KAYO MOTO

K2

Service Manual

WWW.KAYOMOTO.COM

This service manual is edited by KAYO
Please do not modify the content without authorization。
Manufacturer has the right to improve and update the model's structure and spare parts without notice.
The model in the image may be different from the real model.

Preface

Hereby, on behalf of KAYO all staff thank you for choosing our dirt bike: K2, and we believe that this choice will not disappoint you.

This manual is designed to help you better use our products, and it introduces the maintenance adjustment procedure, disassembly and assembly essentials, inspection and maintenance points, troubleshooting methods and maintenance technical data of K2 model in detail, with detailed graphic data attached to guide the operation.

Please carefully read this manual and conduct inspection and repair in accordance with the standard operating practices, which can effectively extend the service life of each part, improve the performance of the engine and the reliability of the whole vehicle.

For the sake of technological development, Kayo reserves the right to modify the construction, equipment and accessories of the motorcycle without prior notice. Due to the different regulations and requirements in different markets, we have made appropriate adjustments to the models, so the images in the manual may be different from the standard samples.In addition, if you have any questions, please refer to our official website www.kayo.com.cn and contact with our service staff, we will be humbly accept.

Please understand that the contents in this maintenance manual which subject to change due to vehicle improvement, upgrading will not notify again. The actual condition of the vehicle shall prevail in the maintenance.

ZHE JIANG KAYO MOTOR CO., LTD
Technical Department

Content

Symbols and Meanings of Special Words

* This symbol indicates that this operation requires the operator to have professional knowledge and technical understanding. If you do not have the confidence to complete this operation, you can go to a professional repair shop or KAYO after-sale service point to be operated by professionals.

→ This symbol indicates that the specific information is on the following page number.

Danger/warning/attention

In this manual, the words "Danger/Warning/attention" will appear. Please read the following words carefully to protect yourself and your motorcycle. The meanings of "danger", "warning" and "attention" are as follows:

Danger: Be on high alert for danger.

Warning: to be alert to moderate danger.

Attention: to be alert to minor danger.

However, please note that in this manual, we only enumerate the main safety issues related to vehicle maintenance and repair, and the contents of warning slogans cannot cover all the potential dangers during the use and repair of the vehicle.Therefore, in addition to the "**Danger**", "**Warning**" and "**Attention**" related matters, users must also have basic mechanical safety knowledge, if you do not grasp the entire maintenance and repair operation process, please consult a more experienced senior technician before operation.

Suggestions for Daily Use

The vast majority of off-road motorcycle fatalities are caused by head injuries. Without helmets, the chances of serious injury or death from a head-hit are much higher. Therefore, we strongly recommend that you wear a full set of safety equipment such as helmet, goggles, gloves and boots when driving, which will save your life at the critical moment.

This series of models is designed for off-road racing at the beginning, without considering the problem of carrying passengers, and there is no backseat, handlebar and pedal for carrying people, so please be sure not to use this motorcycle to carry other people except the driver, which behavior can easily lead to safety accidents.

Try to avoid using non-original parts to modify the car, also do not arbitrarily delete the original components of the car, if you need to replace any parts, please choose the original parts produced by KAYO or products authorized by KAYO manufacturers.In addition, the company is not responsible for any vehicle problems caused by personal modification and the use of unauthorized parts.

Our K2 product are specially designed for off-road and woodland crossing, so they are not suitable for highway riding or long-distance motorcycling. If you insist on using them, the tires may accelerate the wear of the pattern due to high speed rotation and reduce the service life .It is also not suitable for urban use, as prolonged periods at traffic lights may cause the engine to overheat and thus shorten its life. Please take care of your vehicle and avoid problems caused by improper use.

Please check your motorcycle carefully before each use and maintain it in accordance with the maintenance manual after use. After the motorcycle falls, please first check whether the main parts are damaged. If you drive a faulty motorcycle, it is very easy to lead to the occurrence of an accident and endanger your own safety.

When using this motorcycle, the temperature of the engine and exhaust pipe is very high, so it needs to cool down for a period of time after parking. During this period, do not touch or move the engine and exhaust pipe, so as not to cause scald. Do not wear shorts while riding, otherwise leg injuries may result.

Operation notes

Precautions for safety

1. You must wear work clothes (covered overalls, etc.), hats, and safety boots that are suitable for the job. If necessary, you should also wear dust-proof glasses, dust-proof masks, gloves and other safety protection products to protect your body.
2. Because the exhaust contains harmful components, it is forbidden to run the engine for a long time in a closed place or a place with poor ventilation.
3. When the engine is just stopped, the temperature of the engine and the muffler is still very high. Do not touch them before cooling to avoid burns.
4. The storage battery solution (dilute sulfuric acid) is a strong corrosive agent, which may cause burns and blindness when it touches the skin and eyes. If your clothes or skin are accidentally stained with battery solution, please wash them immediately with plenty of water and go to the hospital for treatment. The storage battery and storage battery solution should be kept strictly, and must be placed in a safe place out of the reach of children. When the battery is charged, it will produce flammable and explosive hydrogen. Once a fire source or electric spark approaches, there is a danger of explosion. So please charge in a well-ventilated place.
5. As gasoline is flammable, fireworks are strictly prohibited at the work site. Pay attention not only to open flames, but also to electric sparks. In addition, the vaporized gasoline may explode. Please choose a well-ventilated site for operation.
6. Be careful not to let the rear wheels, clutches and other rotating parts and movable parts pinch hands and clothes during maintenance.
7. When two or more people are doing homework, they must greet each other continuously to confirm safety.

Precautions for disassembly and assembly

1. Parts, lubricating oil and grease must use KAYO recommended products.
2. The parts of each system should be sorted and kept separately, so that the parts can be installed back to their original positions.
3. Please clean the dirt and dust on the car before maintenance.
4. Gaskets, O-rings, piston pin retaining rings, split pins, etc. must be replaced with new ones after disassembly.
5. When the elastic retaining ring is disassembled, if the opening is too large, it will be deformed and will easily fall off after reassembly. Please do not use elastic retaining rings that have become loose or have lost their elasticity.
6. After the parts are disassembled and inspected, they should be cleaned and the cleaning agent should be blown off with compressed air before the measurement. Apply lubricating oil

on the moving surface before assembling.

7. When disassembling, check the necessary places and measure relevant data so that it can be restored to the state before disassembly during assembly.

8. Fasteners such as bolts, nuts, and screws must be pre-tightened first, and then tightened on the diagonal according to the specified tightening torque according to the principle of from large to small, from inside to outside.

9. The rubber parts should be checked for aging during disassembly and replaced in advance if necessary. In addition, since rubber parts are not resistant to gasoline, kerosene, etc., try not to let volatile oils and greases adhere to them.

10. According to the requirements of the maintenance manual, apply or inject the recommended grease on the designated parts.

11. Use correct special tools for disassembly and assembly operations.

12. The inner ring or outer ring of the ball bearing can be rotated by fingers to confirm whether the rotation is flexible and smooth. If the disassembly method of applying force on the ball is adopted during disassembly, the dismantled bearing should not be used again:

- If the bearing axial or radial clearance is too large, replace it.
- Bearings that feel stuck in rotation should be cleaned, and those that still feel stuck after cleaning should be replaced, and those that cannot be cleaned should be replaced directly.
- It is a compression fit with the body or the shaft diameter. If the fit is not tight after disassembly, replace the bearing.

13. Bearings should be coated with oil or grease before assembling. Pay attention to the installation direction when assembling single-sided dust-proof bearings. Open type or double-sided dust-proof bearings should be installed with the manufacturer's logo and size facing outward when assembling.

14. When installing the rectangular retaining ring, the chamfered side should face the direction of force. Do not use the retaining ring that has been slackened and lost its elasticity. After assembling, turn the rectangular retaining ring to confirm that it is firmly installed in the groove.

15. After assembly, it is necessary to check whether each fastening part is tightened and whether it works normally.

16. Brake fluid and coolant will damage the painted surface, plastic parts, rubber parts, etc. Do not allow them to adhere to such parts, and rinse with water immediately in case of adhesion.

17. The oil seal should be installed with the side with the manufacturer's logo facing outward (the direction without oil):

- When assembling, be careful not to curl the oil seal lip and prevent burrs from scratching the oil seal lip.
- Apply grease on the oil seal lip before assembling.

18. When installing hose-like parts, insert the hose into the root of the joint. If there is a pipe clamp, install the pipe clamp in the dent of the pipe. Replace the hoses that are not tight during installation.

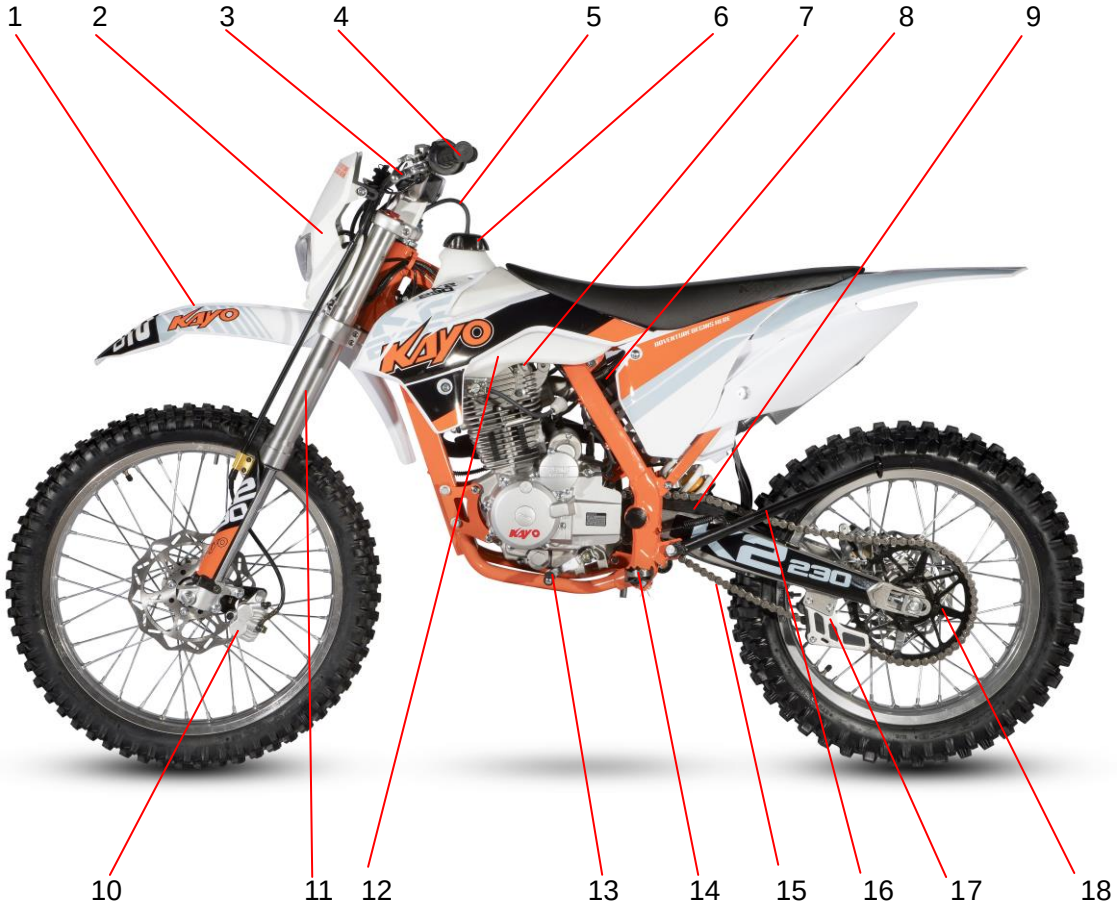
19. Don't get dust, dirt, etc. into the engine and brake hydraulic system.

