the brake pad is prohibited to exceed the allowable minimum thickness to ensure the reliability of the braking system.

#### Replacement

The correct way to replace friction plates requires the removal of the front and rear wheels. Please go to dealers authorized by VOGE to handle such work.

•The whole pair should be replaced no matter the front or rear pad. The brake imbalance will cause accidents if only one is replaced. After removing the pad, please avoid to operate the brake handle or pedal, otherwise brake piston reset will be difficult and the risk of brake fluid leakage will appear. •Prevent the friction plate and brake disc from oil or other dirt when replacing, otherwise brake efficiency will be reduced.



Wear limit of rear brake pad:



#### 🛕 Danger

Please repeatedly confirm the brake handle and pedal to confirm whether the friction plates effectively compress the brake disc after replacing. At the same time, confirm the correctness of free stroke of the brake handle and pedal.

# Replace the fuel filter

•The secondary fuel filter is for filtering the impurity in fuel to prevent them get into fuel injector. •The machining for fuel injector is very accurate, which easily get blocked up, then it may lead to injection and engine starting failure.

Please replace the secondary fuel filter on time.

-Remove the fuel tank first, which could be seen at the right side.

-Remove the clamp for fixing the secondary fuel filter by screwdriver.

-Wrap the both ends of secondary fuel filter by cotton cloth to avoid fuel splashing when you

removing the clamp on both sides, because inside of the fuel tube the residual fuel is still with pressure, which may splash out.

-Remove the clamp on both sides of secondary fuel filter.

-Replace for new secondary fuel filter.

-The re-assembly is completely opposite to disassembly. •When the secondary fuel filter removed, absorb the splashing fuel by cotton cloth.

### A Notice

Replace the secondary fuel filter each 5000km.



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Dispose the replaced fuel filter in environmental friendly way.

# **Replacement of Signal Light**

·You will be in danger without signal lights which can enable others find you and your vehicles more easily. The broken signal lamp should be replaced in time.

·Headlights, position lights, turn signals, rear position lights/brake lights and license plate lights are all LED packaged lamps. Please go to the dealers to replace as a whole.



Please follow the specifications in following table for the replacement of signal lamps. Dirt in surface, especially grease, will interfere the thermal radiation of the signal lamp, leading to overheating and shortening the service life.

### A Warning

Please adopt the same rated power and specifications signal lamp, otherwise the circuit system will be overloaded or the lamps will be damaged prematurely.

# Storage and Cleaning of Vehicles

### Storage

•Special maintenance is needed if vehicles has not been used for a period of time, which requires special materials, equipment and technology. It is recommended to go to authorized dealers to complete these tasks.

·If you want to do these tasks yourself, please do as follows:

-Completely change engine oil.

-Block the air filter inlet and the muffler outlet with a rag stained with fresh oil to prevent damp air from entering the engine.

-Thoroughly drain the fuel tank.

-Remove the battery and clean the battery surface with neutral soapy water and clean the oxide on the battery positive and negative motors.

-Store the battery in a room above 0 °C.

-Adjust the tire pressure to the specified pressure.

-Clean the motorcycle thoroughly. -Spray rubber protective agent on the surface of rubber parts.

-Coat the exterior parts of the whole vehicle with automobile protective wax.

-Finally, cover the motorcycle with dry cloth and park it in a dry and ventilated place. **Re-enabled** 

·Clean the motorcycle thoroughly. ·Remove the rag from the air filter inlet and muffler outlet.

•Completely replace engine oil and engine oil filter element. •Install the battery.

68 ·Start the vehicle.

#### A Notice

Charge the battery once a month.
### Care

•Clean the motorcycle frequently according to the usage, and try to keep the vehicle clean and dry. •Clean the dirt attached to the vehicle surface immediately, such as bird droppings, asphalt, salt, etc. •Try to use the motorcycle cover as long-term exposure to the strong sun will lead to aging and discoloration of appearance parts.

### Cleaning

·Wash the motorcycle with cold water.

·Thoroughly clean the motorcycle with a soft cloth and neutral cleaning agent.

 $\cdot \textsc{Do}$  not spray your motorcycle.

 $\cdot Do \ not \ wash \ motor cycles \ with \ high-pressure \ water.$ 

•There may be a slight mist in headlights or turn signals, etc. in rainy days or after vehicle washing, which is normal and will disappear only after the lights are lit for a while as all lamps are designed with vent holes.

### 🛕 Danger

The braking capacity of wet brakes will decrease. Please repeatedly test the braking system at low speed after washing the vehicle to dry it quickly.

# Alterations and Accessories

Ensure your vehicles is equipped with original parts and accessories.

·You can obtain the certified parts, accessories and other products from authorized distributors, and professionals will introduce you installation and use methods.

•The safety, practical performance and matching of these parts and products have been tested. VOGE assumes responsibility for these products.

 $\cdot \mathsf{VOGE}\xspace$  shall not be liable for unapproved parts and accessories.

•Comply with legal requirements for any modifications. The motorcycle shall not violate the national laws, regulations and norms governing motorcycle for highway use.

## 🛕 Danger

Unauthorized modification of electronic control system and other performance components will lead to motorcycle damage and accidents.



