



VOGE

Far & Beyond Quality

MOTORCYCLE OPERATION MANUAL

R125



Foreword

Thanks for purchasing this model

This user manual introduces the main specification, basic structure, adjustment and maintenance of this model. This user manual helps you know the operation of this model and normal trouble shooting, which make the motorcycle fully play its performance, decrease the malfunctions, and prolong the working life of this motorcycle. Before your first driving of this model, please carefully read this book and well keep it when you already read it.

In the future, our company may make some improvement on this model, and the pictures and contents may have some difference with the old version and without further notice,

Please read the book carefully and know the essentials of it. We adopt the words such as Warning, and Caution to remind you the different importance of issues need pay attention to, please understand them in correct way.

Warning/Caution

Warning----This word means the item need pay attention to involves the driver and passenger's safety, ignore it may get injury.

Caution-----This word means the item need pay attention to is about operation and maintenance of the model.

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Issues need pay attention to

There are many kinds of spare parts in sales on the market, and we are unable to take them all under control, so their quality and suitability is out of our control. The spare parts with bad suitability is dangerous for driver's safety. We are unable to check all the parts on the market, but our dealer can help you to select the ones with good quality and install them in place on the motorcycle.

For your correct selection and installation of the spare parts, we made the principle below for your reference, so you can decide which one shall be selected by yourself and how to install them.

(1) All the accessories with extra weight, or the once face to the wind, whose installation shall be as low as possible, get close to motorcycle body and center of gravity. Please carefully check the luggage rack and its accessories, whose installation must be firm, otherwise it may get offset, even bring you in danger.

(2) Check the ground clearance and inclining angle of installed accessories, the unsuitable installation may be bad for safety. Please pay a special attention to don't be bad for shock absorber, steering and control system.

(3) In case the accessories installed on the steering bar or front fork, it may lead to imbalance. The extra weight on the front part of motorcycle may decrease the sensitivity of steering or turning, which lead to shock on front wheel and stability during driving. In case you have to install accessories on steering bar or front fork, please make their weight to the minimum.

(4) The windshield plate, backrest, sitting bag and luggage case are all facing to wind, which make serious imbalance, especially when there was side wind and get across with vehicle with large size. The incorrect installation of accessories and poor designed ones are dangerous to driving safety. So be careful and pay a special attention to the selection and installation of accessories.

(5) Some accessories may lead to offset of sitting position for driver, which not only limits the moving of driver but also his operational ability.

(6) The extra electrical parts may lead to overloading on the original ones, the serious overloading may damage the electrical circuit, and makes the motorcycle power off during driving even bring the driver and motorcycle under danger.

I.Safe driving of motorcycle

The rules for Safe Driving

1. Please carefully check the motorcycle before driving to avoid accident and damage on components.
2. The driver must get driving permission from relative Traffic Management Department of government, lend the motorcycle to one who without government permission is not allowed.
3. To avoid any injury from other vehicles on the road, please pay your full attention to driving. So please also pay attention to issues below:
 - ★Get close to other vehicles is not allowed.
 - ★Competition for road is not allowed.
4. Please strictly follow up the Local Traffic laws and regulations.
 - ★Many accidents are caused of overspeed, so please let your speed within allowed range.
 - ★Turn on the turning signal light before shifting lane or turning to attract the attention from other drivers.
5. Please pay a special attention to driving when you were at crossing road, entrance and exit of parking place, also the lane of automobile.
6. Please firmly hold the grips and put feet on footrest pedal when you were driving.
7. The luggage rack are usually for light goods, please firmly fix them on motorcycle to avoid moving when you are driving.
8. Get the gear position from neutral to 1st gear under high speed.

Protective device

1. For your safety, please wear helmet, protective face mask, dust-proof glass and gloves when you are driving.
2. In the driving, the muffler is very hot, to avoid scald, the driver and passenger shall wear the long boots to cover legs.
3. Too loose the wear is not allowed, otherwise it may grasp the operation rod, kick starter, pillion step rod and wheel which bring you into danger.

★ The refit for motorcycle

Caution: Refit the motorcycle at will is unable to keep safety even break laws. The user must comply with the local laws and regulations from traffic management department. Our company take no responsibility due to refit at will without authorization.

▲ Warning:

1. Refit without authorization for wiring even anti-theft device is not allowed.
2. Replace the broken fuse by copper wire or the fuse with different specification is not allowed.
3. When parking at night, please turn off the fuel switch.
4. Prevent the moisture touch the certificate for qualification, no folded.

Our company take not responsibility in case the motorcycle turned-out or got other loss due to the actions forbidden above.

Checks before driving

Carefully check the items in the table before driving

Checking items	Contents
Steering bar	Turning free, without clearance and flexibility
Bakes	The brake lever and pedal shall have suitable free clearance, when braking, the braking lights shall get on
Residual fuel	The fuel is enough for your traveling plan
Gear box	Check if the oil level is correct, in case not, please fill up
Throttle valve	The greaser grip and throttle cable shall have suitable free clearance, with smooth acceleration and sharply getting throttle off
Clutch	The free clearance for clutch cable is correct without jamming
Tires	The air pressure inside is correct, without crack and damage on tire surface
Transmission chain	The tightness is suitable, with suitable amount of lubricant
Lights and horn	The performance of lighting system and horn is normal
Oil	Check the oil gauge to confirm if the oil level is correct

Essentials for driving



Warning:

1. In case this is the first time you drive this model, we suggest you practice on a road of non-public, until you know well how to drive this model.
2. Drive by a single hand is the most dangerous, please firmly hold the handle bar by hands and put both feet on pedal in driving. Under any situation, the hands left handle bar is not allowed.
3. Don't decelerate when you are at turning, please slow down to safe speed before you arrived turning.
4. Driving on the smooth and wet road, the friction force of tire gets fall, the braking and turning performance fall down, please decelerate in advance.
5. The crossing wind is usually at the entrance or exit of tunnel, when you getting through the valley or vehicle with large size overtakes you from behind, be careful on your driving and make deceleration.
6. Please comply with the local traffic laws and regulations, drive in limited speed.

II.Main parameters

Model	LX125 –64	Model	LX125 –54
Length	1940mm	Braking deceleration	GB20073
Width	795mm	Max. gradeability	≥34°
Height	1070mm	Bore x Stroke	57.3 x 48.4
Wheelbase	1310mm	Compression ratio	12:1
Curb weight	136 kg	Max. net power/rotation	11kw/9500r/min
Loading capacity	180kg(Including driver)	Max. torque/rotation	12N.m/8500r/min
Max. allowed weight	316 kg	Idling speed	(1600± 150)r/min
Front axle loading	67kg	Cylinder working capacity	124.8ml
Rear axle loading	69kg	Spark plug	CR9E
Front tire size	110/70 –17M/C	Spark plug clearance	(0.6~0.7)mm
Rear tire size	140/60 –17M/C	Valve clearance	Air inlet:(0.13~0.19)mm
Max. designed speed	110km/h		Air exhaust: (0.22~0.28)mm

Main parameters(Connect to the former page)

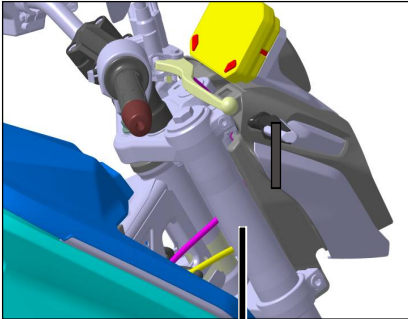
Model	LX125 –54	Model	LX125 –54
Fuel consumption	≤2.1L/100km	Chip fuse	15A, 10A
Lubricant capacity	1.3L	Headlight(High/Low beam)	12V 21W/13W(LED)
Fuel tank capacity	10L	Front position light	12V 0.65W(LED)
Transmission ratio		Rear position light	12V 0.3W(LED)
1 st gear	3.083	Braking light	12V 3W(LED)
2 nd gear	1.941	Front turning signal light	12V 1.4W(LED)x3
3 rd gear	1.5	Rear turning signal light	12V 1.4W(LED)x3
4 th gear	1.227	Rear registration plate light	12V 0.14W(LED)
5 th gear	1.047	Battery	12V6Ah
6 th gear	0.923	Ignition terms	Ignition control by ECU
End transmission ratio	3.357		
Primary transmission ratio	3.261		