20. The gasket material attached to the joint surface of each engine box must be cleaned up

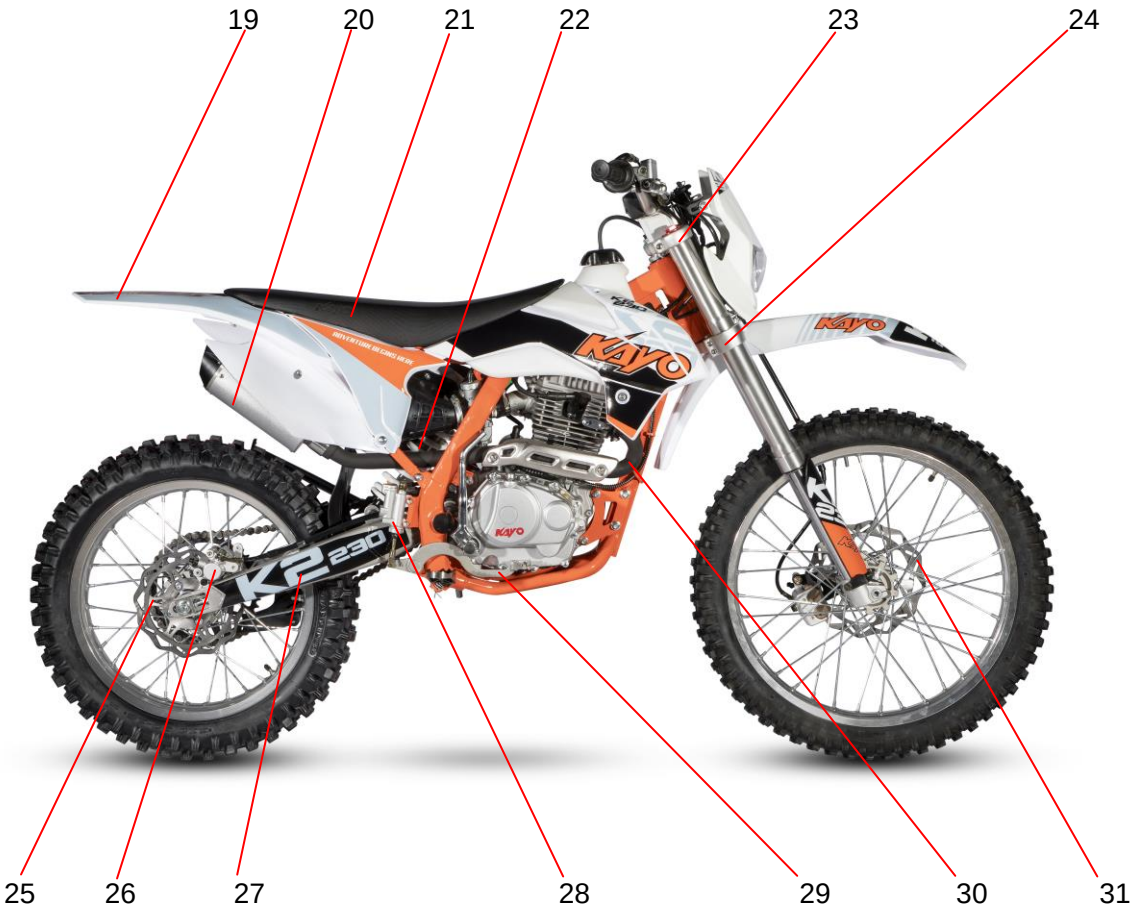
before assembly. The bumps on the contact surface must be polished evenly with oilstone.
21. Do not twist or bend the cable too much. Deformed and damaged cables can cause malfunction or breakage.
22. When assembling protective cap parts, if there is a groove, the protective cap must be inserted into the groove.

Vehicle components and location

K2 specific components and locations



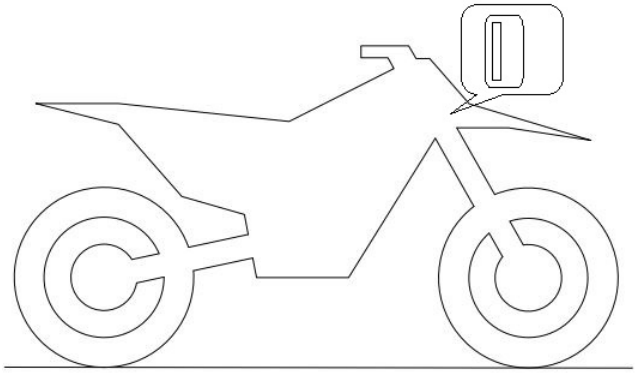
No.	Name	No.	Name
1	Front fender	10	Front brake caliper
2	Headlight	11	Front fork
3	Raiser	12	Fuel tank
4	Handlebar	13	Gear shift lever
5	Vent pipe	14	Pedal
6	Fuel tank cap	15	Chain
7	Fuel tank tap	16	Side stand
8	Air filter	17	Chain guide
9	Chain slider	18	Rear sprocket



No.	Name	No.	Name
19	Rear fender	26	Rear brake caliper
20	Exhaust pipe muffler	27	Steel swingarm
21	Seat	28	Rear brake pump
22	Rear shock	29	Brake pedal
23	Upper clamp	30	Muffler
24	Lower clamp	31	Front brake disc
25	Rear brake disc		

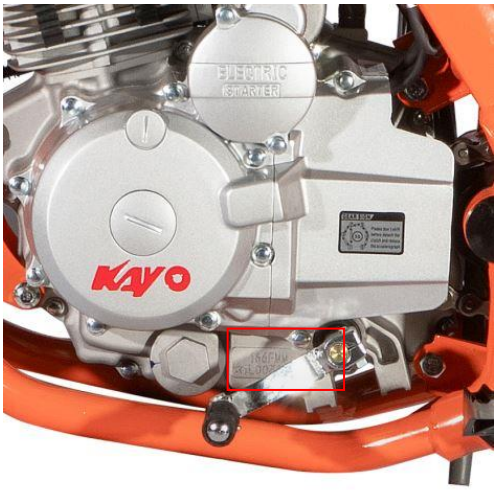
VIN Code and Engine Number

VIN Code



The VIN Code of the K2 is located on the nameplate of the front extension tube.

Engine Number



The engine number of the K2 is located on the inside of the engine gearshift lever.

The Vehicle Parameter

Vehicle Dimensions and Mass Parameter	
L*W*H（mm）	2010×840×1160
L*W*H（mm）	1340
Net weight（kg）	105
Tire size	F：80/100-21；R：110/90-18
Seat height（mm）	875
Tank volume（L）	6.7
Engine Parameters	
Engine type	Single cylinder, four stroke, Air-cooled, 4 Valves
Clutch type	Wet type, Multiple disk
Cylinder diameter×stroke	65.5×66.2mm
Displacement	249.9
Max. Power（kw/r/min）	12/7000
Max. Torque（N•m/r/min）	17.5/5500
Compression Ratio	9.6：1
Shift type	Usually engaged two - stage transmission five - speed transmission, International profile
Starting	Electric
Fuel control system	Carburetor
Battery	EL2-2500lithium battery
Chain	#520H；13T/45T
Frame/Shock/Brake/Wheel system Parameters	
Frame type	Central double cradle type high strength steel tube frame
Front shock	Inverted single unadjustable front shock absorber L=800mm
Rear shock	Adjustable rear shock L=360mm
Swingarm	High-strength steel flat fork L=540mm
Handlebar	6061 aluminum alloy fat bar, with Kayo special ultra-soft off-road grip
F/R rims	F: 1.60×21；R: 2.15×18；high strength aluminum rim
F brake system	Φ240mm disc brake
R brake system	Φ220mm disc brake, Forged up-walking brake pedal
Others	
Air filter type	Sponge filter core filter type
Fuel type	92 and above grade gasoline
Motorcyclists	1（rider）
Maximum load mass	120kg

Important fastener specifications

No.	Item	Fastener specifications	**Quantity**
1	Front brake caliper mounting bolt	Outer hexagon small head flange M8×40 full thread	2
2	Steering column nut	Aluminum silver M26×1	1
3	Upper pressure block mounting screws	Hexagon socket cap screws M8×110	4
4	Front disc brake rotor mounting bolt	Hexagon socket head M8×26	
5	Front axle mounting nut	Socket flange M14×1.5	1
6	Shift lever mounting nut	Hexagon socket head M6×20	1
7	Engine front mounting bolt	Outer hexagon small head flange bolts M8×90	2
8	Engine rear mounting bolt	Hexagon bolts on opposite sides M10×110	2
9	Engine front mounting bolt	Hexagon flange self-locking nuts M8	2
10	Engine rear mounting bolt	Hexagon flange self-locking nuts M10×1.25	2
11	Exhaust pipe mounting nut	Hexagon flange self-locking nuts M8	2
12	Chain guide sleeve mounting screws	Cross recessed pan head screws M6×12	2
13	Chain guide sleeve mounting screws	Cross large flat head machine screw M6×12	1
14	Flange axle mounting nut	Hexagon flange self-locking nuts M16×1.5×H14.8	1
15	Adjusting Chain bolt	Hexagon bolts on opposite sides M8×70	2
16	Adjusting chain nut	Hexagon nuts with opposite side M8	4
17	Rear shock and frame connecting bolt	Outer hexagon big head flange M10×45×1.25	1
18	Rear shock and swingarm connecting bolt	Outer hexagon big head flange M10×45×1.25	1
19	Rear shock and swingarm tighting nut	Hexagonal flange with teeth M10×1.25	1
20	Rear brake disc mounting bolt	Opposite side of outer hexagon M6×20	4

21	Rear sprocket mounting screws	Socket cap screw M8×31 10.9S	6
22	Rear sprocket fastening nut	Hexagon flange self-locking nuts M10×1.25	6
23	Rear axle nut	Hexagon flange self-locking nuts M14×1.5	1
24	Rear brake pump mounting bolt	Hexagon socket head M6×20	2
25	High voltage package mounting bolt	Outer hexagon small head flange boltsM6×16	1
26	Voltage stabilizer mounting bolt	Outer hexagon big head flange M6×16	2
27	Electric door lock bracket bolt	Outer hexagon small head flange bolts M6×12	2
28	Screws connecting the left and right guard plates to the fuel tank	Cross large flat head machine teeth M6×12	6
29	Muffler mounting bolt	Hexagon socket cap screws M8×25	1
30	Hexagonal flange tooth nut	M6	8
31	Hexagon flange self-locking nuts	M6	14

The tightening torque of the fasteners in the above table can refer to the standard torque.
Note：Before installing the thread, apply anti-rust grease on the thread and the joint surface.

The Vehicle Control

Clutch lever inspection

The clutch is controlled by the clutch lever, which located at the left end of the handlebar, and operated by the left hand.

Front brake lever inspection

The front disc brake is controlled by the brake lever. Which located at the right end of the handlebar, and operated by the right hand.

The angle between the brake lever and the handlebar of K2 model can be adjusted according to the needs of customers. For details, see "Adjusting the Stroke of the Front Brake lever".

The front brake adopts a floating caliper disc brake, which is installed on the lower end of the left front shock and fixed by 2 bolts.

Throttle knob

The throttle knob is located on the right side of the handlebar and is controlled by turning with the right hand. When the handle is turned counterclockwise, increase the throttle, release the handle and return it to the position.

Start

The vehicle start button is located on the right side of the handlebar, close to the position of the throttle knob. It is a square gray button. Long press it to start the motorcycle engine. In addition to the start button, the vehicle can also be started by stepping on the start lever.

Note： When starting, the left hand should squeeze the brake to prevent the engine from starting with gear.

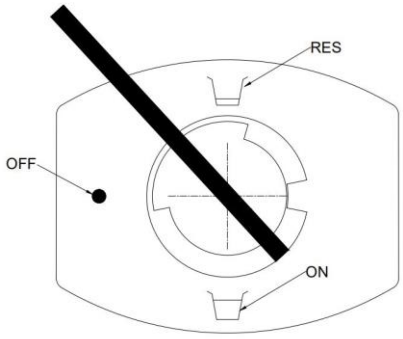
Note： There should be fuel in the fuel tank before starting the engine, and the fuel tank switch is required to be in the open position.

Extinguish

The engine's stop switch is located on the left side of the handlebar near the grip. It is a square red button. Long press it to turn off the engine.

Fuel Tank Switch

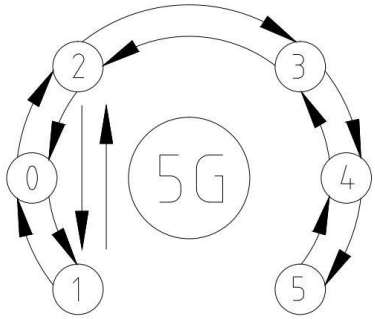
The K2 carburetor version adjusts the fuel supply through the fuel tank switch, which is located at the bottom of the left side of the fuel tank. By rotating the switch, you can control whether the fuel enters the carburetor, so as to achieve the control effect.



The meaning of each symbol on the fuel tank switch is as shown in the left figure, where the "ON" symbol indicates that the switch is turned on and the fuel is drained; the "OFF" symbol indicates that the switch is turned off and the fuel drain stops; the "RES" symbol indicates that the reserve oil is enabled.

Shift check

The K2 shift lever is located on the left side of the engine, and the shift operation is performed by stepping on and hooking up the shift lever.

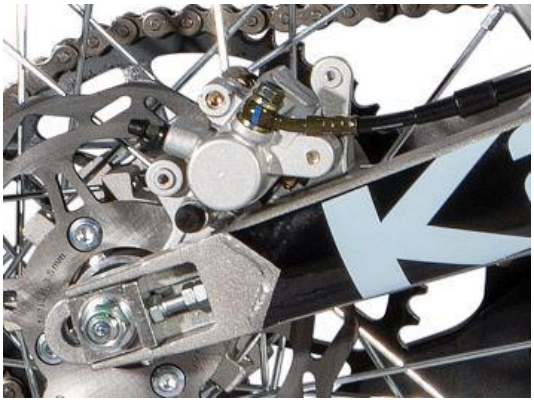


The K2 engine gear is the international five gears, and its gear setting is shown in the left picture.