# The motorcycle parameters

	Motorcycle parameters	Engine system				
Length × width × height	2100mm × 820mm × 1170mm	Engine type	In-line dual cylinder/water cooled/eight valves/DOHC			
Wheelbase	1450mm	Cylinder diameter × stroke	67mmx66.8mm			
Height of seat	795mm	Displacement	471ml			
Ground clearance	162mm	Compression ratio	10.7:1			
Weight	198kg	IIntake valve clearance	(0.16±0.03)mm			
Load capacity	180kg	Exhaust valve clearance	(0.27±0.03)mm			
Maximum load	378kg	Spark plug clearance	0.6mm-0.8mm			
Front wheel load	97kg	Spark Plug Model	CPR8EA-9			
Rear wheel load	101kg	Maximum net power/speed	34.5Kw/8500rpm			
Maximum tested speed	160km/h	Maximum torque/speed	44.5N·m/7000rpm			
Maximum gradeability	≥40°	Idle speed	(1300±100)r/min			
Brake deceleration	Press G B 2 0 0 7 3	Transmission type	International 6 gears			
Fuel consumption	≤4.4L/100km	Clutch type	Wet multi-sheet			
Tank volume	19L	Oil capacity	3.2L(10W/40-SG)			
Coolant capacity	1.27 L	Fuel supply system	Electronic fuel injection system			
Chain specification	520UX118 links	Emission standard	Euro 5			
	Suspension/Brake system	Transmission system				
Front damping type	Inverted shock absorber/fork pipe 4 1 mm stroke 1 0 9 mm	Primary transmission ratio	2.029			
Rear damping type	Center shock absorption/stroke 1 1 9 mm	Last gear ratio	3.000			
Front hub size	3.50×17	1st gear	3.285			
Rear hub size	4.50×17or4.25x17	2nd gear	2.105			
Front tyre size	120/70ZR17M/C(58W)	3rd gear	1.600			
Rear tyre size	160/60ZR17M/C(69W)	4th gear	1.300			
Front brake type	Double disc, double piston, floating pliers/disc diameter 298mm	5th gear	1.150			
Rear brake type	Single disc, single piston, floating pliers/disc diameter 240mm	6th gear	1.043			
ABS	Dual-channel anti-lock braking system					

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Electrical system						
Battery Model	12V 10Ah (C10)					
Headlight (High/Low beam)	13.2V 30W/11.7W					
Front Position Lamp	13.5V 2.07W					
Rear Position Lamp	13.5V 2.36W					
Rear brake light	13.5V 5.06W					
Front turn signal lamp	12V 4.05W					
Rear turn signal lamp	12V 4.05W					
Rear number plate light	12V 0.257W					
Fuse specification	30A、25A、15A、10A					

·Regular maintain on time in full accordance with the instructions in this manual.

•The maintenance table specifies the minimum maintenance to be done. If often used in harsh environment, your vehicle requires more maintenance in the maintenance schedule.

·Special maintenance is needed after long journey with sandstorm weather and muddy roads.

·It is recommended that maintenance work shall be completed at authorized dealers.

·Wastes generated during maintenance, such as cleaning agents and waste engine oil, should be properly treated to avoid pollution to the environment.

•The key is proper maintenance of accessories. Apply the certified accessories provided by VOGE if you cannot confirm the source and quality of accessories. Improper maintenance will lead to accidents in later use.

72 It is recommended that maintenance work shall be completed at authorized dealers.

# Maintenance Plan

Specified inspections in each regular maintenance are as follows. The interval period depends either on the maximum service time or the travel distant limit. Each inspection shall be carried out according to the items in the following table.

Periodic maintenance table											
ltem s Inter			km × 1000								
Power transmission system			1	5	10	15	20	25	30		
	Lubricant		The first maintenance is at 500km, the second is 1000km, then 6000km each								
	Lubrication element		Replace at same time with oil maintenance								
	Check lubricant level		1	1	1	I	1	1	1		
	Check seal performance for fuel tube		I	1	1	1	1	1	I		
	Check the fuel pump element		\	\	1	\	I	\	I		
	Fuel filter		\	R	R	R	R	R	R		
	Throttle valve body/Carburetor		\	\	\	с	\	\	c		
	Check coolant level		1	I	1	1	I	I	I		
	Coolant	2 years	\	\	\	\	\	\	R		
	Check seal performance of air inlet system		I	I	I	1	I	I	I		
	Valve clearance		I	1	1	1	1	1	1		
	Spark plug clearance		\	I	1	R	I	I	R		
	Air filter element		I	с	R	с	R	с	R		
	Throttle operation system		Α	Α	Α	Α	Α	Α	R		
	Clutch operation system		Α	Α	Α	Α	Α	R	Α		
Lubrication system	Check lubrication and tightness for steering bearing		I	\	L	1	L	I	L		
	Check lubrication for Fr. & Rr. Wheel and sprocket base bearing		\	L	L	L	L	L	L		
	Check lubrication for tuning shaft of main and pillion steps		\	L	L	L	L	L	L		
	Check lubrication for side stand shaft		\	L	L	L	L	L	L		
	Check lubricant for brake and clutch lever shaft		\	L	L	L	L	L	L		
	Check lubrication for bearing on rocker rack of rear shock absorber		\	L	L	L	L	L	L		
	Check lubrication for bearing of rear fork shaft		\	L	L	L	L	L	L		
	Check lubrication for driving chain		Α	Α	Α	R	Α	Α	R		
Others	Battery voltage		\	1	1	1	I	1	I		
	Seal performance for brake oil tube		1	I	1	1	I	I	I		
	Brake liquid	2 years	1	I	1	1	I	I	I		
	Brake liquid level		1	I	1	1	I	I	I		
	Fr.& Rr. Brake pads		1	I	1	R	I	I	R		
	Fr.& Rr. Brake switch		I	I	1	1	I	I	I		
	Check fuel evaporation system		I	I	I	1	I	I	I		
	Check tightness of fastening pars on body		I	1	1	1	1	1	1		
	Check leakage for Fr. & Rr. shock absorbers		I	I	I	I	I	1	I		
	Aluminium alloy wheel/Spoke wheel		I	I	I	I	I	I	I		
	Meaning of symbols: I: Inspection C: Clean R: Replacement A: Adjustment L: Lubrication										

## electrical schematic diagram