III.Motorcycle structure

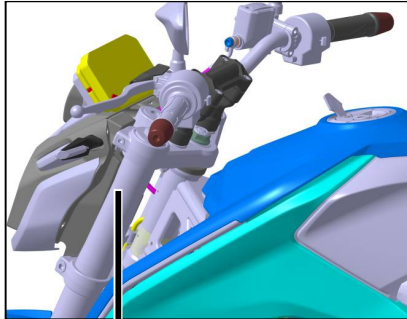
Motorcycle identification

The Vehicle Identification Number (VIN) and products plate

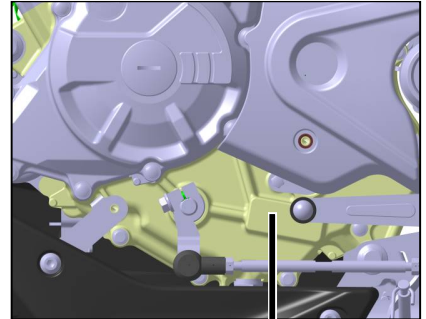
Engine specification and delivery number



Vehicle Identification Number (VIN)



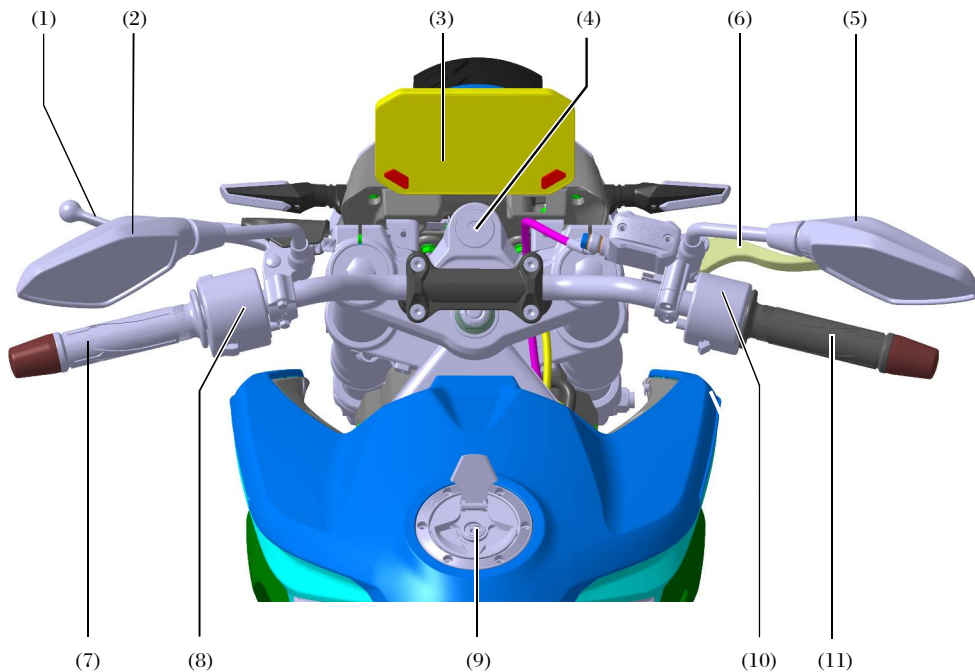
Vehicle products number



Engine specification and
delivery number

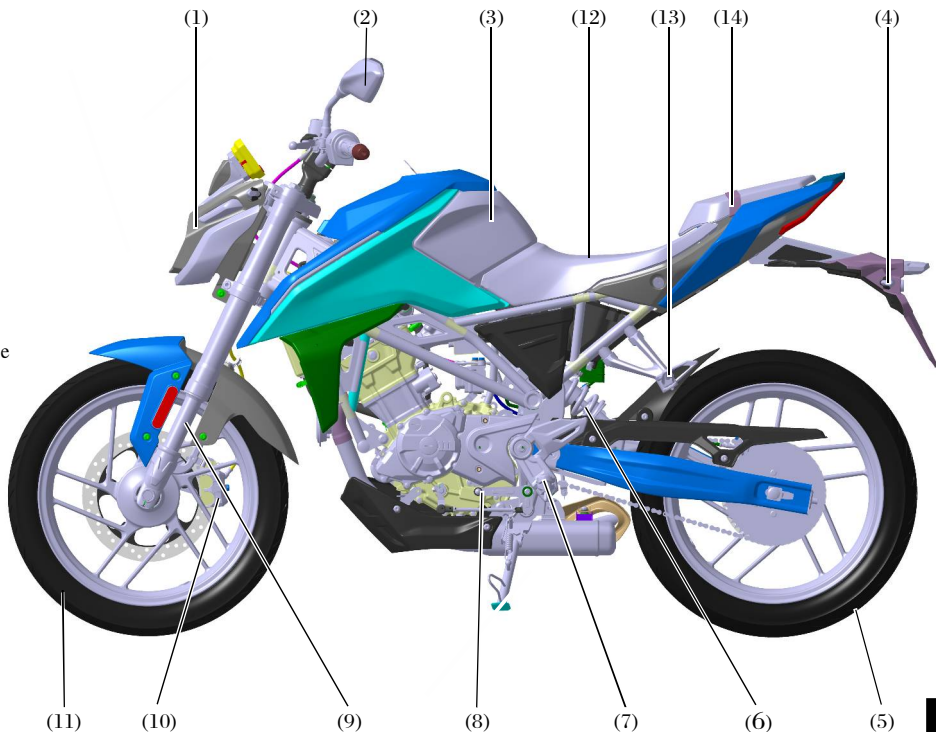
Parts name (Head part)

- (1) Clutch lever
- (2) Left back-view mirror
- (3) Instrument
- (4) Ignition switch
- (5) Right back-view mirror
- (6) Front brake lever
- (7) Left grip
- (8) Left switch assy.
- (9) Fuel tank cap
- (10) Right switch assy.
- (11) Accelerator



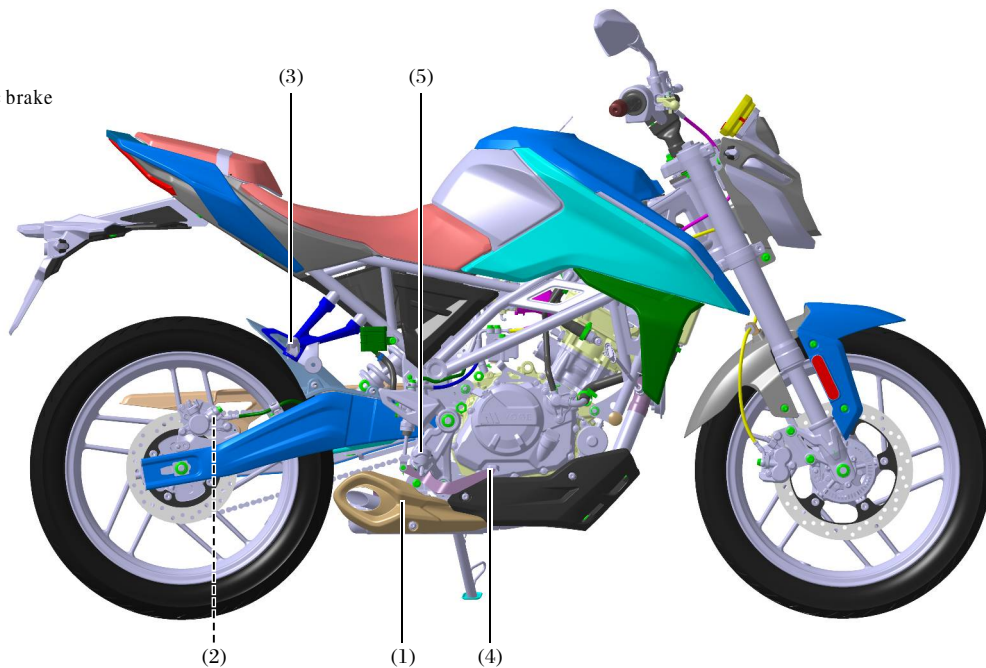
Parts name (Body parts 1st)