Inspection of rear disc brake

The foot brake pedal is located on the right side of the engine and is operated by stepping on it.

Note： When performing brake operation, the foot brake should be used as the main brake, and the hand brake should be used as a supplement.



The rear wheel brake adopts a floating caliper disc brake, whose caliper body is located on the right side of the rear wheel and is fixed by a disc brake bracket.

Parking support

K2 use a single support for parking support. The single support is located on the left side of the whole vehicle. When in use, the vehicle is centered and the single support is kicked to expand it. Tilt the whole vehicle to the left to make the single support contact the ground and support the motorcycle.

Precautions Before Use

Advice for beginners

1.Please read this manual before driving, especially the "The Vehicle Control" and "Drive Guide" sections.
2.Please carry out a standard run-in when driving.
3.If any part problem is found during use, please refer to this manual for repair or contact KAYO dealer.
4.After each use, the whole vehicle needs to be cleaned with water flow.
5.If not necessary, do not drive in bad weather (such as heavy rain, blizzard, etc.).
6.The company is not responsible for the whole vehicle problems caused by malicious behavior.

The running-in process

Motorcycle engines have a lot of relatively moving parts, such as pistons, piston rings, cylinder blocks, and transmission gears that mesh with each other. Therefore, at the initial stage of use, the engine must be run-in to a standard. The running-in can make the moving parts adapt to each other, correct the working gap, and form a good smooth friction surface that can withstand larger loads. Only after standard running-in can the engine have excellent performance and reliability.
The recommended running-in steps are as follows:
1、0~2.5h stage：when the motorcycle is used at 50%~75% throttle, the speed should be changed frequently to avoid the motorcycle running for a long time at the same throttle; After working for 1 hour, let the engine cool for 5~10 minutes; Avoid rapid acceleration, throttle can not be sudden and small.
2、2.5~4h stage：at 50%~75% throttle, the motorcycle can run for a long time at the same throttle. In the working process, the throttle can reach 100%, but the duration is not higher than 5~10 seconds;
3、4~5h stage：use the motorcycle at 75%~100% throttle.
4、More than 5h：increase the speed to 60~80km/h, until the engine performance can be fully played.

Danger：When driving a motorcycle, please do not speed up regardless of the consequences, this behavior is easy to cause engine damage, thus causing safety accidents.Therefore, please pay attention to certain driving skills when using motorcycles.

Drive Guide

Check items before driving

1. Check the tank level
2.Check the liquid level of the hand brake oil cup
3.Check the liquid level of the foot brake oil cup
4.Check the hand brake clamp system dynamic friction plate
5.Check the foot brake clamp system dynamic friction plate
6.Check braking effect of braking system
7.Check the chain
8.Inspect rear sprocket, engine sprocket and chain guide structure
9.Check the chain guider
10.Check the outside surface of the tire
11.Check tire pressure
12.Check the battery level
13.Check the thickness of the front disc brake
14.Check the thickness of the rear disc brake
15.Check the torque of each fastener
16.Check the engine gear
17.Check cover
18.Check the fuel tank switch
19.Check if the body armour is fully worn

Precautions for ignition

The steps of electric ignition are as follows:
1、Open the electric lock.
2、Squeeze the brake lever with your right hand.
3、Hold the ignition switch with your right finger.
4、The engine starts to work, loosen the ignition switch, and the start of the vehicle is over
Note : Before starting the engine for K2 models, turn the fuel tank switch to the "ON" position.
The steps of kick start are as follows:
1、Open the electric lock.
2、Squeeze the brake lever with your right hand.
3、Use your right foot to kick the startshift.
4、The engine starts to work, loosen the ignition switch, and the start of the vehicle is over
Note : Before starting the engine for K2 models, turn the fuel tank switch to the "ON" position.

Precautions for start

1、An inspection should be carried out before starting, including the state of the vehicle and the driver's dress.
2、When starting, the motorcycle should not go too fast.
3、To ensure safety, please use the first gear to start driving for a certain distance before shifting gears.

Precautions for turning

1、Take care to slow down in advance when turning.
2、When turning, lower your center of gravity to reduce the risk of side rolling.
3、When turning, do not shift gears.

Precautions for acceleration

1、Do not accelerate on the corners.
2、After acceleration, shift gears in time.

Precautions for shift gears

1、Do not skip gears when shifting gears.
2、Do not increase the throttle when shifting gears.
3、Shifting should not be done in corners.

Precautions for brake

1、When braking should be based on the foot brake, hand brake as a supplement.
2、Check the level of brake fluid in the brake fluid cup every time you ride.
3、When the brake fluid is insufficient, the appropriate brake fluid should be added in time according to the maintenance manual.

Precautions for stop & park

1.When parking, we should pay attention to slow down first and then stop, and should not brake in an emergency.
2.When parking, unfold the single support and tilt to the left for parking operation.
3.Please put the gear in neutral before stopping.

Suggested inspection time for all parts of the vehicle

	1 hour after each ride	every 10 hours/after every ride	every 20 hours	every 30 hours
Check and charge the battery		●	●	●
Check the front disc brake plate		●	●	●
Check the rear disc brake plate		●	●	●
Check the front and rear disc brake discs		●	●	●
Inspect brake tubing for damage or leakage		●	●	●
Check the rear disc brake fluid level		●	●	●
Check the free stroke of the brake pedal		●	●	●
Check the frame and swingarm		●	●	●
Check whether the swingarm bearing is loose			●	
Check the top of the shock absorber		●	●	●
Check the shock absorber connecting rod		●	●	●
Check tire surface condition	○	●	●	●
Check tire pressure	○	●	●	●
Check hub bearings for looseness		●	●	●
Check the wheel hub		●	●	●
Check the rim bounce	○	●	●	●
Check the spoke tension	○	●	●	●
Check chain, rear sprocket, engine sprocket, guide sleeve and chain		●	●	●
Check chain tension	○	●	●	●
Oil all moving parts (chain, handlebars, etc.) and check for smooth		●	●	●
Check the front disc brake oil level		●	●	●
Check the free stroke of brake handlebar		●	●	●
Check whether the steering head bearing is loose	○	●	●	●
Check valve clearance	○			●
Check clutch			●	
Change the gear oil	○	●	●	●
Check all hoses (such as fuel, cooling, exhaust, drainage, etc.)	○	●	●	●
Check the hardness		●	●	●
Check the lights	○	●	●	●
Clean air filter and air filter housing		●	●	●
Check whether screws and nuts are tightened	○	●	●	●
Replace the fuel filter	○	●	●	●
Check the carburetor idle speed	○	●	●	●
Final inspection: check whether the vehicle is running safely and conduct a test run	○	●	●	●

○ One-time interval

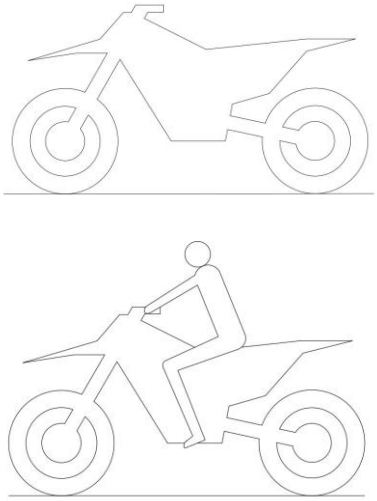
● Periodic interval

Attention : This table is for reference only. Please adjust the maintenance cycle of the motorcycle according to the specific model and use situation.

Warning : For the inspection, adjustment and replacement of the engine, please consult Kayo Service Center to avoid damage.

Suspension system

Check the vehicle's compression and rebound（with rider）



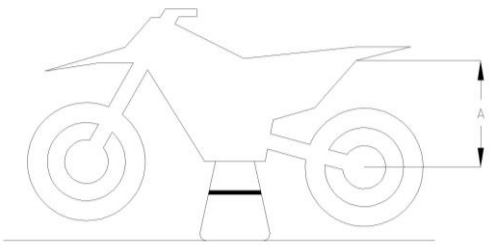
To ensure the best driving characteristics of the vehicle and avoid damage to swingarm, shock absorbers, linkage and frame, the basic setting of the suspension components must match the driver's weight.

The total standard rider mass of the K2 off-road motorcycle is shown in the table below.

K2	65～75kg

If the rider's weight is above or below the standard range, the basic setting of these sections must be adjusted accordingly. A small weight difference can be compensated by adjusting the rear shock absorber spring preload, but if the weight difference is large, the spring must be replaced.

Measure the distance from the center of the rear wheel to the rear fender in suspension



The measurement procedure is as follows:

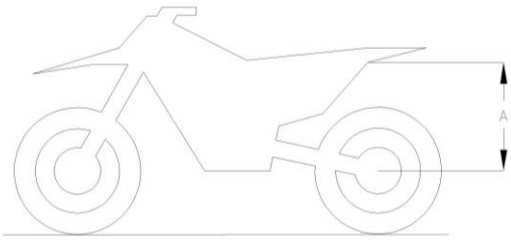
1, the whole motorcycle set up, so that the rear wheel is completely suspended

2. Select a fixed point on the side of the rear fender and mark it as "point 1".

3. Measure the distance from "Point 1" to the center of the rear axle and record it as "A1".

4. Remove the motorcycle from the rack

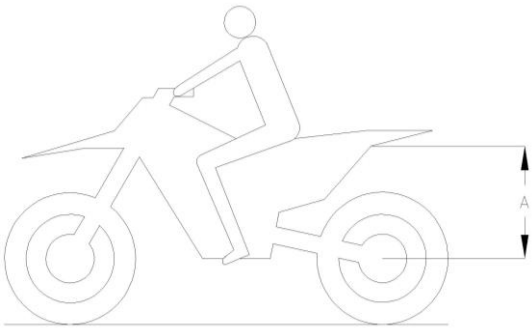
Measure distance from center of rear wheel to rear fender under no load



The measurement procedure is as follows:
1. The motorcycle is righted so that the center surface of the tire is perpendicular to the ground
2. Measure the distance from the center of the rear wheel axle of the motorcycle to "point 1" and record it as "A2".
3. Use single stand to support the vehicle
4. Calculate the difference between "A1" and "A2" and denote it as "D1".
The value of "D1" when K2 motorcycle leaves factory is shown below

MODEL	D1
K2	25～35mm

Measure distance from center of rear wheel to rear fender in driving condition



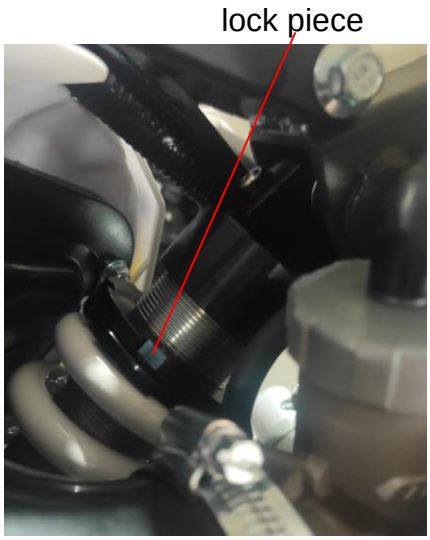
The measurement procedure is as follows:
1. The driver rides the motorcycle (the engine does not start)
2. Righten the motorcycle so that the center surface of the tire is perpendicular to the ground
3. Measure the distance from the center of the rear wheel axle of the motorcycle to "point 1" and record it as "A3".
4. The driver uses single stand to support the vehicle and leave the seat
5. Calculate the difference between "A1" and "A2" and denote it as "D2".
The value of "D2" when K2 leave the factory is shown below

MODEL	D2
K2	90～100mm

If "D2" measured by the customer is lower than the factory value, the spring preload can be lowered appropriately; If the customer measured "D2" is

higher than the factory value, the spring preload can be adjusted higher; If "D2" is far less than the factory value, it is necessary to replace the spring with a lower hardness; If "D2" is much greater than the factory value, it is necessary to replace the spring with a greater hardness.

Adjustment for the spring preload of rear shock absorber



The spring preload of the rear shock absorber can be controlled by adjusting the lock piece. Adjust the lock piece to move down, the spring preload increases; Adjust the lock piece to move up, the spring preload is reduced.

Check for the setting of front shock absorber

The inspection procedure of the front shock absorber is as follows:
1. Place the whole motorcycle on the ground
2. Righten the vehicle
3. Hold the handlebars with both hands and press down on the front shock absorber
4. Observe the effect of pressure and rebound of front shock absorber

If the compression of the front shock absorber is difficult, the compression damping should be appropriately reduced.If the rebound of the front shock absorber is difficult, the rebound damping should be appropriately reduced;When the ambient temperature is high, the front shock absorber should also be properly deflated.

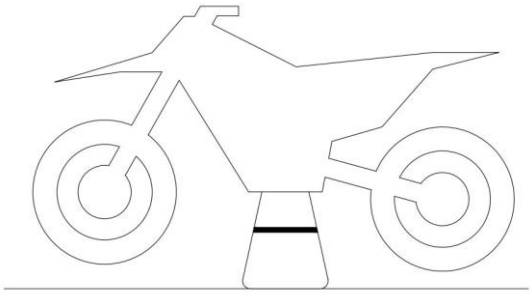
Adjustment for the handlebar

The handlebars of the vehicle can be adjusted according to customers' driving habits. The

specific steps are as follows:
1. Take out the grips and cover on the handlebar
2. Unscrew the press bolt so that the handlebar can rotate
3. Sit on the vehicle and help the handlebars to the natural position of your hands
4. Screw the press bolt back
5. Obtain the position of handlebars. If not satisfied, repeat the above process.

Disassembly and inspection of vehicle parts

Placement



When carrying out the related maintenance of the whole vehicle, it is necessary to suspend the motorcycle to facilitate the disassembly and assembly of various parts.

Disassembly and installation of front shock absorber guard plate

The disassembly and installation steps of the front shock absorber guard plate are as follows:
1. Remove the front shock absorber protection plate fixing screw
2, remove the front disc brake oil pipe clip
3. Remove the front shock absorber guard plate
4. Installation shall be carried out in the reverse order of disassembly
Note: when removing the front shock absorber guard plate of K2, the front wheel should be removed first, otherwise the screws on the inside

near the tire cannot be removed.

Disassembly and installation of front disc brake

The disassembly and installation steps of the front disc brake are as follows:
1. Remove the mounting bolt of disc brake clamp body
2. Remove the front brake oil pipe clamp
3. Remove the front brake handle
4, Remove the front disc brake
6. Installation shall be carried out in the reverse order of disassembly
Note: For K2 model, disc brake cover should be removed first.

Disassembly and installation of front shock absorber

The steps of the front shock absorber are as follows:
1, remove the front disc brake
2. Remove the front wheel
3. Loosen the front shock absorber fixing bolt on the coupling plate
4. Remove the front shock absorber
5. Installation is carried out in the reverse order of disassembly.

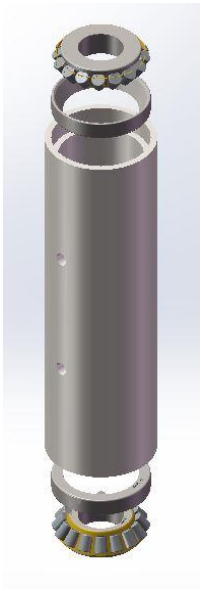
Disassembly and installation of clamps

The disassembly and installation steps of the clamps are as follows:
1. Remove the front shock absorber
2, remove the turning column lock nut
3. Remove the upper clamp
4. Remove the adjusting nut of the turning column
5. Take out the lower clamp
6. Remove the turning column
Installation is carried out in the reverse order of disassembly

Check the head steering

Check the head steering steps as follows:
1. Aerial the whole vehicle
2. By turning the handlebar left to right to control the motorcycle head, if it turns smoothly and there is no obstruction, the motorcycle head turning is normal
3. If it is found that there is a sense of delay and obstruction, then remove the coupling plate to check whether the steering bearing is normal

Disassembly,installation and lubrication of steering head bearing



When installing the steering bearing of the vehicle head, apply a layer of lithium-based grease on the surface of the roller. Refer to the figure on the left for specific installation.

Removal and installation of front fender

The disassembly and assembly steps of the front fender are as follows:
1. Remove the mounting bolts of the front fender;
2. Remove the front fender;
Installation is carried out in the reverse order of removal.

Removal and installation of rear shock absorber

Check the rear shock absorber and observe the spring for cracks, etc. Replace the rear shock if necessary.
Follow the steps below to disassemble the rear shock absorber:

- The whole vehicle is suspended;
- Remove the seat cushion;
- Remove the mounting bolts of the rear shock absorber and the frame;
- Remove the connecting bolts between the rear shock absorber and the flat fork;
- After confirming that there is no interference, take out the rear shock absorber from above;

- When installing the rear shock, proceed in the reverse order of removal.

Removal and installation of seat cushion

The removal and installation steps of the seat cushion are as follows:
1. Remove the fixing bolt on both sides of the rear seat.
2. Take out the seat backwards.
3. The installation steps should be carried out in the reverse order of removal.

Removal and installation of air filter

The removal and installation steps of air filter are as follows:
1. Remove the side cover of the air filter;
2. Loosen the connection between the air filter hose and the throttle body/carburetor;
3. Remove the air filter sponge assembly;
4. Remove the air filter hose;
5. The installation is carried out in the reverse order of removal.

Cleaning and maintenance of air filter

Before performing maintenance on the parts of the air filter, you need to check first as follows:
1. Check whether there are cracks on the surface of the air filter hose
2. Check whether the air filter sponge is damaged
3. Check whether the air filter sponge support is damaged
4. Check whether there is a rupture problem in the air filter
If the air filter is damaged, replace the corresponding parts; if no parts are damaged, perform maintenance as follows:
1. Clean the air filter hose with water and let it air dry
2. Clean the dust attached to the air filter sponge and infiltrate the surface with air filter oil. If

the dust on the sponge is really difficult to handle, you can also replace the new air filter sponge.
3. Clean the surface of the air filter sponge support, let it dry naturally, and then apply a layer of oil on the surface
4. Rinse the air filter housing with water and let it air dry

Removal and installation of exhaust pipe

The removal and installation steps of exhaust pipe are as follows:
1. Remove the muffler
2. Remove the fixing bolts of the exhaust pipe
3. Remove the fixing nut at the connection of the engine exhaust pipe
4. Remove the exhaust pipe
5. Installation is carried out in the reverse order of removal

Removal and installation of muffler

The exhaust pipe and the muffler can guide the gas emission and reduce the noise.
If the exhaust pipe is rusty or ruptured or damaged by impact, please replace it with a new one immediately. If the noise is too high or the engine performance is degraded, replace the muffler.
For the cleaning of the exhaust system, please consult with KAYO dealers before proceeding.
If you need to replace the muffler, please follow the steps below:
Unscrew the mounting bolts of the muffler;
Unscrew the fixing bolts of the muffler;
Loosen the buckle at the connection between the muffler and the exhaust pipe;
Pull out the muffler backwards;
Replace the muffler and install the fasteners;
Fastener installation is carried out in the reverse order of removal.

Removal and installation of fuel tank

Installation screw

Removal and installation of fuel tank are as follows:

1. Remove the seat cushion
2. Remove the front left and right guard plates
3. Unscrew the fuel tank installation screws
4. Remove the fuel tank from the frame
5. Installation is carried out in the reverse order of removal

Check the chain and clean it

The inspection of the chain is carried out from the following aspects:

1. Observe the chain from the rear of the vehicle to check whether the chain is generally skewed
2. Rotate the rear wheel by hand to observe whether the rotation of the rear wheel is smooth
3. Carefully check the gap between the chains to see if there is any sediment attached

The cleaning steps of the chain are as follows:

Use a special cleaning agent to wash the surface of the chain and the silt and grease in the gaps, wait until the chain is naturally air-dried, and then apply a layer of anti-rust oil on the surface of the chain.

Removal and installation of chain

The removal and installation steps of the chain are as follows:
1. Remove the spring on the chain
2. Remove the movable section of the chain
3. Pull out the chain from below the sprocket
4. Installation is carried out in the reverse order of removal

Check And Adjustment of chain tension

The chain transfers the power output from the engine to the wheels so that the motorcycle can move. So it is an important part of the motorcycle. Therefore, the chain needs frequent inspection and maintenance to ensure its normal use.
The chain tension can be adjusted according to requirements, the steps are as follows:
1. Fix the motorcycle so that the rear wheel is completely suspended;
2. Measure the distance between the rear of the flat fork and the chain. The normal distance should be 30-40mm, which is about the distance between two fingers. The distance should be close to the normal distance, and it is not necessary to be very demanding;
3. Loosen the rear axle nut;
4. Find the position with the greatest tension on the chain when the normal distance is satisfied;
5. Through the nut on the tensioner, use the notches on the tensioner and the lugs on the adjuster to align the two ends of the flat fork;
6. Tighten the tensioner nut;
7. Tighten the rear axle nut;
8. Check the point of maximum tension and readjust the tension if necessary.
When checking the chain tension, in addition, a visual inspection of the chain guide and sprocket is required.
When the chain is over-used or the stretch exceeds 2%, the chain should be replaced, and the corresponding guide rail and sprocket should be replaced at the same time. If only the chain is replaced without replacing other accessories, other accessories that are worn out due to the old chain will shorten the service life of the new chain, and these accessories will

quickly reach the limit of use and have to be replaced. Therefore, even from an economic point of view, it is worthwhile to replace the entire chain drive system at the same time. Replacement parts should use KAYO original factory production or authorized products.
The chain needs to be lubricated regularly, see the general lubrication section for details.
Note: The alternating wet and dry working environment will greatly shorten the service life of the chain and its surrounding accessories. Therefore, please follow the correct lubrication method and select a suitable lubricant for lubrication.
Note: If the chain needs to be tightened frequently, or you find any signs of wear on the front sprocket, rear sprocket and the chain, please contact your KAYO dealer for a comprehensive inspection to avoid safety problems.

Inspection of rear sprocket, engine sprocket and chain guide structure

Check the wear of the chain guide and the chain protector on the swingarm. Under normal circumstances, these two can play a role in guiding the movement of the chain. If the wear is too large, it is not conducive to the normal movement of the chain and affects its transmission effect. Therefore, the excessively worn chain guide and chain protector should be replaced in time to ensure that the motorcycle works normally.

Inspection of the frame

Checking steps are as follows:
Check whether the paint layer on the surface of the frame is damaged or not.
Check whether the fixed points of the frame are deformed or not, especially the installation points of the engine, flat fork and rear shock absorber.
Check whether there are cracks on the surface of the frame, especially at the welded point.

Inspection of the swing arm

Checking steps are as follows
Check whether there are cracks on the surface of the swing arm
Check whether there is any deformation at the mounting point of the cradle on the swing arm
Check whether the surface paint of the swing arm is damaged or not.

Inspection of throttle cable

Throttle lever

The method of checking the throttle cable is as follows:
1. Turn the throttle lever to feel whether the throttle rebounds smoothly
2. Start the motorcycle engine, turn the front of the car left and right, and observe whether the power of the engine changes due to the movement of the front of the car.

Inspection of handlebar

Let the rider sit on the vehicle, put his hands on the handlebars naturally, and feel whether the position of the clutch lever and brake lever is comfortable. If you feel difficult to control, adjust the positions of the clutch and brake levers.

Check and maintain of brake system

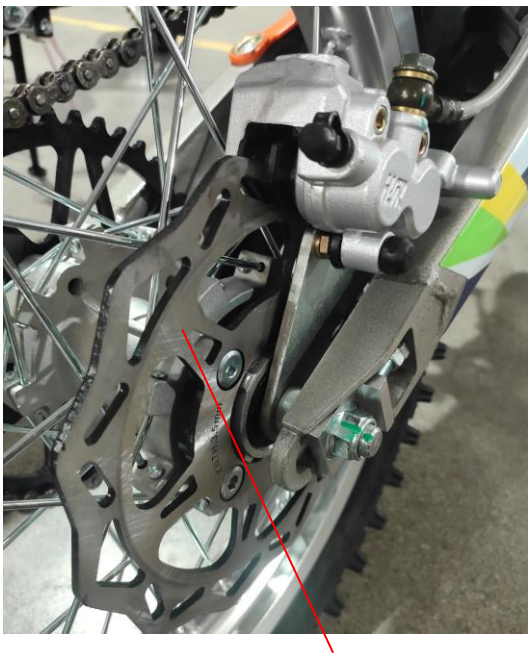
Check the free stroke of the front brake lever

The method of checking the stroke of the front brake lever is as follows:
1. Put your right hand on the right hand grip naturally;
2. Use the index finger and middle finger of your right hand to check the free stroke. At this time, two fingers are required to hook and pull the handle;
3. Pinch and release the handle, and feel the resistance of each pinch and release;
4. If it feels soft when pinching, air may be mixed into the oil pump or oil pipe. Then, check the entire brake system and take corresponding measures.