- (1) Headlight
- (2) Left back-view mirror
- (3) Fuel tank
- (4) Rear turning signal light
- (5) Rear wheel
- (6) Rear shock absorber
- (7) Left main footrest body
- (8) Gearshift pedal
- (9) Front shock absorber
- (10) Lower pump of front disc brake
- (11) Front wheel
- (12) Main seat
- (13) Left pillion step body
- (14) Drawing belt for passenger



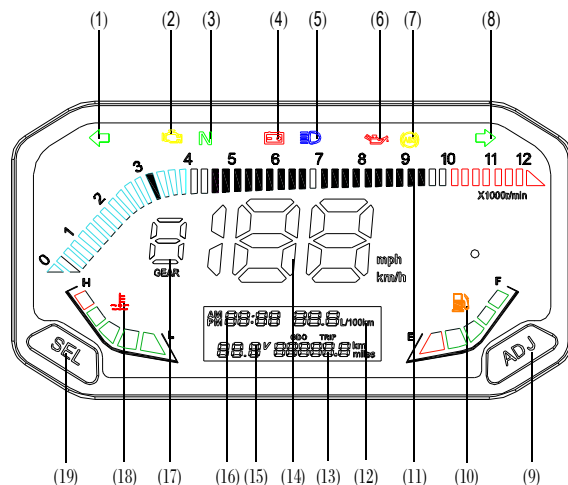
Parts name (Body parts 2st)

- (1) Muffler
- (2) Lower pump of rear disc brake
- (3) Right pillion step body
- (4) Rear brake pedal
- (5) Right main footrest
body



Instrument indicating light



Ref. No.	Name	Note
1	Indicating light of left turning signal	The indicator light gets on when turning left
2	Engine malfunction alarm light	The alarm light gets on when there is malfunction in engine
3	Neutral indicator light	When the engine is in neutral gear, this light gets on
4	Battery voltage alarm light	This alarm light gets on when the voltage in battery is too low 11.5V
5	High beam indicator light	When the high beam gets on, this light gets on also
6	Oil pressure alarm indicator light	When the oil pressure is wrong, this light gets on
7	ABS malfunction alarm light	This alarm light gets on when there is malfunction in ABS system
8	Right turning signal light	This light gets on when turning right
9	ADJ button	For function shifting
10	Fuel alarm light	The full cells mean the fuel is sufficient, when the fuel cell is in red while flashing, please fill up with fuel right now.
11	Engine rotation indicator	Indicate you the engine rotation speed (r/min)
12	Average fuel consumption	Show you fuel consumption (L)/100km
13	Total mileage/Single mileage	Show you the motorcycle mileage
14	Speed display	Show you the speed in unit km/h
15	Battery voltage:	When the motorcycle didn't start, show you the battery voltage, when the motorcycle started, show you the power charging voltage.
16	Clock	Show you the time
17	Engine gear indicator	Show you the gear position
18	Water temperature alarm	The initial temperature when engine starts working is lower than 20°C, the alarm light flashes, then when the temperature was higher than 20°C, the light stopped flashing, when the temperature gets rising, the numbers of cells also increased, in case it keeps flashing without cells, please check the disconnect of circuit, when the temperature is higher than 120°C, the cells of water temperature has got in red zone, the light is flashing for alarming, under this case, please stop engine and check.
19	Setup	For selection




Warning:

Please don't wash the instrument directly by water in high pressure. Please don't wipe up the instrument by organic solvent such as alcohol, gasoline, and brake liquid, otherwise there will be crack or color fading on the instrument.



1.The indicating light of left turning signal light “” :

When pushing the turning signal light switch on the left switch assy. to the left side “”,this indicating light “”,gets on.


Caution:

When the turning signal light gets damaged or without getting on due to other cause, this indicating light “”, may flash more frequent, which reminds you check the malfunction in turning signal light.





2.The indicating light of right turning signal light “” :

When pushing the turning signal light switch on the left switch assy. to the right side “” this indicating light “’ gets on.



Caution:

When the turning signal light gets damaged or without getting on due to other cause, this indicating light “”, may flash more frequent, which reminds you check the malfunction in turning signal light.


3. Engine malfunction alarm light “” :



When there is malfunction in engine managing system, the alarm light “” gets on. When turning the ignition key to position “”, the indicating light “”, gets on; When the engine got started, this indicating light “” gets off.

Warning:

In case the indicating light “”,is still on or flashing when engine started, in case continue the driving may lead to motorcycle ignition failed, and the fuel supplying system without working. In case the indicating light “” is permanently on or flashing during driving, please stop the motorcycle immediately and contact the authorized dealer as soon as possible.


4. ABS malfunction alarm light “” :

When the ABS system on motorcycle is in malfunction, this indicating light “” gets on.

When turning the ignition switch to position “”, the indicating light “” gets on;





When the engine got started, this indicating light “” gets off immediately.


Warning:

In case the indicating light “”, is permanently on when the engine was started, or when the speed is higher than 5km/h, this light is still on, under case, keep driving the wheel may get abnormal even lock up, so keep driving is not allowed.


In case this light gets permanently on or flashing during driving, please stop the motorcycle immediately and contact the authorized dealer as soon as possible.

5. The oil pressure alarm light “” :

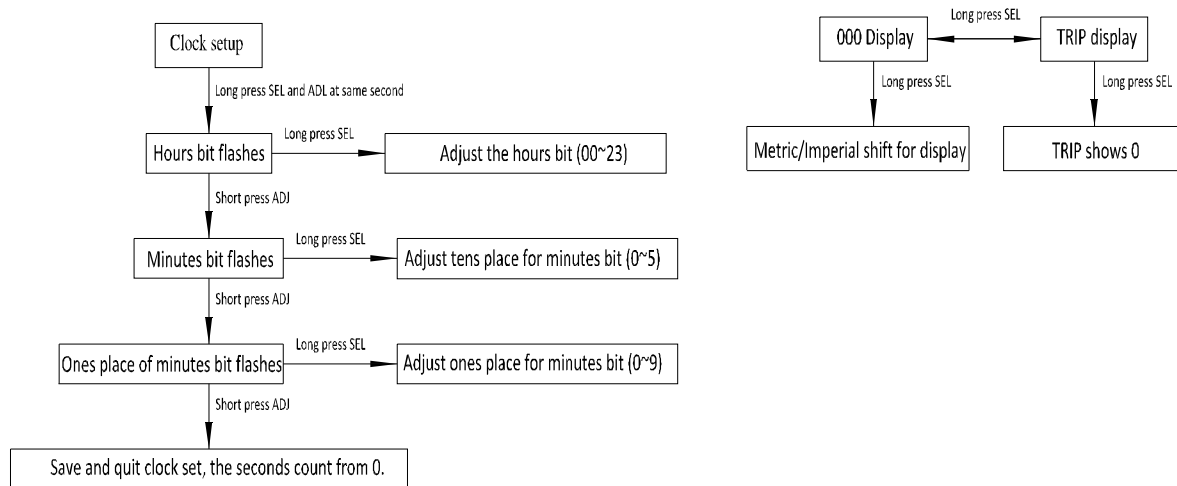
When turning the ignition key to position “”, the indicating light “” gets on; When the engine got started, the indicating light “” goes off. When the engine was started while the oil pressure is lower than normal situation, this indicating light “” gets on.

Caution: Actually, the oil pressure alarm light “” doesn't show you the oil level, instead, it shows you the abnormal oil pressure or malfunction in circuit, so please make periodic inspection for oil level or troubleshooting for circuit. The only way to check oil level is through the oil view window.

Warning:

In case the oil pressure alarm light “” is remaining on during driving or when engine already started, under this case, keep driving may damage the engine due to too low the oil pressure in engine which makes poor lubrication. Please stop the engine immediately and check the oil level.

Operation procedure for buttons Judge for pressing time on button: Short press < 1 Second; Long press ≥ 3 Seconds



Fuel evaporation set

- (1) When the gasoline in fuel tank got heated, the gasoline vapor got out, then arrive the end TANK of carbon canister through the dumping valve and then absorbed by it.
- (2) When the inclining of the motorcycle is more than 60°, the dumping valve got closed, and the gasoline is unable to flow to carbon canister through the dumping valve.
- (3) The fresh air gets from the end A of carbon canister to the end PURGE, who brings the gasoline vapor into throttle valve body, then joins the combustion in engine by getting through air inlet tube.