Adjust the stroke of the front brake lever

front brake lever：
The front brake lever can be adjusted to suit the operating habits of different people. The adjustment steps are as follows:
□1. Loosen the fixing nut;
□2. Turn the adjusting nut to adjust the angle of the handlebar to the position you are satisfied with;
□3. Return the fixing nut.
Danger: Please test the brake system (including front brake and rear brake) every time the motorcycle starts. If you feel soft when you pinch the brake lever or step on the brake pedal, there may be air in the corresponding pump or oil circuit, or the corresponding one or more parts of the brake system are in poor condition. Once the above situation occurs, please check the brake system immediately and contact your KAYO dealer.

Check the brake disc



brake disc

Check the brake disc from the following aspects
1. Check whether there are cracks, dents and other damages on the surface of the brake disc
2. Measure the thickness of the brake disc and compare it with the limit thickness.If the measured brake disc is less than or equal to the limit thickness of the brake disc, then it must be replaced immediately.
The limit thickness table of brake disc is as follows:

	Limit thickness of front brake disc	Limit thickness of rear brake disc
K2	3.5mm	3.5mm

Check the front brake fluid level

K2 model use hydraulic disc brakes, and the brake fluid level of the disc brakes can be checked through the observation hole.
If the liquid level is lower than the lower edge of the observation hole, you should immediately add brake fluid to the upper edge of the observation hole.

Add the front brake fluid

The brake fluid must be checked and replaced regularly. If the brake fluid is mixed with water, soil or other particles, the brake fluid should also be replaced.
It is recommended to use DOT4 brake fluid.
Danger: Do not mix different types of brake fluid and pour it into the brake system for use. The use of brake fluid must meet the braking requirements. Please do not use the brake fluid in an unsealed container. The brake fluid may deteriorate when exposed to the air, which will affect the braking effect. Do not use used brake fluid.
Note: Even if the motorcycle is not used for a long time, the brake fluid should be changed once a year.

Check the front brake pads

Check the thickness of the brake pads of the caliper. If the thickness of the brake pads is less than the minimum, then it must be replaced.
The minimum thickness of the brake pad is 1mm.
Note: The brake pads should be replaced as a complete set. If you are not sure to complete the replacement work, please go to the KAYO dealer and have a professional complete the replacement.

Check the free stroke of the foot brake

Rear brake pedal：
Normally, the free stroke of the brake pedal is shown in the table below. Check the brake pedal and pay attention to whether the stroke is correct.

Model	Free stroke of brake pedal head
K2	25～40mm

Check the rear disc brake fluid level

Observe through the liquid level hole to check the level of brake fluid. The liquid level should exceed half of the observation hole, that is, the liquid level should be higher than "LOWER". If the brake fluid is insufficient, it should be added immediately.

Note: Do not splash the brake fluid on the paint surface, which may cause corrosion.
Danger: Please pay attention to check whether the brake fluid is leaking and whether the brake fluid pipe is damaged. If there is a leakage problem, please contact KAYO dealer.

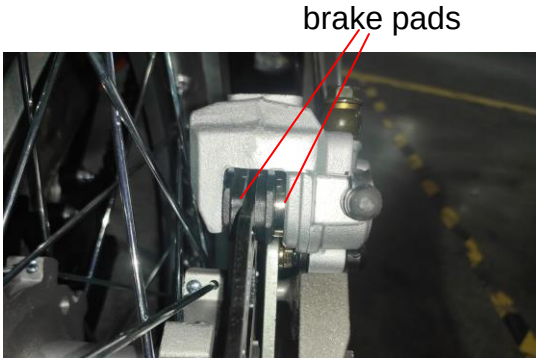
Replenish the rear disc brake fluid

The steps for replenishing rear brake fluid are as follows:

1. Remove the cup cover screw;
2. Remove the cover of the cup;
3. Add brake fluid to a suitable position;
4. Replace the cup cover .

It is recommended to use DOT4 brake fluid.

Check the rear brake pads



check the thickness of the brake pads of the brake caliper, the thickness should not be less than 1 mm. If the thickness of the brake pads is lower than the minimum thickness, the entire set of brake pads should be replaced immediately.

Danger: If it is found that the brake system is too worn, the corresponding parts should be replaced immediately to avoid safety accidents. The specific replacement should be carried out after consulting the KAYO dealer.

Tire inspection and maintenance

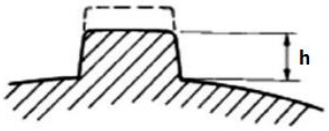
Removal and installation of front wheels

The front wheels can be dismantled in the following order:
Put the whole car on the stool and let it hang in the air.
Remove the front brake disc guard (if there is no guard, skip this step).
Loosen the front wheel shaft lock nut.
Fix the front wheel with one hand, and slowly pull out the front wheel axle with the other hand.
Remove the front wheel and place it in a suitable position.
Installation is carried out in the reverse order of removal

Removal and installation of rear wheels

The rear wheels can be dismantled in the following order:
Loosen the chain adjusting nut
Remove the chain
Loosen the rear axle lock nut
Fix the rear wheel with one hand, and slowly pull out the rear axle with the other hand
Remove the rear wheel and put it in a suitable position
Installation is carried out in the reverse order of removal

Check the outside surface of the tire

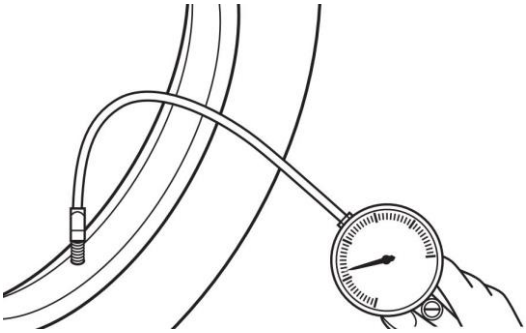


The inspection steps for the outer surface of the tire are as follows:

1. Check whether there are scratches, holes or foreign matter attached to the outer surface of the tire;
2. Check the tire pattern height. If it is less than or equal to the minimum height, replace the tire immediately.

The minimum height of the tire pattern: h=3mm.

Check the tire pressure



Use a pressure gauge to check whether the tire pressure level meets the vehicle's standard. If there are frequent problems with low pressure, check whether the tire is leaking. If the tire is leaking, please contact KAYO dealer.

Recommended pressure：

	front wheel air pressure	rear wheel air pressure
K2	225kPa	280kPa

Note：The check of tire pressure should be carried out under normal temperature conditions.

Check the rim and spokes

Flick the adjacent spokes with your fingers to check whether the tire spokes lack tension. If you find that the spokes are loose and weak, you must check all the spokes and both wheels. If there is any problem, please contact the KAYO dealer.

spokes

Electrical system

Battery removal and installation

The steps for removing K2 battery are as follows:
1. Remove the seat cushion
2. Disconnect the battery from the main cable
3. Remove the screws of the battery fixing bracket
4. Remove the battery
Installation is carried out in the reverse order of removal

Replace the battery

If you find bulging on the surface of the battery or the battery is charged frequently, you need to replace the battery. New batteries need to use KAYO original products or KAYO authorized products.
The size data of the battery is: 112mm×69mm×85mm

Engine installation

The installation steps of the engine are as follows:
⑴Hang the engine on the frame (pay attention to protect the appearance of the engine);
⑵Install the throttle body/carburetor to the intake elbow and fasten it with nuts and bolts;
⑶Install the throttle cable and air filter, the interface should be sealed, and the clutch control cable should be installed;
⑷Install the transmission chain;
⑸Install the left rear cover or sprocket guard, fasten with bolts, pay attention to the outgoing wire of the magneto;
⑹Install exhaust silencer. The M8 nut and the exhaust pipe sealing ring should be installed firmly, with a tightening torque of 25～30N•m, and the exhaust port should not leak air during installation.

Engine inspection and maintenance

Cylinder head part

Precautions

1. The camshaft journal is lubricated by the oil passage on the cylinder head. No foreign mat can enter the oil passage. The camshaft bearing rotates flexibly without jamming. The pressure reducing valve sling rotates flexibly and can return normally, otherwise it will easily engine damage.;
2. When assembling, the camshaft hole of the cylinder head must be smeared with proper a of lubricating oil;

Main parameters and maintenance standards of cylinder head parts

No.	item		standard value	Repair limit value	Remark
1	Free length of valve spring		40.5	39.5	
2	Valve clearance	Intake valve	0.04~0.06	<0.04 or＞0.06	
		Exhaust valve	0.04~0.06	<0.04 or＞0.06	
3	Camshaft base circle runout		0.01	0.03	
4	Valve guide aperture		φ5.475~φ5.487	φ5.5	
5	Valve stem diameter	Intake valve	φ5.45~φ5.465	φ5.45	
		Exhaust valve	φ5.43~φ5.445	φ5.43	

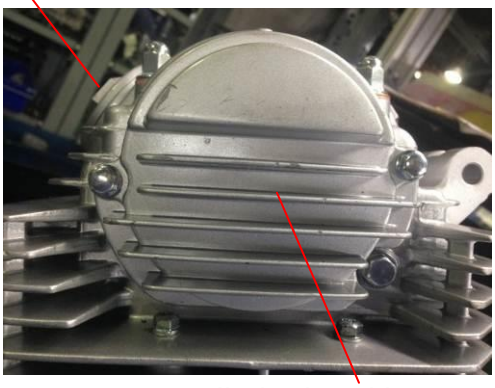
Troubleshooting

No.	Performance	Possible Causes	Remark
1	Low air pressure in the cylinder	Incorrect valve clearance adjustment	
		The valve is not tightly sealed	
		Wrong gas timing	
		Broken valve spring	
		The spark plug is not connected tightly to the cylinder head	
		Damaged cylinder head gasket	

		Cracks or blisters in the cylinder head	
		Piston ring clearance is too large or broken	
		Piston is cracked or excessively worn	
		Excessive cylinder inner diameter or blisters	
2	Black smoke in exhaust	Valve guide wear	
		Leaking or damaged oil baffle	
		Cylinder head gasket leakage	
		Piston ring clearance is too large	
3	Excessive noise or abnormal noise	Incorrect valve adjustment	

Removal of the left cylinder head cover

Valve cover



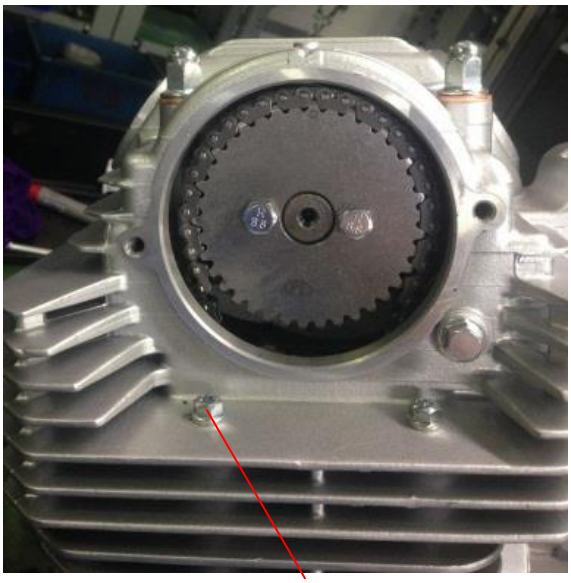
Cylinder head left cover

1. Remove the valve cover;
2. Remove the bolts of the left cover of the cylinder head. Remove the left cover of the engine cylinder head, as shown on the right;
3. Remove the left cover of the cylinder head.

Removal of cylinder head

Cylinder head nut Timing sprocket bolt

1. Remove the fixing bolts of the timing driven sprocket, and remove the timing driven sprocket;
2. Remove the connecting bolts of the cylinder head;
3. Remove the 4 nuts of the cylinder head;
4. Take out the engine cylinder head assembly.



Cylinder head and cylinder block connecting bolt

Decomposition of cylinder head

1. Remove the camshaft limit bolt;
2. Remove the mandrel bolts of the tension plate, and remove the tension plate;
3. Remove the valve rocker arm shaft and valve rocker arm assembly;
4. Remove the upper valve spring seat, valve spring combination and valve;
5. Remove the camshaft components.

Inspection of valves and valve springs

1. Check whether the valve is bent or the valve stem is abnormally worn, and measure the outer diameter of the valve stem. Repair limit value:
Air intake: φ5.45mm
Exhaust: φ5.43mm
2. The maintenance limit value of the width of the contact surface: 1.5mm
3. Check whether the valve spring is abnormally worn, and measure the spring length:
Free length: 40.5mm
Repair limit value: 39.5 mm

Inspection of camshaft parts

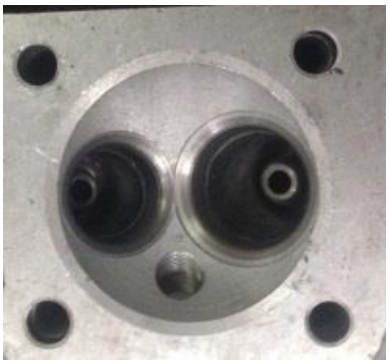
The camshaft convex hull has no obvious unevenness when touched by hand

1. Check whether the camshaft peach tip and base circle are worn out, and whether the camshaft bearing rotates flexibly. If the camshaft is worn out or the bearing is spinning, new camshaft parts should be replaced;
2. Check whether there are cracks in the slinger assembly of the pressure reducing valve, the spring does not rebound, and whether the centrifugal slinger of the pressure reducing valve and the mandrel are loose. If so, replace the slinger combination of the pressure reducing valve.