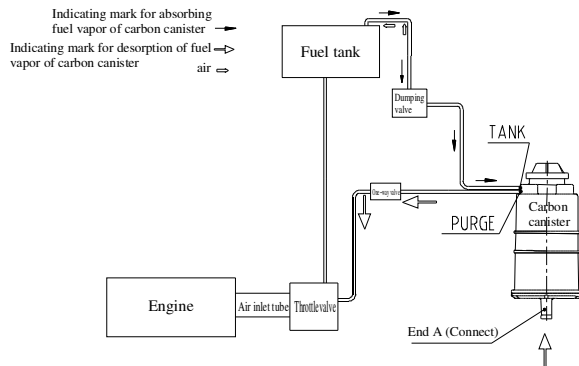
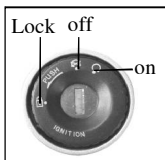


Diagram for controlling system connection for fuel vapor

IV.Operation

Power switch


Position	Function	Note
Off	When parking (All circuits are off)	The key could be pulled out
On	When starting of driving (Main circuit is on)	The key could not be pulled out
Lock	For locking up the steering stem	The key could be pulled out



Warning: Please don't push the motorcycle when its steering stem is locked up, otherwise it may get it imbalanced.



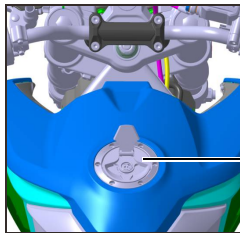
Warning:

Please don't turn the ignition key to position “” when the motorcycle is in driving, otherwise it may bring motorcycle out of control.

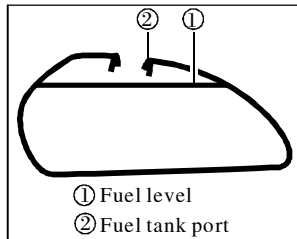
Fuel filling-up

Completely insert the ignition key into the lock's core on fuel tank cap, then turn it clockwise and lift it up the fuel tank cap. When the fuel filling-up finished, get the fuel tank cap return, then powerfully press down the cap to lock it up. Then turn the ignition key back, then it is removeable. Please don't wash the lock' core of fuel tank cap by high pressure water to avoid the water getting into fuel tank.

Caution: Please adopt the unleaded gasoline or the one with few lead above 92#. The insufficient fuel may lead to ignition fail or abnormal power output, in case continue the ignition may damage the fuel pump. Please don't run out the fuel, please fill the fuel up before the fuel alarm light getting on.



Fuel tank cap



Fuel tank capacity: 10L





Warning:

Please stop the engine when filling up the fuel, don't let it get close to heat source such as smoke or fire. The gasoline is corrosive to painting surface, it may let it get color fading or ugly. In case the fuel touched the painting surface, please wipe it up.

The fuel may expand when it getting hot, so too full the filling up is not allowed, otherwise the fuel tank may get distorted or the fuel may flow out due to strong internal pressure, please fill up the fuel until it reach the bottom of anti-shaving ring at fuel tank port.

Engine starting

1. Turn the key of ignition switch to position “”.
2. Turn the emergency switch to position “”.
3. Confirm the position of neutral, the indicating light of neutral gear gets on.
4. Confirm the residual fuel.

★ Cold starting

1. Turn the throttle by 1/8~1/4 round.
2. Start by electrical way.
3. Slightly turn the greaser grip, make the engine rotation speed up, to heat the engine.



Warning:

Confirm the neutral gear first, then the engine could be started, otherwise it is easy to lead accident. Idling rotation especially under high speed is bad for engine.



Warning:

Start engine indoors with poor or no air ventilation is not allowed. The CO is poisonous, in case there is not anybody else besides, don't leave the started engine even one minute to keep safety.

★ Stop engine

1. Release the greaser grip to slow down the engine rotation.
2. Put it on the neutral gear position.
3. Put the ignition switch on the position OFF.

Engine running-in

The first 1500km of this model is the period for grinding-in, please pay attention to the issues below:

1. Heavy load or climbing the steep slope. The acceleration shall be gentle and the speed shall not be higher than 50km/h.
2. Pre-heat the engine for 3~5 minutes before each driving, to let the moving parts sufficiently lubricated.
3. The speed shall not be higher than 40km/h in the first 500km, the second period is the first 500~1000km, whose max. speed shall not be higher than 55km/h.

Right switch assembly

(The electrical starting is with a tiny difference with the non-electrical one)

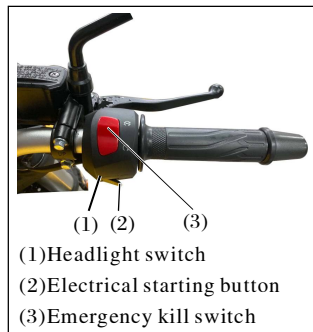
1. The headlight switch

There are three positions of headlight switch, there are “☀” , “☀☀” , and “ • ” , (The white point mark)

“☀” : Headlight, taillight and indicating light on instrument get on.

“☀☀” : Taillight, position light and indicating light on instrument get on.

“ • ” : Headlight, taillight, position light and the indicating light on instrument get off.



Caution:

The headlight and taillight can get on only when the motorcycle started.

2. Electrical starting switch (Only equipped on the model of electrical starting)

The electrical starting switch is under the headlight switch, when the emergency switch turn to position emergency is met, turn the emergency kill switch to position “☒” , directly cut off the power supply of engine.

3. Emergency switch

When the engine is working, the emergency switch is at position “☑” When the emergency is met, turn the emergency kill switch to position “☒” , directly cut off the power supply of engine.

Warning:

When continuously start the engine, each starting time shall not more than 5 seconds, otherwise there will be a large power discharging and make the circuit and starting motor abnormally hot. In case the engine fails to be started after several times, please stop and check the fuel supply and starting circuit system.

Left switch assembly

1. High and low beam switch

Position “≡ ()” , the headlight is in high beam.

Position “≡ ()” , the headlight is in low beam.

2. Turning signal light switch

Position “ ← ” , the left turning signal light gets on

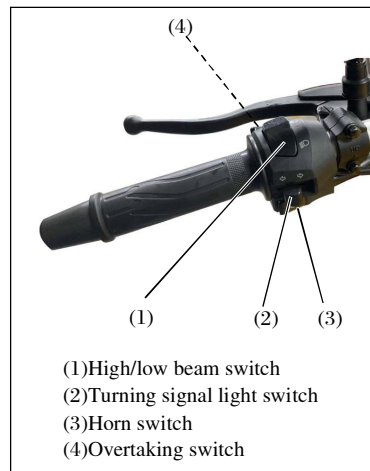
Position “ → ” , the right turning signal light gets on.

3. Horn switch

Press this button, the horn rings.

4. Overtaking switch

Use this switch when the overtaking is needed.



Warning:

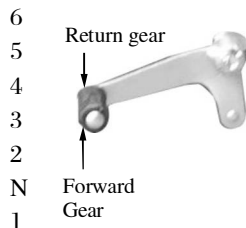
Turn on the turning signal light before shifting lane, when shifting finished, please turn off the turn signal light.

Gearshift

Pre-heat the engine and make it normally work

1. When the engine is in idling speed, it shall separate from clutch (Firmly hold the clutch lever), and step down the gearshift pedal, make the gearshift device get into low gear position (The 1st gear);
2. Gradually speed up the engine rotation, then slowly release the clutch lever, let this two actions cooperate, make sure starting in a natural way.
3. When the motorcycle reached balance in driving, slow down the engine rotation first and then separate the clutch, then kick up and get into the 2nd gear, for other gear positions, repeat this way.

Figure for international 6 gear positions



ABS system

1. Deceleration and braking under normal situations, please release the throttle first, firmly hold the handle bar, then take brake. When the motorcycle slowed down, to avoid the engine stopping, firmly hold the clutch lever and get into low gear position.
2. Before take turning, make deceleration in advance. When you are at the turning, please keep an even speed as possible, make slight brake if it is necessary but a sudden braking is not allowed.
3. When there is ice, snow or water on the road, please decelerate in advance, be careful the driving.
4. Judge the road conditions in advance as possible, to avoid sudden braking.
5. When the emergency is met, swiftly release the throttle, tightly hold the handle bar and take braking by full power.