Inspection of cylinder head

The inspection steps of the cylinder head are as follows:
1. Check whether the airtightness of the cylinder head is good. If the airtightness of the cylinder head is poor, replace the cylinder head or valve with a new one;
2. Check whether there are cracks in the spark plug hole and valve seat;
3. Check whether the cylinder head is deformed, and check the flatness of the cylinder head with a knife-edge ruler and feeler gauge.

Inspection and grinding of valve seat



Completely remove the carbon deposits in the combustion chamber, apply a thin layer of red stamping oil evenly on the valve seat, place the valve on the valve seat and knock the valve lightly without rotating, and then pull out the valve. If the contact marks on the valve working surface are discontinuous, the valve seat should be polished and repaired.
First,remove the carbon deposits on the intake and exhaust valve seats, and then apply abrasives on the valve seat, and then use the rubber head grinding tool to suck up the valve and grind the valve seat.

Inspection of valve guide

Use a dial indicator to measure the inner diameter of each valve catheter and make a record. Repair limit value: φ5.035 mm
Note:
Before measuring the inner diameter of the valve guide, the carbon deposits in the guide should be completely removed. If the inner hole of the valve guide is severely worn, only the cylinder head can be changed, and the guide cannot be replaced separately.

Assembly of the cylinder head

Install the lower seat of the valve spring and the oil shield to the valve guide;
2. After lubricating the intake and exhaust valve rods, install the valve guide, and install the valve spring, valve spring upper seat and valve lock clip;
3. Then use the valve disassembly tool to press down the valve spring, and then install the valve lock clip into the valve spring seat;
4. Check whether the valve lock clip is in place;
5. Assemble the camshaft parts into the cam hole of the cylinder head;
6. Assemble the rocker arm and rocker arm shaft to the corresponding position of the cylinder head;
7. After assembling the rocker shaft positioning plate to the corresponding position, tighten it

with bolts; bolt torque: (8~12) N.m;
8. Check the air tightness of the assembled cylinder head assembly. If there is no leakage of the cylinder head assembly, proceed to the next step.

Installation of the cylinder head

Timing mark points aligned with cylinder head mark grooves

1. Replace the new cylinder head gasket combination, install the positioning pin, and assemble the cylinder head;
2. Assemble the nut and washer on the AB bolt of the cylinder head, and then fasten the bolt. Tightening torque: 28～32N.m;
3. Install two M6×113 cylinder head and cylinder body connecting bolts into the connecting holes of the cylinder head and cylinder body and fasten them. Tightening torque: 11～13N.m;
4. Install the timing chain and timing driven sprocket on the camshaft, and then check whether the engine is in the timing position (see the right picture for the timing position). If it is not in the timing position, you need to re-adjust the timing position of the engine. ;
5. Install the tensioner into the corresponding hole on the cylinder body, and fasten it with 2 GB70.1 bolts M6×16, and finally assemble the sealing ring and the screw in place.

Valve clearance adjustment

1. Check the valve clearance with a feeler gauge:
Valve clearance requirements: 0.04~0.06mm
Repair limit:
0.04mm> air intake or air intake > 0.06mm;
0.04mm > exhaust or exhaust > 0.06mm.

Cylinder and Piston

Precaution:

◆The lubricating oil of the cylinder head goes to the cylinder head through the oil hole beside the AB bolt on the right body of the engine. Before installing the cylinder block, make sure that the oil hole beside the AB bolt on the left body is unblocked, otherwise the engine will be damaged easily;
◆ Do not allow dust or dust to penetrate into the crankcase.

Main parameters and maintenance standards of cylinder block and piston

No.	Item			Standard	Limits	Remark
1	Cylinder	Cinder diameter		Φ72~φ72.01	Φ72.02	
		Cylindricity		0.005	0.01	
		Flatness of cylinder face		0.03	0.05	
		Cylinder clearance		0.04~0.05	0.07	
2	Piston	Skirt diameter of piston, H=7		Φ71.96~φ71.97	Φ81.94	
		Pin outer diameter		Φ16.002~φ16.008	Φ16.015	
		Clearance between piston pin and piston pin hole		0.002~0.016	0.02	
3	Piston ring	Closed internal	First ring	0.15~0.30	0.35	
			Second ring	0.2~0.35	0.4	
			Oil ring	0.20~0.70	0.8	
		backlash	First ring	0.03~0.07	0.08	
			Second ring	0.02~0.06	0.08	
4	Piston pin outer diameter			φ13.015~φ13.022	Φ13.044	

Troubleshooting

No.	Faults	Possible causes	Remark
1	Low or unstable pressure in cylinder	Abnormal wear of cylinder block or piston ring	

2	Black smoke emission	Abnormal wear of cylinder block, piston or piston ring	
		Incorrectly installed piston ring	
		Scratches or scrapes on piston or cylinder walls	
3	Engine overheats	Too much carbon deposit in piston	
4	Knocking or abnormal noise	Piston or cylinder block is worn	
		Too much carbon deposit	

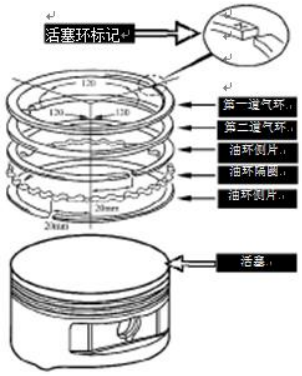
Disassembly of the cylinder block

1.Remove the cylinder head gasket combination;
2. Remove the positioning pin;
3. Remove the chain guide plate;
4. Remove the cylinder block.

Cylinder block inspection

1. Check whether the cylinder block is worn or damaged;
2. Measure the inner diameter of the cylinder and take three positions, namely the top, middle and bottom of the piston stroke, and measure two directions at right angles to each other.
3. Maintenance limit: φ72.02mm.

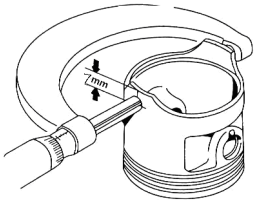
Disassembly of piston and piston ring

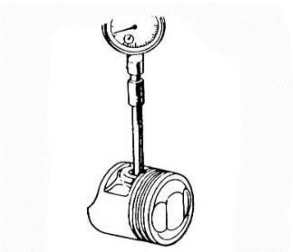


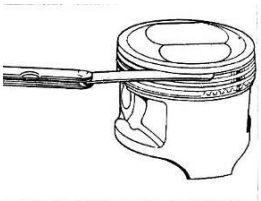
1. Remove the piston pin retaining ring with needle nose pliers;
2. Remove the piston pin;
3. Remove the piston;
4. Remove the piston ring.

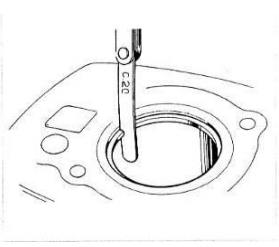
Note: Do not drop the retaining ring into the crankcase when removing the piston pin retaining ring

Inspection of pistons and piston rings

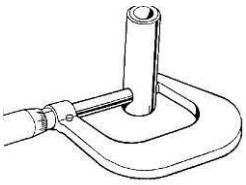




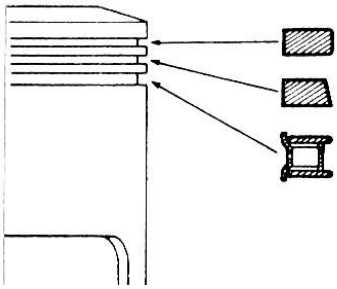


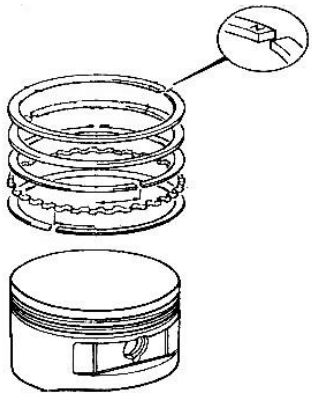


1. Measure the outer diameter at a height of 7 mm from the piston skirt
Maintenance limit: φ71.94mm;
2. Calculate the cylinder clearance
Maintenance limit: 0.07mm;
3. Measure the inner diameter of the piston pin hole
Maintenance limit: φ16.015 mm
4. Check whether the piston and piston ring groove are worn, and measure the side clearance between the piston ring and the piston ring groove
Maintenance limit: one ring: 0.08mm
Second ring: 0.08 mm
5. Put the piston ring into the cylinder, and then measure the closing gap
Maintenance limit: one ring: 0.35mm
Second ring: 0.40mm
Oil ring: 0.8 mm
6. Measure the outer diameter of the piston pin
Maintenance limit: φ15.99 mm
7. Calculate the clearance between the piston pin hole and the piston pin
Service limit: 0.025 mm



Piston Ring Installation





1. Clean the piston ring groove;
2. Install the piston ring;

Notice:
(1) During installation, the piston and piston ring should be prevented from being damaged;
(2) When installing the piston ring, the first ring and the second ring should face the top of the piston, and the openings should be staggered by 180°, and the opening direction should be towards the direction of the piston skirt; the openings of the two oil rings must be staggered by 120°~180° and cannot be aligned. Piston pin holes and piston rings should rotate flexibly.
3. The gap between each ring in the oil ring should be matched with the gap of the spacer ring; when installing the oil ring, the spacer ring should be installed first, and then the side guide rails should be installed.

Piston installation

1. Install the piston pin retaining ring into the piston retaining ring groove;
2. Install the piston and piston pin on the small end of the connecting rod;

Notice:
(1) When assembling the piston, the side marked with the "IN" symbol on the top of the piston faces the intake side of the engine;
(2) If the piston pin retaining ring is seriously deformed, it must be replaced with a new retaining ring.
3. Install the piston pin retaining ring on the other side.

Installation of the cylinder block

1. Install cylinder block positioning pins and new cylinder block gaskets;
2. Apply lubricating oil evenly on the surface of cylinder block, piston and piston ring;
3. Assemble the cylinder block in place;
4. Assemble the chain guide plate in place;
5. Fit the cylinder head gasket assembly in place.

Note: When installing the cylinder block, avoid damaging the piston rings

Right cover, clutch, starting mechanism, shifting mechanism

Precautions

◆After removing the right cover, the disassembly, installation and maintenance of the clutch, oil pump and shifting mechanism can be carried out without removing the engine;
◆In the case of clutch operation, if a malfunction occurs, the free stroke of the clutch handle can usually be adjusted to obtain a better correction.

Main parameters and maintenance standards

No.	Item		Standard	Limits	Remark
1	Clutch	Free height of active disc tension spring	34.8~35.8	/	
		Active disc keyway width	2.95-3.05	2.85	
		Flatness of follower disc	0.1	0.14	
		Cover and friction plate clearance	0.1-0.3	0.6	
2	oil pump	Inner and outer rotor radial clearance	0.06-0.15	/	
		Gap between rotor and cover plate	0.04-0.1	/	

Troubleshooting

No.	Faults	Possible causes	Remark
1	Clutch slips when accelerating	Not enough free travel	
		Clutch release spring force attenuation	
		clutch disc wear	
2	Too much pressure on the handle	Clutch cable stuck, damaged or dirty	
		Lifting mechanism damaged	
3	After the clutch is released, the vehicle moves slowly	Free travel is too small	
		Clutch friction plate wear	
4	Difficulty operating the clutch	Clutch cover chute has burrs	
5	Shift pedal does not rebound	Broken return spring	
		The transmission shaft interferes with the crankcase cover	
6	Difficulty shifting gears	Bent or worn stop plate	
		Incorrect clutch adjustment	
7	shift gear shift	The shift positioning plate spring is broken or not elastic enough	
8	Difficulty with electric start	Starter motor failure	

Removal of right crankcase cover

1. Drain the engine oil first (remove the oil filter cover on the left, take out the spring and oil filter combination, wait for the oil in the box to run out, and then remove the oil filter cover, pay attention to the oil filter Whether the O-ring of the cover is damaged;
2. Remove the fastening bolts of the right cover and take off the right crankcase cover.