Caution:

In case your motorcycle equipped the ABS system, when you fully brake, you may feel active bounce on brake lever or pedal with some frequency, this is normal, don't worry, please tightly hold the handle bar.



Warning:

When the deceleration is under high speed, use the front or rear brake only may make motorcycle skidding or bring it out of control, please use the front and rear brake in a balancing way.

V.Issues need pay attention to in driving and troubleshooting

Issues need pay attention to in driving

1. Don't take engine under idling rotation if it is not necessary, idling for a high rotation is more forbidden, otherwise the engine may damage.
2. Driving when the clutch is in semi-separation may let the friction plate fast wear-out.
3. In case you feel the weak power when the motorcycle is climbing, please shift to low gear position.
4. In downhill way or driving in high speed, singly use the front brake or sliding in neutral gear is not allowed.
5. Slow down the throttle meanwhile cutting off the clutch ,then take brake.




Warning:

1. The higher the speed the longer the braking distance. Please correctly judge the distance to vehicles or materials in your front, an enough braking distance is necessary.
2. The driver without experience usually use rear brake only, which makes rear brake fast wear-out, and the braking distance gets longer and longer.
3. Use front or rear brake only are both dangerous, this braking way may make motorcycle skid or bring it out of control. Carefully use the brake system when you are on wet or smooth road. Sudden braking on the uneven or smooth road may bring motorcycle out of control.

Troubleshooting


Insufficient oil pressure

 This mark means too low the pressure in lubrication system. Under this case, please stop the engine immediately.

The only way to confirm the oil level is check through the oil view window. In case the oil alarm light is on, a possible case is too low the oil level or malfunction in circuit. Check the oil level and make troubleshooting for circuit, in case too low the oil level, please fill up.

In case the oil level is correct while the oil alarm light is on, there may have some other cause such as the oil pressure sensor damaged or malfunction in circuit. Under this case, please contact the service station nearby, in case they are authorized, it is better.

Too hot the coolant

 This alarm light means too hot the coolant. In case too hot the engine, keep driving may damage the engine.

Please follow up the instructions below. Please stop the motorcycle immediately, then stop the engine until the indicating light gets off. When the motorcycle is completely cooled down, check if there is loss of coolant or the normal work of heat radiator.

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

In case the coolant alarm light is on while the fan of heat radiator is not working, it means there is malfunction in the circuit of heat radiation fan.

Please contact the service station nearby as soon as possible, the one with authorization is better.


Insufficient coolant

In case the coolant is not enough or the surface of heat radiator is blocked by sand or mud, we suggest the ways below:

Reduce the loading to decrease the heat produced by engine.

When you are in traffic jam, please let the engine idly run, without turning throttle grip to avoid the temperature keep rising.

In case the engine is still hot when you tried the ways above, please stop engine and contact the specialized service station nearby as soon as possible.

 This mark gets on means there is malfunction is engine system. When this light was on, keep driving may lead to engine ignition fail, and the fuel supply may stop.

Please stop the engine, turn off the ignition switch, then start engine once again, in case the alarm light gets off, please drive it once again; In case this alarm light is still on, please contact the specialized service station nearby as soon as possible.

Inspection and troubleshooting

You can find out the answer in corresponding chapters for daily problems. Of course these are only basic judges, in case the malfunction remains, please contact the authorized dealer.

Engine starting failure

Please check if the kill switch is at the position ON of neutral gear.

Please check if the kill switch is at position ON when the engine is in gear, firmly hold the clutch, and the side stand is picked up.

Please check if the fuel is enough.

Please check the power in battery is enough.

Difficult engine starting

Please check if the motorcycle is in a very cold condition, in case it is, slightly turn the throttle when starting.

Please check the power loss of battery.

Please check if it is too thick the oil, in case it is, please replace the oil.

Weak power output of engine

Please check if the element if air filter is clean.

Please check if the fuel filter is blocked.

Please confirm if motorcycle is at high altitude.

Incorrect inspection and adjustment may damage your motorcycle but fail to find out the Malfunctions.

In case you are not sure how to do under these cases, please contact authorized dealers.

VI. Inspection, adjustment and maintenance

Oil checking

Check the oil before driving. When checking, support the motorcycle on flat ground by side stand, and take the motorcycle upright.

–The way for check oil level:

–When the engine was completely cooled down, make the motorcycle upright.

–Take out the oil gauge 1 for check the oil level.

- In case the level is between the upper and lower marks of oil gauge 1, it is correct.
- In case the oil level is higher than the upper mark, please drain some oil out.
- In case the oil level is under the lower mark, please fill some oil up.
- No matter drain some oil out or fill some up, after the work finished, please check the oil level once again

according to the method above

Oil replacement

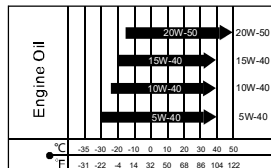
Please adopt the lubricant for our motorcycle only with high quality.

Please screw off the oil drainage plug at the bottom of engine to totally drain off the old oil.

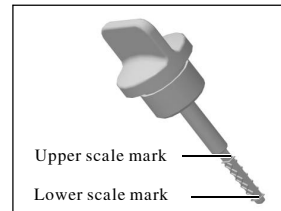
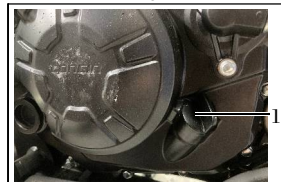
Wash up the oil filtering screen of oil filter, and confirm it is installed in place when washed up, then fill up with oil of 1.2L, then start engine for idly run for 2~3 minutes.

Stop the engine for 1~2 minutes to confirm the oil level is between the Upper and Lower scale marks, this work must be done when the motorcycle is upright.

The mixture of oil from different brands is not allowed, otherwise it may bring your motorcycle with malfunction.



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.



Oil case washing up

1. Drain off the oil
2. Break down each part.
3. Wash up each part.
4. Fill up with oil for our motorcycle only.

Caution:

The oil gauge shows you the oil level, when the oil is not enough, please don't start the engine, the oil filling-up could not be higher than the upper limit.



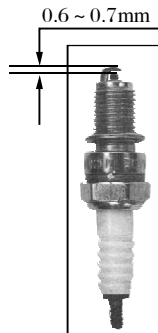
Oil drainage screw plug

Checking for spark plug

1. Open the spark plug cap, remove the spark plug by its spanner.
2. Wash up the surroundings of spark plug, in case there is too much corrosion or sediment, please replace the spark plug.
3. Please adjust the clearance of spark plug to 0.6~0.7mm.
4. Please adopt the spark plug for our model only.

Caution:

1. Too tight or staggered thread of spark plug is not allowed, to avoid damage on the thread of cylinder cover. When removing the spark plug, please don't let the dust and impurity get into the engine through the hole of spark plug.
2. The spark plug for this model is carefully selected, which could meet the demands of most of the conditions. In case replace the spark plug for a different thermal performance or specifications, please discuss with our authorized dealer first, because the wrong selection for different spark plug may seriously damage the engine.



Check and replacement for air filter

The air filter of EURO-V standard, with waste gas and air supplementary nozzle, improves not only the air flow but also the filtering efficiency.

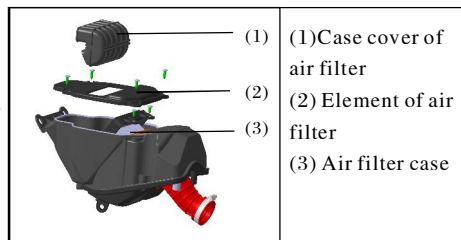
The waste gas nozzle connects its circulation tube first, then connect to the crankcase, who let the waste gas gets into combustion chamber join the combustion once again instead of getting into air directly.

Take out the air filter to check if it is polluted.

(Removal) Remove the air filter cover, pull the bolt out, then break down the air filter.

(Replacement) When the motorcycle already worked for 500~1000km, in case there is dust or greasy dirt on the element of air filter, please replace the element.

Note: Please correctly install the element into air filter, otherwise the dust or dirt may get into engine and decrease its working life. When washing the motorcycle, please don't let the water get into air filter.

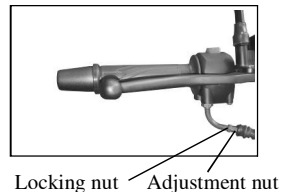


Caution:

1. In case drive under dusty condition, please replacement element of air filter with higher frequency, don't wait for the periodic maintenance.
2. Please pay attention to crack on element of air filter, in case there is, please replace the element of air filter immediately.