Disassembly of the clutch

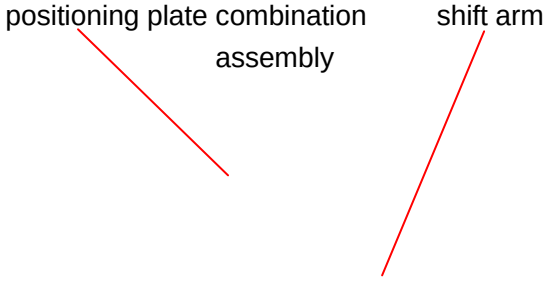
离合器结构图

1. Remove the oil filter parts;
2. Remove the clutch lever and bearing;
3. Remove the clutch collar;
4. Remove the clutch center sleeve assembly;
5. Take out the clutch cover.

Removal of the right body oil pump

1. Remove the oil pump fastening screws;
2. Remove the right oil pump assembly;
3. Remove the oil pump seal.

Removal of the gearshift mechanism



1. Remove the shift arm parts;
2. Remove the five-star board fastening screws GB/T70.1 M6×35, and remove the five-star board
3. Remove the fixing screws of the positioning plate combination, and remove the positioning plate spring and the

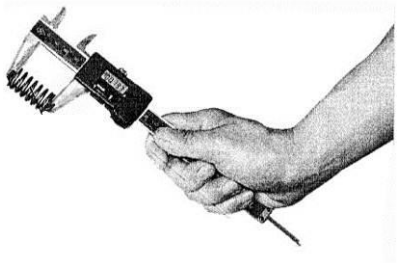
Five-star board

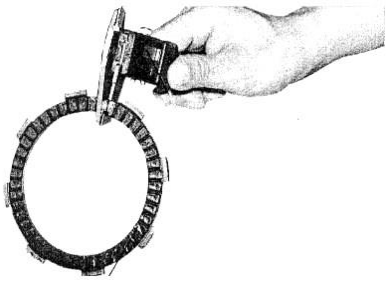
positioning plate combination.

Inspection of Right Crankcase Cover

1. Check whether the crankshaft oil seal of the right crankcase cover is damaged. If the oil seal is found to be broken, it needs to be replaced with a new oil seal;
2. Check whether the oil seal of the starting shaft is damaged. If the oil seal is found to be broken, it needs to be replaced with a new oil seal.
3. Check whether the oil seal of the clutch operating arm is broken, check whether the wear of the clutch operating arm is abnormal and whether there is bending, and if so, replace the new oil seal and new clutch operating arm;

Inspection of the clutch





1. Measure the free length of the clutch spring
Maintenance limit: 32.3mm
2. If there are scratches or fading marks on the clutch friction plate, it should be replaced. Measure the thickness of each clutch lining.
Maintenance limit: 2.85mm
3. Check whether the surface of the clutch disc is twisted
Service limit: 0.14 mm
4. Check the gap between the clutch cover and the friction plate
Service limit: 0.6 mm
5. Check whether the tooth slot on the outer cover drum is caused by the friction of the clutch disc.
Scratches and scratches are produced, and the cover needs to be replaced if it is serious.

Inspection of active teeth

Check whether the driving teeth are worn or damaged. If the wear and damage are serious, the driving teeth need to be replaced with new ones.

Oil pump inspection

1. Check whether the inner and outer rotors of the oil pump are worn or damaged. If the wear and damage are serious, you need to replace the new oil pump parts;
2. Check whether the oil pump gear combination is cracked, if so, it needs to be replaced with a new oil pump gear combination
3. Check whether the O-ring of the oil pump is deformed or damaged, and if so, replace it with a new one.

Shifter inspection

1. Check whether the roller of the positioning plate is worn and whether the roller rotates flexibly; if so, it needs to be replaced;
2. Check whether the five-star plate is worn or lacking material; if so, it needs to be replaced;
3. Check whether the shift arm parts are worn, whether the journal is bent or deformed, and whether the shift paddle is stuck and cannot be returned. If there is, it needs to be replaced.

Assembly of the gearshift mechanism

1. First install the O-ring of the oil pump on the box;
2. Install the oil pump parts into the holes of the right box body; fasten the oil pump with 2 GB819.1 screws M6×30;

Notice:

1. When installing the oil pump, the arrow mark on the pump body should face the direction of the crankshaft;

Assembly of the right body oil pump

1. First install the O-ring of the oil pump on the box;
2. Install the oil pump parts into the holes of the right box body; fasten the oil pump with 2 GB819.1 screws M6×30;
Notice:
1. When installing the oil pump, the arrow mark on the pump body should face the direction of the crankshaft;

Assembly of the drive gear

1. Install the driving gear on the right crank;

Assembly of the clutch

1. Install the clutch cover and the clutch center washer on the main shaft;
2. Set the clutch center to the main shaft and fasten it;
3. Fit the clutch retaining ring into the groove of the main shaft retaining ring.

Assembly of the right crankcase cover

1. Assemble two positioning pins φ10×14 into the positioning pin holes of the box;
2. Remove the old right crankcase gasket and install a new gasket;
3. Assemble the right crankcase cover to the box body;
4. And use GB/T16674 small plate bolts to fit into the mounting holes of the right cover and fasten them. Tightening torque: 11～13N m;

Left cover, double gear, magneto

Precautions

◆The removal and installation of the magneto, the left cover and the double gear introduced in this section can be completed only by removing the left crankcase cover without removing the engine;
◆For the inspection of the magneto, please refer to the method in the chapter on the battery charging system.

Removal of starter motor

Remove the starter motor fastening screw and remove the starter motor

Disassembly of the double gear (1)

1. First remove the double gear cover fastening bolts;
2. Remove the double gear cover, and finally remove the double gear assembly (1).

Removal of left crankcase cover

1. Remove the fastening bolts of the left crankcase cover, and take off the left crankcase cover;
2. Remove the left cover positioning pin and the left cover gasket;
3. Remove the double gear (2).

Disassembly of the magneto stator

1. Remove the 2 fastening screws of the sensor;
2. Remove the 2 fastening screws of the stator coil;
3. Remove the magneto stator assembly from the left crankcase cover.

Disassembly of the magneto rotor

1. Remove the magneto rotor fastening bolts;
2. Remove the magneto rotor with special tools;
3. Remove the starting gear assembly.

Notice:
1. When disassembling the magneto rotor, it can only be disassembled with special tools, and it is not allowed to knock the magneto rotor;
2. The magneto rotor is accidentally impacted during the disassembly and assembly process. If the magneto rotor falls to the ground or is struck by foreign objects, the magneto rotor should be replaced with a new one.

Inspection of Left Crankcase Cover and Duplex Gear Cover

1. Check whether the joint surface of the left crankcase cover is damaged, if any, it must be replaced.
2. Check whether the sealing ring of the double gear cover is damaged, if any, it must be replaced.

Magneto Inspection

1. Check whether the magnetic tile of the magneto stator is cracked or damaged, and if so, replace it with a new magneto rotor.
2. Check whether the magneto rotor is worn or damaged, and if so, replace it with a new one.
3. Check whether the wedge of the overrunning clutch is worn or damaged, if any, it needs to be replaced.

Start the inspection of the platter teeth

Check the starter gear for wear or damage, and replace if necessary.

Inspection of starter motor and double gear

1. Check whether the cogging of the starting motor is damaged, and if so, it needs to be replaced;
2. Check whether the double gear is worn or damaged

Start the assembly of large plate teeth and magneto

1. Install the large starting gear washer on the left crank;
2. Install the magneto rotor on the left crank;
3. After applying thread glue, the magneto-electronic fastening bolts are installed in the left crank threaded hole and tightened. Tightening torque: 70～80N.m.
Notice:
1. Before installing the starting gear, apply a layer of grease evenly on the inner hole of the

starting gear;
2. Before installing the starter gear, check whether the pot-shaped tooth washer is missing.

Assembly of double gear (two)

1. Install the double gear washer on the end face of the double gear;
2. Install the double gear (2) into the double gear hole of the right body.

Installation of magneto stator

1. Install the magneto stator assembly to the left crankcase cover.
2. Take 2 GB5783 bolts M5×25 and install them into the magneto stator mounting holes and fasten them;
3. Assemble the magneto stator sensor to the installation position, and take 2 GB5783 bolts M5×16 to fasten the sensor.
Note: Tightening torque of magneto stator: 7～9N·m.

Installation of the left crankcase cover

1. Take 2 locating pins φ10×14 (RoHS) and assemble them into the locating pin holes of the left box;
2. Remove the old gasket and install a new gasket;
3. Assemble the left crankcase cover in place and fasten it with bolts. Tightening torque: 11～13 N·m.

Assembly of double gear (1)

1. Install the double gear washer on the end face of the double gear;
2. Install the double gear assembly (1) into the double gear hole of the left cover.
3. Assemble the double gear cover into the double gear hole of the left cover;
4. Take 2 GB16674 small plate bolts M6×20 to fasten the double gear cover. Tightening torque: 8～12N m,

Assembly of the starter motor

After smearing oil evenly on the cogging end of the starter motor, assemble the starter motor in place, and fasten it with 2 GB/T16674 small plate bolts M6×25, the tightening torque is 11～13N m

Crankcase, Transmission

Precautions:

This section introduces the installation and inspection of the transmission and crankshaft. When doing the above work, the crankcase should be disassembled first, and other parts of the engine should be disassembled before the crankcase is disassembled. Work before crankcase removal:
Disassembly of cylinder head, disassembly of cylinder and piston, disassembly of clutch, oil pump, shifting mechanism, disassembly of balance tooth, disassembly of magneto

Main parameters and maintenance standards

No	items		standard value mm	Maintenance threshold mm	remark
1	Change fork	Inner diameter of secondary shaft	φ12~φ12.018	φ12.025	

		Inner diameter of main shaft	φ12~φ12.018	φ12.025	
		Claw thickness	4.925~5	4.9	
2	Change fork shaft	External diameter of fork shaft	φ11.966~φ11.984	φ11.95	
		cylindricity	0.01	/	
3	Crankshaft connecting shaft	Inner diameter of connecting rod small end	φ16.010~φ16.018	φ16.025	
		Backlash at the big end of the connecting rod	0.10~0.3	0.5	

Troubleshooting

No.	Faults	Possible causes	Remark
1	Difficulty shifting gears	Shift fork bending deformation	
		Bending deformation of shift fork shaft	
2	skip	Shift gear pawl is worn	
		Bent or worn shift fork	
		Shift fork shaft bent	
3	Crankshaft noise	The needle roller bearing oft the big end of the connecting rod is worn	
		Connecting rod wear	
		crankshaft bearing is worn	
4	Gearshift gear noise	Gearshift gear is worn	
		Gear shaft is worn	

Crankcase Removal

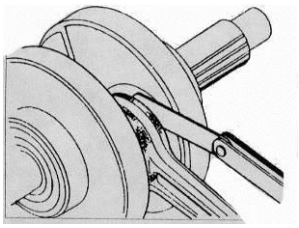
1. Place the left crankcase of the engine upwards;
2. Remove the fastening bolts of the chain guard;
3. Cancel the spring of the pressing pin body and the ejector pin;
4. Remove the fastening screws of the case body, separate the left crankcase from the right crankcase, and remove 2 positioning

pins;
5. Separate the left crankcase body from the right crankcase body, and remove the left case body.

Removal of crankshaft, main and auxiliary shafts

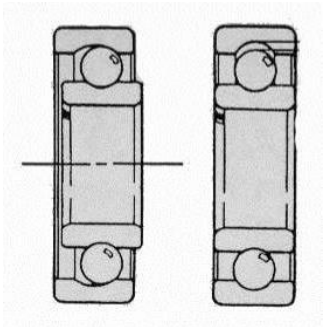
1. Take out the crankshaft assembly from the box;
2. Take out the shift fork shaft, shift fork, shift drum and main and auxiliary shaft components from the box.
Notice:
Make sure that no parts are left behind when taking out the main and auxiliary shaft assemblies

Crankshaft inspection



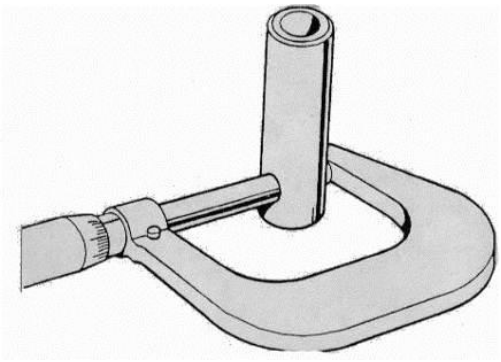
1. Put the crankshaft on the V-shaped iron, measure the side clearance of the connecting rod big end with a thickness gauge, the maintenance limit value: 0.4mm;
2. Check the left and right journals of the crankshaft for runout. If the runout is too large (more than 0.05mm), a new crankshaft must be replaced.