Adjustment for throttle cable

1. Confirm the normal work of adjustment nut of throttle cable.
2. Check and confirm the free travel of throttle grip is within normal range.
3. The stipulated free travel: 2~6mm, in case not, please adjust the nut of adjustment.

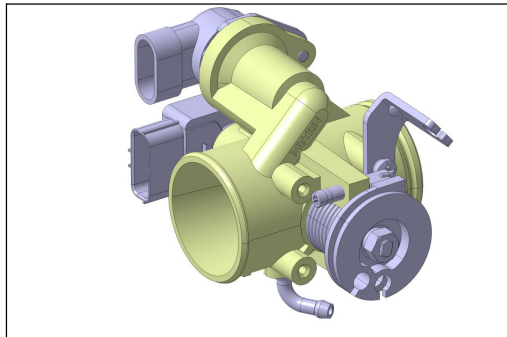


Warning:

When the throttle cable adjusted, please check the turning of throttle grip, in case the idling speed of engine got higher due to the adjustment, this is not allowed, meanwhile, after adjusted, the throttle grip shall be able to get back to the position OFF.

Throttle valve body

1. Throttle valve body.
2. The idling speed control of EFI system could adjust automatically, whose position of idling speed has been fixed, the idling speed screw could not be adjusted.



Check and adjust valve clearance

In case too wide the valve clearance, it would be noisy, Too narrow or without valve clearance

at all may be bad for valve getting close up, which get valve burned out or reduce the power

output. In this case, check the valve periodically is necessary. The air valve of EURO-V engine

was grinded in a very fine way, which makes sure a very nice valve clearance.



Warning:

This work has to be done by specialized service station.

Cylinder cover



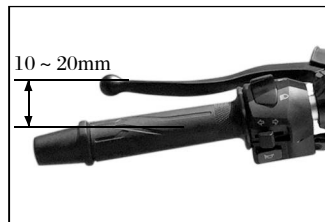
Adjustment for clutch

★ The adjustment of clutch shall be conducted when engine stopped.

The free travel of the end of clutch lever shall be within 10~20mm. In case the adjustment is needed, please loosen the locking nut on the clutch cable, then adjust to stipulated range for the free travel.

In case the adjustment is in a wide range, please adjust the stud for adjusting clutch on the right case of engine.

★ Please start the engine when adjusted to confirm the clutch's normal work. In case there is skidding or difficulty getting into gear, please adjust once again.

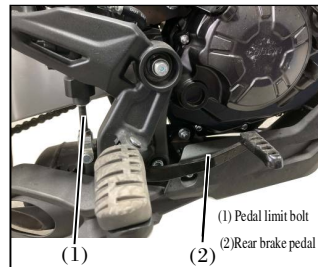


Adjustment for brake pedal

★ When checking the disc brake, please hold the motorcycle by side stand.

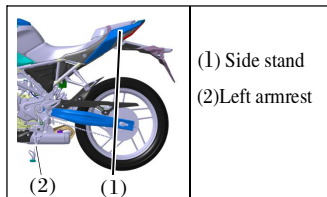
1. The free travel of rear brake pedal is within 15~25mm.
2. When adjusted, please lock up the adjusting nut.

Note: After adjusted, the braking light must be timely on when checking the brake system.



Side stand

This model equipped the side stand only.



Maintenance for front and rear disc brake set

1. The oil for brake device (Brake liquid)

Check if the brake liquid level is lower than scale mark (2) of LOWER through the liquid level viewing window on the master pump of disc brake. In case it is lower than this scale mark, please suitably fill up some brake liquid, it is the best higher than the scale mark by 3~5mm, higher than the upper limit is not allowed. When the liquid level got close to the lower limit (2), please check the abrasion of brake pads. In case the abrasion of brake pads is within allowed limit, please check the leakage of brake system, in this case, please contact the authorized service station of us.

2. Replacement of brake liquid

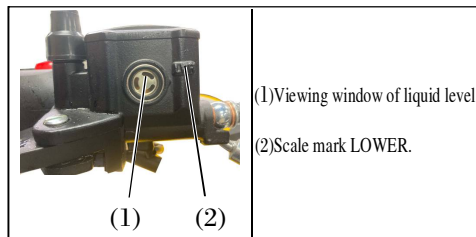
Drain off the old brake liquid first, whose operation is as below:

- ① Put the master brake cylinder on the horizontal ground without removing from motorcycle, then open the oil pool cover and its gasket;
- ② Remove the brake caliper and put its air discharging nozzle at the lowest position;
- ③ Loosen the air discharging nozzle and let the brake liquid freely flow out;
- ④ When there is not brake liquid flow out any more, please fill up with new brake liquid by 30~50ml into the brake cylinder, and then drain it off;

- ⑤ Screw up the air discharging nozzle, wipe up the brake liquid on brake caliper, then install the caliper onto the motorcycle.

Fill up the brake liquid for our model only into brake cylinder once again, whose operation is as below:

- ① Put a transparent drainage tube (Tightly matched with air discharging nozzle) onto the discharging nozzle, then screw off the discharging nozzle by 120° ;
 - ② Fill up the master cylinder with new brake liquid, and let the liquid flow out freely by itself from air discharging nozzle without operating the lever, until there is not any air bubble getting out with brake liquid from air discharging nozzle, then screw up the air discharging nozzle.
 - ③ Operate the lever, and repeat the operation in step ②, until the good hand feeling was set up on the lever.
- Finally, well install the casket and cover of oil pool, and fasten the screw on the cover



Caution:

1. Please adopt the oil of DOT3 or DOT4 for our model only if replacement of oil is necessary.
2. The mixture among oil in different brands or specifications is not allowed.
3. In case the brake liquid was polluted, it could not be used any more.

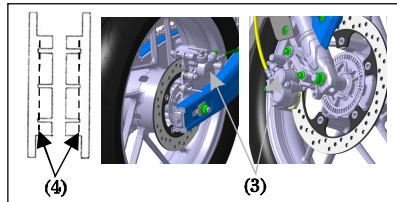
**Warning:**

Drink the brake liquid by mistake is not allowed, it is harmful to skin and eyes in case touched the brake liquid. In case the eye or skin touched the brake liquid, please wash by large amount of clean water.

3. The brake lining (Brake pad)

Within the maintenance period, the abrasion of brake pad could be visually checked.

When checking it, check along the double arrow (3). In case any one of the brake pads' abrasion reached the limit line (4), replace the double brake pads as a set. The leakage of brake liquid is not allowed, before using, please check and confirm there is not any distortion or crack on brake soft hose and joint piece.

**Caution:**

1. When replacement for brake pad is necessary, please adopt the one from our factory only. In case the maintenance or repair of brake device is needed, please contact service station with our authorization.
2. Don't drive immediately when you just replaced the brake pads for new one, please operate the brake lever and pedal for several times to let the brake pads tightly adhere to the brake plate and make the brake liquid in normal circulation.

4. Air exhaust from brake system

(1) Air exhaust from master pump: When operation is on the right master pump, turn the front wheel left (The left pump turns right), open the oil cylinder cover and gasket of oil pool, repeatedly operate the front brake lever, and check if there is air bubble getting out from oil level, until there is not any air bubble getting out. In case the hand feeling is still weak, please make air exhaust from brake caliper;

(2) Air exhaust from brake caliper: Put a transparent tube (Tightly matching with air discharging nozzle) onto air discharging nozzle; Open the air discharging nozzle by 90 °, let the brake liquid flow out by 1~2 seconds, screw up the air discharging nozzle. release the front brake lever, repeat the operation above until you setup good hand feeling. Note: When making the air exhaust from brake caliper, please fill up the master cylinder with brake liquid to keep its level height, please don't let the tiny hole of 0.5 on the master pump (Supplementary hole) expose in air.

**Warning:**

The disc brake adopts the plate with braking under high pressure, so please timely replace the brake liquid and its tube or hose.

Adjustment for chain

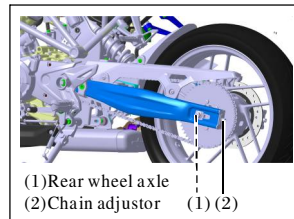
Check the abrasion, tightness and lubrication for transmission chain.

1. Hold the motorcycle by side stand, turn the chain by hand up and down to confirm its drop is within the stipulated range: 10~20mm.

2. When the adjustment is needed, loosen the nut on rear wheel axle and the locking nut, turn the nut for adjustment, let the tightness of chain meet the demands.

3. Fill up a few oil on the chain for it only.

After adjusted, the scale mark on the left and right chain adjuster shall keep aligned with that on rear fork.



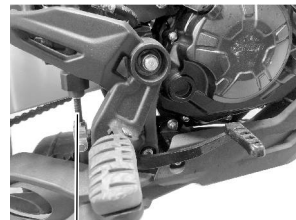
Warning:

Too loose the chain may lead to drop off even accident, once the chain touches the corrosive liquid such as electrolyte, please replace immediately.

Adjustment for brake switch

When the rear wheel braked, confirm if the braking light is on, in case not, turn the adjustment nut for adjusting.

When the switch of braking light is connected, check if the braking light is on, in case not, please check the braking light, circuit and its switch, replace if it is necessary.



Brake switch

Caution:

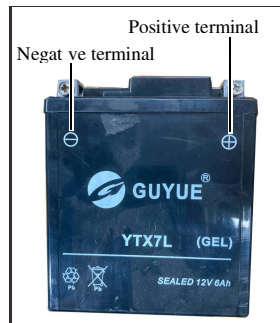
Check and confirm the free travel of brake device is within stipulated range before adjusting the brake switch.

Check the battery

1. Open the seat
2. Clean up the dust and corrosion on the surface of battery.
3. Check the joint of guiding wires, in case the joint is badly corrosive, please replace.

Caution:

- (1) When disassembling the battery, please remove the negative terminal (–) 1st, then the positive terminal (+); When re-assembling, please assemble the positive terminal (+) first, then the negative one (–), the positive terminal (+) touches the body of motorcycle is not allowed.
- (2) Once the battery used, its electrolyte could not be replaced any more, in case the power in battery was exhausted, please remove it from motorcycle and make power charge separately.
- (3) There is sulphuric acid in battery, eye or skin touches it may badly hurt, in case it is, please wash by clean water for 5 minutes and then contact the hospital.
- (4) Please don't let water get into battery when disassembling or re-assembling.
- (5) Keep the good air ventilation in the breathing tube.



Replacement for fuse tube/chip

1. Put the ignition switch on the position OFF. When replacing, please adopt the fuse tube/chip for this model: 15A, 10A.
2. Open the driver's seat, align the fuse tube/chip above battery and then replace.
3. In case the newly replaced fuse tube/chip was burned out immediately when just replaced, which indicates there are some other electrical parts in malfunction.



Warning:

Please don't let water touches battery when washing the motorcycle. Please don't adopt the fuse with different specification, otherwise it is very bad for electrical circuit, burn out the motorcycle even make engine lose its power, which is very dangerous and easy lead to accident.

Tires

Please check the air pressure in tire and the depth of tire tread when at the periodic maintenance, to keep the safety and long working life, except the periodic maintenance, more inspection is necessary.

Air pressure in tires

The insufficient air pressure in tire accelerates not only the wear-out of tire, but also bad for driving stability. The insufficient air pressure in tire makes turning difficult; But too high the air pressure decreases the contact area of tire, which lead to skidding even bring your motorcycle out of control. Please keep the air pressure in tire within stipulation.

The pressure of front tire: 230kPa Rear tire: 230kPa



Shift for light signals

The headlight, position light, turning signal light, rear position light, brake light and rear registration plate light are all LED light and sealed in light case, in case damaged, please contact our service station and replace as a whole set. The replacement for signal light please follow up the stipulation in the table on the right side, when the signal light is broken, please replace for a new one with the same specification and rated power with the former one, otherwise it may make the electrical circuit overloaded and accelerate the damage of signal light.

Muffler

The muffler is with catalyst in it, the oil, gasoline, acid, alkali, and salt get into it are all not allowed, otherwise the catalyst in it may go failure.

Fastening torque table

Ref.No.	Fastening position	Torque (N.m)	Ref.No.	Fastening position	Torque (N.m)
1	Engine suspension	M8 × 1.25: (30~40) M10 × 1.25: (35~45)	6	Joint between handle bar and steering stem	M6 × 1.25: (10~14) M8 × 1.25: (22~32)
2	Front shock absorber	M8 × 1.25: (22~32) M14 × 1.5: (65~90)	7	Rear shock absorber upper	M12 × 1.25: (55~61)
3	Front disc brake	M8 × 1.25: (35~41) M8 × 1.25: (17~23)	8	Rear shock absorber lower	M12 × 1.25: (35~45)
4	Rear wheel axle	M14 × 1.5: (65~90)	9	Disc brake plate	M8 × 1.25: (17~23)
5	Steering stem	M22 × 1: (65~75) M25 × 1: (24~26)	10	Rear fork axle	M14 × 1.25: (65~75)

Periodic Maintenance table

The maintenance of motorcycle must be on time according to our Maintenance Table as the next page shows.

If the user has tools, spare parts and capability for repair or maintenance, this work can be done by himself, how to do this work please refer to this book.

But for safety, we suggest this work shall be done by the workers in our service station.

Note: 1. In case you usually drive in dusty condition, please wash in higher frequency.

2. In case you drive more mileages than odometer, the interval for maintenance still follow up the Maintenance Table below.

Periodic maintenance table									
	Items	Interval	km×1000						
			1	7	13	19	25	31	37
Power transmission system	Lubricant		R	R	R	R	R	R	R
	Lubricationelement		\	\	C	\	C	\	C
	Check lubricant level		I	I	I	I	I	I	I
	Check seal performancefor fueltube		I	I	I	I	I	I	I
	Check the fuel pump element		\	\	I	\	I	\	I
	Fuel filter		\	R	R	R	R	R	R
	Throttle valve body/Carburetor		\	\	\	C	\	\	C
	Check coolant level		I	I	I	I	I	I	I
	Coolant	2 years	\	\	\	\	\	\	R
	Check seal performance of airinlet system		I	I	I	I	I	I	I
	Valve clearance		\	\	\	I	\	\	I
	Spark plug clearance		\	I	I	R	I	I	R
	Air filterelement		I	C	R	C	R	C	R
	Throttle operationsystem		A	A	A	A	A	A	R
	Clutchoperationsystem		A	A	A	A	A	R	A
Lubrication system	Check lubrication and tightness for steering bearing		I	\	L	I	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		A	A	A	R	A	A	R
Others	Battery voltage		\	I	I	I	I	I	I
	Seal performancefor brakeoil tube		I	I	I	I	I	I	I
	Brake liquid	2 years	I	I	I	I	I	I	I
	Brake liquidlevel		I	I	I	I	I	I	I
	Fr.&Rr. Brake pads		I	I	I	R	I	I	R
	Fr.&Rr. Brake switch		I	I	I	I	I	I	I
	Check fuel evaporation system		I	I	I	I	I	I	I
	Check tightnessof fastening parson body		I	I	I	I	I	I	I
	Check leakage for Fr. & Rr. shock absorbers		I	I	I	I	I	I	I
	Aluminium alloy wheel/Spoke wheel		I	I	I	I	I	I	I
Meaning of symbols: I: Inspection, adjust if necessary C: Clean R: Replacement A: Adjustment L: Lubrication									

VII.Motorcycle washing

A periodic washing for motorcycle can prevent the color fading, and also good for check the damage on motorcycle or oil leakage.

Note: Too high the water pressure may damage some parts of motorcycle, so the parts below shall avoid washing in high water pressure:

- Wheel hub
- Air exhaust pipe
- Fuel tank and the place under seat
- Head lock and ignition switch
- Odometer

(1) When the motorcycle washed up, please wash it once again by clean water to clean up the residual dirt and prevent rust. The plastic parts shall be wiped up by cloth or sponge with neutral cleanser, then wash by clean water.

(2) When the washed motorcycle dried in air, lubricate the chain, then idling run for minutes.

(3) Check brake system for times before driving, in case it is necessary, please repair and adjust immediately.

VIII.Maintenance during parking

Storage and maintenance

In case the motorcycle needs parking for a long time, please avoid moisture, sunshine, and rain, to prevent loss due to the parking. Please make a special checking for important parts before long time parking.