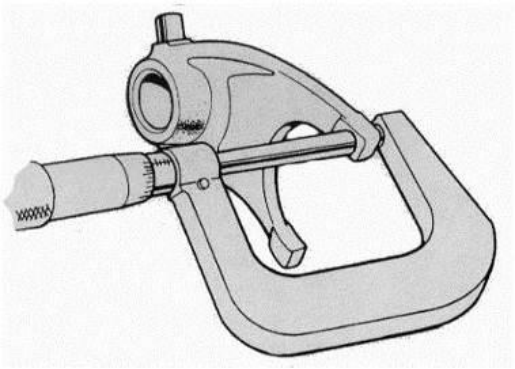
Inspection of Left and Right Crankcase Bearings



1. Check whether all the bearings of the left and right boxes rotate flexibly; if the rotation is not flexible or there is a phenomenon of hairpin, the bearings of the same type should be replaced;
2. Remove the crankshaft bearings of the left and right cases to check their radial runout and end runout. If noise or large radial runout and end runout are found, the crankshaft bearing should be replaced with a new one.

Inspection of shift fork, shift fork shaft, shift drum





Check each shift fork for wear, bending or any other malfunction, measure the inner diameter of the shift fork
Main shaft fork maintenance limit: φ12.025 mm
Maintenance limit value of countershaft fork: φ12.025 mm
Check the main and counter shaft fork shafts for wear, damage or bending, measure the outer diameter
Maintenance limit value of main shaft fork shaft: φ11.95 mm
Maintenance limit value of countershaft fork shaft: φ12.025 mm
Measure the thickness of the prongs
Service limit: 4.9 mm
Inspect gear drum surfaces and grooves for wear or damage

Inspection of main and auxiliary shaft combinations

Check whether the gears of the main and countershaft assemblies have excessive or abnormal wear, and check whether the collars between the gears are deformed or fallen off.

Checking the oil filter

1. Check the cleanliness of the oil filter; rinse the oil filter with poor cleanliness with clean gasoline;
2. Check whether the oil filter is damaged; if there is damage, replace the oil filter with a new one.

Assembly of main and auxiliary shafts and crankshaft

1. Install the crankshaft into the corresponding hole of the left body;
2. Install the main and auxiliary shaft components into the corresponding holes of the left body, and then assemble the shift fork to the corresponding position.
Notice:
1. The shift fork marked with --R is installed on the right side of the secondary shaft;
2. The fork marked with --L is installed on the left side of the secondary shaft;
3. Install the shift fork marked --C into the spindle.
3. Install the shift drum into the corresponding hole of the left body, then install the other end of the shift fork into the corresponding groove of the shift drum, and finally install the shift fork shaft into the corresponding shift fork.

Assembly of closing box and oil filter

1. Install the positioning pin into the corresponding hole of the left box;
2. Remove the old gasket and install a new gasket;
3. Then put the left box body on the right box body, and fasten the fastening bolts; tightening torque: 11 ~ 13 N m;
4. Install the oil filter and filter spring to the filter hole of the left box, and then fasten the filter cover. The tightening torque is 11-13 N·m.

Assembly of double gear (two)

1. Install the double gear washer on the end face of the double gear;
2. Install the double gear (2) into the double gear hole of the right body.

MOTORCYCLE CLEANING

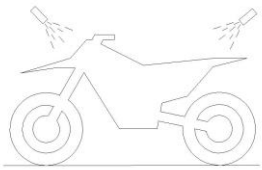
The cleaning of the vehicle is also an important part of the daily use and maintenance of the motorcycle. Frequent cleaning of your motorcycle can keep your car in a good state of motion and prolong its service life. You can clean your motorcycle through the following steps:

1. Cover the exhaust system to prevent water from entering;
2. Seal the electric door lock and all connectors with tape;
3. Use a low-pressure water spray device to remove the mud and dirt on the surface;
4. Use a special motorcycle cleaner to clean particularly dirty places;
5. Flush with low-pressure water flow;
6. Let the motorcycle air dry naturally;
7. Drive the motorcycle for a short period of time until the engine reaches the working temperature;
8. Lubricate the chain and all other parts that need to be lubricated.

WARINING: Never use high-pressure water to clean the vehicle. Avoid direct contact with coils, pipe plugs, carburetor or any electrical components.

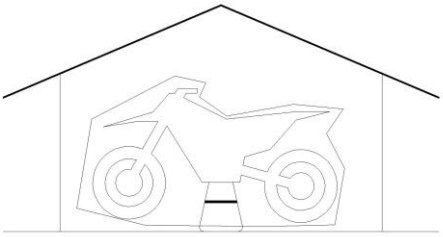
STORAGE

PREPARING FOR LONG STORAGE



If you want to garage the motorcycle for a longer period, take the following steps.

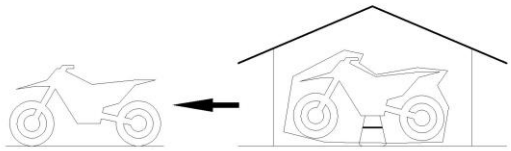
1. Block the exhaust port of the muffler tube;
2. Clean the motorcycle
3. Wait for the motorcycle to dry naturally;
4. Empty the fuel tank (if not used for a long time, the gasoline will deteriorate);
5. Lubricate the chain;
6. Apply oil to all unpainted metal surfaces to avoid rust;
7. When storing the motorcycle, keep the motorcycle wheels suspended. If this condition cannot be achieved, you can use cardboard to pad under the motorcycle tires;



8. Cover the motorcycle to prevent dust and dirt.
9. Move the motorcycle into a dry room and place it.

NOTE: When applying anti-rust oil, please do not splash the oil on the brake and rubber parts, otherwise the rubber may be aged.

PREPARING FOR USE AFTER LONG STORAGE



After the motorcycle has been stored for a long time, please follow the steps below when it is put into use:

1. Take out the blockage in the exhaust port of the muffler tube;
2. Tighten the spark plug;
3. Fill the fuel tank with fuel;
4. Check the items that need to be checked before daily driving;
5. Routine lubrication for motorcycles.

MAINTENANCE POINTS

In the following content, we will enumerate the problems that occurred during your use, find out the possible causes and give general solutions.

Problems	Reason	Solution
The crank of the engine cannot be turned	Crank stuck	Contact KAYO Service Center
	Cylinder/piston/ connecting rod stuck	Contact KAYO Service Center
	Gearbox stuck	Contact KAYO Service Center
The engine does not start	The motorcycle has been stored for a long time and the	Drain the old fuel and add new fuel

	fuel has deteriorated	
	Dirt or wet spark plug	Clean or dry the spark plug, if necessary, replace the spark plug
	Engine water intake	First, drain the mixed fuel out the engine and remove the crankcase of the engine, clean it with a strong cleaning agent, then remove the spark plug, blow it dry with a fan (the machine that inflates the tires), and then wipe the air filter element. Finally, remove the exhaust pipe of the engine and blow it dry with a fan. After everything is done, the car owner should add new mixed fuel to the engine before the car can drive. Because the moisture in the crankcase is difficult to completely evaporate, the new fuel still contains a small amount of moisture. Therefore, after the engine has flooded and the car has run for 100 kilometers, the fuel should be changed again, and then again within 500 kilometers. After three times, the water in the carburetor is almost gone. If water enters the cylinder, depress the start lever several times after the flame is turned off. Step on it for a few times, the water in the cylinder will be drained from the exhaust pipe, and then use a fan to blow on the mouth of the oil dipstick for a few minutes. Warning: In safety sake, the spark plug should be wrapped with dry cloth to avoid spark jumping.
	Incorrect mixing of air and fuel	Clean the fuel tank vent pipe, adjust the air filter duct
	Open exhaust valve	Check and correct the exhaust valve

The engine can be started, but it will stop immediately	Incorrect air supply	Close the choke valve, clean the fuel tank vent pipe, and adjust the air filter duct
	Lack of fuel	Add fuel
Engine overheated	Fouling on the surface of radiator of cylinder head	Use low-pressure water to clean the cylinder head radiator
Unbalanced engine operation	The spark plug is dirty, damaged or adjusted incorrectly	Remove the spark plug for cleaning, adjustment, and replacement if necessary
	There is a problem with the spark plug cap	Check the condition of the spark plug cap, check whether the spark plug cap is in good contact with the cable itself, check the cable, and replace the damaged parts
	Ignition rotor is damaged	Replace the rotor
	Water mixed in the fuel	Empty the fuel, then inject new fuel
Insufficient engine power or poor acceleration	Problems with fuel supply	Clean fuel system and check
	Dirt in the air filter	Clean the air filter and replace if necessary
	Damaged or leaking exhaust system	Check whether the exhaust system is damaged, and replace related accessories if necessary
	Dirt in the carburetor nozzle	Remove the carburetor and clean the nozzle
	Damaged or worn crankshaft bearings	Contact KAYO Service Center
Engine sound is abnormal	Problem with ignition	Contact KAYO Service Center
	overheat	See "Engine Overheating" section
Exhaust pipe backfire phenomenon	Carbon deposits in the combustion chamber	Contact KAYO Service Center
	Poor gasoline	Change fuel
	The spark plug is in poor condition or the specification is wrong	Replace with a new spark plug with the correct specification
	Exhaust system gasket aging	Check whether the exhaust system is damaged, check whether the gasket is in good condition, if the gasket is aging, replace the gasket
White smoke from exhaust pipe	The fuel contains water	Change fuel
Black smoke from	Air filter is clogged	Remove and clean the air filter

exhaust pipe	The combustible mixture is too rich	Adjust the carburetor valve
Gearbox gear does not mesh	Clutch abnormality	Contact KAYO Service Center
	The fork is bent or stuck	Check and adjust the fork
	Damaged gear lever	Replace the gear lever
	Damaged gear shift drum	Replace the shift drum
	Damaged ratchet device	Replace the ratchet device
Gear bounce	Fork wear	Replace the fork
	Tooth wear	Check gears and replace if necessary
	Gear damage	Change gear
	Damaged displacement drum groove	Replace the shift drum
	Worn fork shaft	Check the fork shaft and replace if necessary
	The selector position spring is damaged	Replace the selector position spring
The motorcycle is difficult to steer	The cable makes it difficult to turn the handlebars	Move the cable to reduce its interference
	The steering shaft nut is too tight	Adjust the steering shaft nut
	Worn or damaged steering bearings	Check the steering bearing and replace if necessary
	Bent steering shaft	Contact KAYO Service Center
Damping is too hard	Fork oil level is too high	Lower the front fork oil level to a suitable position
	Fork oil viscosity is too high	Replace the fork oil with the right viscosity
	Fork bent	Contact KAYO Service Center
	Tire pressure is too high	Check tire pressure and adjust to proper pressure
	Damping adjustment error	Re-adjust damping
Damping is too soft	Insufficient front fork oil level	Add the right amount of fork oil Note: It is required to add the same kind of oil
	Fork oil viscosity is too low	Change to fork oil with suitable viscosity
	Tire pressure is too low	Check whether the tires are leaking, if the tires are complete, pump them to the proper pressure
	Damping adjustment error	Re-adjust damping
There is abnormal noise when the motorcycle is	Improper chain adjustment	Re-adjust the chain tension
	Chain wear	Replace the chain and front and

driving		rear sprockets
	Wear of rear sprocket teeth	Replace the sprocket
	Insufficient chain lubrication	Follow the manual to lubricate the chain
	Rear wheel off center	Check the spokes and adjust the spoke tension centrally if necessary
	The fork spring is soft or broken	Replace the front fork spring
	Disc brake disc wear	Check the disc brake disc, if its thickness is less than the limit thickness, replace it
	Damaged cylinder head	Contact KAYO Service Center
	Brackets, nuts, and bolts are not tightly fastened	Check and adjust the torque of the corresponding fasteners
	The gasket is installed incorrectly, is worn, or is too smooth	Readjust the gasket and replace if necessary
Motorcycle front wheel shimmy	Tire wear	Change tires
	Rim offset	Contact KAYO Service Center
	Whether the front wheel bearing is worn	Check the bearing and replace if necessary
	The vehicle is not aligned	Check the spokes and adjust the spoke tension if necessary
	Steering shaft tolerance is too large	Check the steering shaft pressure bearing clearance
	The steering shaft nut is loose, and the handlebar is not fixed	Check and re-tighten
The motorcycle skews to one side	Bent chassis	Contact KAYO Service Center
	Improper steering adjustment	Check and readjust
	Bent steering shaft	Contact KAYO Service Center
	There is a problem with the fork	Contact KAYO Service Center
	Vehicle is not aligned	Re-adjust the spoke tension and contact KAYO Service Center if necessary
Brake failure	Disc brake disc wear	Replace the disc brake
	Insufficient brake fluid	Replenish brake fluid
	Deteriorating brake fluid	Replace brake fluid
	Piston damaged	Contact KAYO Service Center
	Brake pad wear	Check the brake pads, if the thickness is less than the

		minimum friction thickness, replace the brake pads