1. Replace the lubricant

2. Lubricate the chain

3. Drain off the fuel in fuel tank and fuel tubes, fill up the fuel tank with anti-rust liquid and well cover the fuel tank cap. In case the parking time is over a month, please drain off the fuel in the fuel injector.

Warning:

The fuel is combustible, when filling up or draining off, please stop the engine first. No smoking at the place for fuel filling up or draining off.

4. Remove the spark plug, fill up pure lubricant by 15~20ml into cylinder, the re-assemble the spark plug.

5. Remove the battery and put it in cool and well ventilated place, we suggest you make monthly power charge.

6. Wash and wipe up the motorcycle, spread the painting parts with fixing agent and rust prone parts with anti-rust oil.

7. Make air charge for tires, the hold the motorcycle and its wheels apart from ground,

8. Take cover for motorcycle with covering cloth.

Recovery for use

1. Remove the covering cloth of motorcycle, wash and wipe it up. In case the parking is over 4 months, please replace the lubricant.
2. Charge and battery and re-assemble it onto motorcycle.
3. Drain off the anti-rust oil in fuel tank, then fill up it with fuel.
4. Make an inspection for motorcycle before driving, make a trial driving at safe place in low speed.

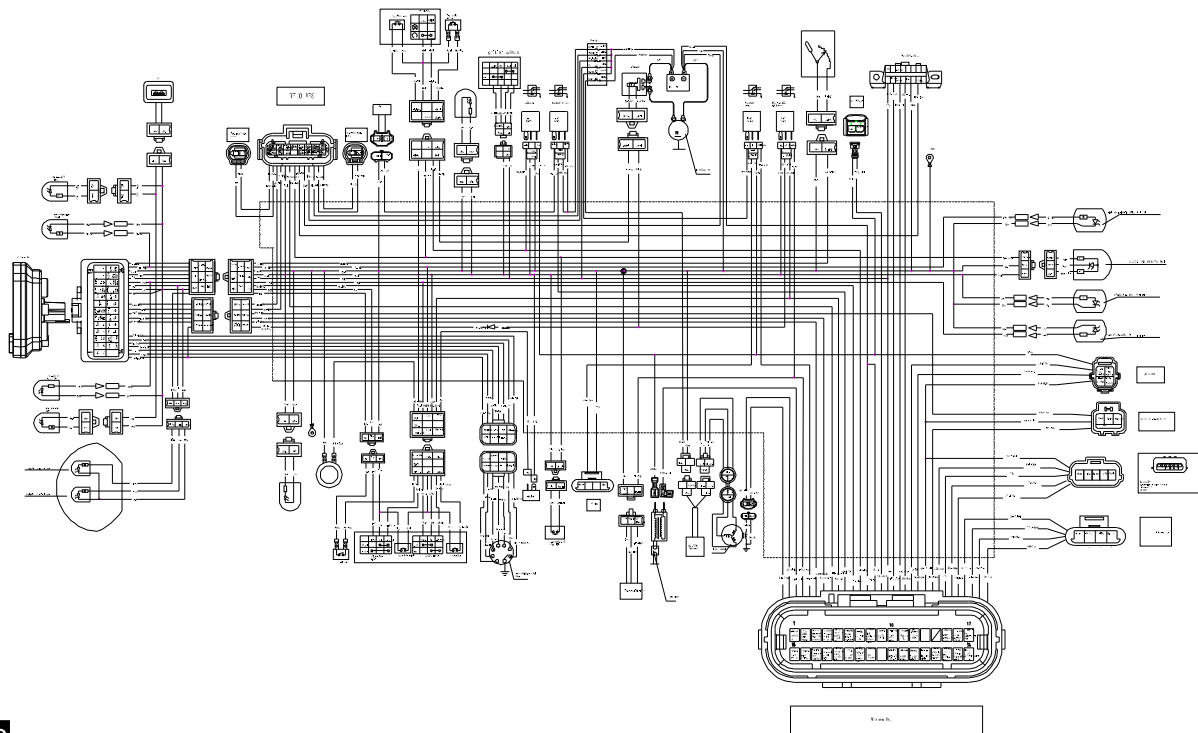
IX. Electrical starting

The electrical starting motorcycle is designed on the basis of counter kick starting, then makes improvement on electrical parts, which is a new kind of motorcycle.

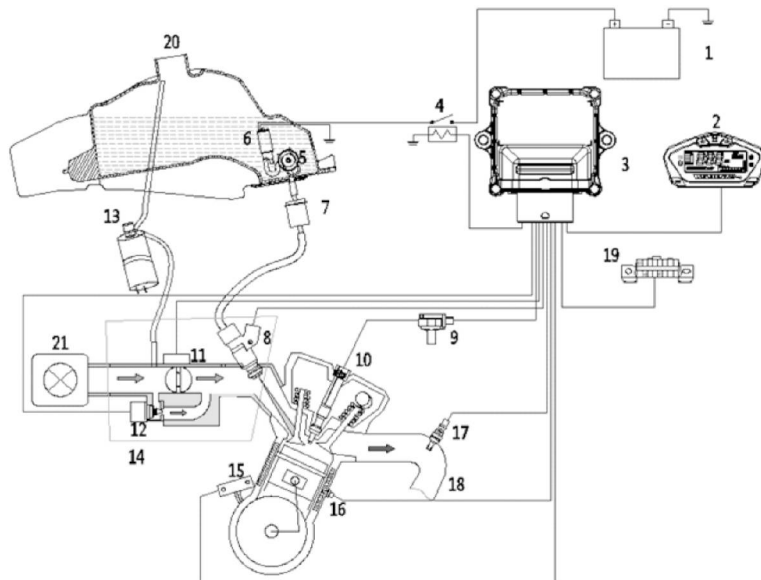
This model is for electrical starting only, whose battery shall be in specification of 12V6Ah. The clutch switch is on the left switch assembly for controlling the starting, and the engine could be started only when the clutch is separated. The electrical starting button is on the right switch assembly, who is for starting engine. When starting, put the key for general switch on the position of ON, tightly hold the clutch lever, then press the electrical starting button. In case the starting was failed in 5 seconds, release the switches, start the engine once again after seconds.

For your driving and maintenance, this book provides you the Electrical Starting Diagram.

X.Electrical diagram



XI.Mawson EFI diagram



1. Battery
2. Instrument
3. ECU unit
4. Oil pump relay
5. Oil pressure adjustor
6. Electrical fuel pump
7. Fuel filter
8. Fuel injector
9. Ignition coil
10. Spark plug
11. Sensor
12. Idling controller
13. Carbon canister
14. Throttle valve body
15. Rotation phase sensor
16. Coolant temperature sensor
17. Oxygen sensor
18. Muffler (With catalyst)
19. Diagnosis interface
20. Fuel tank
21. Air filter

XII. Use and maintenance for Mawson EFI

*Before the first driving, we suggest you turn on the key for 3 times before ignition with interval of 5 seconds, to exhaust the residual air in fuel supplying system and set up a sufficient fuel pressure.

**In the future normal driving, we suggest you when you turn on the key, wait for the fuel pump finished its work (Or 5 seconds after the key turned on), then take ignition, to set up sufficient fuel pressure which is good for starting.

***When the driving was more than a year or 6000km, please replace the fuel filter and wash the throttle valve body.

Special reminder

1. Check the voltage on both terminals of the battery, in case above 5V, it is chargeable.
2. Charge the battery by adjustable power charger, adjust its charging voltage to 16V–17V, then activate the battery by high voltage power for 40 minutes.
3. In case there is not charging current after a 40 minutes activation, that means the battery is broken and could not be used any more, in case there is charging current found, stop the activation of high voltage power, adjust the voltage to 14V–14.5V of constant, then make power charging.
4. When the charging current rises up to 2A, adjust the charging current to 2A, now please adopt a constant voltage; 14V–14.5V with constant current of 2A, make power charging, until the charging current decreased to 0.2A, stop the charging, up to now, the power of battery is full.
5. Then lay the battery over 1 hour, check the voltage between positive and negative terminals, in case the voltage keeps about 12V, which means the battery is normal, otherwise the battery is broken and could not be used any more.

Thank you for your cooperation!



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